CURRICULUM OF
EDUCATION

B.Ed. (Hons.) Elementary
ADE (Associate Degree in Education)

(Revised 2012)

HIGHER EDUCATION COMMISSION
ISLAMABAD-PAKISTAN

Session 2015-2019 and onwards

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ISLAMABAD –PAKISTAN

All Codes for complete program are classified as:

S. No	Compulsory Courses/Core Courses	Symbol of Code	Alphabetical Code	Level of Study/Year	Semester
1	Functional English-1, Islamic Studies/Ethics, Urdu/Regional Languages, General Science	Will be given by other Department	Will be given by other Department	3	1
2	English-II, Computer Literacy, General Mathematics, Pakistan Studies	Will be given by other Department	Will be given by other Department	3	2
3	Art, Craft and Calligraphy	Will be given by other Department	Will be given by other Department	4	3
5	Content course I from Discipline I, Content Course I from Discipline II	Will be given by other Department	Will be given by other Department	5	5
6	Content course II from Discipline I, Content Course II from Discipline II	Will be given by other Department	Will be given by other Department	5	6
7	Content course III from Discipline I, Content Course III from Discipline II	Will be given by other Department	Will be given by other Department	6	7

S.No	Foundation Courses/Basic Courses/Introductory Courses	Symbol of Code	Alphabetical Code	Level of Study/Year	Semester
1	Child Development, General Methods of Teaching, General Methods of Teaching	0	EDU	3	1
2	Classroom Management	0	EDU	3	2
3	Classroom Assessment, School Community and Teacher	0	EDU	4	4
4	Foundation of Education, Curriculum Development, Educational Psychology	0	EDU	5	5
5	Introduction to Guidance and Counseling	0	EDU	5	6

S. No	Major Courses	Symbol of Code	Alphabetical Code	Level of Study/Year	Semester
1	Teaching Practice (Short Term)	1	EDU	4	3
2	Teaching Practice (Short Term)	1	EDU	4	4
3	Teaching Practice (Short Term),	1	EDU	6	7

	Pedagogy-I, Pedagogy-II				
4	Teaching Practice (Long Term)	1	EDU	6	8

S. No	Minor Courses	Symbol of Code	Alphabetical Code	Level of Study/Year	Semester
1	Contemporary Issues and Trends in Education, Comparative Education, Learning Innovation & Interactive Teaching	2	EDU	5	6
2	School Management, Test Development and Evaluation, Educational Law	2	EDU	6	8

S. No	Professional Courses	Symbol of Code	Alphabetical Code	Level of Study/Year	Semester
1	Methods of Islamic Studies	3	EDU	3	2
2	Teaching Literacy Skills, Teaching of Urdu, Teaching of General Science, Instructional & Communicational Technology	3	EDU	4	3
3	Teaching of English II, Teaching of Mathematics, Teaching of Social Studies	3	EDU	4	4
4	Teaching of English III	3	EDU	5	5

S. No	Advance Courses	Symbol of Code	Alphabetical Code	Level of Study/Year	Semester
2	Research Methods in Education	9	EDU	6	7
3	Research Project	9	EDU	6	8

CONTENTS

Note: *After completing 2 years, the universities / institutions may award an* ***Associate Degree in Education (ADE).*** *However, the students admitted for B.Ed. (Hons) 4 Years Degree Program will continue for 3rd and 4th Year.*

B.Ed (Hons.) 4 year Degree Program (Elementary)
Scheme of Studies

Eligibility Criteria

1. FA/F.Sc / A level or equivalent with minimum 2nd Division.
2. FA/F.Sc / A level with school subjects.

Duration:	4 years
Semester Duration:	16-18 weeks
Semesters:	8
Course Load Per Semester:	16-18 Credit Hours
Number of Courses per semester:	5-6 (not more than 3 lab/ practical courses)

Structure of the Scheme

Courses	Credit Hours
Compulsory Courses	19
Professional Courses	43
Foundation Courses	24
Content Courses	27
General Courses	05
Pedagogy I &II	06
Teaching Practice	15
Total Credit Hours:	**139**

Year / Semester wise Scheme of Studies of B.Ed (Elementary)

I[st] Year

SEMESTER I

S.NO	CODES	COURSES	CREDIT HRS
1		Functional English-I (Compulsory)	3
2		* Islamic Studies/** Ethics (Compulsory)	3
3	EDU-301	Child Development (Foundation)	3
4		Urdu / Regional Languages (Content)	3
5		General Science (Content)	3
6	EDU-302	General Methods of Teaching (Foundation)	3
		Total Credit Hours	**17**

SEMESTER II

S.NO	CODES	COURSES	CREDIT HRS
1		English-II (Communication Skills Compulsory)	3
2		Computer Literacy (Compulsory)	3
3	EDU-303	Classroom Management (Foundation)	3
4		General Mathematics (Compulsory)	3
5		Pakistan Studies (Compulsory)	2
6	EDU-331	** Methods of Teaching Islamic Studies (Professional)	3
		Total Credit Hours	**17**

2[nd] Year

SEMESTER III

S.NO	CODES	COURSES	CREDIT HRS
1	EDU-432	Teaching Literacy Skills (Professional)	3
2		Art, Crafts and Calligraphy (Content)	3
3	EDU-433	Teaching of Urdu/ ** Regional Languages (Professional)	3
4	EDU-434	Teaching of General Science (Professional)	3
5	EDU-435	Instructional and Communication Technology (ICT) in Education (Professional)	2
6	EDU-411	Teaching Practice (Short Term)	3
		Total Credit Hours	**17**

SEMESTER –IV

S.NO	CODES	COURSES	CREDIT HRS
1	EDU-404	Classroom Assessment (Foundation)	3
2	EDU-436	Teaching of English (Professional)	3
3	EDU-437	Teaching of Mathematics (Professional)	3
4	EDU-405	School, community and Teacher (Foundation)	2+1
5	EDU-438	Teaching of Social Studies (Professional)	2
6	EDU-412	Teaching Practice	3
		Total Credit Hours	**17**

3rd Year

SEMESTER –V

S.NO	CODES	COURSES	CREDIT HRS
1	EDU-539	English –III (Technical Writing & Presentation Skills) (Compulsory)	3
2	EDU-506	Foundations of Education (Foundation)	3
3		Content Course –I (from selected discipline –I)	3
4		Content Course –I (from selected discipline –II)	3
5	EDU-507	Curriculum Development (Foundation)	3
6	EDU-508	Educational Psychology (Foundation)	3
		Total Credit Hours	**18**

SEMESTER –VI

S.NO	CODES	COURSES	CREDIT HRS
1	EDU-521	Contemporary Issues and Trends in Education (Professional)	3
2		Content Course –II (from selected discipline –I)	3
3		Content Course –II (from selected discipline –II)	3
4	EDU-522	Comparative Education (Professional)	3
5	EDU-509	Introduction to Guidance and Counseling (Professional)	3
6	EDU-523	Learning Innovation & Interactive Teaching (General)	2
		Total Credit Hours	**17**

4th Year

SEMESTER VII

S.NO	CODES	COURSES	CREDIT HRS
1		Content Course –III (from selected discipline –I)	3
2		Content Course –III (from selected discipline –II)	3
3	EDU-613	Pedagogy –I (Methods of Teachings related to specialization –I)	3
4	EDU-614	Pedagogy –II (Methods of teaching related to specialization –II)	3
5	EDU-691	Research Methods in Education (Professional)	3
6	EDU-615	Teaching Practice (Short Term)	3
		Total Credit Hours	**18**

SEMESTER VIII

S.NO		COURSES	CREDIT HRS
1	EDU-624	School Management (Professional)	3
2	EDU-625	Test Development and Evaluation (Professional)	3
3	EDU-626	Educational law (General)	3
4	EDU-616	Teaching Practice (Long Term)	6
5	EDU-699	Research Project (Professional)	3
		Total Credit Hours	**18**
		Grand Total Credit Hours	**139**

Note: *After completing 2 years, the universities / institutions may award an* ***Associate Degree in Education (ADE).*** *However, the students admitted for B.Ed. (Hons) 4 Years DegreeProgram will continue for 3rd and 4th Year.*

* ***Same as published in HEC Curriculum of Education 2010.***

** ***Universities will develop the courses.***

Associate Degree in Education (ADE)
Two Years Scheme of Studies

Eligibility Criteria

1. FA/F.Sc/ A levels with minimum 2nd Division.
2. FA/F.Sc/ A levels with school subjects.

Duration:	2 years (4 Semesters)
Semester Duration:	16-18 weeks Semesters: 4
Course Load per semester:	15-18 Cr hr
Number of Courses per semester:	5-6 (not more than 3 lab/ practical courses)

Structure of the Scheme

Courses	Credit Hours
Compulsory Courses	16
Professional Courses	22
Foundation Courses	15
Content Courses	09
Teaching Practice	06
Total Credit Hours:	**67**

Year / Semester wise Scheme of Studies of Associate Degree in Education (ADE)

I[st] Year

SEMESTER I

S.NO	COURSES	CREDIT HRS
1	Functional English-I (Compulsory)	3
2	* Islamic Studies/** Ethics (Compulsory)	2
3	Child Development (Foundation)	3
4	Urdu / Regional Languages (Content)	3
5	General Science (Content)	3
6	General Methods of Teaching (Foundation)	3
	Total Credit Hours	**17**

SEMESTER II

S.NO	COURSES	CREDIT HRS
1	English-II (Communication Skills Compulsory)	3
2	Computer Literacy (Compulsory)	3
3	Classroom Management (Foundation)	3
4	General Mathematics (Compulsory)	3
5	Pakistan Studies (Compulsory)	2
6	** Methods of Teaching Islamic Studies (Professional)	3
	Total Credit Hours	**17**

2[nd] Year

SEMESTER III

S.NO	COURSES	CREDIT HRS
1	Teaching Literacy Skills (Professional)	3
2	Art, Crafts and Calligraphy (Content)	3
3	Teaching of Urdu/ ** Regional Languages (Professional)	3
4	Teaching of General Science (Professional)	3
5	Instructional and Communication Technology (ICT) in Education (Professional)	2
6	Teaching Practice (Short Term)	3
	Total Credit Hours	**17**

SEMESTER –IV

S.NO	COURSES	CREDIT HRS

1	Classroom Assessment (Foundation)	3
2	Teaching of English (Professional)	3
3	Teaching of Mathematics (Professional)	3
4	School, community and Teacher (Foundation)	2+1
5	Teaching of Social Studies (Professional)	2
6	Teaching Practice	3
	Total Credit Hours	**17**

COURSE SYLLABI

for

ADE and B.Ed. (Hons.) Elementary Programs

Note:

The primary audience for course syllabi is student teachers although teaching faculty will also find them useful.

Course guides for faculty are also available for most of the courses in the first two years of the B.Ed. (Hons) Elementary and ADE. The course guides provide ideas and resources for teaching the courses.

Course guides can be downloaded from:

www.pakteachers.org/Curriculum-Material

English I (Functional English) (Compulsory)

Semester 1

SYLLABUS: FUNCTIONAL ENGLISH

YEAR/SEMESTER: Year 1/Semester 1
DURATION: 3 credits, 48 class hours

COURSE DESCRIPTION

The purpose of this course is to develop the English language proficiency of prospective elementary school teachers, and to help them become confident in reading, writing, speaking and listening to the English language.

Instead of teaching grammar in isolation and at sentence-level only, this course is based on developing language abilities among student teachers through an integrated approach that provides opportunities to develop their listening, speaking, reading and writing skills. With a focus on social interaction, the course draws specific attention to accurate use of structures, improved pronunciation and to developing active vocabulary in descriptive, narrative and instructional texts.

COURSE OUTCOMES

After completing this course, pre-service teachers/teachers will:

- have improved their listening and reading skills in English following significant exposure to texts in the target language
- be able to communicate in written and oral English with class-fellows, peers and teachers
- rely less on first/native language and reduce their use of code-switching in formal and informal situations
- have a deeper understanding of correct English structures in descriptive, narrative and instructional texts.

LEARNING AND TEACHING APPROACHES

The course uses an integrated approach to language teaching which enables learning of all the four skills of language i.e. listening, speaking, reading and writing, in natural settings. The teachers and student teachers are encouraged to respond through pair/group work and active learning strategies such as role play, debates, presentations, brainstorming, etc. Teachers and student teachers are encouraged to use online resources and make the best use of the interactive exercises in various websites. The course links learning approaches with assessment tasks to provide student teachers with the opportunity to accept responsibility for their own learning.
Even if student teachers begin the course unable to communicate fluently in English, instructors will use English as the language of instruction. Instead of switching to Urdu or other languages when there is a problem, instructors will use other strategies such as slowing down, repeating a text, asking others to explain, or using simpler vocabulary.

SEMESTER OUTLINE

UNIT 1 –INTRODUCTIONS (3 weeks/9 hours)
The first unit will provide student teachers with an opportunity to interact with one another in oral and written forms. It will serve as an icebreaker and help develop conversations through suggesting simple words and phrases to describe people, likes/dislikes, etc., in a logical

sequence.

Week 1	**Making introductions** • Make effective self and peer introductions • Take useful introductory notes
Week 2	**Requests and enquiries** • Make appropriate requests and enquiries • Respond to enquiries • Listen for specific information in English.
Week 3	**Practice Practical Classroom English** • Use different classroom language routines (functions) for effective classroom Management • Develop effective classroom language by following the given examples/ Situations • Demonstrate and practice practical classroom language routines.

UNIT 2 –SOCIAL INTERACTION (4 weeks/12 hours)

This unit is aimed at developing student teacher social interaction in English and developing their interpersonal skills. Through class activities they actively engage in formal and informal contexts to congratulate, express gratitude, make invitations and respond to speakers in oral and written contexts

Week 4	**Greetings** • Greeting friends and family on different occasions/reasons • Responding to a happy event • Using formal greeting expressions appropriately
Week 5	**Saying thank you** • Using formal/ informal expressions of gratitude appropriately • Reading a story which uses expressions of gratitude • Writing a formal letter to say thank you to a teacher/parent/friend
Week 6	**Inviting people** • Demonstrating the use of formal and informal expressions of invitation • Developing verbal and written skills for invitations • Responding to invitation requests (accepting and declining)
Week 7	**Regrets** • Expressing regrets orally and in writing in an appropriate manner • Saying sorry and accepting apologies

UNIT 3 –GIVING AND FOLLOWING DIRECTIONS (3 weeks/9 hours)	
In this unit, student teachers will learn how to follow directions from a map, to give directions to search for a location and specific information. This is to be followed by structuring clear instructions and learning how to put something together from a recipe or manual. .	
Week 8	**Following and giving directions** • Following directions from a map • Giving directions for a location in oral and written forms • Reaching a destination
Week 9	**Giving clear instructions** • Carrying out instructions • Structuring instructions • Writing clear instructions
Week 10	**Designing instruction manuals** • Exploring instruction manuals of different products • Comparing instruction manuals for developing critical understanding of the essentials of a manual • Designing an instruction manual for a new student enrolling in college. This could be group project.
UNIT 4 - SHARING EXPERIENCES (3 weeks/9 hours)	
In this unit, student teachers will engage with meanings in a variety of written and visual texts through shared, guided and independent readings of nar encouraged to respond to the narrative and imaginative texts by building up stories and sharing them in written and oral form.	
Week 11	**Sharing narratives** • Reading short stories • Reading excerpts; comic strips, interviews, etc.
Week 12 3	**Sharing unique experiences** • Summarizing/Narrating true stories • Solving word puzzles to develop language awareness • Reading a short stories followed by exercises/worksheet • Converting an event into a short story • Using pictures as stimuli for narrative creation • Using songs as examples of personal experience
Week 13	**Imaginative texts** • Identifying imaginative texts • Developing imaginative texts by giving engrossing stories and descriptions of Scenes

UNIT 5 –FUNCTIONING IN ENGLISH (3 weeks/9 hours)	
Student teachers will be involved in learning how language works and critically evaluating texts in terms of effectiveness, meaning and accuracy. This unit draws their attention to understanding how grammatical patterns change according to the purpose and audience.	
Week 14	**Writing styles** • Changing narration: converting a dialogue into a report • Converting a story into a news report • Converting a graph/picture into short report/story
Week 15	**Writing mechanics** • Punctuation and structure • Sentences, Fragments and run-ons • Subject-predicate and pronoun-reference agreement
Week 16	Project presentations Course Revision

SUGGESTED TEXTBOOKS AND REFERENCES

- Carver, T.K. &Fortinos-Riggs, S. (2006) *Conversation Book II–English in Everyday Life*. New York, Pearson Education Limited.
- Eastwood, J. (2005) *Oxford Practice Grammar*, Karachi: Oxford University Press. Swan, J. *Practical English Usage* (3rd editions) Oxford University Press
- Thomson and Martinet, *A practical English Grammar (Intermediate)* Oxford University Press AllamaIqbal Open University *Compulsory English 1 (Code 1423)*
- The following websites provide a variety of useful resources:
- http://www.bbc.co.uk/worldservice/learningenglish/
- http://learnenglish.britishcouncil.org/en/
- http://www.teachingenglish.org.uk/
- Grammar software free download http://freesoftwarepc.biz/educational-software/download-free-software-3d-grammar-english-portable/

GRADING POLICY

A variety of assessments should be used to assess student learning. It is recommended that course work count towards at least 50% of the final grade. Instructors should advise which pieces of course work (assignments) will be graded. The remainder of the grade will be determined by mid and end of semester exams.

Islamic Studies
(Compulsory)
Semester 1

Title of Course: **Islamic Studies**
Credit Hours: 03

Objectives
This course is aimed at:

1. To provide Basic information about Islamic Studies
2. To enhance understanding of the students regarding Islamic Civilization
3. To improve Students skill to perform prayers and other worships
4. To enhance the skill of the students for understanding of issues related to faith and religious life.

Course Outline
Introduction to Quranic Studies
1) Basic Concepts of Quran
2) History of Quran
3) Uloom-ul -Quran

Study of Selected Text of Holly Quran
1) Verses of Surah Al-Baqra related to Faith (Verse No-284-286)
2) Verses of Surah Al-Hujrat related to Adab Al-Nabi (Verse No-1-18)
3) Verses of Surah Al-Mumanoon related to Characteristics of faithful (Verse No-1-11)
4) Verses of Surah al-Furqan related to Social Ethics (Verse No.63-77)
5) Verses of Surah Al-Inam related to Ihkam(Verse No-152-154)

Study of Selected Text of Holy Quran
1) Verses of Surah Al-Ihzab related to Adab al-Nabi (Verse No.6,21,40,56,57,58.)
2) Verses of Surah Al-Hashar (18,19,20) related to thinking, Day of Judgment
3) Verses of Surah Al-Saf related to Tafakar,Tadabar (Verse No-1,14)

Seerat of Holy Prophet (S.A.W)
1) Life of Muhammad Bin Abdullah (Before Prophet Hood)
2) Life of Holy Prophet (S.A.W) in Makkah
3) Important Lessons derived from the life of Holy Prophet in Makkah

Seerat of Holy Prophet (S.A.W) II
1) Life of Holy Prophet (S.A.W) in Madina
2) Important Events of Life Holy Prophet in Madina
3) Important Lessons Derived from the life of Holy Prophet in Madina

Introduction ToSunnah
1) Basic Concepts of Hadith
2) History of Hadith
3) Kinds of Hadith
4) Uloom –ul-Hadith
5) Sunnah& Hadith
6) Legal Position of Sunnah

Selected Study from Text of Hadith

Introduction To Islamic Law & Jurisprudence
1) Basic Concepts of Islamic Law & Jurisprudence
2) History & Importance of Islamic Law & Jurisprudence
3) Sources of Islamic Law & Jurisprudence
4) Nature of Differences in Islamic Law
5) Islam and Sectarianism

Islamic Culture & Civilization

1) Basic Concepts of Islamic Culture & Civilization
2) Historical Development of Islamic Culture & Civilization
3) Characteristics of Islamic Culture & Civilization
4) Islamic Culture & Civilization and contemporary issues

Islam & Science

1) Basic Concepts of Islam & Science
2) Contributions of Muslims in the Development of Science
3) Quranic& Science

Islamic Economic System

1) Basic Concepts of Islamic Economic System
2) Means of Distribution of wealth in Islamic Economics
3) Islamic Concept of Riba
4) Islamic Ways of Trade & Commerce

Political System of Islam

1) Basic Concepts of Islamic Political System
2) Islamic Concept of Sovereignty
3) Basic Institutions of Government in Islam

Islamic History

1) Period of Khlaft-E-Rashida
2) Period of Ummayyads
3) Period of Abbasids

Social System of Islam

1) Basic Concepts of Social System Of Islam
2) Elements of Family
3) Ethical Values of Islam

Reference Books:

- Ahmad Hasan,*Principles of*(1993),*IslamicJurisprudence*"" Islamic Research Inst Pakistan, International Islamic University.
- Bhatia, H*Studies. in*S*Islamic.*(1989)*Law,Religionand Society*"" New Delhi: Deep &PublicationsDr. Muhammad Zia-ul-Haq, (2001)*IntroductiontoAl.Sharia*" *Al Islamia*" Islamabad,
- Pakistan: AllamaIqbal Open University
- Hameed ullah*Introduction*Muhammad,*toIslamMulanaMuhammad*,, *YousafIslahi*,"
- Hameed ullah*Emergence*Muhammad,*ofIslam*"Islamabad:" IRI.
- Hameed ullah*Muslim*Muhammad,*ConductofState*"Islamabad",Pakistan:Hussain Hamid Hassan, u leaf Publication.
- Mir Waliullah,*MuslimJrisprudence*(1982),*andtheQuranicLaw*"*of Crimes*" Islamic Book Publication

EDU-301 Child Development (Foundation) Semester 1

Syllabus: Child Development

YEAR/SEMESTER: Year 1/Semester 1
DURATION:03 credits, 48 class hours

COURSE DESCRIPTION

The primary focus of this course is learning about children in order to become an effective teacher. It provides prospective teachers with an overview of child development and growth as an holistic process. The latest research and thinking with regard to the conditions that affect
children's learning and development will be of development. Development of language and cognition as well as emotional, social, and
physical characteristics of children will be explored. Students will form their own child development theory. Implications of child development theory for schools, teachers, and society will be considered. Student will be provided with real experiences to study/observe children at different levels of development. They will have an opportunity to enhance their understanding of how people learn, individual differences and learning styles, and how theories of learning and development relate to classroom learning and teaching. The course will enable students to create learning environments that suit the needs of an individual child as well as children in general.

COURSE OUTCOMES

After completing this course, pre-service teachers/teachers will be able to:

- describe major theories and big themes in how children develop
- compare the characteristics of various developmental stages according to various theorists
- identify factors influencing the learning process
- design different age appropriate teaching methods based on developmental theory
- identify individual differences of students and children with special needs
- design different age appropriate teaching strategies based on developmental theory
- reflect on their conceptions about child development and its implications for teaching and learning.

LEARNING AND TEACHING APPROACHES

A variety of teaching and learning approaches will be used throughout the course, for example, group work, peer learning, class debates and discussions. Students will collaborate on performance-based tasks such as performing role plays, making informational posters, and writing letters to teachers. The course links learning approaches and assessments to provide Prospective Teachers with opportunity to accept responsibility for their own learning.

SEMESTER OUTLINE	
Unit 1 –Course Introduction (2 weeks/6 hours) Unit one gives an overview of the course and the key models, theorists, and debates in child development. Development is seen as an holistic process.	
Week 1:	
	Overview of Growth and Development as a Holistic Process Psycho-social Models
	Behaviorism and Socio-cultural Models
	Cognitive Models
Week 2:	Factors That Affect the Child: Key Issues and Controversies (3 Big Debates)
	Approaches to Classroom Development
Unit 2 –Early Childhood Development (2 weeks/6 hours)	
This unit looks at the first three stages of child development: infant, toddler, and preschool. It focuses on knowledge essential for elementary and middle school teachers about how children grow and how this knowledge can inform	
Week 3:	
	Unit Introduction and Infant Development 3 Domains of Toddler Development
	Developmentally Appropriate Practices for Toddlers
Week 4:	3 Domains of Preschool Child Development
	Developmentally Appropriate Practices for Preschool Child Development
	Unit Review
Unit 3 –Elementary School-Age Child Development (3 weeks/9 hours)	
The physical, cognitive, emotional, and social development of elementary school-age children (6-12 years old) are explored. Emphasis is on understanding the whole child. Students will analyse stages of development during this critical period of growth. They will have opportunity to consider how early childhood development can inform their study of primary child development.	
Week 5:	Introduction to Elementary Child Development Aspects of Physical Development Encouraging Healthy Physical Development
Week 6:	Cognitive Development: Over Theory Cognitive Development: Industriousness and Intelligences Emotional Development
Week 7:	Social Development: Changes and Parental Roles Social Development: Peer Interaction, Friendship, and Growth

Unit 4 - Adolescence and Development (3 weeks/9 hours)

Children undergo complex changes as they reach adolescence. The impact these changes have upon adolescent cognitive development, social development and behaviors such as motivation and identity -formation is examined. Critiques of adolescent developmental theory are considered.

Week 8:
Intro and overview of physical development
Physical dev. II: Individual/group differences
Social/emotional dv. I: Erikson, self and identity

Week 9:
Social/emotional dev. II: Adolescent peer group
Social/emotional dev. III: Motivation/self-regulation
Cognitive/linguistic dev. I: Piaget

Cognitive/linguistic dev. II: Vygotsky

Week 10: Cognitive/linguistic dev. III: Appropriate assessment Critics of adolescent developmental theory Conclusion/review

Unit 5 –Differences in Development and Special Needs (3 weeks/9 hours)

Focus is on learning differences. The role of the school and the instructor in managing and accommodating learning difference in classroom practice is considered. Perspectives on national educational policy in Pakistan on accommodating diverse developmental needs are explored.

Week 11:	Differences in student learning styles Alternative sessions: Understanding differences in light of Child development across the elementary and middle school years Or Gardner's multipleandspecialintelligence need students Critique of Gardner's theory Scaffolding different learning styles
Week 12:	Recognizing disability and learning disorders I - emotional and Behavioural Recognizing disability and learning disorders II - language, physical and sensory Cognitive differences: Delays and giftedness
Week 13:	Addressing special needs in the classroom The perspective of national policy Unit reflection and review

Unit 6 –The Influence of Society and Culture on Child Development (3 weeks/9 hours)

Child development is influenced by families, society, schools, and teachers influence child development. Students will reflect on major concepts of child development and their implications for teaching and learning. The role of the teacher will be considered.

Week 14:	The family in child socialization Partnering with families Role of community and society
Week 15:	Inclusion and gender balance The school and learning environment Role of the teacher in child development
Week 16:	Teacher'sinfluence on students Schools, families and communities as partners in child development Reflection and review

SUGGESTED TEXTBOOKS AND REFERENCES

- Bredekamp, S. &Copple, C. (eds.) (1999). *Developmentally appropriate practice in early childhoodprograms serving children from birth through age 8*. Washington, D.C.: National Association for theEducation of Young Children.
- Child Development Institute, http://childdevelopmentinfo.com/
- Early Childhood Development (ECD) Pakistan Website: http://www.ecdpak.com/
- Encyclopedia on Early Childhood Development: (Available in English and Urdu)
- http://www.child-encyclopedia.com/en-ca/home.html
- Howes, C. & Ritchie, S. (2002). *A Matter of Trust:Connecting Teachers and Learners in the Early ChildhoodClassroom.* New York: Teachers College Press.
- Howes, C. (2012). *Culture and Child Development in Early Childhood Programs:*
- *Practices for Quality Education and Care.* New York: Teachers College Press.
- RCC; ECD Programme. *Nurture: Pakistan's Pioneer Public* http://www.ecdpak.com/nurture/about_nurture.html
- Search-Institute. 40 Developmental Assets for Early Childhood, K-3, Middle Childhood, & Adolescents. http://www.search-institute.org/developmental-assets/lists
- Steinberg, L. (1999). *Adolescence, fifth edition.* McGraw-Hill.

ASSIGNMENTS

Assignments will be listed on a separate handout. These assignments will contribute to your learning and count toward your final grade.

GRADING POLICY

A variety of assessments will be used in the course, including mid-term and final examinations.

نصاب اردو
SYLLABUS URDU

نصاب برائے نفسِ مضمون/ اردو مافیہ (Content)

- کورس کا بیان (COURSE DESCRIPTION)
- حاصلاتِ کورس (COURSE OUTCOMES)
- تعلّمی اور تدریسی رسائی: (LEARNING AND TEACHING APPROACHE)
- یونٹ (UNIT)

۱۔ تعارفِ زبان

۲۔ اصنافِ ادب

۳۔ اصنافِ سخن (نظم و غزل)

۴۔ انشا پردازی

۵۔ اردو کے جدید رجحانات

- حوالہ جات (REFERENCES)
- اسائنمنٹ (مختلف موضوعات) (ASSIGNMENTS)
- کورس سے متعلق لازمی معلومات
- اردو سے متعلق غلط فہمیوں کا اِزالہ
- تفصیلی سبقی خاکے

نصاب برائے نفسِ مضمون/اردو مافیہ (Content)

سال اول سمیسٹر ۔ا

ایسوسی ایٹ ڈگری آف ایجوکیشن/ADE

بی ایڈ ایلیمینٹری/(آنرز)

کریڈٹ:۳

پیش لازمہ:(PREREQUISITES)

ایف اے سطح تک اردو لازمی پڑھنے والے طلبہ اس کورس میں داخلے کے اہل ہوں گے۔

کورس کا بیان: COURSE DESCRIPTION

یہ کورس خاص طور پر زیرِ تربیت اساتذہ کے لیے ترتیب دیا گیا ہے۔ اور یہ اہتمام کیا گیا ہے کہ زیرِ تربیت اساتذہ بنیادی لسانی مہارتوں (سننا، بولنا، پڑھنا، لکھنا، سمجھنا) میں کمال حاصل کر سکیں۔ ان مہارتوں میں دسترس حاصل کرنے کے لیے عملی طریق Functional Method استعمال کیا جائے گا۔

فنکشنل (عملی) طریقے میں ساخت اور معنی دونوں کی اہمیت پر زور دیا جاتا ہے۔ اس طریقہء تدریس کے ذریعے زبان کے سیاق و سباق یا سانچے یعنی کسی موقع پر ''کیا کہنا چاہیے'' پر خاص توجہ دی جائے گی۔ تاکہ زیرِ تربیت اساتذہ نظم و نثر میں فکری، فنی اور عملی سطح پر مہارت حاصل کر سکیں۔ یہ امر بھی قابلِ توجہ ہے کہ اس کورس میں اساتذہ قواعد و رانِ مطالعہ اسباق پر دسترس حاصل کریں گے۔

سادہ لکھائی کو متعارف کروایا جائے گا۔ تاکہ کورس کے اختتام پر طلبہ محض ادب کے نہیں بلکہ زبان کے استاد کہلائیں۔ کسی بھی زبان کی تدریس سے پہلے اس کے متن پر عبور ہونا ضروری ہے اس لیے نصاب میں وہ شعراء و ادباء شامل کیے گئے ہیں جو جماعت اول تا ہشتم تک درسی کتابوں میں پڑھائے جاتے ہیں۔ اردو کو بہ طور گلوبل لینگویج جدید رجحانات (ضرورتوں/تقاضوں/تعمیری جہتوں) کے حوالے سے بھی زیرِ بحث لایا گیا ہے۔ علاوہ ازیں ابتدائی جماعتوں میں پڑھانے کے طریقے ترکیبی (الف بائی+صوتی) تحلیلی، مخلوطی، فنکشنل اردو کی تدریس پر خصوصی توجہ دی گئی ہے تاکہ ایلیمینٹری اساتذہ مہارت سے ان جماعتوں میں اردو پڑھا سکیں۔

حاصلاتِ کورس: (COURSE OUTCOMES)

اس کورس کی تکمیل کے بعد زیرِ تربیت اساتذہ اس قابل ہو جائیں گے کہ وہ:

- اردو زبان کی ساخت، وسعت اور اہلیت سے آگاہی حاصل کر سکیں۔
- ادبیات کو زبان کے عملی تناظر میں زندگی کے حوالے سے سمجھ سکیں۔
- مختلف موضوعات کو عملی و تحریری انداز میں بیان کر سکیں۔
- اردو کے ابلاغ میں جدید رجحانات کے تحت نئی جہتوں پر عمل کر سکیں۔
- زبان کے استاد کی حیثیت سے اپنی صلاحیتوں کی تنظیمِ نو کر سکیں۔

- تدریسِ زبان کے عملی پہلو کو ابتدائی و درمیانی سطح کی جماعتوں استعمال کر سکیں۔
- عملی طریق (Functional Method) سے نصاب پر دسترس حاصل کر سکیں۔

تعلّمی اور تدریسی رسائی:(LEARNING AND TEACHING APPROACH)

اس کورس کی ترتیب نو کے مقاصد کو پیشِ نظر رکھتے ہوئے تعلّمی اور تدریسی رسائی میں جدید و قدیم تدریسی طریقے مثلاً ترکیبی، تحلیلی، مخلوطی استقرائی، استخراجی، انکشافی اور خصوصاً فنکشنل و عملی جیسے مستند طریقے استعمال کیے گئے ہیں سوالات کا اسلوب، سمعی بصری معاونات کا بروقت استعمال، انٹرنیٹ سے استفادہ، پیئر لرننگ جیسی تدریسی تکنیکوں کا ماہرانہ انداز میں موقع پر برتنا سکھایا گیا ہے جو ایک مشاق استاد کی تدریسی حکمتِ عملی سے مزید کارآمد ہے۔

یونٹ ۱

تعارفِ زبان

تعارف:

اس یونٹ میں زبان کی اہلیت کے وسیع تر موضوعات کو شامل کیا گیا ہے تا کہ اردو کے استاد کو ادب پر فنی اور زبان پر حتی الامکان دسترس حاصل ہو۔ جہاں زبان کی تاریخی حیثیت کے حوالے سے بابائے اردو مولوی عبدالحق کی کاوشوں کو سراہا گیا ہے وہیں ڈاکٹر محمد صدیق خان شبلی کے مضمون عملی، فنکشنل اردو سے بھرپور استفادہ کیا گیا ہے تا کہ نو آموز اساتذہ جدید تدریسی تکنیک اور مہارتوں کو بروئے کار لا سکیں۔ ان طریقوں سے تدریس کو ایک منظم سائنس کی صورت میں پڑھانے کے لیے کئی ایک اصولوں کو بھی اختیار کیا جائے گا۔ مثلاً: الفاظ کی بار بار مشق، تذکیر و تانیث، واحد و جمع، جملہ سازی، انتخابی مشقیں۔ ان طریقوں میں بنیادی تدبیریں استعمال کی جائیں گی۔ جو مثبت نتائج کا باعث بنیں گی۔ تا کہ ایلیمینٹری سطح کے اساتذہ زبان و ادب کی تدریس میں جدید طریقے استعمال کر سکیں۔

پہلا ہفتہ

- تعارف زبان (اردو زبان کی ترقی کا پس منظر و پیش منظر)
- زبان کی اہمیت و افادیت (فکری/فنی/عملی سطح پر)
- اردو کے فروغ میں درپیش مشکلات (تدارک/غلط فہمیوں کا ازالہ)

دوسرا ہفتہ

- اردو زبان کی کہانی از بابائے مولوی عبدالحق (مضمون کا مطالعہ)
- عملی/فنکشنل اردو ڈاکٹر محمد صدیق خان شبلی (مضمون کا مطالعہ)
- مصنفین کا تعارف اور تعمیری کردار (اردو زبان کے حوالے سے)

یونٹ ۲

اصنافِ ادب

(صرف وٹحو تدریسِ ادبیات کا حصہ ہیں)

تعارف:

اس یونٹ میں اردو ادب کی اصناف کا مختصر تعارف شامل ہے۔نثری اصناف میں داستان، ناول، ڈراما، مضمون، آپ بیتی، مکالمہ اور طنز و مزاح شامل ہیں۔تا کہ ایلیمنٹری اساتذہ نثر کی تمام اصناف سے واقفیت حاصل کر سکیں۔مثلاً مزاح ادب کی صنف ہے اور طنز صفتِ ادب ہے۔علاوہ ازیں فن پارے کا تنقیدی جائزہ لینے کے اس کی ہیت کا ادراک ضروری ہے۔اس یونٹ میں ادبی اصطلاحات/قواعد کو جدید، عملی، فنکشنل اور ثقافتی طریقوں کے ذریعے روزمرہ زندگی سے مربوط کر کے پڑھایا جائے گا تا کہ قواعد نفسِ مضمون کا حصہ بن جائے اور زبان شناسی پر عبور کا باعث بن جا سکے۔ اسی ضرورت کے تحت اس کورس میں ادبی اصطلاحات کے ساتھ طلبہ جدید تعلیمی اصطلاحات کا استعمال بھی سیکھیں گے۔

مثلاً (زبانی اندازِ تعلیم (Oral Approach) اور صورت حال کے مطابق تدریس زبان Situational Language (Teaching) جیسی اصطلاحات حالیہ دور کی پیداوار ہیں جن کا مقصد لسانی سانچوں کی تدریس کو بہتر بنانا ہے۔تا کہ اسباق کی تدریس کے ساتھ جانچ (Testing) اور مشق (Exercise) کا کام بھی چلتا رہے۔ان مقاصد کے حصول کے لیے سب سے پہلا قدم بے تکلف گفتگو کے مواقع پیدا کرنا ہے۔مثلاً سننا بولنا تو سننے اور بولنے ہی سے آتا ہے۔لہذا اس یونٹ میں سننے اور بولنے کے زیادہ سے زیادہ مواقع فراہم کیے جائیں گے۔

تیسرا ہفتہ

- اصنافِ نثر کا مختصر تعارف اجزا و اقسام/اصناف کا تقابل
- داستان (اجزا/ناول و داستان کا فرق)
- ناول (اقسام/ناول و افسانہ کا فرق)

چوتھا ہفتہ

- ڈراما (اقسام/اجزائے ترکیبی/روایت)
- افسانہ نگاری کا تعارف اشفاق احمد کے "گڈریا" کے حوالے سے (فکری و فنی تجزیہ)
- طنز و مزاح مشتاق احمد یوسفی کی مزاح نگاری کے حوالے مزاح اور طنز میں فرق کی وضاحت

پانچواں ہفتہ

- ماخوذ اقتباسات (صرف یعنی الفاظ سے بحث، نحو مکمل جملوں اور عبارتوں سے بحث)
- اغلاطِ زبان (بلحاظ قواعد فقروں کی تصحیح)
- محاورات (دورانِ گفتگو/عام بول چال میں استعمال)

چھٹا ہفتہ

- ضرب الامثال (تعارف، تلمیح اور ضرب الامثال میں فرق)
- اوصافِ خوش خوانی (تلفظ، لب ولہجہ، روانی، تاکید، تفصیل)
- تحت اللفظ (نثر و نظم سے عملی مشق)

یونٹ ۳

اصنافِ سخن (نظم وغزل)

تعارف:

زیرِ بحث یونٹ میں شعری اصناف، حمد، نعت، غزل، پیروڈی اور گیت شامل ہیں۔ اس یونٹ کا عملی پہلو یہ ہے کہ شعرائے کرام کے منظوم فن پاروں کا ایک استاد کی حیثیت سے فکری وفنی، تقابلی وتحلیلی تجزیہ پیش کر سکے۔ مثلاً میرؔ کا ترکیبی شعر ہے۔

فقیرانہ آئے صدا کر چلے
میاں خوش رہو ہم دعا کر چلے

یہی خیال غالبؔ کے ہاں تحلیلی رنگ میں ملاحظہ فرمایئے!

بنا
تماشائے اہلِ کرم دیکھتے ہیں

قوتِ حافظہ، فکر اور تخیل کی تربیت اس جہت کا لازمہ ہے۔ اس کوشش کو عملی رنگ دینے کے لیے تمثیل، رول پلے، تحت اللفظ اور فی البدیہہ نظم گوئی کے رجحان کو فروغ دیا جائے گا۔

ساتواں ہفتہ

- اصنافِ سخن کا تعارف
- اردو نظم (تعارف، اقسام)
- اردو غزل (نظم اور غزل میں فرق)

آٹھواں ہفتہ

- علامہ محمد اقبال کی نظم ''روحِ ارضی آدم کا استقبال کرتی ہے''۔

- مولانا الطاف حسین حالؔی کی نظم مسدس حالؔی کے پہلے چار بند
- پس منظر کے تحت منظومات کی تشریح

نواں ہفتہ

- مرزا اسداللہ خاں غالبؔ کی غزل/"بازیچہء اطفال ہے دنیا میرے آگے"
- صوفی غلام مصطفیٰ تبسم کی غزل "یہ کیا کہ اک جہاں کو کرو وقفِ اضطراب" کے پہلے پانچ اشعار
- شعرا کا فکری وفنی تقابل

دسواں ہفتہ

- پرائمری سطح کی نظمیں (کلام پر اظہارِ خیال، تمثیل)
- وسطانی سطح کی نظمیں (کلام کی خوبیاں، تبصرہ)
- تحت اللفظ اور فی البدیہہ نظم گوئی

یونٹ ۴

انشاپردازی

تعارف:

آج ضرورت ایسی اُردو کی ہے جو روزمرہ زندگی میں زبان کے استعمال یعنی "کس موقع پر کیسی زبان بولی جائے" کے اصول پر سکھائی جائے۔ جس کا مقصد طالب علم کو مختلف صورتوں میں زبان کے استعمال کے قابل بنانا ہے۔ اس لیے فنکشنل اُردو کا مطلب روزمرہ کی اُردو ہے۔ یہ اُردو ادبی اور علمی اُردو سے مختلف ہوگی۔ اس کے مقابلے میں سادہ، آسان اور عام فہم ہوگی۔ ایلیمنٹری سطح کے اساتذہ انشا پردازی کے طریقے، تکنیک اور حکمتِ عملی کے گُر سیکھ کر اس قابل ہو جائیں گے کہ ان خطوط پر مزید کام کر سکیں اور اُردو میں عملی ضروریات ادبی، صحافتی، دفتری، سائنسی و تکنیکی اور علمی اُردو کے ضمن میں مہارت دکھا سکیں۔ مندرجہ ذیل امور بھی تقریری انشا یعنی بول چال سیکھنے میں مدد و معاون ثابت ہوں گے۔ ان میں سے کئی تدابیر استعمال کی جائیں گی۔ جیسے کہانیاں، پہیلیاں، لطیفہ گوئی، مکالمے، بہروپ بھرنا یا ڈراما کاری، بحث مباحثے/مذاکرے۔ مثلاً رپورتاژ کو ڈراما کاری میں تبدیل کرنا۔ غالبؔ کے خط کو مکالمہ بنا کر پیش کرنا یا مولوی عبدالحق کے خط کو تقریری اندازِ بیاں دے دینا۔ اس ضمن میں جماعتی سطح/معیار/استحسان کا خاص خیال رکھا جائے گا۔ تاکہ اردو سے شغف اور زبان سیکھنے کی خواہش فروغ پائے۔

گیارہواں ہفتہ

- اردو حروفِ تہجی (صوتیات/اعراب/حرکات)
- اُردو کا جدید ترین قاعدہ (صوتی، بنی، تصویری، تلازمی)
- حروف کا عملی کردار (ابتدائی و درمیانی جماعتی سطح پر)

بارھواں ہفتہ

- صحیح بولنے کی شرائط (روزمرہ بول چال، عام گفتگو، مکالمے، ذرائع ابلاغ، اخبارات، ٹی وی ڈرامے)
- تعلیم خوش خطی (درست تحریر کے ضروری امور)
- تخلیقی انشا (مشاہدہ وتحریر)

تیرھواں ہفتہ

- خطوط، درخواست (بہ شمول برقیاتی خط E-mail، برقیاتی پیغام SMS)
- مکالمہ وڈراما نگاری (ڈراما کاری)
- مضمون نویسی (جدید موضوعات پر اظہارِ خیال)

یونٹ ۵

اردو کے جدید رجحانات

(ضرورتیں/تقاضے/تعبیری جہتیں)

تعارف :

اردو کے جدید رجحانات: ضرورت، تقاضے اور نئی تعبیری جہت کے حامل ہیں۔ اردو کی ترویج کے لیے زبان وادب کے حوالے سے نصاب کی اس جہت کو نوآموز اساتذہ کے لیے حتی المقدور سادہ، عام فہم اور پر لطف انداز میں دیا گیا ہے۔ اردو برقی پیغام زیرِ تربیت اساتذہ کے ہاتھ میں موبائل کی صورت میں موجود ہے۔ اس مختصر سے کمپیوٹر نے اردو اطلاعیات کا مستقبل روشن کر دیا ہے۔ دفتری عملہ عام شہری سے اردو میں گفتگو کرنے پر مجبور ہے تو صحافی اردو میں رپورتاژ رقم کر رہے ہیں۔ مذہب واخلاق کی ہر گرہ اردو کھول رہی ہے۔ سائنسی و تکنیکی ترقی عام ہو جائے کے مفروضے پر ہی زیرِ تربیت اساتذہ کو مستند عملی معلومات فراہم کی جائیں گی۔ آرٹ کے بغیر تو یہ کائنات بھی بے رنگ ہے تو اردو ادب کیسے آرٹ سے یا آرٹ ادب سے استفادہ نا کرے۔ اس خیال کو یہ نصاب عملی صورت دیتا ہے مثلاً اشعار میں پوشیدہ خیالات کو تصویر کے کینوس پر اتارنا۔ غالبؔ واقبالؔ کی شاعری پر یہ کام ہو چکا ہے۔ ملی نغمے، نعت اور مضامین کا مقابلہ تو اب شہرتِ عام حاصل کر چکا ہے۔ اردو کے اساتذہ میں زبان کے حوالے سے ملی تشخص اجاگر کرنے اور اسے گوبل لینگویج بنانے کی کارروائی میں حصہ لینے کے قابل بنانا ہی اس کورس کا مرکزی نقطہ ہے۔

چودھواں ہفتہ

- اردو کی ترویج (ہمہ پہلو ضرورت)
- اردو کی بین الاقوامی حیثیت (تقاضے/تعبیریں)
- اردو کمپیوٹر کی زبان (اطلاعیات: اردو کا مستقبل)

پندرھواں ہفتہ

- اردو ذریعہء ابلاغ (دفتر، صحافت، مذہب واخلاق)

- اردو اور جدید ٹیکنالوجی (ترقیاتی ادارے، معاشرتی شعبے اور کام)
- اردو اور ابلاغ کی زبان (عام بول چال کے حوالے سے)

سولہواں ہفتہ

- اردو آرٹ اور کلچر (نثر و نظم میں آرٹ/آرٹ میں نثر و نظم)
- اردو ترانہ ملی (قومی و ملی جذبے/ماخوذ متن)
- اردو گلوبل لینگویج (منظر نامہ)

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افسانے/کہانیاں/ڈرامے/خطوط

- ''خود کشی/ٹوبہ ٹیک سنگ'' سعادت حسن منٹو
- چور، اشفاق احمد
- رستم و سہراب، آغا حشرؔ

- ''مرزا غالب بندر روڈ پر'' خواجہ معین الدین (ڈراما سی ڈی)
- ''یوسف مرزا کے نام'' مرزا غالبؔ
- ''مولانا انشا اللہ خان کے نام'' علامہ اقبالؔ

ماڈل اسائنمنٹ : (ASSIGNMENTS)

۱۔ علامہ اقبالؔ کی شاعری مختلف موضوعات کا مرقع ہے۔ کسی ایک موضوع کو بنیاد بنا کر شعرا کٹھے کریں اور ایک کتابچے (booklet) کی صورت میں تیار کریں۔ اشعار کو لیبل کرنے کی وجوہات بھی تحریر کریں اور پہلے ہفتے کے اختتام پر جمع کروائیں۔

۲۔ دو گروپوں کو مختلف موضوعات دیے جائیں گے دونوں گروپ اسکرپٹ لکھ کر رول پلے/تمثیل تیار کریں گے۔ دونوں گروپ اپنے مکالمے (اسکرپٹ) تحریری صورت میں جمع کروائیں گے۔

۳۔ صوفی غلام مصطفیٰ تبسم کی جماعت اول تا ہشتم درسی کتاب میں موجود نظموں کا فنی و فکری جائزہ مباحثے کے ذریعے تحریر کریں۔ ایک ہفتے کے اندر جمع کروائیں۔

۴۔ موبائل کے ذریعے اردو کے ادب پاروں پر کتابچہ کی صورت میں مواد اکٹھا کریں۔ مواد کا معیاری ہونا ضروری ہے۔ دو ہفتے کے اندر جمع کروائیں۔

نصاب سے متعلق لازمی معلومات:

اس کورس کا بنیادی لازمہ اردو کو فنکشنل بنیادوں پر استوار کرنا ہے۔ تاہم ادبی ماخذ کی اہمیت سے بھی انکار نہیں کیا جا سکتا۔ اسی وجہ سے کورس کا آغاز تعارفِ زبان سے کیا گیا ہے۔ زبان کے تاریخی پس منظر پر نظر ڈالیں تو برصغیر میں داخل ہونے والے فاتحین کی اردو معاشرتی ضرورت رہی ہے۔ خاص طور سے انگریزوں نے اس کی تعلیم پر خصوصی توجہ دی۔ غیر ملکیوں کے لیے اُردو کی تدریس کا آغاز تو ہندوستان ہی سے ہوا تھا۔ ولندیزیوں نے بھی اس کے لیے مواد تیار کیا مگر انگریزوں نے کلکتہ میں اس مقصد کے لیے فورٹ ولیم کالج قائم کیا۔

اس کے برعکس ادبی حوالے سے سرسید تحریک نے اردو کا مستقبل با مقصد بنیادوں پر متعین کر دیا جبکہ دیگر تحریکات نے بھی اردو کے فروغ میں بھرپور حصہ لیا۔ اردو زبان کے حوالے سے بابائے اردو مولوی عبدالحق اپنے آپ میں ایک تحریک تھے۔ جس کا عملی مظاہرہ اردو یونیورسٹی کا قیام ہے۔ اردو پر کیے گئے کام کو ادبی اور تدریسی بنیادوں پر پرکھنا جانچنا اور معیار مقرر کرنا اس کورس کا مفروضہ ہے۔ اور مفروضہ ہی اس کا فرضیہ ہے۔ اس انداز میں کام کرنا ہی زبان کو سائنسی طرزِ فکر دے سکتا ہے۔

جدید ماہرینِ تعلیم فنی امور میں منطق سے زیادہ نفسیاتی پہلو پر زور دیتے ہیں، اس لیے کہ انسان روزمرہ زندگی میں جو علم براہ راست حاصل کرتا ہے۔ وہ کسی منطق کا پابند یا محتاج نہیں ہوتا۔ مثلاً جب ایک بچہ زبان سیکھنا شروع کرتا ہے تو وہ گردوپیش میں بولی جانے والی زبان کو ضرورت کے مطابق اخذ کرتا جاتا ہے۔ یوں نہیں کہ وہ پہلے اسمائے معرفہ سیکھے پھر اسمائے نکرہ کو پہچانے، پھر ان کی مختلف اقسام کو ترتیب سے اپناتا جائے۔ اس کی ترجیحات، اس کی ضرورت اور اس کے ماحول سے منسلک ہیں۔ استعمال پہلے ہے اور تجزیہ بعد میں۔ یہ کورس خاص طور پر زیرِ تربیت اساتذہ کے لیے ترتیب دیا گیا ہے۔ اردو دنیا کی دوسری بڑی زبان ہے۔ اردو کو ادبی و علمی/تکنیکی زبان یا محض (Discourse) کی حیثیت سے سمجھنا اس کورس کا بنیادی نقطہ ہے۔ تدریسی تکنیک کا تعلق کسی خاص طریقہ کار سے نہیں ہوتا بلکہ دورِ حاضر کے رجحانات، تقاضے اور ترجیحات اسے نئے رخ دیتے رہتے ہیں۔

تمام تر تدریسی عمل کا بنیادی نقطہ یہ ہے کہ زیرِ تربیت اساتذہ فنکشنل و عملی طریقے سیکھیں۔ عملی/فنکشنل اُردو کے حوالے سے بلاشبہ ڈاکٹر محمد صدیق خان شبلی کا مضمون قابلِ توجہ ہے۔

علمی ادبی مطالعے کو عملی زندگی کا حصہ بنانا اس کورس کی جہت ہے۔ زیرِ تربیت اساتذہ ادبی متن کی تدریس اسی صورت میں احسن طریق پر کر پائیں گے جب وہ خود ان کے ادبی معیار پر استدلال حاصل کر پائیں گے۔ اسی لیے اصنافِ ادب کو پڑھاتے ہوئے جدید طریقے استعمال کیے گئے ہیں۔ زبان کی حفاظت بھی ایک اہم ضرورت ہے۔ زبانوں کا بدلتا ہوا منظر نامہ ہی ان کی بقا کی ضمانت ہوتا ہے۔ زبان کا فطری ارتقا اپنے فروغ کا راستہ خود بخود ڈھونڈ نکالتا ہے مروج طریقہ ہائے تدریس سے استفادہ کرتے ہوئے نئے تدریسی طریقے، مہارتیں، معاونات اور تکنیک وضع کرنا۔ جو سائیکلک انداز نظر رکھتی ہوں۔ اس کورس کا حصہ ہیں۔

فنکشنل طریقے میں زبان کی پانچوں مہارتوں پر توجہ دی جاتی ہے۔ سننے، بولنے اور سمجھنے کی مسلسل مشق کا آغاز مکالمے سے ہوتا ہے۔ ہر سبق میں پڑھنے اور لکھنے کا حصہ الگ ہوتا ہے اس طریقے کا پورا پورا فائدہ اسی قسم کے کورس کی تدریس سے اٹھایا جائے اُردو کی تدریس کو موثر بنانے کے لیے اُردو کے فنکشنل کورس مرتب کرنے کی ضرورت ہے۔ مگر اس قسم کے کورس کی تیاری کا امکان بہت کم ہے۔ زبان پر عبور حاصل کرنے کے لیے ضروری ہے کہ نفسِ مضمون پر دسترس ہو۔ اس لیے کورس میں جماعت اول تا ہشتم نصابی کتب میں شامل شعراء و ادباء پر تفصیلی بحث فنکشنل انداز میں شامل ہے۔

انشا پردازی میں مہارت کے لیے زبان کے بنیادی قاعدوں کا علم ضروری ہے۔ حروف کی صوتی، تلازمی اور بنی کیفیتوں کو سمجھنا اور ان کی ابتدائی و وسطانی جماعتوں میں عملی کردار سے واقفیت ہونا ضروری ہے۔ مثلاً روزمرہ بول چال، مشاہدہ، مکالمہ نویسی، درخواست، جدید برقیاتی خط اور مضمون نویسی تک حرف و صوت کی کارفرمائی تخلیقِ انشا کا باعث ہے۔ عملی اردو کا تقاضا ہے کہ غالبؔ و اقبالؔ کا انداز سیکھنے والے طلبہ ان کے خیالات کو چاہیں تو مکالمے میں ڈھال لیں یا تمثیل کا رنگ دے دیں۔

کمپیوٹر سے فنکشنل زبان سیکھنے میں بے حد مدد ملے گی۔ جہاں کمپیوٹر سے زبان کا سیکھنا ایک سائنس ہے۔ دنیا کا بدلتا ہوا منظر نامہ اُردو کو نئی حیثیت میں تسلیم کر رہا ہے۔ مستقبل کی حکمت عملی، اس کی ہیئت، تکنیک اور تدریسی انداز میں تبدیلی، فروغ کے رجحانات کو مثبت زاویے، تکنیکی سانچے، کینڈے اور محضر فراہم کرے گی۔ ہمیں اپنے اساتذہ کو جدید ترین پیشہ وارانہ علمی تربیت سے آراستہ کرنا ہے۔ ایسوسی ایٹ ڈگری آف ایجوکیشن/ADE اور بی ایڈ ایلیمنٹری کی سطح کا یہ کورس اسی خیال (فرضیے Hypothesis) کے تحت ڈیزائن کیا گیا ہے

اردو سے متعلق مسائل

بولنے کا عمل زبان کی تدریس میں نہایت اہم ہے کیونکہ جب طلبہ اُردو بولتے ہیں تو انھیں بہت مشکلات درپیش ہوتی ہیں۔ تلفظ، افعال کا سمجھنا، سوال و منفی جملے، جملہ صحیح نہیں بول پاتے، حروفِ عطف کا مسئلہ اور بھی کئی ایک مسائل کا سامنا ہوتا ہے۔ تلفظ اکثر غلط۔ زبان اکثر طلبہ کی ناقص، بولنے میں ججک، قرات معیوب، تلخیص و توضیح کی صلاحیت کم، مطالعے کا شوق کم، تحریری خط اکثر خراب، ہجے اکثر غلط مضمون نگاری کی قابلیت کم، خیالات میں ناداری، ذخیرہ الفاظ میں افلاس، سمجھنے کی قوت کم، ذہن ابہامات سے پُر۔ اس کا سبب غلط طریق تدریس ہے۔ یہ تمام نقائص بے توجہی سے پیدا ہوئے۔ اکثر حالات میں اساتذہ کو خود بھی زبان پر دسترس حاصل نہیں ہوتی۔

اُردو کا رسم الخط کچھ ایسا ہے کہ تحریر میں اکثر حروف کی شکلیں بدل جاتی ہیں۔ ''بات، بس اور بچ حرف میں ''ب'' میں تین جداگانہ

صورتیں اختیار کر لی ہیں۔ اُردو حروف ملا کر لکھے جاتے ہیں۔ حروف کو جوڑتے وقت ان کی شکلیں تبدیل ہو جاتی ہیں کیونکہ اُردو میں ہر حرف کی چار مختلف شکلیں ہوتی ہیں۔ ابتدائی وسطی، آخری اور مکمل۔ ان شکلوں کی تبدیلی طالب علم کے لیے مسئلہ بن جاتی ہے اور اسے پڑھنا مشکل ہو جاتا ہے۔ دیگر زبانوں میں حروف کو ملایا نہیں جاتا بلکہ حروف اپنی شکل میں لکھے جاتے ہیں

اُردو حروف ملا کر لکھے جاتے ہیں۔ حروف کو جوڑتے وقت ان کی شکلیں تبدیل ہو جاتی ہیں کیونکہ اُردو میں ہر حرف کی چار مختلف شکلیں ہوتی ہیں۔ ابتدائی وسطی، آخری اور مکمل۔ ان شکلوں کی تبدیلی طالب علم کے لیے مسئلہ بن جاتی ہے اور اسے پڑھنا مشکل ہو جاتا ہے۔ عربی میں بعض حروف کا تلفظ اور ہے جب کہ اُردو میں اور ہے مثلاً ض کو اُردو والے ذ کے تلفظ سے ادا کرتے ہیں مگر عرب ''دھ'' کے تلفظ میں بولتے ہیں۔ ع، کو اُردو والے، الف کے تلفظ سے ادا کرتے ہیں مگر عرب طلبہ اسے ''ع'' کے تلفظ ہی میں بولتے ہیں۔ اعراب بدلنے سے بھی لفظ کے معنی تبدیل ہو جاتے ہیں۔ سَحر۔ سِحر، صِرف۔ صَرف، دَور۔ دُور وغیرہ۔ عربی میں جہل کے معنی جذباتی ہیں اور ذلیل کے معنی کمزور کے ہیں جب کہ اردو میں بالکل الٹ معنی برتے جاتے ہیں۔ تاہم لفظ جس زبان سے مستعمل ہے اس کا خیال لغت کے ذریعے رکھنا چاہیے۔

بنیادی لسانی عادات کی تربیت بھی ناپختہ رہنے سے بچے مسائل کا شکار رہتے ہیں۔ قدیم طریقہ ہائے تدریس ان میں زبان کا متنوع ماحول بیدار ہی نہیں کر پاتا۔ ذخیرۂ الفاظ میں وسعت اور بوقتِ ضرورت ان کے انتخاب کی اہمیت تقریر کے لیے بنیادی آلے کی حیثیت رکھتی ہے۔ اس مقصد کے لیے اُردو لغات اور ''اُردو تھیسارس'' کا استعمال زیادہ مفید ہوتا ہے۔ اُردو میں مترادفات اور متضادات کی کوئی کمی نہیں لیکن تقریر کرتے وقت ان میں سے موزوں ترین الفاظ کا استعمال ان کے سیاق وسباق پر منحصر ہے۔ ظاہر ہے کہ سیاق وسباق اور برمحل استعمال کے لیے وسعتِ مطالعہ اور لغات یا تھیسارس کا استعمال ہی مدد دے سکتا۔ بعض اربابِ تعلیم جو ثانوی سطح پر بولنے کو پڑھنے اور لکھنے پر ترجیح نہیں دیتے۔

- ثانوی درجے کے طلبہ کے پاس ذخیرۂ الفاظ کی کمی نہیں ہوتی لیکن ابتدائی درجے میں ایسا نہیں ہے۔
- ثانوی درجے میں طالب علم زیادہ تر پڑھنے اور لکھنے کی کوشش کرنے کے بعد داخل ہوتا ہے۔ اس میں بولنے کی صلاحیت کم ہوتی ہے یا اس پر زیادہ زور نہیں دیا جاتا۔ ابتدائی درجے میں تو یہ صلاحیت بالکل ہی کم ہوتی ہے۔
- اس درجے میں طالب علم کافی لکھنا پڑھنا سیکھ چکے ہوتے ہیں لیکن تکلم اور تقریر پر توجہ کم ہوتی ہے۔
- امتحان کا کچھ فی صد ثانوی جماعتوں میں زبانی امتحان کے لیے وقف کرنا اشد ضروری ہے تاکہ طلبہ مستقبل قریب کی عملی زندگی میں مسائل وحالات پر مدلل اظہارِ خیال اور دوسروں کو اپنی تقریر سے مطمئن کر سکیں۔ اس کے لیے ایک عملی پیریڈ اور اس کا عملی امتحان ضروری ہے۔
- اُردو قومی زبان ضرور ہے لیکن اکثر طلبہ کی مادری زبان نہیں، ہمارے اکثر طلبہ گلابی قسم کی اُردو بولتے ہیں اور بعض طلبہ بالخصوص دیہات کے طلبہ اُردو میں چار جملے بھی نہیں بول سکتے۔ لہٰذا الفاظ کا طرزِ تکلم سکھانا ضروری ہے۔
- یہ کہنا کہ سارے ملک کے تقریباً تمام باشندے اُردو زبان ٹوٹے پھوٹے انداز میں بول سکتے ہیں غلط ہے۔ ہو سکتا ہے کہ یہ بجا ہو لیکن صحیح اُردو بولنا ہی اصل مہارت ہے۔
- اردو زبان کو اردو زبان کے استاد ہی پڑھائیں تو بچوں کے زبان کے حوالے سے بہت سے مسائل کا خاتمہ ہو جائے۔

Science 1 (General Science)
(Content)
Semester 1
Syllabus: Science I

YEAR/SEMESTER: Year 1 / Semester 1
DURATION (Hours): 48 hours (16 weeks)
CREDIT VALUE: 03 credits
PREREQUISITES: Matriculation (with a science subject)

COURSE DESCRIPTION

This Science I course will refresh and strengthen prospective

It lays a foundation for the pedagogical content knowledge also required to effectively teach general science in elementary school. The course covers core concepts in physical science, life science, and earth science. Also covered are the teaching strategies and instructional approaches that best support the development of conceptual understanding of science.

Science I in Semester 1 is followed by Science II in Semester 3. Both courses integrate science content with science pedagogy and skill building instead of teaching them separately. Both content outcomes and process outcomes have been listed. This division in the objectives between content and process is primarily one of convenience. It allows outcomes to be adequately represented in a written document. In the classroom, content and process should always be addressed simultaneously. After completing Science I and Science II, the prospective student teachers will be well prepared to implement the National Curriculum in elementary grades 1-5.

The Science I and Science II course materials are designed to prepare prospective elementary teachers to teach inquiry science in grades 1-5. The (pedagogical) content knowledge is chosen accordingly. Prospective science teachers who want to teach science in higher elementary grades (6-8) should deepen their science knowledge further by attending additional science classes offered in Year 3 and Year 4 of the B.Ed. (Hons) program.

COURSE OUTCOMES:

After completing this course, student teachers will be able to:

1. Describe the interdependence of ecosystems and the organisms within and how changes affect populations and the equilibrium of a system. Relate evolutionary forces to the diversity of ecosystems and of the species within them.
2. Identify the effects of human activities and naturally occurring changes on ecosystems and the consequences of those changes.
3. Begin to see the Earth as a system consisting of major interacting components that consistently undergo change. Physical, chemical, and biological processes act within and among them on a wide range of timescales.
4. Describe physical and chemical properties and physical/chemical processes with a special focus on the change of state of matter and how this change relates to energy.
5. Develop an understanding of common misconceptions about matter and particle theory.
6. Be able to describe a chemical reaction in the context of a rearrangement of atoms and also in the context of the formation of a new substance with new properties.
7. Investigate the relationships among force, mass, and motion of an object or system.
8. Be able to apply various models to science teaching while recognizing their limitations. Prevent potential misconceptions that could result from the use of some

widely used models.

9. Be able to read, record, and analyze data, and present that data in meaningful ways.

Teaching-Learning Framework

Throughout this course, pedagogy is interwoven with the content development. Faculty will model inquiry teaching to student teachers in order for them to experience firsthand the learning and teaching of science in an inquiry way. Thoughtful discussions will follow such hands-on experiences to clarify the applied methods and expected learning. These reflections are essential because it is through these discussions that prospective teachers will gain essential pedagogical content knowledge. They will also learn how to apply this knowledge to their science teaching in elementary grades upon graduation. Discussions, reflections, and application of pedagogical science content knowledge are critical components of Science I (and Science II). Each task prepares prospective teachers for their own teaching and enables them to modify activities to best meet the needs of their individual classrooms. For this reason, a substantial amount of timeis dedicated to the "Teaching of Specific School"

In addition to content and pedagogical content knowledge, this course is also designed to help students develop science thinking and process skills.

After completing this course, student teachers will be able to:

1. Begin to apply inquiry to the teaching of science at the elementary level.
2. Be able to identify, adapt, and modify investigations that lead to conceptual understanding.
3. Begin to design science investigations around core concepts.
4. Begin to understand the need for learning progressions.
5. Recognize common misconceptions and be able to respond with appropriate remediation.
6. Be able to use open-ended questions to assess student
7. Provide their students with exciting science experiences that extend their natural fascination with the world and help them learn the science skills and concepts they will need in later schooling and in life.
8. Reflect on their teaching to develop a personal approach to the teaching of science.

SEMESTER OUTLINE

Unit 1: Course Overview

Week	Topics/Themes
1	Course overview Science in personal and social perspective The nature of science and scientific investigation (observations, inferences) Teaching of science: reflect upon the way prospective teachers learned science and how they want to teach science when they graduate.

During this unit, prospective teachers will:

- Discuss the nature of science and contrast science to other ways of knowing about the world.
- Understand the differences between results, conclusions, and inferences.
- Describe how science is a process rather than a product.
- Provide examples for the impact of science in daily life and the environment.

Unit 2: Populations and Ecosystems

Week	Topics/Themes
2	Basic needs of living things Interdependencies of living things (symbiotic relationships)
3	Ecosystems and Habitats Population Growth –Survival and Extinction
4	Teaching "Populations and Ecosystem

During this unit, prospective teachers will:

- Investigate the interdependence of living things (including humans) in an ecosystem.
- Investigate how changes in environments affect plants and animals (including humans).
- Explain how adaptive characteristics of a species affect its chance for survival or possible extinction.
- Describe factors that limit or support the growth of populations within an ecosystem.
- Analyze data collected over time, and explain how disruption in one part of an ecosystem can repeat throughout an ecosystem.
- Begin to identify the unit's underlying c
- Design age-appropriate, inquiry-based activities and identify learning outcomes.

Unit 3: Diversity and Adaptations

Week	Topics/Themes
5	Diversity of living things Systems of classification
6	Adaptations for survival Evolution and Diversity
7	Teaching "Diversity and Adaptation

During this unit, prospective teachers will:

- Describe the diversity of living things.
- Explain how adaptive characteristics of a species affect its chance for survival or possible extinction.
- Explain how evolution has resulted in diversity among living things.
- Observe fossil records and interpret them for evidence of adaptation, environmental change, and extinction.
- Explain why we use classification systems and how classification systems are applied.
- Begin to identify the unit'selementaryunderlyingstudents.
- Design age-appropriate, inquiry-based activities and identify learning outcomes.

Unit 4: Earth –The Blue Planet

Week	Topics/Themes
8	Earth - an inhabitable planet Weather and Seasons Categorizing the world by continents, biomes, vegetation zones, climate zones, etc. Introduction to maps; reading and creating simple data charts
9	Constant changes on Earth –rock cycle Rivers (erosion / sedimentation) Earthquakes and Volcanoes
10	Teaching–The"EarthBlue Planet" in elemen

During this unit, prospective teachers will:

- Recognize that the abundance of water on Earth makes Earth unique and habitable.
- Explain how weathering and erosion reshape landforms by eroding rock and soil in some areas and depositing them in others.
- Investigate landforms and identify constructive and destructive forces that led to their formation.
- Begin to identify the unit's underlying c
- Design age-appropriate, inquiry-based activities and identify learning outcomes.

Unit 5: Force and Motion

Week	Topics/Themes
11	Relationship among force, mass, and motion of an object. Interaction of objects as it relates to force and linear, constant motion. Graphing of motion and basic calculations of speed and average speed.
12	Non-linear motion and accelerated motion. (Laws of motion) Graphing of non-linear and accelerated motion.
13	Teaching "Force and Motion" in el

During this unit, prospective teachers will:

- Articulate and demonstrate the principles of motion and forces, and apply them to examples of interactions between objects.
- Investigate the relationships among force, mass, and motion of an object or system.
- Conduct investigations to determine the position and direction of a moving object (and represent its motion on a graph).
- Draw free-body diagrams that list all the forces acting on an object and the resulting direction of motion.
- Analyze the motion of objects by the established relationships known as the laws of motion.
- Begin to identify the unit's underlying c
- Design age-appropriate, inquiry-based activities and identify learning outcomes.

Unit 6: Properties and Matter

Week	Topics/Themes
14	Physical properties of matter, including melting point, boiling point, hardness, density, and conductivity Atoms, molecules, mixtures, elements, and compounds Introduction to the periodic table
15	States of matter: solid, liquid, gas (examples of water) Introduction to models and their limitations in science teaching
16	Teaching "Properties of Matter"

During this unit, prospective teachers will:

- Differentiate between physical and chemical properties of matter.
- Classify chemicals as pure substances or mixtures (homogenous or heterogeneous) and classify pure substances as elements or compounds.
- Identify atoms and molecules as the building blocks of elements, compounds, and mixtures.
- Explain the atomic structure, addressing parts and properties of the atom.
- Analyze the relationship between the structure and the properties of matter, focusing on chemical properties of elements and their placement in the periodic table.
- Explain how substances change from one state to another by heating or cooling.
- Describe a model of the atom and what it depicts as well as its limitations.
- Begin explaining student misconceptions about properties and particle theory, and what to do about them.
- Begin identifying the underlying core science concepts in this unit for elementary students
- Design age-appropriate, inquiry-based activities and identify learning outcomes.
- Begin developing learning progressions.

SUGGESTED TEXTBOOKS AND REFERENCES

There are many science books and other reference that could be useful during this course. Here is just a selection:

- Target Science - Physics by Stephen Pople
- Target Science - Chemistry by Michael Clugston& Rosalind Fleming The Teaching of Science in Primary schools – Wynne Harlen
- Inquiry –Thoughts, Views, and Strategies for the K-5 Classroom –National Science Foundation Ready, Set, Science! Putting Research to Work in K-8 Science Classrooms – National Research Council
- Taking Science to School: Learning and Teaching Science in Grades K-8 –National Research Council

- Lederman, N. &Abd-El-Khalick, F. (not-Natureddated)Science:Activities."AvoidingThat
- Promote Understandings of the Nature of Sciehttp://toolbox.learningfocused.com/data/0000/0014/2125/Teaching_the_NatOSci.pdf.

- "A science prototype: Rutherford and the atohttp://undsci.berkeley.edu/lessons/pdfs/rutherford.pdf.
- Understanding Science is a website that communicates what science is and how it works: http://undsci.berkeley.edu/index.php.
- For an easy to understand illustration of Newton's Laws ohttp://teachertech.rice.edu/Participants/louviere/Newton/.
- For information about Bloom's Taxonomy, refehttp://www.odu.edu/educ/roverbau/Bloom/blooms_taxonomy.htm.

COURSE ASSIGNMENTS

Suggested assignments are included in the Unit Guides of the course. Some are short-term assignments and some take several weeks to complete. A mix of individual and group assignments is also provided.

Examples of assignments include:

a) Conduct an investigation on a science topic and present your findings and conclusions.

b) Develop hands-on activities around a core science concept for an elementary grade.

c) Write an editorial for a local newspaper on a relevant science topic stating an opinion supported by evidence.

d) Plan and conduct a science activity with a group of children using the inquiry approach.

GRADING POLICY

The university and its affiliated colleges will determine the course grading policy. The policy should be shared with students at the beginning of the course. It is recommended that at least 50% of the final grade is determined by course work completed by prospective teachers. Course work may include work completed in assignments in or outside the classroom, or assignments at school.

EDU-302 General Methods of Teaching (Foundation) Semester 1

Syllabus: Methods of Teaching

Year /Semester: Year 1/Semester 1
Credit Value: 03 credits
Prerequisites: None

COURSE DESCRIPTION

This course is an introduction to teaching methods used in elementary schools. Since you have been an elementary school student, you will recognize some of the methods but you know them froma student's perspective.

Teaching methods are often divided into two broad categories: teacher-centered methods (also called Direct Instruction) and learner-centered methods (also called Indirect Instruction or Inquiry Learning). An effective teacher knows several methods, some teacher-directed and others learner-directed. He or she would choose, from among these, the one method orcombination of methods most likely to achieve group of students.

Because teaching and learning interact, a course about teaching must also be about learning. The content and structure of the course is based on two strong claims about learning. First, learning results from what the student already knows, thinks, and does and *only* from these actions of the student's mind. A teacher enables*does to*students*learn* but the student has to *do* it. Second, as students progress through school they should learn to become their own teachers. That is, students should learn *how to learn* using their teachers as models.

COURSE OUTCOMES

- A personal theory of teaching and learning based on a critical analysis of implicit theories formed as a student and modified/elaborated through reflections prompted by the work done in this course.
- An argument paper that presents the pros and cons of teacher-centered and learner-centered teaching methods and states your position as a teacher
- Records of structured, reliable classroom observations and conclusions drawn from reflection on these.
- Participation in a Cooperative Learning group that planned, taught, and critiqued a lesson to college/university classmates
- An elementary school lesson plan
- A reflective journal

LEARNING AND TEACHING APPROACHES

This is your first opportunity to study teaching and, to a lesser extent, learning in school. You will soon learn that there are several sources of knowledge about teaching and learning and you will be introduced to these sources. Because you have years of experience as a student but are a beginner to the study of teaching, this course provides you with the opportunity to experience school with a focus on the teacher. You will observe teachers at work in classrooms and interview two students in each classroom. You will start your student interviews with two elementary school students whom you interview about their teachers away from the classroom. You will have a conversation with at least two experienced teachers. You will participate in planning and teaching a lesson to your college/university classmates and you will write a plan for a lesson appropriate for students in an elementary school.

Experiences of all types have more meaning when you *reflect* on the experience. In this context, *reflection* means turning your attention inward to your mind and searching for connectionsbetween the experience you have just had and past experiences. You turn to your own thoughts, experienced as mental images and words, to discover what you learned through the new experience. Reflection is aided by writing about your thoughts and by talking about them with other people. The course is organized so that you complete many of your assignments in collaboration with two or more of your classmates and you write 3 to 5 times a week in your journal.

You are expected to be a self-directed student in this course. This means that you will act to arrange school visits and to find teachers and students to talk with away from school. You also will take an active interest in your journal and use it for the purposes for which it is intended. Finally, you will be a responsible member of any group of classmates with whom you work. It is probable that the value of this course to your study of teaching will be proportional to the energy and time you invest in the course assignments.

SEMESTER OUTLINE

Unit 1 Teaching and Learning in School (2 weeks/6 hours)

You have been in school for at least 12 years. If you are like other prospective teachers, you probably have a personal theory about teaching and learning that was formed by your experience in school as a student. You may not be aware of all of these thoughts and beliefs but some of them may interfere with learning to teach. In this unit you will examine and write in your journal about your existing theory about teaching and learning so you become fully aware of it. Then you will compare your personal theory about teaching with other perspectives on effective teaching. You may want to modify your theories. You will also learn how to observe teachers and students at work in classrooms.

Week	Topics	Sub Topics
1	**Sources of Information about Effective Teachers**	•Your experience as a student •Students currently in school •Published research •Observations in classrooms •Reflections on classroom observation by yourself and with Others •Conversations with experienced teachers •Theories about education and instruction •The relationship between teaching and learning
2	**Sources of Information about Learning in School**	•Your experience as a student •Current students' self •Published research, especially in cognitive and educational Psychology •Observations in classrooms •Reflections on student interviews by yourself and with Others •Conversations with experienced teachers •Theories about learning •Cultural influences on teaching and learning

Unit 2 Classrooms are Busy Places (2 weeks/6 hours)

Teaching is a universal human experience: parents teach their children; brothers and sisters teach each other; friends teach friends; employers teach employees; and colleagues teach each other. These examples of teaching usually involve a few students at the most and occur in the setting where the learning is used. (For example, young children learn about collecting water with their mother at a stream or well, or a child learns a new game from a group of friends in a playground.)

Classroom teaching is a special instance of teaching. First, the group is large and diverse creating management challenges for the teacher. Second, learning takes place in an unnatural environment creating motivation and attention problems for the students. People who have not been responsible for teaching in a classroom have difficulty appreciating the complexity of the work. The purpose of this unit is to introduce you, a prospective classroom teacher, to the complex environment in school classrooms

Week	Topics	Sub Topics
3	**Sources of Complexity in the Classroom**	• Classroom space is crowded • Work takes place in group or individually • Teachers must simultaneously pay attention to a group and each individual in the group • Children are not carbon copies of each other • Resources are scarce: students have to share and often Wait • Teachers plan but unexpected events upset plans often • Classroom activities do not occur once at a time: several different activities are in progress at the same time
4	**Managing Complexity**	• Learn names, interests, & learning strengths fast • Establish rules and routines • Group students • Organize books and other materials for easy access • Create pairs of students to help each other

Unit Three: Teacher-centered and Student-centered methods (2 weeks/6 hours)

These two methods are a good place to start your study of teaching methods because they are usually seen in opposition to each other when they may be seen as complementary. Teacher-centered, Direct Instruction is used to help students acquire knowledge and skills. Student centered, Indirect Instruction (Inquiry/Problem Solving) is used to help students understand the physical, social, and psychological world in which they live. In addition to different goals, the methods derive from different theories about learning and employ different practices. The Unit is organized around the view that both methods belong in schools. *Knowing* and *understanding* are different but related mental processes; each is a legitimate goal of schooling for all students.

Week	Topics	Sub Topics
5	**Key Concepts**	•Distinction between lower and higher order learning •Outcomes from lower order learning •Outcomes from higher order learning

		•Instructional activities that enable lower order learning •Instructional activities that enable higher order learning •Direct Instruction: a method to enable lower order Learning •Inquiry Learning: a method to enable higher order learning •Different roles for teachers and students
6	**Model Lessons**	•Template for Direct Instruction lessons •Sample lessons •Template for Inquiry/Problem Solving lessons •Sample lesson •Inquiry, Problem Solving, Project: same or different? •Choice: Teacher –centered or Learner- centered? Or both?

Unit Four: Lecture, Demonstration, Discussion, Questions, and Cooperative Learning (3 weeks 9 hours)

As the previous unit illustrates, the method or practice that a teacher chooses depends on the goal s/he intends to achieve with a particular group of students. Teachers have choices not only about teaching methods but also about how they group students for instruction: whole class; small groups; pairs; or as individuals.

This Unit has ambitious goals and complicated logistics. Each of you will be assigned to one of six cooperative learning groups. Each group the methods in the Unit title (lecture, demonstration, or discussion) for a total of six lessons (twofor each method). All six lessons will include questions. One person from each of the six groups will teach the lesson to the rest of the class during the third week of the Unit (week nine of the course). Three class sessions will be devoted to the lessons the (2 lessons per day) leaving 15 minutes day for discussion of the lessons and 15 minutes for continued study of questioning strategies. There are handouts for this unit, that facilitate the work of the cooperative Learning groups. Persons who will teach the lesson from each group will be selected by drawing one name from an envelope that contains names of everyone in the group at the beginning of class on the day of the lesson.

Week	Topics	Sub Topics
7	**Cooperative Learning**	•Peer teaching practice •Rationale for Cooperative Learning •Different models of Cooperative Learning •Cooperative Learning procedures •Incentive structure of Cooperative Learning •Limitations of Cooperative Learning •Checklists as assessment devices

8	**Lecture, Demonstration, and Discussion**	•Reasons to lecture •Structure of a lecture •Active lectures •Structure of a demonstration •Characteristics of good discussion •Purposes of questions •Questions in lecture, demonstration and discussion •Wait time
9	**Asking questions**	•Open and closed questions •Lessons taught in class

Unit Five: Teacher-Student and Student-Student Interactions that Support learning in the Classroom (2 weeks; 6 hours)

While studying Unit 2 in this course, you had the chance to watch a teacher and students at work in 2 different classrooms and discuss the observations with your colleagues. Hopefully, you could see that classrooms are unusual social environments. One adult is expected to allocate limited resources (space, time, learning tools, and attention) equitably among 40 (more or less) students. Students are expected to sit for long periods of time and pay continuous attention to their lessons.
You and your partners will observe in two more classrooms during the next two weeks. In each classroom you will observe a teacher interacting with two students and those students interacting with each other. In each classroom the teacher will choose the students whom you will observe.

Week	Topics	Sub Topics
10	**Constructive Interactions Between Teacher and Students**	•Respect •Credibility •Fairness (justice) •Trust •Interest •Enthusiasm •Adaptive teaching
11	**Constructive Interactions Between Students**	•Cooperative working relationships are central •Examples of cooperative working relationships •Feelings are the foundation of thought •Importance of trust and confidence

Unit Six: Designing Instruction: Goals and Objectives; Assessment; Plans; and Materials (4 weeks; 12 hours)

You have seen different formats for lesson plans: some plans have more parts than others. Though there are differences in the number of parts a plan may have, all lesson plans have objectives, a sequence of activities for obtaining the objectives including materials that will be used; and means for collecting evidence that students achieved the learning outcomes. In this unit, you will learn how to write learning outcomes and choose or create assessments. You will use knowledge you have acquired about methods to create and write a

teaching plan. You will learn to find or create the materials that you need to use your plan. You will do some work on the lesson plan in class with the two people with whom you have visited schools. During the last week of the Unit (week 15 of the course) you will review what you have learned about teaching methods and learning and instructional principles in the course and compare that knowledge with your current personal theories of teaching and learning.

Week	Topics	Sub Topics
12	**Sources of Knowledge for Designing Lessons**	•Learning principles •Pakistan's elementary school curriculum •Definitions of standards, goals, and objectives •Examples of standards, goals, and objectives •Bloom's Taxonomy ofObjectives
13	**Assessment**	• Definition of assessment in schools • Personal experience with assessment • Assessment practices in schools in Pakistan • Purposes of assessment • Distinction between formative and summative assessment • Examples of formative assessment
14	**Instructional Materials**	• Sources of instructional materials, including textbooks, in Pakistan • School budgets for instructional materials • Lo/no cost materials as a supplement to or substitute for materials provided by the government • Examples of materials created from local resources by teachers for mathematics, science, and literacy
15	**Review and Synthesis**	• Review of teaching methods and instructional and learning principles • Review of students' cur and learning • Search for synthesis • Complete instructional design project (lesson plan) • Presentation of lesson plans designed by students

Unit Seven: Self-Regulated Learning (1 week 3 hours)

You know that learning is not confined to school. Children learn to walk and talk before they go to school. People continue to learn after they go to work. When you think about it for a little while, you will probably conclude that people learn throughout their lives. When you think about your own experience in school, you will probably also conclude that as you progressed from grade 1 through grade 12 the work in school got harder and you had more responsibility for learning. (Learning in school can also be called studying.) The purpose of this Unit is to introduce you to the process of learning how to learn. You will probably become aware of mental actions that you do without thinking about it (For example, checking with yourself to be sure you understand when you are reading in preparation for a test.) As you study the unit, try to think of yourself both as a student (which you are) and as a teacher (which you are becoming) because you are learning about mental actions that

you will teach your students.

Week	Topics	Sub Topics
16	**Self-Regulated Learning**	• Becoming your own teacher • Parents and teachers attitudes toward self-regulated Learning • Interdependence between learning and motivation • Intrinsic and extrinsic motivation • Mastery learning goals and performance learning Goals

SUGGESTED REFERENCES

- Boekarts, M. (2002). Motivation to learn. (Educational Practice Series No. 10). Geneva: International Bureau of Education. Retrieve from http://www.ibe.unesco.org/en/services/online-materials/publications/educational- practices.html

- Brophy, J. (1999). Teaching. (Educational Practice Series No. 1). Geneva: International Bureau of Education. Retrieved from http://www.ibe.unesco.org/en/services/online-materials/publications/educational- practices.html
- Dasgupta, M. A. (n. d.). Low-cost, No-cost Teaching Aids. Retrieved from
- http://www.arvindguptatoys.com/arvindgupta/lowcostnocost.pdf

- Elias, M. J. (2003). Academic and Social-Emotional Learning. (Educational Practice Series No. 11). Geneva: International Bureau of Education. http://www.obe.unesco.org/en/services/online/services/online-materials/publications/educational-practices.html

- UNESCO(1973). NewUNESCO sourcebook for science teaching. Retrieved on January 20, 2012. http://unesdoc.unrsco.org/images/oooo/ooooo56/00564le.pdf
- Rosenshine, B. (2010). Principles of instruction (Educational Practice Series No. 21). Geneva: Retrieve from http://www.ibe.unesco.org/en/services/online-materials/publications/educational-practices.html

- Vosniadou, S. (2001). How children learn. (Educational Practice Series No. 7). Geneva: International Bureau of Education. Retrieve from http://www.ibe.unesco.org/en/services/online-materials/publications/educational- practices.html

- What Makes a Good Teacher? Opinions from Around the World. Retrieve from
- http://www.unicef.org/teachers/teacher/teacher.htm

- West Virginia State Department of Education Resources for Formative Assessment Retrieve from http://wvde.state.wv.us/teach21/ExamplesofFormativeAssessment.html

GRADING POLICY

A variety of assessments should be used to assess student learning. It is recommended that course work count towards at least 50% of the final grade. Instructors will advise at the start of the course about which pieces of course work (assignments) will be graded. The remainder of the grade will be determined by mid and end of semester exams. s

COURSE ASSIGNMENTS

Reflective Journal

Each student will purchase a spiral bound notebook to be used as a Reflective Journal. This journal will be used for specific assignments (e.g.) the development and continuous revision of a personal theory of teaching and of learning) and also for classroom observations. In sum, the journal will function simultaneously as a repository for certain assignments and as a diary for recording experiences connected with the course (e. g. classroom observations). When you talk with students about journal, tell them either to leave a wide margin when they write or to leave one side of each age blank so that you can record your reactions to their work and they can go back and record their own reactions to text they have written earlier (e.g. personal theory of teaching and of learning).

Classroom Observations

The course includes nine observations in classrooms. The course syllabus indicates that students may have to locate the schools in which they will observe. If the teachers approve, form triads among the students so three people observe in the same class at the same time. Each triad should remain together throughout the semester. Observing in triads has two purposes.

First, it allows a richer conversation about the observation and, second, it allows the students to practice talking and thinking together about teaching an learning with colleagues. Hopefully, they will bring this habit with them when they begin their teaching careers. Explain that observing and recording what they see is necessary but not sufficient. The value of the observations comes from talking and thinking Together about what you have seen and then individually describing what you saw and your interpretations as a one page paper.

English II (Communication Skills)
(Compulsory)
Semester 2

Syllabus: English II (Communication Skills)

YEAR/SEMESTER: Year 1/Semester 2
DURATION: 3 credits, 48 class hours
PREREQUISITES: successful completion of courses in semester 1

COURSE DESCRIPTION

This is the second English course for prospective elementary school teachers. It aims to develop skills for effective communication and presentation using clear and appropriate English. The course comprises five units which focus on developing effective communication strategies, making oral presentations, understanding intonation patterns and their role in determining the meaning of a message or text, and how to present information in speech and writing. The first five weeks are devoted to developing student teacher language confidence and interpersonal skills. This is followed by task-based projects which incorporate all four language skills in order to develop their proficiency in English language.

COURSE OUTCOMES

After completing this course, pre-service teachers/teachers will be able to:

- use English confidently and independently
- discriminate between formal and informal language use
- communicate effectively in speech and writing with different audiences for a variety of purposes
- communicate their own ideas clearly by applying their knowledge of grammar and usage in written and oral presentations
- identify the main stylistic features of descriptive, narrative, persuasive and argumentative texts

LEARNING AND TEACHING APPROACHES

To make student teachers independent users of language, it is essential to involve them in the learning process. The course requires an integrated approach to language teaching which enables learning of all the four skills of language (i.e. listening, speaking, reading and writing) in natural settings. The learning and teaching approach should be balanced so that student teachers not only learn about language, but also how to use English in different contexts. The teachers and students are encouraged to respond through group and pair work, active learning strategies such as role plays, debates, presentations, brainstorming, etc.

Although student teachers may lack the necessary background at the beginning of the course to communicate in English, instructors will use English as the language of instruction. Instead of switching to Urdu or other languages when there is a problem, instructors will use alternative strategies such as slowing down, repeating a text, asking others to explain, or using simpler vocabulary.

SEMESTER OUTLINE	
UNIT 1 –EFFECTIVECOMMUNICATION(3 weeks/9 hours)	
The first unit aims at building student teacher confidence and understanding the factors that lead to communicating a thought, an idea or a message clearly and effectively. From a sender to receiver, encoding to decoding a message, the communication cycle comprises various verbal and non-verbal elements as well as calling on the interpersonal skills of individuals. However, various factors may lead to the creation of a gap in oral and written communication. These factors are explored in depth in this unit.	
	Effective communication
Week 1	• Communicating effectively • The communication cycle and process • Communication barriers
	Language Development of English Language Teachers (ELT)
Week 2	•Understanding group dynamics •Understanding ELT as a self directed learner •Developing Language awareness by using CLT activities
Week 3	**Organizing a message** • Grammatical accuracy in speech and writing • Coherence and clarity • Opening statement/topic sentence & key words
UNIT 2 –MAKING ORALPRESENTATIONS(2 weeks/6 hours)	
This unit draws the attention of student teachers to the design and delivery of an effective presentation by giving essential tips and allocating sufficient time for practice sessions. A good presentation requires organized planning and preparation, careful selection of language and vocabulary, the correct body language and rapport with the audience. With an understanding of these requirements, the student teachers should be able to develop sufficient confidence to handle the various tasks required in giving a clear and cogent oral presentation.	
Week 4	**Effective presentations** • The ingredients of a successful presentations • Structuring a presentation –the key stages
	• Using visual displays to present key facts and figures
Week 5	**Presenting in a logically organized and interesting manner** •Using PowerPoint or overhead transparencies for presentations that describe aprocess/phenomenon • Tips to holdattentionyour audience's •Preparing for a presentation •Delivering a five-minute presentation

UNIT 3 –SOUND PATTERNS, TONE ANDPURPOSE(4 weeks/12 hours)

In this unit, student teachers will be given a one-week refresher to re-learn and articulate basic sounds (consonants and vowels) and sound patterns of English language through practical activities. The unit, furthermore, suggests some critical awareness of intonation patterns in listening and reading texts and how the meaning changes with variation in tone.

	Sound patterns and tone
Week 6	• Vowel and consonant sounds and clusters
	• Phonemes and syllables
	• Stress and intonation
	Modes of communication
Week 7	• Audience and purpose - Visual texts: pictures and video clips
	• Identifying purpose and audience in different texts
	• The language of media –differentiating between audience and purpose
	Audience specific
Week 8	• Writing for different audience
	• Presenting informally vs. formally
	• Communicating through different mediums
Week 9	**Understanding the purpose**
	• Reading for meanings
	• Reports/Descriptive vs. narrative texts
	• Argumentative vs. persuasive texts
	• Writing/Presenting persuasively

UNIT 4 –PERSUADINGAUDIENCE(3 weeks/9 hours)

Once the purpose and goal of a message have been identified, the major task is to ensure the audience follow the thought presented. By giving practice through various modes of communication like formal speeches, public announcements, news broadcast and presentation of a CV, this unit offers opportunities for student teachers to become familiar with the needs of modifications in language and structure according to the requirements of the audience. It also incorporates a section on writing persuasively to make requests and compose applications or letters.

	Public speaking
Week 10	•Speech/presentation: extemporary and prepared
	• Public announcements
	• News broadcast
	Being interviewed
Week 11	•Résumé/CV
	• Interview skills
	• Interviewing for a job/internship
	Persuasive writing
Week 12	•Writing persuasively
	• Applications
	• Letters of advice/direct request

UNIT 5 –COLLECTING& PRESENTINGINFORMATION(4 weeks/12 hours)	
Student teachers will examine learning differences, both normal variation in learning styles and disabilities and disorders. Student teachers will consider the role of the school and the instructor in managing and accommodating learning difference in classroom practice in addition to the perspectives on national educational policy in Pakistan on accommodating diverse developmental needs.	
Week 13	**Collecting information** •Power reading/study skills • Note-taking; summarizing • Synthesizing information
Week 14	**Graphical information** •Reading graphical information: data presented through charts, graphs, etc. • Converting a report to a chart/graph • Summary and outline
Week 15	**Collecting and presenting data objectively** •Small scale research project • Developing a questionnaire • Gathering data and presenting findings • Reporting results
Week 16	Project presentation Revisions

SUGGESTED TEXTBOOKS AND REFERENCES

- Eastwood, J. (2005) *Oxford Practice Grammar*, Karachi: Oxford University Press. Swan, J. *Practical English Usage* (3rd editions) Oxford University Press
- Thomson and Martinet, *A practical English Grammar (Intermediate)* Oxford University Press Howe, D.H. & Kilpatrick, L. (2008) *English for Undergraduates*, Oxford: Oxford University Press
- Write better, Speak better (2005) Editors of the following websites provide a wealth of resources:
- http://www.bbc.co.uk/worldservice/learningenglish/
- http://learnenglish.britishcouncil.org/en/
- http://www.teachingenglish.org.uk/
- http://freesoftwarepc.biz/educational-software/download-free-software-3d-grammar-english-portable/(agrammar software free download)

GRADING POLICY

A variety of assessments should be used to assess student learning. It is recommended that course work count towards at least 50% of the final grade. Instructors will advise student teachers about which pieces of course work (assignments) will be graded. The remainder of the grade will be determined by mid and end of semester exams.

Computer Literacy
(Compulsory)
Semester 2

Syllabus: Computer Literacy

Year/Semester: Year 1/Semester 2
Credit Value: 3 credits
Pre-requisites: F.A. /F. Sc.

Course Description

This course will prepare teachers to understand, use and apply technologies (computer, digital camera, mobile phones) in an effective, efficient and ethical ways. Advanced technologies are more pervasive today than they have ever been, and their uses are expanding continually. ICT is significantly enhancing and altering human activity, and enabling us to live, work and think in ways that most of us never thought possible. Prospective teachers will actively explore the fundamental concepts, knowledge, skills, and attitudes for applying technology in educational settings. They will also learn to develop skills like collaboration, higher-order thinking, problem solving, and self-direction through effective use of technology tools and resources thus, enabling them to be a lifelong learner in 21st century.

Course outcomes:

Trainee-teachers develop confidence and an aptitude for using computers and will be able to:

- use computer technology as a tool for communication & collaboration, problem solving
- create productivity materials related to teaching profession (lesson plans, result sheets etc)
- use computers technology for personal & professional growth, for research and generating new knowledge
- explore new technologies/knowledge for career growth as lifelong learners

Learning & Teaching Approaches:

This is a skills-focused/practical course and it is expected that all the sessions would be implemented practically in the computer lab. The course is based on interactive exploration approach using lecture demonstration method with various teaching techniques including K-W-H-L, brain storming, thought provoking questions, think pair-share, reflections, discussions, etc. The instructional strategies recommended focus the development of knowledge, skills and attitude.

Content Outline

Unit 1 Introduction to Computer (1.5 weeks/ 4 hours)		
Week #	**Session/Main topics**	**Details of sub-topics**
	Session-1: History and classification of Computers	▪ Introduction to computer ▪ Examples of computer o personal computers (desk-top, laptops, pocket PCs/hand-held computers) o main-frame computer systems

		▪ Brief history of computers with timeline
Week 1	**Sessions 2**: Introduction to computers – Learning about Input devices	Knowledge about and interfacing with: ▪ Input devices (Examples: mouse, keyboard, scanner, joystick, webcam, digital camera, bar-code reader, digital voice recorder, etc.) o Knowing the mouse and keyboard ▪ Interfacing with the computer using mouse and Keyboard o Practicing to input data using a mouse (left-click, right-click, move, drag, trackball, double-click), etc.
	Sessions 3: Learning about different parts (hardware) of computer and accessories	▪ Output devices (Examples: printer, speaker, projector, etc.) ▪ Storage devices (hard disk, USB-flash disk, CDs/DVDs, memory card, etc.) ▪ Understanding of Central Processing Unit (CPU) ▪ How do computers work?
Week 2	**Session 1:** Computer Software	▪ Operating/System software introduction ▪ Application software- usage & types (word processing, spreadsheets, multimedia, etc.)

Unit 2

Learning Computer Basics and Internet (3.5 weeks/ 11 hours)

Week 3	Main topics	Sub-topics
Week 2 (contd.)	**Session 2:** Interfacing with computer	Hands-on activities on: o User window (Minimizing, maximizing and closing a window, menu, status and other bars, etc.) ▪ Working with the Operating System oStart/Shut down (menu, purpose, etc.) o User window (Minimizing, maximizing and closing a window, menu, status and other bars, etc.) o Basic concepts of Desktop, Icons, shortcuts, etc.
	Session 3: Interfacing with computer (Contd.)	▪ Working with the Operating System (Continued) o Control Panel o Using Help o Selecting a Printer, Changing a Default Printer, Checking the Status of a Printer
		▪ Concept of files and folders (types of files and extension)

	Session 1: Interfacing with computer (Contd.)	▪ File and folder properties o Renaming a folder, etc. (Practicing to input data using a keyboard)
Week 3	**Session 2:** Interfacing with computer (Contd.)	▪ Types of storage devices ▪ Practically knowing and accessing storage devices/drives
	Session 3: Interfacing with computer (Contd.)	▪ Data transfer between different storage devices (Example: to/from USB-flash disk to hard disk, etc.)
Week 4	**Session 1**: Internet basics	▪ Introduction to Internet and the World Wide Web (www) ▪ Internet browsing applications (Examples: Internet Explorer, Mozilla Firefox, Apple Safari, etc.) ▪ Web addresses and links
	Session 2: Internet basics (Contd.)	▪ Interfacing with the Internet browser window (browser menu-bar, buttons, scrolling, clicking on links, etc.)

		▪ Search engines
	Session 3: Internet basics (Contd.)	▪ Using specialized web-sites (see reference web-links) ▪ Searching for information (search tips, etc.)
Week 5	**Session 1:** Introduction to different types of Networks (LAN/WAN, wireless)	Brief introduction to: ▪ Local Area Network (LAN); sharing on a LAN; Wide Area Network (WAN); Wireless Networks ▪ Sharing on networks; network-related security Issues ▪ Firewalls
	Session 2: Security (Identity and virus protection)	▪ Security (Identity and virus protection): o Protection against virus and spam emails o What is Hacking, and protecting against it
	Session 3: Troubleshooting, software installation and Protection	▪ Software installation (Example: Installing an electronic Dictionary) ▪ Utilities: o What is file compression and why it is needed o File compression applications (Winzip, other programs) o Learning to compress files and folders using

		Windows default options (Zip, rar)

Unit 3

Using Productivity Applications (Word Processing) (Microsoft Word, OpenOffice.org Writer) (2 weeks/ 6 hours)

Week #	Session/Main topics	Details of sub-topics
Weeks 6 and 7	**(6 Sessions)** Using Productivity Applications (Word Processing) (Microsoft Word, OpenOffice.org Writer)	▪ General introduction to application window ▪ Creating, saving & opening documents ▪ Formatting, editing Pages, text & paragraphs ▪ Adding pictures to pages (Clipart & from file) ▪ Working with tables, charts & graphs ▪ Working with Diagrams ▪ Print preferences, printer properties and printing a Document ▪ Using preset and advance features ▪ Using word processing to create classroom instruction documents (diagrams, lesson plan, worksheets, flash cards, brochures, newsletters) and motivation tool (certificate)

Unit 4: Using Productivity Applications (Spreadsheet)

(Microsoft Excel, OpenOffice.org Calc) **(2 weeks/ 6 hours)**

Week #	Main topics	Sub-topics
Weeks 8 & 9	**(6 Sessions)** Using Productivity Applications (Spreadsheet) (Microsoft Excel, OpenOffice.org Calc)	▪ General introduction to spreadsheets interface ▪ Creating, saving & opening spreadsheet ▪ Using worksheets (renaming and adding worksheets) ▪ Adding and working with information (formatting cells, adding comments, inserting hyperlinks) ▪ Changing the look of information with spreadsheet (cell alignment, changing font face and size, adding background color to cells and rows, inserting picture) ▪ Doing Mathematics (formulas: addition, subtraction, average, logic formula etc) ▪ Making charts (formatting i.e. background, legend, color of bars, creating pictograph) ▪ Including print properties ▪ Using spread sheets to create class room management documents (seating chart, electronic attendance register, result sheet, student academic performance graph, bio data)

Unit 5: Using Productivity Application (Multimedia)

Microsoft PowerPoint, OpenOffice.org Impress

Week #	Main topics	Sub-topics
Weeks 10 & 11	**(6 Sessions)** Using Productivity Applications (Multimedia Presentation) (Microsoft PowerPoint, OpenOffice.org Impress)	▪ General introduction to multimedia application ▪ Creating, saving & opening presentation ▪ Viewing and working with slides ▪ Building presentations (adding, moving/sorting and duplicating a slide) ▪ Making slides look good (applying templates, changing color schemes, slide layout, background) ▪ Adding pictures and artistic effects (inserting compressing pictures , applying borders to pictures and other objects, adding 3-D effects, ▪ Adding sounds, movies and links ▪ Adding animations and special effects (applying slide transition, adding & customizing animations, adding action buttons, turning off animations) ▪ Setting up and playing presentation (printing presentations, setting time) ▪ Using multimedia to create presentation (school profile, lesson presentation, action plans, assignment presentation, etc)

Unit 6: Making Connections (3 weeks/ 9 hours)

Week #	Main topics	Sub-topics
Weeks 12 & 13	**(3 sessions)** Searching and saving web resources (images, audio, videos)	▪ Searching multimedia resources ▪ Uploading, downloading documents and other files (pictures, audio, etc.) ▪ Saving information from Web pages ▪ Interfacing with online multimedia resources (Example: videos on www.youtube.comabout learning computer)
	(3 sessions) Communicating through Internet	▪ Creating and using e-mail to communicate and Collaborate o E-mail management (creating, sorting, forwarding, searching, flagging, deleting) o Attaching document (files & folders) ▪ Using Web 2.0, Using chat/talk applications (Skype, GoogleTalk, etc.)
Week 14	**(3 sessions)** Online collaboration Applications	▪ Introduction to online collaboration ▪ Working with an online collaboration application (Application: Google docs) ▪ Creating, importing and editing a file –document, spreadsheet & presentation) ▪ Sharing and accessing online files

Unit-7: Using multimedia devices and resources (1 week/ 3 hours)

Week #	Main topics	Sub-topics
Week 15	**(3 sessions)** Using multimedia digital devices with a computer	▪ Introduction and examples of digital devices (camera, mobile phone, digital voice recorders, etc.) ▪ Using a digital camera and other technologies i.e. mobile phones to down-load images, and videos ▪ Transferring images and videos to computer from mobile devices (mobile phone, camera) ▪ Using multimedia applications (Examples: Real Player, Windows Media Player, Quick Time Player etc.) to play educational audio & video clips

Unit 8: Use of computer in daily life (1 weeks/ 3 hours)		
Week #	Main topics	Sub-topics
Week 16	**Session-1**: Working in the information society	▪ Uses of computer o at workplace, o in community, o for communication, o education & research, literacy o entertainment
	Session-2: Computer ethics	▪ Code of ethics ▪ Computer crime ▪ Copyrights Law and fair-use guidelines and Plagiarism
	Session-3: Computer-Assisted Instruction (CAI)	▪ Computer as a teacher ▪ Use of computer-assisted instruction ▪ Online education (Example: Virtual University of Pakistan

Course Grading Policy

The ability to use a computer can only really be judged by having someone complete a task using a computer. A written exam is of almost no use as an assessment method for this course.

Your instructor will give you a series of assignments and tasks to perform throughout the course, with several at the mid-point and end of the course. These will be graded. Your instructor should tell you in advance which courses will be graded.

EDU-303 Classroom Management (Foundation) Semester 2

Syllabus: Classroom Management

YEAR/SEMESTER: Year 1 Semester 2
CREDIT VALUE: 03 credits
PRE-REQUISITES: Successful completion of semester 1 courses

COURSE DESCRIPTION:

One of the foremost reasons cited for teacher burnout is the challenge of classroom management. This comes as little surprise since classrooms are crowded, busy places in which students of diverse backgrounds and learning styles must be organized, directed and actively involved in learning. Many events need to occur simultaneously, the course of these events is often unpredictable and teachers must react often and immediately to evolving problems and needs. Teaching in such settings requires a highly developed ability to manage people, space, time and activity.

A program of study that aims to prepare prospective teachers must, therefore, equip them with knowledge and strategies for become effective managers of classrooms. That is, it views the best-managed classrooms as ones where each learner is effectively engaged in constructing knowledge. To this end, teachers must manage teaching content, plan lessons, develop responsive instructional strategies, differentiate instruction, create predictable structures and routines and connect learning to the real world outside the classroom. It also views the best-managed classrooms as learning communities with shared values of respect and caring.

In this course, prospective teachers will be encouraged to explore their own beliefs about teaching and learning to arrive at an ultimate goal. Prospective teachers will be given the chance to explore curricular concerns of'what to teach' and 'how to teach it' and decisions. They will also study research
and best practices on differentiation of instruction,classroom structures, routines, procedures and community-building.

COURSE OBJECTIVES:

After completing this course, prospective teachers will be able to:

- define classroom management as a means to maximizing student learning.
- identify key features of a well-managed classroom.
- plan lessons, activities and assignments to maximize student learning.
- differentiate instruction according to student needs, interests and levels.
- design and practice predictable classroom routines and structures to minimize disruptions
- plan for a culture of caring and community in the classroom

SEMESTER OUTLINE

Unit 1—**Learning Theories and Classroom Management** (4 weeks/12 hours)

Week 1	Why a course on Classroom Management? How does a teacher's personal phil beliefs about classroom management?
Week 2	What happens in a well-managed classroom? Classroom Observations and Data Collection (students spend 6 hours in a classroom including class and out-of-class hours)
Week 3	What are the features of Classroom Management? (physical environment, social environment) What challenges must teachers negotiate in the management of a classroom? How do classroom discipline and management differ? What kind of classroom environment do I want?
Week 4	What do I need to think about in designing the effective classroom environment? o Identifying resources for learning oUsing displays and visuals for enhancing the learning environment in theclassroom oSeating arrangements for different kinds of learning experiences Physicalfacilities to enhance the learning environment o Building the social environment

Unit 2-- **Curriculum and Classroom Management** (4 weeks/12 hours)	
Weeks 5-8	How can my curriculum support the classroom management? In what ways can the teacher create a plan for teaching and learning that is consistent with her/his philosophy? o Planning, motivation, teaching and assessing the curriculum o Differentiation of instruction o Multi-grade classrooms o Over-crowded classrooms

Unit 3—**Routines, Schedules and Time Management in Diverse Classrooms** (3 weeks/9 hours)	
Weeks 9	What are classroom 'routines' and ' of classroom time? How do you create structures and routines in a multi-grade context? How can routines and structures help me deal with special needs and situations?
10	How might routines and structures be used to teach specific subject content like Math, Science or Literacy?
11	How might routines and structures be used to promote cooperation and collaborative learning?

Unit 4—**Creating Shared Values and Community** (2 weeks/ 6 hours)	
Week 12	What is community inside and outside the classroom and school? What is community participation and involvement?

	What are typical practices of community participation?
Week 13	How can I manage involvement of the community in my classroom? What routines and structures need to be put in place? In what ways might community involvement be different in multi-grade classroom?
Week 14	How can I create an "ethic of care o diverse classrooms as caring, democratic communities o respectful relations between teacher and students, students and students
Week 15	How can a caring classroom help me build responsible actions and personal accountability? What happens when behavior breaks down? How do I deal with unexpected events?

Unit 5—**Planning the Classroom Environment I Would Like**	
Week 16	How can I use what I have learned to create the classroom I want? oPeer critique and review of final projects o Summary and closure

LEARNING AND TEACHING APPROACHES:

This course assumes that prospective teachers will develop their own plans for classroom management as a result of all they learn in the sixteen weeks that follow.

This course relies on peer discussions, independent reflections and class lectures. It also assumes that student teachers will read all the recommended text and ask provocative questions of themselves and during class. Students are expected to listen with tolerance to new points of view and contribute their understanding and experiences during discussions.

SUGGESTED RESOURCES

Note: The PDF versions of each of the books listed below can be read online for free from the web-links given below.

- Classroom Management That Works: Research-Based Strategies for Every Teacher By Robert J. Marzano, Jana S. Marzano, Debra Pickering
- http://smkbp.com/attachments/Ebook%20-%20Classroom%20Management%20That%20Works.pdf
- Chapter 1—Introduction to Proactive Classroom Management http://ptgmedia.pearsoncmg.com/images/9780135010631/downloads/Henley_Ch1_Introducti_ontoProactiveClassroomManagement.pdf
- The Multi-grade Classroom: A Resource handbook for Small Rural Schools-- Book 3: Classroom Management and Discipline by Susan Vincent, Northwest Regional Educational Laboratory, Portland, Oregon 97204.
- http://educationnorthwest.org/webfm_send/1152
- Canter, L. Assertive discipline: More than names on the board and marbles in a jar. [Retrieved on February, 28, 2011] from http://campus.dyc.edu/~drwaltz/FoundLearnTheory/FLT_readings/Canter.htm
- Evertson, C. M., & Emmer, E. T. (2009). *Classroom management for elementary teachers* (8th Ed.). Upper Saddle River, NJ: Pearson.
- Marzano, R. J. (2003). *Classroom management that works: Research-based strategies for every teacher.*
- Alexandria, VA: Association for Supervision and Curriculum Development.

General Mathematics
(Compulsory)
Semester 2

Syllabus: General Mathematics

Subject: General Mathematics
Credit value: 3 credit hours
Prerequisite: SSC Mathematics

This course provides opportunities for prospective elementary teachers to strengthen their mathematical knowledge and skills and to gain confidence in their understanding of mathematics. An important outcome of this course is for prospective teachers to be able to teach mathematics successfully in the elementary grades.

Research-based knowledge about good math instruction provides a solid base of information for educators to use as they identify mathematics skills students need to develop, as well as teaching strategies and instructional approaches that best support the development of these skills. The course is designed based on what research tells us about good math instruction.

The overall organization of the course is divided into four units:

1. Number and Operations
2. Algebra and Algebraic Thinking
3. Geometry and Geometric Measurement
4. Information Handling

Each unit of study has a consistent design or organization and is meant to maximize time on learning for prospective teachers.

1. **Content:** Most one hour sessions will begin working on a math problem. Prospectiveteachers will engage in solving and discussing a math problem and sharing approaches and solutions. The content has been developed to so that prospective teachers will engage in mathematics *in depth* to help them connect concepts within and across the four units.
2. **Pedagogy:** In each lesson prospective teachers will actively engage in doing mathematicsin order to experience approaches to teaching and learning math that they can use when they teach. They will recognize that there are often multiple ways of approaching a problem and in some instances more than one correct answer. The instructor will present questions that stimulate curiosity and encourage prospective teachers to investigate further by themselves or with their classmates.
   The course will also examine how children learn and develop mathematical understanding and skills and how the way children think influences the teaching of mathematics in the primary, elementary, and middle grades.
3. **Assignments:** Students are expected to continue learning about math and the teachingof math after class. There will be assignments to stretch prospective teachers content knowledge and to learn more about teaching math. Assignments will take many forms including independently solving math problems and school based tasks.

Course outcomes:

Students will:

- Increase their mathematical content knowledge for Number and Operations, Algebra and Algebraic Thinking, Geometry and Geometric Measurement, and Information Handling for teaching in the primary, elementary, and middle grades
- Increase their confidence, competence, interest, and enthusiasm for mathematics by exploring and doing mathematics
- Deepen an understanding of how children learn mathematics

- Build a variety of instructional techniques with clear purposes
- Enhance their use of questioning technique
- Learn ways to engage students in mathematical thinking through interactive activities

Semester Outline

Unit 1: Numbers and Operations (5 weeks/15 hrs)

The prospective teacher will:

- Differentiate between various types of numbers in our number system
- Know various models for arithmetic operations (addition, subtraction, multiplication and division) with natural numbers, rational numbers, and integers
- Understand Base-10 place value as it relates to natural numbers and eventually to decimals
- Be able to describe the relationship among and between fractions, decimals, ratios, rates, proportions, and percentages

Week #	Themes	Sub themes
1	Numbers and Operations	●Counting ●Models for Addition & Subtraction with natural numbers ●Addition and Subtraction as inverse Operations ●Word problems involving addition and Subtraction
2	Place Value Numbers and Operations	●Working in the base-10 system ●Models for Multiplication with natural Numbers ●Multiplication and Division as inverse Operations ●Models for Division with natural Numbers ●Nature of the remainder in division ●Factors, Prime and Composite Numbers
3	Fractions and Decimals	●Models of fractions (sets, number line, area, volume) ●Types of fractions (proper, improper and mixed-number) ●Decimals as fractions linked to base-10 place value ●Concept of GCF and LCM ●Operations with fractions and decimals
4	Percent Ratios and Proportion Rates	●Percent as related to fractions and Decimals ●Ratio and Proportion ●Rates
5	Integers	●Integers, Operations with integers ●Venn Diagrams

Unit 2: Algebra (4 weeks/12 hrs)

The prospective teacher will be able to:

- Describe the connection between Arithmetic and Algebra
- Identify the repeating and/or increasing unit in a pattern and express that pattern as a rule
- Understand what variables are and when and how variables are used
- Express algebraic relationships using words, tables, graphs, and symbols
- Use order of operations to solve for unknowns in algebraic equations

Week #	Themes	Sub themes
1	Algebra as Generalized Arithmetic Patterns	•Repeating patterns and growing patterns •Generalizing a pattern and finding a rule
2	Algebraic terminology, the concept of x as a variable, coordinate graphs, multiple representations, the concept of identity	•Creating coordinate graphs •Continuous, discontinuous, and discrete Graphs •Equivalent expressions
3	Linear functions Order of Operations	•Interpreting tables, graphs and equations of linear functions •The concept of slope •Order of Operations
4	Square expressions and equations Symbol manipulation	•Interpreting tables, graphs and equations of quadratic functions •Solving for x, the unknown

Unit 3: Geometry and Geometric Measurement (5 weeks/15 hrs)

The prospective teacher will:

- Understand undefined terms in geometry
- Identify and construct different types of angles.
- Identify characteristics and measurable attributes of 2-dimentional figures and 3-dimentional objects
- Calculate area, perimeter, surface area, and volume
- Understand square numbers, square roots, and the relationships involved in the Pythagorean Theorem

Week #	Themes	Sub themes
1	Polygons	•Characteristics of Polygons with an emphasis on Triangles and Quadrilaterals,
2	Undefined terms in geometry Identification and construction of Angles	•Point, line, line segment, ray •Models of angles •Benchmark angles •Classifying angles by measurement
3	Geometric Measurement: Area and Perimeter of polygons	•Perimeter and Area formulas
4	Geometric Measurement: Circumference and Area of Circles Surface Area of Cuboids and Cylinders	•Circumference and Area formulas •Surface Area formulas

5	Volume of Cuboids and Cylinders Introduction to the Pythagorean Theorem	•Volume formulas •Squares, square numbers, square roots (surds) •The Pythagorean Theorem

Unit 4: Information Handling (2 weeks/6 hrs)
The prospective teacher will:

- Recognize and construct various types graphs
- Determine which types of graphs best describe a given situation
- Analyze a graph and interpret its information
- Understand different measures of central tendency and determine which best describes a given situation

Week #	Themes	Sub themes
1	Graphic displays of information	•Collect &organize data via: tally marks, pictographs, line plot, bar graph, and line graphs (discrete and continuous) •Interpret the above graphic displays of Data
2	Measures of dispersion and central Tendency	•Range •Mean •Median •Mode

Course Grading Policy

A variety of assessments will be used to assign a final grade. It is recommended that course work be used to assign at least 50% of the final grade. Your instructor will tell you at the start of the course how your final grade will be determined and which pieces of course work will be assessed.

Suggested Resources:

These resources provide additional information about math education and the mathematical topics addressed during the course.

- NCTM *Illuminations*: http://illuminations.nctm.org/
- MathsCurrriculum: http://nzmaths.co.nz/
- N-Rich Maths site: http://nrich.maths.org/public/
- *How Students Learn: History, Mathematics, and Science in the Classroom* www.nap.edu/catalog.php?record_id=10126#toc Published by National Academies Press.
- *What does Good Mathematics Instruction Look Like?:*
- http://www .naesp.org/resources/2/Principal/2007/S-Op51 .pdf
- Mathematics for Elementary School Teachers, by Tom Basserear, published by Brooks Cole.
- Elementary and Middle School Mathematics: Teaching Developmentally, by John A. Van de Walle, Karen Karp, and Jennifer Bay-Williams, published by Pearson Education.
- Mathematics Explained for Primary Teachers, by Derek Haylock, published by SAGE Publications.

Pakistan Studies
(Compulsory)
Semester 2

Syllabus: Pakistan Studies

YEAR/SEMESTER: Year 1/Semester 2
CREDIT VALUE: 02
PRE-REQUISITES: Successful completion of Pakistan Studies Course at F.A./F.Sc. level

COURSE DESCRIPTION

Pakistan Studies is the integrated, coordinated and systematic study drawing upon disciplines of social sciences such as history, geography, anthropology, economics, political science and sociology in relation to Pakistan.

The Pakistan Studies course provides a background of Pakistan Movement and political development after its inception. It will also particularly cover the salient features of Pakistan i.e. land, economy, human development and domestic and international current issues. The course will provide opportunities to the prospective teachers to enhance their content knowledge in disciplines that form the core of Pakistan studies; to critically examine the content; to broaden their vision and understanding of society, democratic citizenship, respect for cultural diversity and religious harmony; to develop their range of skills such as information gathering and processing, map reading, critical thinking, decision making, problem solving, communication and presentation skills; and to explore values and dispositions such as commitment to the common good and justice, to social responsibility, action and develop personal qualities like self-esteem, confidence and initiative and risk taking.

COURSE OBJECTIVES

- To create awareness among students about Pakistan as an enlightened nation , comparing it with the rationale and endeavors
- To educate students about key concept in the disciplines comprising Pakistan Studies (history, geography, economics and political science);
- To assist students to identify various perspectives on current, persistent and controversial issues in Pakistan; identify their own position and be able to support it;
- To inculcate in students the sense of patriotism, tolerance, active citizenship, and respect for cultural diversity and religious harmony.
- To encourage students to design and implement a project to promote active and responsible citizenship;

SEMESTER OUTLINE

The course content will be covered within one semester and consist of four units. A weekly breakdown of each unit is provided below:

UNIT 1: HISTORICAL PERSPECTIVES

Week	Session	Topics Subtopics
1	1	**Introduction; The concept of civilization** Introduction to the course Civilization Ancient civilizations of Indus valley: Mohenjo-Daro and Harrapa
	2	**Skills development** Inquiry skill Presentation skill Teaching history: facts versus opinions
2	3	**Ideological rationale with reference to important personalities** Two nation theory: Sir Syed Ahmad Khan, AllamaIqbal and Quaid-e-Azam Muhammad Ali Jinnah
	4	**Factors leading to the birth of a nation** Factors leading to the creation of Pakistan - Economic, Social and Political
3	5	**Factors leading to the birth of a nation** Factors leading to the creation of Pakistan - Economic, Social and Political
	6	**Struggle for Pakistan** British colonization and Muslim reform movement (1857 –1905) The struggle of independence (1905 –1940)
4	7	**Struggle for Pakistan** The Pakistan movement (1940 –1947) The teething years (1947 –1958)

Unit outcomes:

By the end of this unit, the students will be able to:

- Recognize how the past has been represented and interpreted;
- Distinguish between facts and opinions;
- Demonstrate inquiry and presentation skills;
- Evaluate role and contribution of key leaders in creation of Pakistan;
- Critically analyze the key events and factors that led to the creation of Pakistan;
- Identify and discuss various perspectives and develop their own historical understanding.

UNIT 2: LAND AND PEOPLE

Week	***Session***	***Topic***
4	*8*	**Geography of Pakistan** General overview to geography of Pakistan Introduction to project work
5	*9*	**Map skills** Globe and different types of map Skill development: map and globe reading and interpreting
	10	**Physical features of Pakistan** Physical features of Northern and Western Highlands and The Punjab Plains

6	*11*	**Weather and climate; Factors affecting weather and climate** Factors that influence weather and climate of Pakistan Major climatic zones of Pakistan and their characteristics
	12	**Environmental problems in Pakistan** Major Natural and Human Made Disasters in Pakistan Disaster Management / Preparedness
7	*13*	**Movement and Human environment interactions** Movement: people, goods and ideas; Humans adapt to the environment / Humans modify the environment / Humans depend on the environment.
	14	**Population and its effects on economy** Population density and distribution Population growth and its effects on economy of the country

Unit outcomes:

By the end of this unit, the students will be able to:

- Apply a range of geographical skills (ability to read and interpret maps, graphs and charts, photographs and statistics, etc.);
- Compare and contrast the five geographical regions of Pakistan;
- Describe the impact of climate on the people and land of Pakistan;
- Discuss the natural and man-made disasters that occur in Pakistan and ways that they can be prevented and/or how to respond
- Analyze factors influencing population change and its effect on economy;

UNIT 3: BASIC ECONOMICS

Week	*Session*	*Topic*
8	*15*	**Basic Concepts of Economics** Goods and services Utility Scarcity
	16	**Economic systems** Market Command Mixed
9	*17*	**Sectors of the economy – Agriculture** Role and importance of agri Agriculture production and productivity
	18	**Sectors of the economy –Industry** Contribution of industrial sector to national economy Prospects for industrialization
10	*19*	**Sectors of the economy – Trade** Major imports and exports of Pakistan
	20	**Economic Development** Economic development and growth Economic development of Pakistan

Unit outcomes:

By the end of this unit, the students will be able to:

- Explain key characteristics of three economic systems
- Differentiate between economic development and economic growth;
- Interpret and present data about the economy;

- Analyze the role and major benefits of agricultural, industrial sectors and trade in
  Pakistan's development.

UNIT 4: GOVERNMENT AND POLITICS IN PAKISTAN

Week	***Session***	***Topic***
11	*21*	**The government of Pakistan** Introduction Systems, levels functions and branches of government
	22	**Objective Resolution** The approval of the Objective Resolution by the Constituent Assembly Key features of the Objective Resolution Significance and impact of Objective Resolution in constitution making
12	*23*	**The Political and Constitutional Phases** Pakistan: The early years (1947 –1958) The Ayub Era (1958 –1969) The Yahya Regime (1969-1971)
	24	**The Political and Constitutional Phases** The Z. A. Bhutto Era (1971-1977) The Zia Regime (1977-1988) Civillian Rule (1988-1999) Musharraf Rule (1999-2008)
13	*25*	**The 1973 Constitution**
	26	**Citizen participation** The role of the citizen in a democracy; Civil society and the role of civil society Major Civil Society Organizations: Origin, Growth, Contribution and Impact
14	*27*	**Citizen participation** Role of major political parties in politics of Pakistan

Unit outcomes:

By the end of this unit, the students will be able to:

- Explain the basic components of the governance system in Pakistan;
- Describe and explain the significance and salient features of the Objectives Resolution;
- Identify political and constitutional political systems;
- Recognize the significance of the constitution of Pakistan;
- Give examples of the role civil society plays in Pakistan;
- Recognize political parties of Pakistan and their role.

UNIT 5: CONTEMPORARY PAKISTAN

Week	***Session***	***Topic***
14	*28*	**Contemporary Pakistan** Politics
15	*29*	**Contemporary Issues** Major Social, Cultural, Sectarian and Ethnic issues
	30	**The future of Pakistan** Economic Prospects Positional opportunities and threats
16	*31*	**Consolidation of the course**
	32	**Conclusion of the course**

Unit outcomes

By the end of this unit, the students will be able to:

- Synthesize information from a variety of sources to describe the political situation of Pakistan;
- Investigate and lead a discussion on a key contemporary issue;
- Describe and analyze the current situation of Pakistan from an economic perspective;
- Debate future plans for development of Pakistan.

LEARNING AND TEACHING APPROACHES

The teaching of Pakistan Studies will adopt methods that promote creativity, aesthetics, and critical perspectives, and enable learner to draw relationships between past and present, to understand changes taking place in society. This requires students and teachers to engage in active teaching and learning.In order to make the process of learning participatory there is a need to shift from mere imparting of information to debate and discussions. This approach to learning will keep both the learner and teacher alive to social realities.

It has often been observed that cultural, social and class differences generate their own biases, prejudices and attitudes in classroom contexts. The approach to teaching therefore needs to be open-ended. Teachers will discuss different dimensions of social reality in the class, and work towards creating increasing self-awareness amongst themselves and in the learners. Teaching will utilize a range of audio -visual materials, including photographs, charts and maps, and organize visits to museums and archeological sites if possible. Learning about Pakistan studies will also involve the local community –older community members can talk about local history, local experts such as water engineers and local craftsmen and women can talk about their work in relation to topics in the course. Experiential learning will be encouraged through project work.Thus, to achieve set course objectives a creativity, intellectual curiosity, tolerance and respectfor others and to maintain a good civicsense, the course will use a combination of the different teaching and learning approaches. Students will be encouraged to engage in the following activities / strategies to stimulate their interest in the topics being studies and to develop a better understanding of the syllabus content:

- Effective lecturing
- Instructional strategies
- Cooperative learning structures
- Conducting inquiry
- Critical discussions / debates on the content materials
- Project work
- Drawing, reading and filling-in maps
- Making charts, graphs and tables
- Visit and write reports or make presentations on places visited

SUGGESTED COURSE GRADING POLICY

The course grading policy of the university and its affiliated college will be shared with students at the beginning of the course. It is recommended that 50% of the final grade is based on course work (on

the basis of two assignments) and 50% of the grade from the final and mid-term exam. Universities and colleges will be adhering to their agreed grading policy.

Two graded assignments will have to be completed within a semester. They will be assessed according togradingthepolicy. university'sFirstassignmenttask,conducting inquiry on a topic and making presentation after inquiry process, weighs 20 % of mark out of 50 % total. As a second assignment, students will be involved in a project work. Upon completion of the project, the students will be expected to submit a report on planning and implementation of the project. The report will be assessed and carries weight of 30 %. In addition, there are several non-graded assignments and tasks during the course. All graded and non-graded assignments should be carried out by the students in order to pass the course of Pakistan Studies. Description, tasks, criteria and indicators of the graded assignments will be shared with the students in a separate handout.

SUGGESTED RESOURCES

- Abid, S.Q. (2007). *A Muslim Struggle for Independence: Sir Syed to Muhammad Ali Jinnah*. Lahore: Sang-i-Meel.
- Ali, C. M. (1998). *The Emergence of Pakistan*. Lahore: Research Society of Pakistan.
- Ali, Mehrunnisa (2001). *Readings in Pakistan's*.Karachi:OxfordUniversity*Foreign Pol* Press.
- Amin, Shahid.M (2004). *Pakistan's Foreign*.Karachi:Oxford*Policy:*UniversityPress*A. Reapp* Anwar Syed (2007). *Issues and Realities of Pakistani Politics*. Lahore: Research Society of Pakistan,
- University of the Punjab.
- Burke, S.M, Qureshi, Salimul-Din (1995). The British Raj in India. Karachi: Oxford University
- Choudhary, G. W. (1969). *Constitutional Development in Pakistan*. London: Longman Group Ltd. Citizenship Rights and Responsibilities Pakistan
- (CRRP) Program (2007). Youth in Elections: Voting for our future. Islamabad: The Asia Foundation.
- Cohen, S. P. (2005). *The Idea of Pakistan*. Karachi: Oxford University Press.
- Dean, B.L., Joldoshalieva, R., Fazilat, A. (2006). *Creating a Better World: Education for Citizenship,Human Rights and Conflict Resolution.* Karachi: AKU-IED
- Kazimi, M. R (2007). *Pakistan Studies*. Karachi: Oxford University Press.
- Kazimi.M.R. (2009). *A Concise History of Pakistan*. Oxford University Press.
- Kennedy, C. (Ed.) (2006). *Pakistan 2005*. Karachi: Oxford University Press. Khan, F. K. (1991). *A Geography of Pakistan: Environment, People and Economy*. Karachi: Oxford University Press.
- Khan, H. (2001). *Constitutional and Political History of Pakistan.* Karachi: Oxford University Press.

- Malik, H. &Gankovsky, Y. V. (Eds.) (2006). The Encyclopedia of Pakistan. Oxford University Press.
- Rabbani, M. I. (2003). (Revised Edition). *Introduction to Pakistan Studies*. Lahore: Caravan Book House.
- RafiqueAfzal, *Political Parties in Pakistan,* Islamabad: National Institute of Historical and Cultural Research, 1999, (Vol. I, II and III) 1999.
- Shafqat, Saeed, *New Perspectives on Pakistan: Visions for the Future,* Karachi, Oxford University Press, 2007
- Smith, N. (2007). *Pakistan: History, Culture and Government*. Karachi: Oxford
- Yusuf, Hamid (1998) A study of political Development 1947-99. Lahore: The Academy.

Website Resources

Story of Pakistan: A multimedia journey
http://www.storyofpakistan.com/

Government of Pakistan
http://www.pakistan.gov.pk/

Pakistan Institute of Trade and Development
www.pitad.org.pk

Pakistan Agricultural Research Council
http://www.parc.gov.pk/

Geographical Association: Furthering the learning and teaching of Geography
http://www.geography.org.uk/

National Fund for Cultural Heritage
http://www.heritage.gov.pk/

Defense Journal:
http://www.defencejournal.com

Constitution of Pakistan
http://www.mofa.gov.pk/Publications/constitution.pdf

Declaration on Rights and Duties of States
http://untreaty.un.org/ilc/texts/instruments/english/draft%20articles/2_1_1949.pdf

EDU-331Methods of Teaching Islamic Studies

(Professional)

Semester 2

Credit Hrs: 03

Eligibility Criteria: Successful Completion Semester 1

Learning Outcomes:

At the end of the course students will be able to;

1. discuss the value and importance of Islamic studies.
2. apply the suitable teaching methods in teaching of Islamic Studies.
3. develop lesson plan in Islamic Studies.

1. Objectives of Teaching Islamic Studies

1.1 Meaning, importance and objective of education in the light of Quraan and Hadith
1.2 Objectives of teaching Islamic Studies in the light of educational policies
1.3 Classification of Objectives of teaching Islamic Studies
1.4 Objectives of Teaching Pakistan Studies at Primary and Secondary level

2. Meaning and Importance of Education and Teaching

2.1 Identification of teaching affecting factors
2.2 General principles of teaching, motivation and learning by doing
2.3 The relation of education and teaching with practical life
2.4 Maxims of teaching
2.5 Effective teaching and its characteristics

3. Method of Teaching

3.1 Method of teaching in the light of Quraan and Uswa-e-Husna
3.2 Different teaching methods
3.2.1 Discussion Method
3.2.2 Descriptive Method
3.2.3 Assignment Method
3.2.4 Story Method
3.2.5 Question & answer Method
3.2.6 Interview Method

4. Preparation of Lesson Planning

4.1 Meaning of lesson planning
4.2 Objectives of lesson planning

4.3 Importance of lesson planning
4.4 Need of lesson planning
4.5 Characteristics of lesson planning
4.6 Basic steps of teaching
4.7 Major and minor steps of presentation

5. Teaching Technology

5.1 Meaning, historical background, need and importance of audio visual aids
5.2 Types and use of audio visual aids
5.3 Difficulties in using audio visual aids

6. Teaching Techniques

6.1 Importance and Functions of questions
6.2 Characteristics of questions
6.3 Types of Questions
6.4 Importance of asking questions
6.5 Types and characteristics of questioning
6.6 Handling of Students questions and answers

7. Study of Islamic Studies Curriculum (6^{th}-10^{th}) under the following topics

7.1 Surah-e-Shams
7.2 Surah-e-Qadar
7.3 Surah-e-Takasur
7.4 Surah-e-Qarigha
7.5 Surah-e-Humazah
7.6 Surah-e-Quresh
7.7 Surah-e-Maghoon
7.8 Translation and explanation of Ahadith
7.9 Masael-e-Taharat (cleanliness)
7.10 Masael-e-Ghusal and Wazoo (ablution)
7.11 Tayammum
7.12 Salaat (pray)
7.13 Zakat(alms giving)
7.14 Hajj (Pilgrimage)

8. Evaluation of learning outcomes of Islamic Studies

8.1 Meaning and objectives of Evaluation
8.2 Characteristics of a good testing program
8.3 Evaluation Techniques for Islamic Studies

9. Teacher of Islamic Studies

9.1 Status and value of teacher in Islam

9.2 Personal qualities and training and educational background of teacher
9.3 The role and duties of teacher in teaching

10. Analysis of Islamic studies text books in curriculum of Secondary level classes

References:

1. Ali Osatsdiddiqui, (1982)Islamiat or is ketadreesikhakey, Lahore press
2. Fazal Ahmed, (2001)Usool-e-taleem or tareeqa-e-tadrees. Majeed book depot
3. ShabbberKazmi,(2000) falsafa-e-tadveen-e-nissaab, Lahore Publishing House
4. Dr, Feroz Hayat, (1998)TadreesiMuawnaat, Majeed book dopot
5. DhanijaNeelam (1993), *Multimedia Approaches in Teaching Social Studies,* New Delhi: Harmen Publishing House.
6. Fenton, E.A. (1967), *The New Social Studies,* New York: Ho Rinehart, Winston, Inc.
7. Bining, A.C., &Bining , D.H. (1952), *Teaching the Social Studies in Secondary School,* N.Y: McGraw Hill Book Company.
8. Quillen, I.J., & Hanna, L. A. (1943), *Education for Social Competence, Curriculum & Instruction in Secondary School Social Study.* Chicago: Foreman & Co.
9. Islamic Studies text book (VI-X) Khyber Pakhtunkhwa Book Board

EDU-432 Teaching Literacy Skills (Compulsory) Semester 3

Syllabus: Teaching Literacy

YEAR/SEMESTER: Year 2/ Semester 3
DURATION: 16 weeks/ 3 Credits
PREREQUISITES: Successful completion of Semester 1 and Semester 2

COURSE DESCRIPTION

The purpose of this course is to help prospective teachers understand the theory and practice of teaching early reading and writing. Reading and writing are seen as related, integrated meaning-making processes, which are reciprocal with the oral language processes, listening and speaking. Like oral language, reading and writing development with print and the environment, with support and facilitation by the teacher. Adopting effectivestrategies that foster success and a love of reading is a key to supporting all children as they engage in the process of becoming readers and writers.The course will provide learners with grounding in what it means to be a reader and early reading development, which is the foundation for the continuation of literacy development. A major goal is to develop the learners' under constructing meaning through the interaction of a reader in the text, and the context of the reading. Students will also understand the connection between reading and writing and the important role of writing in early literacy development.
Further, we will consider that most students will be learning to read and write in a language that is not his or her first language. Although the development of reading and writing in a second language follows the same trajectory as the development in a first language, there is by necessity a delay as students begin to learn the languages of the school.The numerous topics will be discussed, exemplified, conceptualized and developed within a three-unit span. These units are: 1) What is Reading? 2) Growing Up to Read and Write, and 3) Becoming Real Readers. Within these units the students will come to understand that reading develops at different rates and in different ways within each individual, but that there are enough commonalities to be able to group students for instruction that is specifically designed to meet their needs.

COURSE OUTCOMES

After completing this course, pre-service teachers/teachers will be able to:

5. describe reading as a holistic process comprising comprehension, fluency, and word recognition/solving.
6. Identify phases of second language development and the implications for reading and writing instruction
7. identify various phases in reading development.
8. explain the reciprocal nature of reading and writing and the effects of childr on their development as readers and writers
9. develop a repertoire of strategies for teaching comprehension, vocabulary, fluency, and word recognition/solving to diverse early readers, including multilingual learners and children learning a new language.
10. differentiate instruction through various classroom organizational structures and teaching strategies.
11. Identify supports for learning to read and write, including family and community.

LEARNING AND TEACHING APPROACHES

The students will engage in small group work in order to process and clarify assignments as well as material read and material presented in a whole group brief lecture/discussion format, modeled lessons, and video presentations. Students will work with partners or small groups.

SEMESTER OUTLINE

Unit 1: What is Reading and Writing	
The first unit will provide prospective teachers with an understanding of reading as a meaning-based language process with a specified set of components. Further, they will see how reading fits with writing and language development, particularly within a multilingual context. The stages and models of reading and development will be examined.	
Week One	Introduction Why this Course? What is Skilled Reading? What is Skilled Writing?
Week Two	Components of Reading Oral Language as the Foundation of Reading The Sub-systems of Language
Week Three	Learning to Read and Write in a Multilingual Context Home -School Connection Stages of Second-Language Acquisition
Week Four	Phases and Models of Reading and Spelling Development
Week Five	Stages of Writing Development
Unit 2: Growing Up to Read and Write: Early Reading and Writing	
The second unit will provide prospective teachers with an understanding of phonological awareness and the alphabetic principle, focusing on strategies to teach/develop these in emergent/beginning readers. The critical role of book-reading and print-rich environment in early literacy will be examined, with an emphasis on bringing these to feature in early literacy classrooms.	
Week Six	Phonological Awareness Alphabetic Principle
Week Seven	Instructional Strategies for Word Recognition
Week Eight	Book Reading
Week Nine	Literacy-Rich Classroom Environment Types of print resources to use in the early-literacy classroom Differentiating instruction in a print-rich classroom.
Unit 3: Becoming Readers and Writers (Grades 1-3)	
In the third unit we will examine the development and instruction of students who have acquired	

basic emergent literacy skills (typically grades 1-5). The reciprocal nature between reading and writing will come to life. The selection of books and their role in Guided Reading will be closely explored. In addition, we will unpack research-based instructional strategies that support the development components of reading such as word recognition, fluency, vocabulary, and comprehension. The writing process and effective writing instruction will be explored.	
Week Ten	Instruction Strategies for Fluency
Week Eleven	Instructional Strategies for Vocabulary
Week Twelve	Instructional Strategies for Comprehension
Week Thirteen	Matching Texts to Students
Week Fourteen	Guided Reading
Week Fifteen	Writing as a Window Into Reading
Week Sixteen	Course Wrap-Up

SUGGESTED TEXTBOOKS AND REFERENCES

Books

- M.S.Burns, P. Griffin, and C.E. Snow (1999). *Starting Out Right: A GuiReading Success.* Washington, DC: National Research Council.Available on line: http://www.nap.edu/catalog.php?record_id=6014

Readings and On-line Resources

Readings:

- http://www.nap.edu/catalog.php?record_id=6014*StartingOut Right: A Guide to Promoting*
- *Children'sReading Success*
- http://www.naeyc.org/files/naeyc/file/positions/PSREAD98.PDF*Learningto Read and Write:Developmentally Appropriate Practices for Young Children* http://www.naeyc.org/files/naeyc/file/positions/WWSSLearningToReadAndWriteEnglish.pdf
- *Where we Stand: On Learning to Reading and Write* http://www.cal.org/projects/archive/nlpreports/Executive_Summary.pdf*ExecutiveSummary:*
- *Developing Literacy in Second-Language Learners: Report of the National Literacy Panel on Language-Minority Children and Youth*
- http://www.aft.org/pdfs/teachers/rocketscience0304.pdf*TeachingReading IS Rocket Science: WhatExpert Teachers of Reading Should Know and Be Able to Do*
- http://lincs.ed.gov/publications/pdf/PRFbrochure.pdf*PutReading First: Help Your Child Learn toRead*
- http://lincs.ed.gov/publications/pdf/PRFbooklet.pdf*PutReading First: Kindergarten to Grade 3*
- http://tapestry.usf.edu/nutta/data/content/docs1/NaturalApproachNarrative.pdfTheNaturalApproach: Stages of Second Language Development

Web sites:

- http://www.readinga-z.com: Reading A to Z
- www.ttms.org/:Teaching That Makes Sense
- http://www .readingrockets.org/:Reading Rockets
- http://www.colorincolorado.org/:ColorinColorado

- http://www.pbs.org/parents/readinglanguage/PBSParents Reading and Language
- http://www .fountasandpinnellleveledbooks.com Fountas&Pinnell Leveled Books

Videos:

http://www.learner.org/resources/series162.htmlTeachingReading K-2: A Library ofClassroom Practices
http://www.learner.org/workshops/writing35/index.htmlReadingLike a Writer Videos

SUGGESTED ASSIGNMENTS

Assignment 1.Reading and Writing Autobiography. Prepare an autobiography of yourself asa multilingual reader and writer. The purpose of this paper is to introduce yourself as a multilingual reader and writer to the professor. Talk about how you learned to read and write in your home language (the language you learned as a baby on the laps of your parents and family members) and in Urdu and English: how easy or hard was reading and writing for you; at what age did you begin to read; at what age did you begin to write; in what language did you first learn to read and to write; if this was not Urdu or English, when did you learn to read and write in English; how well did you like reading and writing as achild?Talk about yourself as a reader today: in what language(s) do you continue to read and write as an adult; for what purposes do you read and write (work, pleasure, study, religion, family connections, other); how often do you read for these purposes; what types of materials do you read (books, magazines, newspapers, etc.); what are your favorite books; what is easy or hard for you?

Assignment 2.Oral Tradition. Collect an oral story from someone in your family, community,or friend. Write or record the story. Think about how this story could be used in a classroom to stimulate students'writinginaclassroomstorytelling.Inatwo-pagepaper,summarizeandthe story and explain how you would use it with students. Remember to attach the story you collect to the paper.

Assignment 3.Model of Print Rich Environment. Working together in a group the studentswilldevelop a model of a print rich environment, complete with word wall and classroom charts on reading. Select a topic that is understudy in the classroom. It can be a science, social studies, literature, or math topic. In a two-page paper describe the environment. A map of the classroom with labels may be helpful and should be attached to the two page paper.

Assignment 4. **Prepare a Guided Reading Lesson.** Design a Guided Reading lesson to be taught to a small group or individual student. Based reading level, choose an appropriate book and complete the Guided Reading Lesson Plan.Conduct the lesson and reflect on it. Prepare a paper three page paper in which you answer the following:

1. **Student(s):** Who are the student(s) you worked with? Include a description of theirages, grade levels, and language backgrounds.
2. **Book/Materials:** What book/materials did you choose? Explain why you chose thesematerials.
3. **Evaluation of Lesson:** Did you follow your plan as written or did you have to adaptthe plan? Describe what the student(s) did during the lesson? In what ways was it successful? In what areas did you experience difficulty? What would you do differently next time?

Remember to attach the Guided Reading Lesson Plan Template to your paper.

COURSE GRADING POLICY

The course grading policy will be determined by the university and its affiliated colleges. That policy will be shared with the students at the beginning of the course. It is recommended that at least 50% of the final grade be determined by in-course work and assignments carried out by the students (prospective teachers).

Arts, Crafts and Calligraphy (Content) Semester 3

Syllabus: Arts Crafts and Calligraphy

Year/Semester: Year 2 Semester 3
Credit Value: 3credits
Prerequisites: Successful completion of Semester 1 and 2

COURSE DESCRIPTION:

Art, Crafts & Calligraphy course, is designed for teachers who will teach this subject at the elementary level. Content of the course is mainly drawn from the national Arts Curriculum designed for elementary schools. This will facilitate the teachers to enhance their understanding and skills for the subject which will be essential for them to have in order to become an effective elementary school teacher. Besides drawing content from elementary school curriculum, various topics have been included keeping in mind the advance knowledge and skills that a teacher needs to have to effectively implement the curriculum. This course will develop and broaden critical and creative thinking skills, understanding of and appreciation for the visual arts and culture and increase participant'sinvisualtechniquesandproficiencyprocesses.Participantswillget an opportunity to explore various visual art forms and techniques in this course through the elements and principles of art and design.

COURSE OUTCOMES

By the end of the semester participants will be able to:

- Explain the importance of art education and its role in child development especially for nurturing creativity, enhancing aesthetic sense and stretching imagination.
- Use tools and materials in art more skillfully
- Use of an art journal on their own artistic ideas and thoughts for refining their teaching as an art teacher
- Recognize and appreciate artists, art styles, and artwork
- Reflect and participate in art critiques as a critic and as an artist
- Initiate independent projects that allow personal interpretation and self-expression
- Identify links between art and other school subjects

LEARNING AND TEACHING APPROACHES

Participants will engage in instructional activities using a greater variety of materials and/or combination of materials. It will provide opportunities for participants to explore their abilities to transmit forceful and
meaningful ideas in a variety of media to a two- dimensional surface based on their previous experiences. Participants would be encouraged to use sketch books to note information and develop ideas, make use of
a good variety of media to illustrate art history lessons, e.g. teacher can explore and experiment with different mediums to illustrate her ideas, shecan develop a time line mural, explore low cost materials for making
cave arts etc develop skills in note-making when viewing reproductions of the work of artists and designers;
set regular assignments for homework which require personal research. Variety of teaching and learning approaches would be used e.g. the museum visit/ report and the research project, glossary, handouts.

EXAMPLE ASSIGNMENTS

These are examples of the types of assignments you might be given. Your instructor will tell you more about course assignments.

- Visit an art gallery or museum. Ask students to select three pieces of work. If possible, they should photograph the work and then write about why they like the piece.
- Work with a group of children in elementary grades to make simple puppets. Help them prepare and stage a short puppet show.
- Prepare a variety of objects for use in an elementary grade classroom using junk or recycle-able materials. Explain how they might be used.
- Plan an art activity for children in elementary grades. Try out the activity at school and ask one of your peers to observe and give feedback at the end of the lesson. Write a reflection about your experience teaching the lesson –including observations from your peers.
- As part of learning about a particular sc that school.
- Interview a local artisan e.g. a weaver, a potter, a wood carver to find out more about their work. Prepare a video, a photo display or poster about their work, with a commentary.

COURSE GRADING POLICY

Multiple variety of assessment will be used in the course. By using multiple forms of assessment, the instructor will have many windows on the knowledge, skills and dispositions of prospective teachers. The total grade determined by examinations will not exceed 20% of the course grade. Prospective teachers are expected to be present in class, engage with activities and discussion and complete course assignments. The course instructor will tell you how the course will be graded and which assignments will be graded.

Unit 1: Introduction to Arts, Crafts & Calligraphy (2 Weeks)	
Week 1	• What are Arts, Crafts and Calligraphy? • The role of the teacher in teaching art • Influence of the arts in chill
Week 2	• Calligraphy- The emergence of Islamic calligraphy • Ceramics and Sculpture • Puppetry in Pakistan

Unit 2: History and Culture	
Week 3	• Indus Civilizations • Exploration of history through a museum visit Art and Architecture (From Indus to Mughal)
Week 4	• Islamic Art and Calligraphy (Introduction of art and craft and calligraphy /origin from Persian artist and their calligraphy) • Pakistani Calligraphers (Anwar Jalal Shimza, Rasheed Butt, HanifRamy, Zahoor-ul- Ikhlaq, Arshad, Sadqain, Shakir Ali, Gul gee, Aslam Kamal) • Review of this unit

Unit 3: History and Culture	
Week 5	• Introduction to the Cubism Understand the Cubism • Pakistani Artist‘s (worked in
Week 6	• Intro about Realism • Pakistani Artist‘s work in Real

	• (Ali Imam, M. Husain, Hanjra, Khalid Iqbal, Ana Molka) Hands-on activities
Week 7	• Abstraction • Origin and History of Abstract art • Explore the work of Pakistani artists in abstract (Ahmed Pervaiz, LubnaLatif, Maqsood Ali, Anwar MaqssodHameed Ali) • Hands-on activities
Week 8	• Indigenous art • Pottery, ceramics, textile etc. Hands-on activities
Week 9	• Art Across the curriculum • Ideas to integrate art with languages, science, social studies, mathematics etc. Teachers will be facilitated to learn how illustrations, drawings and craft work can be used to understand and express the concepts of science, maths, social studies and skills in languages • Hands on activities and conclusion

Unit 4: Elements of Art & Principle of Design	
Week 10	• Understanding elements of art (line, Shapes, color, texture, and space and volume) • The importance of lines and its use in art work • Kinds of lines • Use of color (Color wheels, tints, tones and shade)

	• Use of Space and value in 2D and 3D art Texture
Week 11	• Use of Space and value in 2D and 3D art Texture • (Natural and man- made) • Introduction of Principle of Design (unity, variety, balance, contrast, emphasis, and pattern and proportion)
Week 12	• Drawing/ technique of rendering • Still life • Painting
Week 13	• Printing • Pattern making • Shapes- organic and geometrical shapes
Week 14	• Sculpture Landscape • Stick Drawing and conclusion and review of the unit
Week 15	• What is assessment in art curriculum? • How and why we assess creativity? • Review the recommendations proposed in the national curriculum grades
Week 16	• Design rubric/checklist for portfolio • Set criteria for presentation/display/ peer and self-assessment etc. • Conclusion and review of whole unit

TEXTBOOKS AND REFERENCES

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- P., Gura. (1996. Resources for early Learning Children, Adults and Stuf. London :Hodder& Stoughton, (1996.
- P., Tambling. (1990. Performing Arts in the Primary School. UK :Dotesios, (1990. R., Fisher. 1992. Teaching Juniors. UK : T.J. Press, 1992.
- Vandal, S.H. Art Education in Pakistan: A case study of bringing art to school children at the informal level. Pakistan :s.n.
- Razzak. A (2011) Children and Art- Status of art education in Pakistan: VDM. Germany Razzak. A (2009) Fun with paper bag: Feroz Sons. Lahore

EDU-433 Teaching of Urdu (Professional)

Semester 3

نصاب اردو
SYLLABUS URDU

نصاب برائے تدریسِ اردو (فنکشنل/عملی)

- کورس کا تعارف: (COURSE DESCRIPTION)
- حاصلاتِ تعلم: (COURSE OUTCOMES)
- تعلّمی اور تدریسی رسائیاں: (LEARNING AND TEACHING APPROACHES)
- یونٹ (UNIT)

۱۔ نظریہءزبان

۲۔ عملی تدریسی طریقے (سننا، بولنا اور سمجھنا)

۳۔ عملی تدریسی طریقے (پڑھنا اور لکھنا)

۴ ۔ جائزہ و آزمائش

- حوالہ جات (REFERENCES)
- اسائنمنٹ (مختلف موضوعات) (ASSIGNMENTS)
- کورس سے متعلق لازمی معلومات
- اردو سے متعلق غلط فہمیوں کا اِزالہ
- یونٹ نمبر ا سے متعلق سبقی اشارے
- تفصیلی سبقی خاکے
- دیگر یونٹس سے متعلق اہم سبقی اقدامات

نصاب برائے تدریسِ اردو

(CURRICULUM FOR TEACHING OF URDU)

سال دوم/سمیسٹر ۳

ایسوسی ایٹ ڈگری آف ایجوکیشن/ADE

کریڈٹ:۳

پیش لازمہ: (PREREQUISITES)

تدریسِ اردو کے اس کورس میں صرف وہ طلبہ داخلے کے اہل ہوں گے۔جو سمیسٹر اول میں اردو کورس کامیابی سے مکمل کر چکے ہوں۔

کورس کا تعارف: COURSE INTRODUCTION

اس کورس میں زیرِ تربیت اساتذہ نظریہء آموزشِ زبان(The Theoryof Learning of Language) اورزبان کے متنوع ماحول (FEATURES OF A LANGUAGE -RICH ENVIRONMENT) کے حوالے سے تدریسِ زبان کو سمجھیں گے۔ ماہرینِ زبان کا کہنا ہے کہ زبان کا فطری سافٹ وئیر پیدائش سے قبل ہی ہمارے دماغ میں موجود ہوتا ہے اور یہ پروگرام یونیورسل گرائمر کہلاتا ہے۔ بچے اپنی معصوم عمر ہی میں ہم سے اچھے زبان کے متعلم ہوتے ہیں۔اس نظریے کے تحت اس کورس میں ابتدائی اور وسطانی جماعتوں کی درجہ بندی کی گئی ہے۔ لسانی مہارتوں کو جماعت بندی کے تحت عملی تدریسی طریقے (سننا، بولنا اور سمجھنا) اور عملی تدریسی طریقے (پڑھنا اور لکھنا) میں تقسیم کیا گیا ہے۔علاوہ ازیں ان مہارتوں پر دسترس کے نقطہء نظر سے آڈیو لنگوئل اور ٹوٹل فزیکل جیسے عملی طریقوں سے استفادہ کیا گیا ہے۔

جائزہ و پیمائش اور اس پر تنقید کرنا مدرس کے لئے بہت مفید ہے۔اشاراتِ سبق کامیاب تدریسی حکمت عملی کی ضمانت ہیں۔ جو اساتذہ کی تربیت کا لازمی ہیں۔اس لیے اس نصاب میں ایلیمینٹری اساتذہ جماعت اول تا ہشتم جدید سبقی اشارات نا صرف خود تیار کریں گے بلکہ ایلیمینٹری مدارس میں ان کی عملی مشق بھی کریں گے۔اس کورس کی جدت یہ ہے کہ سبقی اشارات کی تیاری اور عملی مشق کورس کا آخری یونٹ نہیں بلکہ دورانِ کورس جاری رہے گی۔

حاصلاتِ کورس: COURSE OUTCOMES

اس کورس کی تکمیل کے بعد زیرِ تربیت اساتذہ اس قابل ہو جائیں گے کہ وہ:

- نظریہء آموزشِ زبان (The Theory of Teaching of Language) کے فطری تقاضوں کو سمجھ سکیں۔
- اردو زبان شناسی پر عبور حاصل کر سکیں۔
- سن کر لہجے، تلفظ کی ادائیگی اور الفاظ کے آہنگ کا لطف لے سکیں۔
- بڑھ کر جملہ سازی کی تحریری مشق کر سکیں۔
- پڑھ کر زندگی سے متعلق مختلف موضوعات پر عمدہ تحریریں پیش کر سکیں۔
- جائزہ و آزمائش کے جدید ترین انداز سبقی اشارات میں بتا سکیں۔
- طریقہ ہائے تدریس میں عملی کا مظاہرہ کر سکیں۔
- ابتدائی سے وسطانی سطح کے تدریسی کورس پر سمعی بصری معاونات و سبقی اشارات تیار کر سکیں۔

تعلّمی اور تدریسی رسائیاں: (LEARNING AND TEACHING APPROACHES)

نظریہء آموزشِ زبان کے ماہرین کا کہنا ہے کہ بچہ ماں کے پیٹ ہی سے سننا شروع کر دیتا ہے۔ کیوں کہ زبان بچے کے جینز میں پوشیدہ ہوتی ہے۔ جدید تکنیکی مہارتیں، تدابیر، فطری سانچے، آزمائشی سوالات اور سوالنامے تدریسی عمل کو جانچتے، پرکھتے اور معیارِ استدلال مقرر کرتے ہیں۔ اس کورس کی تدریسی تعلّمی رسائی زیرِ تربیت اساتذہ کا (جماعت اول تا ہشتم) کے طلبہ کے لیے فراوانی زبان کا ایک متنوع ماحول تیار کرنا اور آموزشی قالب تیار کرنا ہے۔ جو معیارِ زبان کے اصولوں پر پرکھے جاسکیں۔ کورس سے منسلک ان سرگرمیوں کا مقصد زیرِ تربیت اساتذہ کو اپنی تعلّمی ذمے داری بڑھانے کا موقع فراہم کرنا ہے۔

یونٹ ۱

نظریہءزبان

(THEORY OF LANGUAGE)

تعارف:

زبان کے متنوع ماحول میں بچے کے لیے کثرت سے ماحولیاتی مواد زبانی اور تحریری صورت میں موجود ہوتا ہے جو والدین، عزیز و اقارب اور اساتذہ کی جانب سے میسر آتا ہے۔ اس یونٹ میں زیرِ تربیت اساتذہ فراوانی زبان کی نمایاں خصوصیات EATURES OF A LANGUAGE -RICH ENVIRONMENT کو سمجھتے ہوئے آموزشِ زبان کے وسیلوں کے مطابق زبان کے فطری سانچوں پر تدریسی حکمتِ عملی تیار کریں گے۔ مثلاً بچوں کو بات کرنے کے مواقع فراہم کرنا، اردگرد کے ماحول پر رائے لینا، خواہش دریافت کرنا اور منظوم و نثری آسان فہم مواد فراہم کرنا وغیرہ۔ اردو کی لسانی خوبیاں صوتی، قواعدی، متنی نوعیت کی حامل ہیں۔ ان خوبیوں سے استفادہ کرتے ہوئے زیرِ تربیت اساتذہ جماعت اول تا ہشتم کے تدریسی مسائل پر کیسے قابو پاتے ہوئے جدید سبقی ڈیزائن میں کارآمد تدریسی تدابیر اختیار کرتے ہیں۔ اس یونٹ کا کام عملی تدریسی معلومات فراہم کرنا ہے تاکہ اساتذہ عملی مشق کی تیاری کرسکیں۔

پہلا ہفتہ

- نظریہءزبان (THEORY OF LANGUAGE)
- آموزشِ زبان کے وسیلے (پیدائش سے پہلے اور بعد کے محرکات، والدین، اساتذہ)
- اردو زبان کا متنوع ماحول

دوسرا ہفتہ

- اردو کی بنیادی لسانی خصوصیات (صوتی، قواعدی، متنی)
- اردو سے متعلق غلط فہمیوں کا ازالہ
- اردو کی تدریسی تدابیر

تیسرا ہفتہ

- جدید سبقی ڈیزائن

- تدریسی تکنیک
- سمعی بصری معاونات

عملی مشق (TEACHING PRACTICE) شروع ہونے سے پیش تر اساتذہ موضوعاتی بحث کے ذریعے درج بالا نکات کے تحت راہنما استاد کی زیرِ نگرانی اپنی حکمتِ عملی طے کریں گے۔

یونٹ ۲

عملی تدریسی طریقے (سننا، بولنا اور سمجھنا)

ابتدائی تا وسطانی سطح کی جماعتیں

تعارف:

زبان کی تدریس میں صرف سننا ہی کافی نہیں، سن کر سمجھنا ہی اصل شے ہے۔ بچے کے اردگرد مبہم آوازیں اس کے لیے جلد از جلد زبان ازبر کرنے میں مددگار بنتی ہیں۔ زبان سننا اس کے سیکھنے کا پہلا مرحلہ ہے۔ تدریسِ زبان میں بھی پہلی مہارت سننا سکھانا یا تدریسِ سماعت ہے۔ جماعت اول تا ہشتم عملی تدریسی طریقوں (سننا، بولنا اور سمجھنا) کے ذریعے حروف اور الفاظ کی کھوج زبان کا عملی پہلو ہے۔ قرآن ۷۵۶ آیات میں مطالعہ کائنات کا درس دیتا ہے۔ اس کائنات میں موجود ہر شئے پر غور کرنے کی دعوت دیتا ہے۔ اس یونٹ میں دیکھ کر زبان سیکھنا یعنی مطالعہ بہ ذریعہ سماعت تدریس کیسے کی جائے۔ اوصافِ خوش خوانی تدریسِ نظم ونثر میں کارگر ثابت ہوتے ہیں اس لیے زیرِ تربیت اساتذہ جدید طریقہ ہائے تدریس مثلاً (فنکشنل، آڈیو لنگوئل اور ٹوٹل فزیکل) کو جدید سبقی اشارات میں دورانِ عملی تدریس استعمال کریں گے۔ زیرِ تربیت اساتذہ کی تدریس دورانِ کورس جاری رہے گی۔ اس لیے ایک ہفتہ سبقی اشارات کی تیاری کے لیے مختص کیا گیا ہے۔ جس میں زیرِ تربیت اساتذہ عملی تدریسی طریقے (سننا، بولنا اور سمجھنا) اور مطالعہ بہ ذریعہ سماعت تدریس کا گر سیکھ سکیں۔

چوتھا ہفتہ

- اوصافِ خوش خوانی/کرداری مقاصد (تلفظ، روانی، تاکید، لب ولہجہ، تفصیل)
- بنیادی لسانی عادات/مہارتیں تعارف (بولنا، سننا، سمجھنا)
- بولنا اور سننا (فنکشنل، آڈیو لنگوئل اور ٹوٹل فزیکل طریقوں سے مشق)

پانچواں ہفتہ

- بہ ذریعہ قصہ/کہانی (تمثیل، ڈراما، قصہ گوئی)
- بہ ذریعہ کھیل (مثلاً لفظ کی بناوٹ میں حروف کی کھوج)
- بہ ذریعہ مطالعہ (ٹی وی، ریڈیو، کمپیوٹر، مطالعہ کائنات)

چھٹا ہفتہ

- پرائمری سطح پر تدریسِ نظم
- مڈل سطح پر تدریسِ نظم
- فی البدیہہ نظم گوئی

یونٹ ۴

جائزہ وآزمائش

تعارف:

تدریسی عمل کا جائزہ اور اس پر تنقید کرنا مدرّس کے لیے بہت مفید ہے۔ اسباق کے جائزے میں مدرّس کے اشارات، سبق کی خوبی اس کے موقف کی موزونیت، اس کی تدابیر، توضیح کی کامیابی، اس کے عمل تدریس کی کیفیت اور بہ حیثیت مجموعی اس کے سبق کے اثر اور نتیجے پر خاص نگاہ تنقید ڈالنی چاہیے۔ زبان کی جانچ پڑتال کے سائنٹفک قالب تیار کرنا اس یونٹ کا کارآمد پہلو ہے۔ ایلیمنٹری اساتذہ جماعت اول تا ہشتم ہر درجے میں شامل نصاب پر نئے پیمانے تیار کرسکیں گے۔

بارہواں ہفتہ

- جائزہ وآزمائش تعارف
- سوالات کی تکنیک، مشق
- کلوز ٹیسٹ، کثیر انتخابی
- آزمائش (TEST)

تیرہواں ہفتہ

- سوالنامے
- پرچہ جات
- اسائنمنٹ

چودہواں ہفتہ

- ابتدائی سطح کے سانچے (جماعت اول تا سوم)
- وسطانی سطح کے سانچے (جماعت چہارم تا ششم)
- مڈل/وسطانی سطح کے سانچے (جماعت ہفتم وہشتم)

پندرہواں ہفتہ

- منظومات پر مبنی اسباق (جماعت چہارم تا ششم)
- نثر پر مبنی اسباق (جماعت ہفتم وہشتم)
- منظومات پر مبنی اسباق (جماعت ہفتم وہشتم)
- نثر پر مبنی اسباق (جماعت ہفتم وہشتم)

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ماڈل اسائنمنٹ: (ASSIGNMENTS)

۱۔ مختلف موضوعات پر اخباری اشتہارات لکھیں اور ایک ہفتے میں جمع کروائیں۔ اشتہار رنگا رنگ، بامعنی اور جدید ہوں۔

۲۔ رموزِ اوقاف پر اس انداز سے سبقی اشارہ تیار کیجیے کہ کہانی کی کہانی ہو اور رموزِ اوقاف پڑھا دیے جائیں۔ کم از کم تین دن میں سبقی خاکہ جمع کروائیں۔

۳۔ دو گروپوں میں سننے/ بولنے اور پڑھنے/ لکھنے کی مہارتیں تقسیم کی جائیں گی دونوں گروپ اسکرپٹ لکھ کر رول پلے/تمثیل تیار کریں گے۔ دونوں گروپ اپنے مکالمے (اسکرپٹ) تحریری صورت میں ایک ہفتے میں جمع کروائیں گے۔

۴۔ جماعت اول اور ہشتم سے دو اسباق پر سائنٹفک قالب تیار کریں اور ایک ہفتے میں جمع کروائیں۔

نصاب سے متعلق لازمی معلومات:

یہ ہمارا روزمرہ کا مشاہدہ ہے کہ پیدائش کے بعد بچہ اپنے ماحول میں بولی جانے والی زبان خود بہ خود ایک مختصر عرصے میں بولنا شروع کر دیتا ہے۔ اس عام مشاہدے کی غور طلب بات یہ ہے کہ ایک چھوٹا بچہ جس کی ذہنی صلاحیتیں ابھی نشوونما کے مراحل سے گزر رہی ہیں، زبان جیسی پیچیدہ

چیز خود بہ خود کیسے سیکھ لیتا ہے۔ نہ تو اُس نے اسکول کی شکل دیکھی ہے، نہ کسی ٹیوٹر نے اُسے بتایا ہے کہ بولا کیسے جاتا ہے اور نہ والدین نے اسے بولی جانے والی زبان کے اسرار و رموز سمجھانے کی کوشش کی۔ کسی بیرونی دباؤ یا درس و تدریس کے بغیر پیدائش کے دو سالوں کے اندر اندر بچے کا زبان سیکھ جانا صرف حیرت ناک عمل ہی نہیں ہے بلکہ تدریس زبان کے اساتذہ کے لیے اس میں ایک عظیم سبق پنہاں ہے۔

زبان سیکھنے کے اس قدرتی عمل سے یہ بات اخذ کرنا مشکل نہیں ہے کہ زبان سیکھنا ایک فطری عمل اور بچہ یہ خداداد صلاحیت لے کر پیدا ہوتا ہے۔ بچے کا ماحول اس خداداد صلاحیت کو پروان چڑھانے میں اہم کردار ادا کرتا ہے۔ ایک ایسا ماحول جہاں بچے کے لیے محبت، عزت اور آزادی ہو بچے کو سیکھنے کے عمل میں مدد کرتا ہے۔ Noam Chomsky کے نظریے کے مطابق دنیا میں آنے والا ہر بچہ اپنے ساتھ دماغ میں ایک خاص عضو لے کر آتا ہے جسے Language Acquistion Device کہتے ہیں۔ زبان سیکھنے کے بنیادی اصول و اجزا پیدائشی طور پر موجود ہوتے ہیں۔ پیدائش کے بعد جب بچہ اپنے ماحول میں بولی جانے والی زبان سنتا ہے تو اس کی زبان سیکھنے کی فطری صلاحیتیں متحرک ہو جاتی ہیں اور کچھ عرصے میں بچے کا دماغ بولی جانے والی زبان کی پیچیدگی کو سمجھنے لگتا ہے اور بچہ زبان بولنا شروع کر دیتا ہے۔

سننا اور بولنا دو اہم لسانی مہارتیں ہیں۔ عام طور پر تدریس اُردو میں ان مہارتوں پر توجہ نہیں دی جاتی۔ آموزش زبان کی ابتدا سننے سے ہوتی ہے اور سننے کا ردعمل بولنے کی صورت میں سامنے آتا ہے۔ اگرچہ سننا اور بولنا فطری صلاحیتیں ہیں اور غیر رسمی طریقے سے خود بہ خود نشو و نما پاتی ہیں مگر اُنھیں بھی جلا دینے کی ضرورت ہے۔ سننا، سن کر سمجھنا، سمجھ کر مناسب ردعمل کا اظہار کرنا اور مناسب لب و لہجہ اختیار کرنا وغیرہ سننے اور بولنے کے مختلف مرحلے ہیں اور ان کے لیے مناسب تربیت بہت اہمیت رکھتی ہے۔ کیوں کہ

- سننے اور بولنے کی فطری صلاحیتوں کو جلا ملتی ہے۔
- غور سے سننے اور سننے کے عمل کو مؤثر بنانے کی صلاحیت پیدا ہوتی ہے۔
- درست زبان میں اپنے دل کی بات سادہ اور قابل فہم انداز سے بیان کرنے کی اہلیت پیدا ہوتی ہے۔
- بلا جھجک، اعتماد اور روانی کے ساتھ گفتگو کی صلاحیت پیدا ہوتی ہے۔

یہ ہم سب کا مشاہدہ ہے کہ ایک ایسا ماحول جہاں بچے کو زبان بولنے کی آزادی ہو، جہاں اُس کو گفتگو کرنے کے مواقع ملتے ہوں اور جہاں اس کی عزت نفس کا احترام ہوتا ہو اُس کو زبان سیکھنے میں بہت مدد دیتا ہے۔ اُردو زبان کے اس کورس میں جہاں ان مہارتوں کے خاص پہلوؤں کی پر توجہ دی گئی ہے۔ وہیں ان مہارتوں کو پروان چڑھانے کے لیے ادبی/نصابی کتب سے مربوط کیا گیا ہے۔ لسانی مہارتوں کو مربوط پروگرام کے تحت

زیرِ تربیت اساتذہ کے لیے دیے گئے۔ اس کورس کے تمام یونٹوں کی اس طرح منصوبہ بندی کی گئی ہے کے چاروں لسانی مہارتیں یونٹ کا بنیادی مرکز رہیں۔ زیرِ تربیت اساتذہ تمام یونٹوں کی تدریس کے دوران اشاراتِ سبق کی تیاری اور عملی مشق بھی سرانجام دیں گے۔ اور ایسی سرگرمیاں بچوں کے لیے تیار کریں گے جس سے بچے نہ صرف سرگرمی سے پڑھنے اور سمجھنے میں حصہ لیں بلکہ اُنھیں پڑھنے، لکھنے سننے اور بولنے کے مواقع بھی ملیں۔

ابتدائی سے وسطانی جماعتوں میں اُردو کی نصابوں کتاب میں دیے گئے ہر سبق کا مقصد تدریس اُردو ادب کی مختلف اصناف سے واقف کروانا بھی ہے۔ دوران تدریس اگر اساتذہ کرام اس نقطے کو خاطر میں نہیں لائیں گے تو اُردو پڑھانے کا حق ادا نہیں ہوگا۔ مثلاً چچا چھکن کا سبق اس لیے دیا گیا ہے کہ طلبہ کی توجہ کردار نگاری کی طرف دلائی جا سکے دوران تدریس اگر اساتذہ بچوں کو یہ غور کرنے میں مدد نہیں کریں گے کہ امتیاز علی تاج نے چچا چھکن کا کردار یا ٹوٹ بٹوٹ کیسے تراشا ہے، کس طرح اس کردار کو پیش کیا ہے وغیرہ تو اس سبق کو پڑھانے کا مقصد پورا نہیں ہوگا۔ اسی طرح یہ بات شخصیت نگاری، منظر نگاری، آپ بیتی اور سفرناموں والے اسباق پر لاگو ہوتی ہے۔ اس لیے اس کورس میں اصنافِ ادب کو درج بالا جماعتوں کے مطابق درجہ بندی اور لسانی مہارتوں کے تحت شاملِ نصاب کیا گیا ہے۔

ہر استاد اپنی شخصیت، ذہانت اور قابلیت کے مطابق تعلیم دیتا ہے۔ تاہم یہ اندازہ لگانا کہ کس طرح کامیاب تدریس کی جائے، بہت اہم ہے بنیادی تدریسی تکنیک کے بغیر یہ ممکن نہیں کہ استاد اپنے مقصد میں کامیاب ہو جائے۔ اور یہ شعبہ ایسا ہے جس میں تبدیلی، چیلنج اور گنجائش ہر وقت موجود رہتی ہے اس لیے اس کورس میں جانچنے، پرکھنے اور معیار مقرر کرنے کے نئے پیمانے دورانِ تدریسی مشق تیار کرنے پر خاص توجہ دی گئی ہے۔ امید ہے فنکشنل/عملی اندازِ تدریس کی جانب مثبت قدم ثابت ہوگا۔

اردو سے متعلق غلط فہمیوں کا ازالہ

اُستاد کا اُردو رسم الخط میں مہارت رکھنا خصوصاً ابتدائی جماعتوں میں از حد ضروری ہے۔ اردو کو آسان مضمون سمجھنے کی وجہ سے اردو پڑھانے والے اکثر اردو زبان کے استاد نہیں ہوتے اور اگر موجود بھی ہوں تو شاید ادب کے طالبِ علم تو ہوں مگر زبان کے استاد نہیں۔ گفتگو میں پہلا مرحلہ لب و لہجے کی درستی کا ہے۔ اس کے لیے صحیح تلفظ سکھانا ضروری ہے۔ تلفظ سے مراد یہ ہے کہ ہر حرف کی آواز اس کے صحیح مخرج کے ساتھ ادا کی جائے اور ہر لفظ نہ صرف درست طریقے پر بولا جائے بلکہ الفاظ کے درمیان مناسب ٹھہراؤ، فاصلے اور وقفوں کا تعین کیا جائے۔

حرکات و سکنات کا صحیح استعمال کیا جائے اور ادائیگی ٹھہر ٹھہر کر مناسب لہجے کے ساتھ کی جائے۔ تلفظ کی درستی کے لیے استاد کو اپنا نمونہ پیش کرنا چاہیے۔ نہ صرف یہ کہ وہ خود صحیح تلفظ ادا کرے بلکہ اس مقصد کے لیے صحیح زبان بولنے والوں کو سنے، ان کے ساتھ گفتگو کرے اور معیاری لغت استعمال کرے۔ موقع کی مناسبت سے صحیح تلفظ اور ادائیگی کے ساتھ الفاظ بولے۔ چھوٹی جماعتوں میں بول چال کے لیے اپنا نمونہ پیش کرے۔ لہجے کا جو فقدان آج ہے شائد کبھی نا تھا۔ اس طرح بچوں کو زبان سیکھنے کے درپیش مسائل کا حل بھی نکالا جا سکتا ہے۔

جدید تدریسی طریقوں سے واقفیت استاد کے پیشہ ورانہ اخلاق کا حصہ ہے اس عمل کو زبان آموزی کہتے ہیں۔ ثانوی زبانوں کی تدریس کے بہت سے طریقے رائج رہے ہیں۔ ان طریقوں کے نقائص دور کر کے انھیں بہتر بنانے کی کوشش کی جائے۔ اس طرح کئی نئے طریقے بھی وجود میں آتے ہیں۔ ہر زبان کا اپنا ایک مزاج ہوتا ہے اور ہر زبان کے اپنے تدریسی مسائل ہوتے ہیں۔ تدریسی مسائل کو سمجھتے ہوئے عملی طریقوں کو برتنا استاد کی حاضر دماغی ہی نہیں ہنر بھی ہے۔ ہمارے اساتذہ کو زبان کی آموزش کے فنکشنل انداز اختیار کرنا ہوگا۔

سمعی بصری آلات یعنی ریڈیو، ٹیپ ریکارڈر اور ایسے صوتی آلات جو تدریسی اعانت کے طور پر استعمال ہوتے ہیں، سننا سکھانے میں بہترین اعانت ہیں۔ مختلف مضامین کے لیے ''رہنمائے اساتذہ'' بھی شایع ہوتے ہیں۔ اُردو کے سلسلے میں ان کا مطالعہ استاد کے لیے ضروری ہے۔ ان میں سمعی و بصری معاونات کے کئی طریقے بتائے جاتے ہیں۔

اردو زبان کا اثاثہ دیگر زبانوں کے الفاظ کا اس میں شامل ہونا ہے۔ عربی، فارسی اور اب انگریزی کے الفاظ اسے اردش بنا رہے ہیں۔ اردو میں انگریزی الفاظ کا آنا درست مگر اتصال کی تبدیلی زبان کے حسن کو ماند کر دیتی ہے اس کا بھی خصوصاً خیال رکھنا اساتذہ کی ذمے داری ہے۔

میں اکیلا ہی چلا تھا جانبِ منزل مگر
لوگ ساتھ آتے گئے اور قافلہ بنتا گیا

EDU-434Teaching of General Science 2 (Professional) Semester 3

Syllabus: Science II

SEMESTER: Year 2 / Semester 3
DURATION (Hours): 48 hours (16 weeks)
CREDIT VALUE: 03 credits
PREREQUISITES: Matriculation (with a science subject)

COURSE DESCRIPTION:

This Science II course will strengthen prospective elementary teachers' sub knowledge. It provides further opportunity to deepen the pedagogical science content knowledgerequired to effectively teach general science in elementary school. The course covers core concepts in physical science, life science, and earth science. It also covers teaching strategies and instructional approaches that best support the development of a conceptual understanding of science. In contrast to Science I, which dealt with simpler concepts, Science II establishes connections between core concepts, such as matter and energy, and entire systems, such asEarth'ssystems or systems within the humans. After taking Science I and Science II, the prospective student teachers will be well prepared to implement the National Curriculum in elementary grades 1-5.
Science I and Science II integrate science content with science pedagogy and skill building. Both courses are designed to prepare prospective elementary teachers to teach inquiry science in grades 1-5. Their (pedagogical) content knowledge is chosen accordingly. It is recommended that prospective science teachers who want to teach science in higher elementary grades (6-8) deepen their science knowledge further by attending additional science classes offered in Year 3 and Year 4 of the B.Ed. (Hons) program.

COURSE OUTCOMES

After completing this course, student teachers will be able to:

1. Describe forms and interactions of energy and matter, including energy transfer and transformations, as they apply to chemical and physical processes with an emphasis on events/phenomena in everyday life.
2. Begin to see that complex interactions between the atmosphere, the hydrosphere, and the lithosphere in Earth's systems undergo plate tectonics as it relates to Pakistan's mountain examples of advances in technologies that have made it possible to more accurately predict natural disasters and provide life-saving warnings (for floods, hurricanes, etc.). Explain how human activities influence air and water quality, ecosystems, and climate across the globe.
3. Begin to understand the vastness and age of the universe, and be able to discuss the characteristics and differences of objects within our Solar System.
4. Describe the flow of matter and energy in living systems, and apply it to the human body to explain, for instance, the circulatory and digestive system.
5. Be able to understand the purpose of scientific models and tools, and use them appropriately. Examples are the periodic table, classification tables, maps, and models of particle theory and the atom. In addition, be able to demonstrate and teach data collection, recording, and graphing to present conclusions of investigations.

Teaching-Learning Framework

Throughout this course, pedagogy is interwoven with the content development. Faculty will model inquiry teaching to student teachers in order for them to experience the learning and teaching of science in an inquiry way. Thoughtful discussions will follow such hands-on

experiences to clarify the applied methods and expected learning. These reflections are essential because it is through these discussions that prospective teachers will gain essential transfer and pedagogical content knowledge needed for after graduation when they enter the field and teach science to elementary students. Therefore, it is critical to give prospective teachers the opportunity to reflect on what they are experiencing as learners as well as opportunities to practice their role as teachers. Teachers can thus develop meaningful activities around core concepts that will enable their students to gain deeper conceptual understanding and allow them to modify these activities to best meet the needs of their individual classrooms.

This course is also designed to help students develop science thinking and process skills in addition to content and pedagogical content knowledge.

After completing this course, student teachers will be able to:

1. Apply inquiry to the teaching of science at the elementary level.
2. Identify, adapt, and modify investigations that lead to conceptual understanding.
3. Design science investigations around core concepts.
4. Understand the need for learning progressions.
5. Recognize common misconceptions and be able to respond with appropriate remedies.
6. Use open-ended questions to assess students' c
7. Provide their students with exciting science experiences that extend their natural fascination with the world and help them learn the science skills and concepts they will need in later schooling and in life.
8. Reflect on their teaching to develop a personal approach to the teaching of science.

SEMESTER II OUTLINE

Unit 1: Course Overview

Week	Topics/Themes
1	Overview of course content (science and teaching) Life of scientists and the role of science in society Nature of science and its application for teaching Introduction to independent course project, possible topics, and criteria

During this unit, prospective teachers will:

- Understand that science reflects its history and is an ongoing, changing enterprise.
- Read and reflect about the nature of science, and apply it to their own learning and teaching.
- Distinguish between observation and inference.
- Read about famous scientists and their lives, and relate their scientific quest to their own lives.
- Investigate and present a science topic of their choice, applying their science and teaching of science knowledge following specific criteria (research component, science explanations, conclusions, and transfer to teaching in elementary school grades).

Unit 2: Energy Transfer, Transformations, and Conservation

Week	Topics/Themes
2	Types of energy (heat, light, sound, kinetic, potential, gravitational, etc.) Investigating light
3	Energy transfer and transformation - Concept of conduction, convection, and Radiation Law of conservation of mass and energy
4	Teaching "Energy transfer"

During this unit, prospective teachers will:

- Distinguish among different forms of energy (kinetic, potential) and demonstrate that energy can be transferred and transformed.
- Provide examples of kinetic energy being transformed into potential energy and vice versa.
- Recognize that heat can spread from one place to another in predictable ways.
- Provide examples of the transfer of energy from hotter to cooler objects by conduction, radiation, or convection.
- Explain that energy can be transferred (e.g., by collisions and radiation) but never destroyed (conservation of energy).
- Differentiate the states of matter based on their energy state (e.g., the structure of molecules and atoms in these different states varies from rigid in solids to independent motion in a gas).
- View thermal energy (i.e., heat) in terms of atomic and molecular motion (i.e., the higher the temperature, the greater the atomic or molecular motion).[1]
- Compare the transmission, reflection, refraction, and absorption of light using different materials.
- Listen for student misconceptions about properties and particle theory, and try to correct them.
- Identify the underlying core science concepts in this unit for elementary students
- Design age-appropriate, inquiry-based activities and identify learning outcomes.

Unit 3: Interactions of Energy and Matter

Week	Topics/Themes
5	Review of physical and chemical properties and physical change Solutions and solubility Conservation of mass in solutions
6	Introduction to chemical reactions Difference between chemical and physical reactions The role of energy in explaining bonds Applications of electrolysis
7	Teaching "Interactions of Energy

During this unit, prospective teachers will:

- Differentiate between physical and chemical properties, and physical and chemical change.
- Gain an understanding that mass is conserved even when materials are dissolved.
- Investigate how some common materials interact to form new materials.
- Explain how in physical change properties of substances remain the same.
- Provide examples of how the properties of a product of a chemical change are different than the products of the reactants.
- Provide examples of the natural world in which energy is released (or needed) in chemical reactions (e.g., burning fossil fuels, photosynthesis).
- Be able to identify some of the underlying core science concepts in this unit for elementary students.
- Design age-appropriate, inquiry-based activities and identify learning outcomes.
- Be aware of misconceptions about energy and matter, and learn what to do about them.

Unit 4: Earth's Systems Undergoing Constant

Week	Topics/Themes
8	Water, carbon, and rock cycle Theory of plate tectonics - Living in the shadow of the big mountains
9	Climate change
10	Teaching "Earth's Systems Undergo

During this unit, prospective teachers will:

- See the Earth as a system consisting of major interacting components that consistently undergo change. Identify physical, chemical, and biological processes act within and among them on a wide range of scales.
- Begin to see that there are complex interactions between the atmosphere, the hydrosphere, and the lithosphere.
- Apply the theory of plate tectonics to explain the formation of P ranges and the threat of earthquakes.
- Recognize how the movementplatescausesslowofchangesEarth'sin lit Earth's surface (e.g., formation of mount volcanic eruptions and earthquakes).
- Give examples of advances in technology that have made it possible to more accurately predict natural disasters.
- Understand how human activities influence air and water quality, ecosystems, and climate across the globe.
- Identify the underlying core science concepts in this unit for elementary students.
- Design age-appropriate, inquiry-based activities and identify learning outcomes.

Unit 5: Solar System and the Universe

Week	Topics/Themes
11	Characteristics of our Solar System Earth and Sun compared to other objects in the sky Working with and understanding large distances
12	Origin and evolution of Earth (and the Solar System)
13	Teaching "Our Solar System

During this unit, prospective teachers will:

- Differentiate groups of objects in the Solar System—including the Sun; the planets and their moons and rings; and smaller objects, such as asteroids and comets—by their size, composition, and position in the Solar System.
- Compare and contrast the properties and characteristics of Earth with those of the other planets in our Solar System.
- Explain, based on the naked eye and telescopic observation, how objects in the Solar System change position against the background of stars.
- Begin to understand the scale of time and distance involved in deep space.
- Describe how the early Earth was very different from the planet we live on today.
- Identify the underlying core science concepts in this unit for elementary students.
- Design age-appropriate, inquiry-based activities and identify learning outcomes.

Unit 6: Human Body as a System

Week	Topics/Themes
14	Flow of matter and energy in living systems Circulatory and digestive system Structure, function, and organization of different cells
15	Cell processes Cellular respiration
16	Teaching "Human Body as a System"

During this unit, prospective teachers will:

- Connect an organism's need for food with
- Explain how multiple body systems work together to meet cell energy needs.
- Examine and describe the flow of matter and energy in living systems.
- Demonstrate through investigations that food is a source of energy (fuel) and building materials for cells.
- Relate cellular respiration to the functions of body systems (e.g., how body systems function to provide cells with the necessary raw materials).

SUGGESTED TEXTBOOKS AND REFERENCES

There are many science books and other resources that could be useful during this course. Here is just a selection:

- Target Science - Physics by Stephen Pople
- Target Science - Chemistry by Michael Clugston and Rosalind Fleming The Teaching of Science in Primary schools –Wynne Harlen
- Inquiry –Thoughts, Views, and Strategies for the K-5 Classroom –National Science Foundation Ready, Set, Science! Putting Research to Work in K-8 Science Classrooms – National Research Council
- Taking Science to School: Learning and Teaching Science in Grades K-8 –National Research Council

COURSE ASSIGNMENTS

Suggested assignments are included in the Unit Guides of the course. Some are short-term assignments and some take several weeks to complete. A mix of individual and group assignments is also provided.

Theseassignments are designedandallowthemtoresearchtodeepenandstudentsapply their knowledge to topics of personal interest. All the assignments count toward the finalgrade. Assignments are similar to those conducted in Science I but are more complex and self-directed:

a) Conduct an investigation on a science topic, and present your findings and conclusions.

b) Develop an investigation around a core science concept for an elementary grade.

c) Write an editorial for a local newspaper on a relevant science topic stating an opinion supported by evidence.

d) Using the inquiry approach, plan and teach a science activity in a local elementary school.

In addition, as part of Science II, prospective teachers will conduct an independent research project during the course that will mirror a real-life context and investigation. Examples of such topics could be:

- Design a model to explain the greenhouse effect.
- Research how Pakistan generates its electricity and provide a report on how some of it could be supplemented by using renewable energy.
- Waste management and recycling
- Natural resources in Pakistan
- Natural disasters in Pakistan
- Infectious diseases

GRADING POLICY

The course grading policy should be determined by the university and its affiliated colleges. The policy should be shared with students at the beginning of the course. It is recommended that at least 50% of the final grade is determined by course work completed by prospective teachers. Course work may include work completed in assignments in or outside the classroom.

EDU-435 Information and Communication Technologies (ICTs) in Education (Professional) Semester 3

Syllabus: Information and Communication Technologies (ICTs) in Education

YEAR/SEMESTER: Year 2, Semester 3
DURATION: 2 credits (32 facilitated hours, 64 essential independent study and practice hours)
PREREQUISITES: Successful completion of Semester 1 and 2 courses including Computer Literacy in Semester 2

COURSE DESCRIPTION

Information and Communication Technologies (ICTs) in Education is a broad and constantly changing subject. This course will prepare teachers to understand, use and apply a range of technologies* and platforms in teaching and learning, in line with international standards.

With the changing face of technologies and related application, this course will primarily focus on using technologies for learning 'howtocopewithtochangelearn'.It will provide opportunities to prospective teachers to collaborate with students, educators, peers, parents, and global community using digital tools and resources to support learning, success and innovation.

Course topics include supporting policies and guidelines for ICTs integration, computer-mediated learning, telecommunications and multimedia resources, online teaching and learning, problems of classroom integration, and computer support for professional development and administration.

Teachers-in-training will engage with the design and creation of exciting, intellectually challenging and authentic learning environments in which ICT changes not only what students learn but also how they learn, as we move forward in the 21st century. Trainees in this course will examine how ICT might be used to both enhance and transform learning.

The changing world demands changes in, and quickly learning competencies. The course is aimed at specifically developing the following competencies in prospective teachers:

- critical thinking and reflective approach,
- decision-making,
- handling of dynamic situations,
- multi-tasking
- working as a member of a team, and collaboratively
- communicating effectively, and
- general ICT competencies enabling professional and day-to-day work

*(computer/Internet, other audio/video equipment, digital camera, mobile phones, online and digital resources and tools)

Societal issues arising in the educational use of ICT, and (c) the development and evaluation of educational applications and resources of ICTs.

COURSE OUTCOMES

After completing this course, pre-service teachers/teachers will be able to:

1. develop a well-articulated perspective on information and communications technology in education informed by personal experience and critical examination of computer

resources, curriculum, and educational practice.
2. model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning
3. engage students in exploring real-world issues and solving authentic problems using digital tools and resources
4. participate in local and global learning communities to explore creative applications of technology to improve student learning
5. promote student reflection using collaborate understanding and thinking, planning and creative processes
6. evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning
7. develop confidence, skill and an attitude to use a range of technologies (radio, video, computer, digital and online tools, digital accessories, etc.) for instruction and generating new knowledge for life-long learning

LEARNING AND TEACHING APPROACHES

Teachers-in-training and instructors should integrate this course with other courses and with their theses or projects; adapt the course to personal interest, knowledge, experience, and responsibility; and design assignments with sufficient depth and breadth to be useful in other courses and later work.

Trainees will combine the exploration of educational software and other ICT resources with the discussion of its application with a critical examination of educational issues that surface with computer and other ICTs use - issues such as empowerment, the shaping of modes of thinking, access, control, ownership, role of student and teacher, classroom and school organization, and professional development.

Who should teach this course?

The Methods of Teaching instructor is recommended to take this course, however, team-teaching is highly recommended. As the course teaches skills using content from different subjects, team-teaching is expected to have a multiplier effect to enhance learner achievement. Instructors' collaboration is also expected

The instructors are encouraged to co-plan the sessions and use a variety of team-teaching techniques. Some possible options are where:

- two or more teachers teach the same group at the same time;
- team members meet to share ideas and resources but generally function independently;
- teams of teachers share a common resource centre;
- a team shares a common group of students, shares planning for instruction but team members teach different sub-groups within the whole group;
- planning is shared, but teachers each teach their own specialism or their own skills area to the whole group;
- teams plan and develop teaching resource materials for a large group of students but may or may not teach them in a classroom situation.

Note: It is essential that this course is taught in a computer-lab with broadband Internet connectivity. As this course is heavily-dependent on 'functioning ICT resources, head phones and other audio-video and projection equipment need to be available and functioning ALL the time.

The trainee-practice and study time needs to be organized in the computer lab or computer-equipped classrooms or other such facilities with Internet connection.

SEMESTER OUTLINE

Unit-1:
Introduction to ICTs, Policy and Other Guidelines for Use of ICTs in Education
(1 week / 2 hours)

Unit Overview

The first unit aims at providing prospective teachers an understanding of ICTs in Education and the driving forces - i.e., supporting policies and the need. The trainees will get an overview of National Education Policy for Pakistan and the National Professional Standards (NTSTP) for ICTs in Education. The trainees would discuss and analyze the objectives for integrating ICTs in Education to live, learn and work successfully.

Intended Learning Outcomes:

After going through this unit and the suggested assignments, the trainees would

- develop an initial understanding of different types and formats of technologies that can be used in education
- discuss and analyze the way needed teaching and work skills keep changing with the demand of the day
- compare and contrast the conventional teaching practices with technology-supplemented and enhanced instructional and learning opportunities

Week 1: (2 sessions/2 hours)	**Introduction and Guidelines** a. Introduction to the course –ICTs in Education b. Pre-assessment for the course c. 21st Century Skills –the need of the day d. What are ICTs? e. Highlights - National ICTs Strategy for Education in Pakistan, National Education Policy 2009
Week 2: (2 sessions/2 hours)	**ICTs Integration, Standards and Competencies for Teachers** a. ICTs Integration –Why and What it means; objectives; Misconceptions b. ICT competencies for Teachers c. Highlights - National Professional Standards (NTSTP) for ICTs in Education d. Introduction to electronic Portfolios –setting up for the Course

Unit 2:
ICTs Integrated into Curriculum and Instruction–(9 weeks / 18 hours)

Unit Overview

This unit provides extensive technology-rich and enhanced instruction experience to the prospective teachers by giving essential knowledge and allocating several hours of practice sessions on ICT applications, discussions and analysis of situations how ICTs are exploited to maximize learning experiences and outcomes. With an understanding of these requirements and benefits of *multi-channel learning*, the prospective teachers could develop sufficient confidence and skills to design ICT-supplemented instruction, using alternatives as needed.

Training teachers how to implement technology-enhanced instruction can fail. One of the reasons is that teachers experience "Information Overload" very easily when it comes to technology, and they shut down. This unit breaks the 'tasks' into technology) coupled with hands-on practice which is expected to lead to success!

Intended Learning Outcomes:
The trainees will:

- go through technology-rich experiences throughout all aspects of the training and understand ICTs-integration for a variety of content and pedagogical themes
- develop an understanding of providing video-enhanced learning experiences to their students
- practice utilizing technology effectively to enhance teaching through lesson-planning
- analyze, experience and get supported through peer-teaching
- compare and contrast the conventional teaching practices with technology-supplemented and enhanced instructional and learning opportunities
- develop a technology plan for practicum school and classroom after thorough analysis of situation

Week 3: (2 sessions/2 hours)	**Learning through custom-designed/ready-made applications** (available on DVDs/CDs –Story of Pakistan, tutorials, multimedia encyclopedias, etc.) a. Exploring the custom-designed multimedia resources b. Instruction using available applications for teaching of Pakistan Studies/History, Functional English, Methods of Teaching, etc.) c. Lesson planning and review
Week 4: (2 sessions/2 hours)	**Audio, Radio Broadcast and Interactive Radio Instruction (IRI)** a. Power of audio/radio in education b. Using audio/radio/IRI resources for teaching of different subjects (Functional English, Pakistan Studies/Islamic Studies, Early Childhood Education, etc.) c. Case-studies for extended reading
Week 5: (2 sessions/2 hours)	**Video, animations, movies and television broadcast** (Examples for different content/subject and pedagogy areas - Child Development, Early Childhood Education, Communication, Geography, Science, etc.) • Using recorded-classroom videos (Examples for different subject and pedagogy areas - Child Development, Early Childhood Education etc.) • Using video prompts in classroom • Lesson Planning using video resources
Week 6: (2 sessions/2 hours)	**(Continued) Video, animations, movies and television Broadcast** • Using movies in education • Using video commercials in education • Using split-video technique in classroom

	• Documentaries and discussions • Exploiting the potential of television broadcast in education • Case-studies for extended reading • Lesson Planning using video resources • Lesson Demo and Presentations
Week 7: (2 sessions/2 hours)	**Learning through Internet (applications, etc.)** (Examples for different content/subject and pedagogy areas – Teaching of Science, language-development, improving communication skills, etc.) a. Concept of globalization –'Global Teacher b. Online tutorials c. Browsing for a purpose - Seeking and filtering information d. Online tools for communication and collaboration e. Introduction to Digital Libraries, archives and eBooks
Week 8: (2 sessions/2 hours)	**Learning through Internet /Videos in Education –Revisited** a. Interactive Online applications (Google Earth and Google Maps) b. Online video resources and video channels (TeacherTube, YouTube, etc.) c. Sketchcasting technique and animation in education (Case Study: The Khan Academy)
Week 9: (2 sessions/2 hours)	**Using Digital Camera in Education** (Examples for different content/subject and pedagogy areas - Methods of Teaching, Child Development, Classroom Management, Practicum, etc.) a. Power of Pictures/photographs b. Developing local content using digital camera c. 'Shoot -andSharingexperiencesshare'
Week 10: (2 sessions/2 hours)	**Interactive Games and Puzzles** a. Exploring resources and applications, subject-wise (language, Science, Mathematics, etc.) b. Digital Applications - From Toys to Learning Tools Trainees to design a storyboard of an educational game; Or design a puzzle online
Week 11: (2 sessions/2 hours)	**Planning for ICTs Integration** a. Planning for ICTs Integration (SWOT analysis, building support networks, etc.) b. Developing a Technology Plan for Classroom and School c. Barriers for effective ICT use in schools and suggestions

Unit-3:
Collaborative Learning using ICTs (2 weeks–4 hours)
Unit Overview

ICTs has undoubtedly offered numerous practical advantages by allowing users to overcome restrictions of time and place, transcending barriers of textbooks and classroom walls, providing up-to-date resources for teachers and students, supporting a range of individual learning styles, providing authentic contexts for students and broadening the curriculum. One of the most promising ways the Internet is being utilised in schools is to participate in global or collaborative Internet projects and assignments. These projects often involve students in using the Internet and WWW for research, publishing of Web pages and communication using chat and e-mail. These project-based learning contexts are motivating students and providing real life contexts for successful collaborative learning. In this unit, students will experience

working on collaborative projects and assignments. It is encouraged that trainees establish contacts with trainees from other institutions in and outside of the country –as, with technology, there are no boundaries to learning!

Week 12: **Enhancing Opportunities for Collaborative Learning**

(2 sessions/2 hours) a. Collaborative projects (using email, Google Docs/presentations, etc.) –folk tales/cultural stereotypes, learning about communities, and other iEARN projects)

- Pakistan Studies
- English/Urdu –Using email or Google Docs to write a collaborative "Rota
- Civics, etc.

b. Using Wikis and Blogs –an introduction

Unit-4:
ICTs for Life-long Learning and Teacher Professional Development (2 weeks–4 hours)

Unit Overview

This unit will provide some orientation to the prospective-teachers and teacher educators about the need for continuous professional development specifically in this age of ever-changing circumstances –technologically, socially, culturally and economically. This unit emphasizes the need of life-long-learning as opposed to learning in the initial part of professional life. Moreover, this unit focuses on supporting life-long-learning with ICTs. The prospective-
teachers will learn to connect and 'co

Week 13: (2 sessions/2 hours)	**ICTs for life-long learning and teacher professional Development** d. Why life-long learning? e. Planning –an information resource (TL resources on WWW, Wikipedia, National curriculum, etc.) f. Learning content and methods g. ICT/Collaborative Tools for Teachers (Emails, discussion groups, chat, mailing lists, professional forum, etc.) h. Teaching-learning and assessment tools (templates, lesson plans, worksheets, online tests-IELTS, etc.) i. Video/teleconferencing (Skype)
	j. eLearning and Blended Learning (Introduction)
Week 14: (2 sessions/2 hours)	Continued - ICTs for life-long learning and teacher professional development

Unit-5:
Evaluating ICT Tools and Resources for Use (1 week - 2 hours)

Unit Overview

This unit emphasizes the purposeful and judicious selection of digital resources. As a teacher would consider different factors while referencing a book, same is the case with using and referencing any ICT resource, be it a website, a video clip, radio program or an online puzzle. Prospective teachers will evaluate resources based on several factors (purposefulness, need, time, cost, presentation quality, instructional value-addition, usability, context, etc.). Due to time constraints, the types of evaluation for technology interventions in education (like IRI programs, interactive video, etc.) is not covered in this unit (for example, formative and summative evaluation, integrative evaluation, etc.)

Week 15 (2 sessions/2 hours)	**Evaluating ICT tools and resources** (1 week - 2 hours) a. Making decisions on identifying ICT resources: Assessing quality and usability of ICT resources with the help of rubrics b. Assessing quality of websites and other Internet applications, educational games, etc. (Gathering and analyzing information)
Week 16 (2 sessions/2 hours)	a. Review b. Post-assessment

Course Extension Ideas	
	• Emerging trends (Virtual schools, Online Universities, eTutoring, etc.) • Assistive Technologies (Case Study –Pakistan Foundation for Blinds; Technologies to assist Special Education) • Technologies in other domains of education - Life Skills, health education, vocational training, preparing-for-work, etc.) • Professional Associations online • Digital Libraries • Using Wikis and Blogs • Tools and applications to support distance education (Moodle, Whiteboards, Elluminate, etc.) • Cell phones in education • Concept-mapping (MindMap)

SUGGESTED TEXTBOOKS AND REFERENCES

- *Journal of Research on Technology in Education (JRTE, International Society for Technology in Education (ISTE)* - http://www.iste.org/learn/publications/journals/jrte-old.aspx
- *Journal of Technology and Teacher Education* (JTATE) -http://aace.org/pubs/jtate/
- Partnership for 21st Century Skills. 2010. *Framework for 21st Century Learning.* http://www.21stcenturyskills.org/index.php?Itemid=120&id=254&option=com_content&task=view

RESOURCES

Geography

- Google Earth free download: http://www.google.com/earth/download/ge/agree.html

- Google Earth tutorial: http://earth.google.com/outreach/tutorial_annotate.html
- Google Maps: http://maps.google.com/
- National Geographic Channel: http://maps.google.com/
- Videos –National Geographic: http://video.nationalgeographic.com/video/player/national-geographic-channel/

Science, History, News, etc. - Discovery Channel

- Videos –Discovery Channel http://dsc.discovery.com

Mathematics, Physics, etc.

Videos –The Khan Academy
http://www.khanacademy.org/

English:

English Grammar software free download http://freesoftwarepc.biz/educational-software/download-free-software-3d-grammar-english-portable/

GRADING POLICY

A variety of assessments will be used in the course, including mid-term, lesson planning anddemonstration, collaborative semester project and final examination.

EDU-411 Developmental Practicum
Teaching Practice
Semester 3

SYLLABUS: The Developmental Practicum

YEAR/SEMESTER: Year 2/Semester 3
CREDIT VALUE: 3 credits*
PREREQUISITES: Successful completion of Semesters 1and 2 of the ADE/B.Ed.(Hons)

*The Practicum is a 3 credit course. One credit requires three course hours.

Thus, the total number of hours required in the semester for this course is 3 credits x 3 hours x 16 weeks equals 144 hours. It is recommended that Student Teachers spend around 120 hours in the classroom and the rest of the hours will be spent in seminar meetings and working on assignments.

NOTE: Student Teachers are expected to make regular visits to schools throughout their program, starting in the first few weeks of Semester 1.The Semester 3 Developmental Practicum is an extension of these visits and should not be the first time students are at school.

COURSE DESCRIPTION

This course includes two important parts:

a. **A school placement in an elementary school.**
b. **A seminar that meets regularly.**

A. **School Placement:**The developmental practicum experience in Semester 3 provideselementary grade Student Teachers with carefully sequenced and supervised field experiences in all areas of the elementary curriculum. Opportunities to work with children at two different grade levels, one in an upper and one a lower elementary school classroom are provided. As a Student Teacher, you will work with children from a variety of backgrounds, and with different capabilities. Initially you will conduct formal observations and complete a variety of school based assignments, but you are expected to gradually take a more active role, with increased responsibilities in each classroom.

During this developmental practicum, you are expected to critically select and use appropriate materials, resources (including persons in the community) and technology, and to have opportunities to employ various classroom management techniques, and a variety of formative and summative evaluation techniques (including authentic assessment).[2] Collaboration with other Student Teachers and professionals in the school setting is encouraged in order to develop team building skills and utilization of all resources to enhance children's learning.

Ideally, groups of three or four Student Teachers are placed in each school. Opportunities for peer coaching as well as coaching by the Cooperating Teacher and College/University Supervisor are provided. You are encouraged to take advantage of any opportunities to interact with parents and to develop skills for communicating with parents under the guidance of the Cooperating Teacher.

B. **Seminar**:The seminar which accompanies your fieldwork, will be facilitated by yourCollege/University Supervisor and is designed to link

pre-service program content to classroom practice. You will have an opportunity to clarify and revise your teaching goals and your beliefs about a wide range of educational issues. The primary focus of this seminar is the inducting of Student Teachers into professional practice. Habits of thinking that provide the foundation for continued growth as a teacher are as important as strategies for solving immediate classroom issues and problems.

Student Teachers will be expected to complete a variety of seminar assignments during this semester. . Most, but not all, of these assignments will be directly linked in some way to your classroom experiences. For example:

- Present an analysis of your own or a peer's te
- Conduct observations focused on specific classroom practices or an individual child
- Try out a particular method and reflect on its success in achieving its purpose

All of the assigned tasks are flexible enough to allow for adaptation to a wide variety of classrooms.

COURSE OUTCOMES

Student Teachers will be able to:

- Reflect on and learn from connecting theory and their teaching practice.
- Collaborate with peers, Cooperating Teacher, other School Staff, and College/University Supervisor, establishing professional relationships.
- Invite, accept, and utilize formative feedback from the Cooperating Teaching peers, and the College/University Supervisor in a non-defensive manner.
- Produce instructional plans unit plans, which reflect the use of appropriate instructional methods and strategies to meet the needs of all students within the context of the practicum classroom.
- Utilize appropriate instruments or techniques for informally and formally assessing student learning and learning needs.
- Recognize cognitive and affective needs of students and establish learning environments and use activities appropriate to meeting those needs.

LEARNING AND TEACHING APPROACHES

Every Student Teacher enrolled in the developmental practicum will be assigned to two different classrooms for this school placement experience, approximately half at early and the other half at upper elementary level. This will mean that by the end of the ADE (first two years of the B.Ed.

Honors) Student Teachers will have experienced teaching in two different classrooms during the developmental practicum in Semester 3.

The Practicum Seminar will provide opportunities for structured and guided discussion, but rely heavily on reflective journals, small group and peer interaction.

SEMESTER OUTLINE

School Experiences.

The manner in which school experiences for the Practicum are organized will vary from semester to semester. Colleges and Universities will work with their cooperating schools to select the most appropriate model. Your Instructor will

provide you specific information about where you will teach or how to obtain a classroom placement, and your schedule for the semester.

Each Student Teacher will develop a plan for gradually increasing responsibility in the classroom, working with the Seminar Instructor, the College/University Supervisor (Seminar Instructors will supervise field experiences, but may also work with a team of supervisors) and the Cooperating Teacher.

Student Teachers can expect the following types of activity and progression during the developmental semester 3 practicum. This sequence of activities presented is for Model A (2 days per week for two school placements for six weeks each). Should Model B or C be adopted, the sequence of activities should remain the same, simply conducted on a daily basis, rather than on a weekly basis.

First Classroom Placement (6 weeks)

Week 1: Introduction to the school and classroom context:

- Complete School-based assignments which provide you with an opportunity to get to know the school, its resources, the rules, and procedures expected of you;
- Complete Classroom Observations which will provide you with an opportunity to learn about:
    - oThe classroom environment, placement of materials, arrangement of workspaces, traffic patterns;
    - oClassroom interactions, e.g. whole class teaching, teacher to student, student tostudent, student to teacher initiated interactions;
    - oAssist the Cooperating Teacher as requested with any tasks
    - oSmall administrative tasks
        - Helping individual children or small groups of children
    - oMeet with the Cooperating Teacher to discuss how he/she plans for instruction,expectations and the like
- Reflect on your learning this week.

Week 2: Becoming more involved in the classroom:

- Complete school based assignments which will provide you with tools to use to learn to know more about:
    - oYour Cooperating Teacher and his/her educational philosophy; o A small group of children or an individual child.
- Complete classroom observations:
    - Small group engagement;
    - Individual child engagement.
- Assist the Cooperating Teacher as requested:
    - Work with children who need extra help;
      Work with a small group ofchildrentomeet with the Cooperating Teacher to discuss plans for teaching.
- Reflect on your learning this week.

Week 3: Taking an active role in co-planning and co-teaching sections of a lesson alongside your Cooperating Teacher:

- Complete school based assignments:
    - Learn about how your Cooperating Teacher manages their classroom;

    - Learn to know more about the community (parents and other community members) involvement in the school.
- Complete classroom observations:
    - Observe your Cooperating Teacher with the aim to rewrite the lesson plan adding ideas of your own;
    - Use one of the additional observation tools to understand how your Cooperating Teacher engages with the children.
- Assist the Cooperating Teacher as requested:
    - Continue with all the previous tasks in the classroom;
    - Work with your Cooperating Teacher to co-plan a few lessons;
    - Take over routines such as taking children for recess, taking the register, or reading a story to the class
    - Co-teach a few sections of classes with your Cooperating Teacher.
- Reflect on your learning this week

Week 4: Assuming responsibility for co-planning and co-teaching many in as many classes as you can.

- Complete school based assignments:
    - Learn to know more about the co-curricular activities available at your school, and specifically those that the children in your classroom do.
- Complete classroom observations:
    - Use an additional observation tool to learn how your Cooperating Teacher manages the classroom through movement;
    - Use an observation tool to learn how to keep track of student engagement by focusing on their on/off task behaviour.
- Assist the Cooperating Teacher as requested:
    - Continue with all the previous tasks in the classroom;

    oCo-teach a few lessons with your Cooperating Teacher.oWork with children who need extra help

    - Meet with the Cooperating Teacher to discuss plans for teaching whole lessons next week.
- Reflect on your learning this week

Week 5: Assuming responsibility for planning, teaching and assessing in at least one subject.

- Complete school based assignments:
    - Complete any school based assignments that might be outstanding;
    - Use this time to start to file all assignments from the seminar and the school experience in your Developmental Portfolio, using your Notes for Self Assessment sheet to indicate how you believe you are meeting the NPSTP.
- Complete classroom observations:
    - Use the additional observation tools to observe how involved children are in the classroom, in terms of their verbal engagement.
    - Develop your own observation tool to collect data on how engaged children are.
- Assist the Cooperating Teacher as requested:
    - Plan and teach lesson in at least ONE subject area this week.
    - Continue activities above, taking over responsibility for planning, teaching and assessing for one subject area..
- Reflect on your learning this week

Week 6 : Assuming responsibility for planning, teaching, and any additional responsibilities as negotiated with the Cooperating Teacher and College Supervisor.

- Complete school based assignments:
    - Continue to make notes about how you are meeting the NPSTP on your Note

Sheet.

- Complete classroom observations:
    - If you are challenged by any particular aspect of teaching this week, complete an additional observation –using the same tool –to learn more about teaching and learning.
- Assist the Cooperating Teacher as requested:
    - Plan and teach lesson in at least TWO subject areas this week.
    - Continue activities above, taking over responsibility for planning, teaching and
- Reflect on your learning this week

Second Classroom Placement (6 weeks)

Student Teachers repeat the program in the first six weeks but in a different grade and school. Note that while the assignments are the same –if you are at a different school, the school-based assignments will provide you with in-depth knowledge of the inner workings of that school.

The Practicum Seminar

The seminar runs parallel to your experience at school. The content of the seminar will vary with the Instructor every semester that it is offered.

However, students may expect to discuss issues such as:

- Practical issues of teaching in learning in their field placements,
- Language learning,
- Different perspectives on how to organize and manage a classroom,
- Planning units of instruction,
- Content-specific instruction,
- Selecting and using assessments of learning,
- How to use standards for primary school teaching practice,
- Identifying the hidden curriculum in the classroom,
- Creating classroom environments that recognize physical, emotional, affective, social and intellectual needs of children,
- Non-instructional roles of the teacher,
- Working with parents and community

TEXTBOOKS AND REFERENCES

Course readings and assignments will focus primarily on preparation for field assignments. Additional assignments and/or readings will be provided throughout the semester.

COURSE ASSIGNMENTS

Assignments will be listed on a separate handout. These assignments will be designed to help you achieve course outcomes. Some will take place in the classroom and others outside of the classroom.

GRADING POLICY

Grading for this course follows the university's early in the course and will include both coursework and examinations. Grades for thePracticum Experience will be assigned in collaboration with the Cooperating Teacher, college supervisor and Practicum Instructor

GENERAL INFORMATION ABOUT THE COURSE

You will be provided with specific and detailed information about every part of your Developmental Practicum Experience. The following will give you a general idea of what to expect this semester.

ROLES AND EXPECTATIONS OF PRACTICUM TRIAD MEMBERS

Every Practicum experience is guided by three critical participants: 1) the Student Teacher, 2) the Cooperating Teacher and 3) the College/College/University Supervisor.

What happens in the classroom and how it is interpreted will depend on the views of each member of the triad. It is important for each member of the triad to negotiate common expectations for roles and responsibilities. If expectations are clear and understood by each member, the experience is likely to be more satisfactory to all.

The triad should meet together several times during the semester (Keep track of these meetings using the Triad Meeting sheet in your handbook):

1. At the beginning when roles and relationships are discussed,
2. At mid-point when performance is discussed;
3. At the conclusion of the experience as a final evaluation is made.

Depending on the challenges met during the practicum experience, the triad may feel that it is important to meet more frequently.

The Cooperating Teacher will guide the day -to-day work of the Student Teacher, providing feedback and initiating the Student Teacher into the life of the profession. This will include discussions of how planning, teaching and assessment are made.

The Cooperating Teacher will communicate regularly with the College/College/University Supervisor. The purpose of supervision is to support good communication between the Student Teacher and Cooperating Teacher. Communication and collegial relationships are important to the Student Teacher and other triad members in their professional development.

The supervisor will also provide feedback on including planning and teaching.

SUMMARY OF THE ROLE OF THE STUDENT TEACHER

The Student Teacher should have maximum opportunity to perform to the degree which his or her personal interests, abilities, and individuality allow.

There are three major aspects to the Student Teacher's role during the semester:
1) His or her activities in the classroom, school and community;
2) Participation in the weekly Practicum Seminar; and
3) Continued reflection and the creation of a developmental portfolio housing the documentation as evidence of professional growth .

The Student Teacher should become involved in the instructional program of the classroom as soon as possible. The experience will begin with observation. Time spent in observation will vary in length according to the situation, the Student Teacher will gradually assume more responsibility for planning and instruction through activities such as:

- Completing school-based assignments
- Completing school-based observations
- Assisting individual students
- Working with small groups
- Taking responsibility for co-planning and co-teaching
- Assisting the Cooperating Teacher with planning and teaching
- Teaching selected lessons under the Coope lessons that are part of the on-going curriculum, not lessons planned off-site and that do
  not relate to what is appropriate in the classroom)
- Assuming over-all management for part of the day
- Assuming overall management of the classroom.
- Use the Cover Sheet for Formal Observation and prepare all the materials required for Prepare for 6 formal observations (2 by your Cooperating Teacher and 4 by your Supervisor)

The Student Teacher is expected to play an active role in deciding how he or she will take on new activities and in assessing her or his effectiveness.

The Student Teacher is expected to participate as a regular staff member of the school in terms of professional behaviour.

SUMMARY OF THE ROLE OF THE COOPERATING TEACHER

The Cooperating Teacher is expected to:

- Share school and classroom policies and procedures, the curriculum, the daily/semester schedule, and provide the Student Teacher with guides etc.

- Work with the Student Teacher and College/University Supervisor to set up a lesson plan format to be used by the Student Teacher. The student is required to provide the supervisor with comprehensive written plans prior to each formal observation. Cooperating Teachers may also want to require written plans in addition to those required by the supervisor, for example, for small group instruction.
- Formally and informally observe and provide verbal and written feedback to the Student Teacher on: lesson planning and teaching.
- Meet daily to discuss classroom events and make plans.
- Provide assessment to the College/University Supervisor and participate in triad meetings to discuss the Student Teacher's performance.

SUMMARY OF THE ROLE OF THE COLLEGE/UNIVERSITY SUPERVISOR

The College/University Supervisor is the official representative of the college/university. Therefore, the supervisor has responsibility for the supervision of Student Teachers, serves as

the liaison between the college/universitypersonnel,andmaintain positive relationships between the two institutions. Through classroomobservations, conferences, and the weekly seminar the supervisor will:

- Provide feedback on at least 2 lesson plans
- Make at least three one-hour observation visits throughout the semester, with at least two of these visits followed by a three-way conference involving the student, Cooperating Teacher, and College/University Supervisor. The focus of these visits will depend on the needs of individual Student Teachers. (When possible, prior to making a supervisory visit, supervisors should meet with Student Teachers to discuss plans, questions, expectations and the like.)
- Guide entry into the profession through discussion of issues of professional practice, providing a guided seminar experience, and conferring with the Student Teacher before and after classroom observations and giving feedback on teaching to the Student Teacher.

EDU-404 Classroom Assessment (Foundation)
Semester 4

Syllabus: Classroom Assessment

SEMESTER: Year 2/Semester 4
DURATION: 48 Hours (16 weeks)
CREDITS 03
PREQUISITES: Successful completion of Semester 3 courses

COURSE DESCRIPTION

Historically, the practices of testing and teaching have been conducted separately. A shift in schools throughout the world from the practice of testing to the practice of assessment is an effort, in part, to integrate assessment and instruction. Experienced teachers know that when a lesson ends, the teacher does not know exactly what each student learned. (The fact that the teacher taught does not necessarily mean that the students learned.) The only way to know what the students actually learned is to check in some way (written quiz, homework assignment or, perhaps, oral questions from the teacher that individual students answer when called upon.)

Fortunately, educational researchers, working in many countries throughout the world, have proven something that some teachers learned from experience. These researchers have shown time and again that students earn significantly higher scores on major tests when their teachers check for learning during and/or immediately after lessons than do similar students whose teachers do not check for learning while students are learning but wait until it is time for a major test. Checking for learning continuously rather than assuming it has occurred is the essence of several practices that educators call *Classroom Assessment.*
This course is based on the belief that wise assessments are at the core of wise decisions.

COURSE OUTCOMES

After completing this course, you will be able to:

- explain and defend the claim that professional judgment is the essence of classroom assessment
- explain error in assessment, identify potential sources of error, and describe how teachers can compensate for error in assessment
- create classroom scenarios that illustrate links between instruction, assessment, and learning.
- explain the difference between formative and summative assessments
- list the characteristics of constructive written feedback accompanied by an example produced by you on an elementary school student's achievem
- explain why the data obtained from an assessment always has to be interpreted and shared with relevant stakeholders

TEACHING AND LEARNING FRAMEWORK

This course introduces prospective elementary school teachers to two complex

practices that characterize effective teaching: 1) constructing a test, using it, scoring it, interpreting the scores, and providing feedback to students: and 2) integrating assessment into lesson plans through establishing criteria for judging if learning objectives have been attained and selecting appropriate assessment tools.

Notions of Assessments are learned through practice, coaching, feedback and reflection in a classroom. Since these are complex teaching practices, rather than expecting you, the student teacher, to practice the finished act you will practice component parts which can be integrated as you achieve proficiency. You will have models to guide you and access to cued practice. Most of this practice can take place in college and university classrooms with peers providing feedback to each other. The learning framework for the course is guided practice and reflection. You will work in pairs and small groups. Class discussions will aim at identifying indicators of quality in the work done by you and your colleagues.

SEMESTER OUTLINE

UNIT 1: INTRODUCTION TO CLASSROOM ASSESSMENT: CONCEPTS AND CONTEXT (3 weeks, 9 hours)

The Unit will begin with begin by pushing you to explore your personal experiences with assessment as a way to orienting you to the broader forms and functions of assessment as a tool that measures, and also facilitates, learning. You will review research that explains the positive role of teacher feedback on learning and also look at assessment in the light of broader curriculum. In exploring concepts of assessment, you will learn how tests may be used formatively or summatively and how they may be checked for reliability and validity. Finally, you will evaluate how a culture of testing differs from a culture of authentic assessment and all that this entails.

By the end of this unit you can expect to:

- Know what research reveals about teacher feedback before, during and after assessment.
- Differentiate between the formative and summative uses of assessment.
- Understand the concepts of validity and reliability as they apply to assessments conducted in the classroom.
- Compare and contrast a culture of testing versus a culture of assessment

Week 1: Overview of course and ideas

Session 1 and 2

- Overview of course
- Revisit Assessment practices in schools in Pakistan
- Personal experience with tests in school
- The distinction between assessment *of* learning and assessment *for* learning

Session 3

- Review of research on the positive effects of continuous assessment
- Possible causes of those effects: motivation; feelings toward self; improved instruction
- Review of research on the effects of a technology

Week 2: Assessment concepts and underpinnings

Session 1

- Curriculum: goals, objectives, standards, targets
- Pakistan National Curriculum (2006-2007): standards, benchmarks, learning outcomes

Session 2

- Formative and summative Assessments
- Distinguishing between the two through real examples

Session 3

- Assessments concepts: The relationship between reliability and validity

Week 3: Cultures of testing and assessment

Session 1

- Shift from a culture of testing in schools to a culture of assessment

Session 2

- Assessment practices and policies in elementary schools in Pakistan

Session 3

- How might the culture of classrooms change if formative assessment becomes a routine part of instruction? How might the roles of teachers and learners change? Might this pose challenges?

UNIT 2: ASSESSMENT IS THE BRIDGE BETWEEN TEACHING AND LEARNING
(5 Weeks/ 15 hours)

This unit will give you the chance to develop a valid and reliable test based on 4 to 6 lesson units in a subject of their choice. You will work with peers, either in pairs or triads, developing lessons that incorporate assessment. These assessment tasks can be a combination of Selected-Response items (multiple choice, true-false and matching) and Constructed-Response items (completion and short-answer). The test will have to be balanced not only among these types of test items but also across the mental demands of knowing, understanding and reasoning. You will have a chance to practice each step in test construction, using models to guide you (a model learning unit, model table of test specifications, and model test).

By the end of this unit, you will be able to:

- Describe both objective and subjective item types used in assessment.
- Write Selected-Response and Constructed-Response test items following the rules and produce good examples of those test items.
- Prepare a test specification table showing proportional representation among content topics and among different mental demands.
- Prove that test items map onto lesson objectives.
- Compile items into a test in accordance with the distribution on the table of text specifications.

- Write clear instructions for a test.

Week 4: Constructing the Unit upon which the test will be based

This week you will work with your partner(s) to construct the 4 to 6 lessons unit upon which your test will be based. Between Sessions 1 & 2 write the learning objectives for your content outline. Again, check the National Curriculum and textbook to be sure your objectives are consistent with these sources.

Session 1

- Study the subject textbooks to select the unit and determine the subject and topic for your unit with partner(s)
- Outline the content for your unit with your partner(s)

Week 5: Principles and rules for writing Selected-Response and Constructed-Response objective test questions

Session 1

- Study directions for and practice writing short answer and completion questions for your test(for the lessons that you have constructed)

Session 2

- Study directions for and practice writing true-false, alternate-choice and matching questions for your test(for the lessons that you have constructed)

Session 3

- Study directions for and practice writing multiple choice items for your test(for the lessons that you have constructed)

Week 6: Assembling your test

Session 1

- Writing and constructing answers to sentence completion and short answer questions

Session 2

- Writing and constructing answers to true-false, alternate-choice and matching questions

Session 3

- Writing and constructing answers to multiple questions
- Writing directions for the test

Week 7: Assembling your test

Session 1

- Building a Table of Specifications I

Session 2

- Finishing a Table of Specifications II

Session 3

- Checking for balance in the coverage of learning objectives
- Determining the length of the test

Week 8: Essays - One way to assess complex learning and achievement

Session 1

- Forms and uses of essay questions
- Restricted-Response essay questions
- Extended-Response essay questions

Session 2

- Scoring rubrics for Restricted and Extended-Response essays

Session 3

- Advantages and limitations of essays
- Suggestions for constructing essays

Week 9: Making sense of the test items

By now you and you and your partner(s) will have gained enough experience on how to write a good test

Session 1

- Item analysis of the test.
- Report on the results of the item analysis
- Decide which items to eliminate/improve.

Session 2 and 3

- Research on students' reactions to the ki as a means of feedback on tests items .

UNIT 3: INTEGRATING AND SHARING ASSESSMENT RESULTS (3 weeks, 9 hours)

You have been in school for 13 years, at least. During those years you were given feedback about your academic performance but you may not be fully aware of the influence that feedback had on your attitude and motivation toward learning and your feelings about yourself as a student. This unit will introduce you to the importance of feedback and the types of feedback that have the most positive effects on learning and motivation. Motivation has been included in two previous courses you have taken, i.e. *Methods of Teaching* and *Classroom Management*. This unit will reinforce what you already know about motivation while showing you the critical role that teacher feedback plays in this.

Feedback is a term that educators borrowed from biologists and electrical engineers. Used byteachers, feedback means giving information to a student in response to an action on the part of the student. You will learn in this unit there is more than one type of feedback. To be useful to a student, feedback must make him or her think.

In this unit you will work with partner(s) on the test you created in the

previous unit, share it with a cooperating teacher in a school and with his/her support, administer it to a group of students. You will provide two or three rounds of feedback to students based on their performance in this test and evaluate the effects that your feedback had on their next performance.

Unit Outcomes

By the end of this unit you will:

- Know what makes feedback particularly effective.
- Be able to provide feedback that enables learning.
- Appreciate parents'informationneedaboutfor their child and other assessments and give it to them effectively.

Week 10: Characteristics of effective and ineffective feedback

Session 1

- What is feedback?
- What are some ways in which teachers provide conscious and unconscious feedback to students? How might these affect learning?
- Conclusions from research on feedback in the classroom

Session 2

- Characteristics of effective feedback
- Consequences for students from effective feedback on assessments
- Examples of effective feedback
- Characteristics of ineffective feedback
- Examples of ineffective feedback

Session 3

- Guidelines for writing effective feedback
- Ways to avoid ineffective feedback statements
- The role of feedback inconfidence increasing

Develop a mock conference with a student in which you provide feedback on his/her recent assignment. Peers will critique each others'

Week 11: Sharing assessment results with others

Session 1

- How might you provide feedback to a parent in a way that facilitates the environment of teaching and learning at home
- Develop a mock parent teacher conference, keeping cultural considerations in mind.
- Role-play various parent teacher conference scenarios

Session 2 and 3

Develop a mock teacher student session following points to be considered

- Sharing assessment results with students
- Integrate test performance with classroom performance.

- Develop some feedback statements that you would give students on their assignments

Week 12: Practice - Feedback to students and assessment results to parents
This week follows the practical administering of a test to students in a lab school. Bring the test results including transcripts of any oral or written feedback you provided.

Session 1
- Half the class presents their feedback.
- Members of the class critique the feedback presentations

Session 2
- The other half of the class presents their feedback.
- Members of the class critique the feedback presentations

Session 3
- Feedback Framework: Medal, Mission and Goals
- review the feedback received in different courses against this framework

UNIT 4: THE ARRAY OF AVAILABLE ASSESSMENT TASKS (4 weeks/12 hours)
Teachers are assessing their students all the time but such assessment is often neither systematic nor recorded and the teacher may or may not remember what s/he learned about a particular student or a group of students. In this unit alternate forms of assessment will be discussed, you will receive information about the variety of assessment tasks that are available to you in addition to tests. At the end of the Unit your will review your understanding of assessment and how this course has helped you in constructing new knowledge regarding assessment. You will further enhance your knowledge of assessment testing and evaluation when you will study a second course ion Year 3 of the 4 year B.Ed. Hons.

Week 13 Informal Performance Assessment
- Anecdotes in teacher journals.
- Homework
- Written work produced in class
- Informal behavioral observation with check lists and rating scales
- Class discussions.
- Academic Tasks (Running Oral Reading Records, for example)

Weeks 14 Restricted and Extended Performance Assessment
- Essays, Experiments, Projects, Demonstrations, Performances
- The Best Apple: an example of a Restricted Performance Assessment
- The Green Bean Race: an example of an Extended Performance
- Rubrics
- Learning objectives for Performance Assessments
- Strengths and weaknesses of Performance Assessments

Weeks 15 Portfolios

- Purpose of Portfolio Assessment
- Supply content
- Evaluation of Structure
- Evaluation of Content
- Illustrations of Portfolio Assessment: Your Semester 3 Student Teaching Portfolio

Week 16 Review

- You know more about assessment now than you knew 15 weeks ago when you had the discussion about a shift from a culture of testing in schools to a culture of assessment. Go back to that discussion now. Do you believe such a cultural shift can take place in classrooms in Pakistan? How?
- Though the topic was not covered in this course, there is some evidence that students earn higher scores on a test if they write test questions and answer them before taking the test prepared by the teacher. This is a good course in which to try this out. See if you can devise an assessment task for the course that you are taking and share it with your professor.

Practice Exercises

This course was developed around a series paper and pencil exercises designed to help you acquire the knowledge and skill to conduct classroom assessment. We recommend to your teachers that you do these exercises in class. We also recommend that you exchange with
Partnersand use your partner's work to practice.

You will use these materials throughout the semester to learn about relationships between assessment and instruction as well as the process of test construction. The materials were developed for this course by two teachers.

Course Assignments

Assignments will be listed on a separate handout. These assignments will count toward your grade.

Examples of assignments are:

- Interviews with school officials about assessment practices at the district and provincial levels
- Designing alternate assessments to those in students textbooks
- An information sheet for parents explaining the difference between formative and summative assessment
- Creation and administration of a test
- Providing informative feedback to students on the test they have taken that you developed

- Creating formative assessments for lessons in the unit you developed and used to create a summative assessment

Grading Policy

The university and its affiliated colleges will determine the course grading policy which will be shared with students at the beginning of the course. It is recommended that at least 50% of the final grade be determined by course work carried out by students preparing to be teachers. Course work may include assignments completed in schools

Suggested Textbooks and Resources

- Black, P., Harrison, C., Lee, C., Marshall, B., &Wiliam, D. (2010). *Assessment for learning: Putting itinto practice.* Berkshire, UK: Open University Press.

- Clarke, S. (2008). *Active learning through formative assessment.*
- London, UK: Hodder Education

- McMillan, J. H. (2011). *Classroom assessment: Principles and practice for effective standards-based instruction(5th ed). Boston: Pearson.*

- Miller, M.D., Linn, R.L., &Gronlund, N.E. (2009). *Measurement and assessment in teaching (10th ed).* Upper Saddle River, NJ: Pearson.

- Stiggins, R., Arter, J., Chappuis, J., &Chappuis, S. (2006). *Classroom assessment for student learning:Do it right-Using it well.* Boston: Pearson. This text has a DVD and CD.

- Wiliam, D. (2011). *Embedded formative assessment.* Bloomington, IN: Solution Tree Press. There are several website addresses to use for the course that are recorded on the handouts where they are to be used. They were last checked during the week of December 3, 2012 and were active.

EDU-436 Teaching of English (Professional) Semester 4

Syllabus: Teaching English

YEAR/SEMESTER: Year 2/Semester 4
CREDITS: 3 credits
PRE-REQUISITES: successful completion of courses in semesters 1-3

COURSE DESCRIPTION

This three-credit course has been designed to enable prospective teachers to teach English using an interactive communicative approach to students aged 6 to 13. It will be taught over 16 weeks with three face-to-face sessions per week, making a total of 48 sessions. The course aims to be comprehensive in its coverage and depth so that, on its completion, participants will have gained both a theoretical understanding of the basic principles of Second Language Acquisition and the practical knowledge of how to apply these principles effectively in the language classroom. The course focuses on ways of teaching young learners the four skills of listening, reading, speaking and writing to enable them to reach a basic level of communicative competence in both spoken and written English. In addition to learning how to teach and integrate the four skills in an interactive, learner-centered manner, participants will gain an understanding of how grammar awareness raising and vocabulary acquisition can be incorporated into a communicative teaching approach. Finally, student teachers will learn how to design and develop their own teachingmaterials and activities, and how to assess progress.

COURSE OUTCOMES

On completing the course, student teachers are expected to:

a. have gained a basic understanding of how second/foreign languages are acquired and possess a working knowledge of the following methods/approaches to Second Language Acquisition: grammar-translation, audio-lingualism, the natural approach, communicative language teaching.

b. be able to teach the four skills of listening, reading, speaking and writing to young learners using an interactive communicative approach.

c. be able to design suitable teaching materials which focus on helping learners acquire a basic level of communicative competence.

d. be able to assess their students' -language designed assessment procedures.

e. know how to help learners develop basic grammatical competence and vocabulary knowledge in English using a learner-centered communicative teaching approach.

f. be aware of the differences between teaching and testing when they are designing their own classroom materials and activities.

LEARNING AND TEACHING APPROACHES

The communicative approach to language learning and teaching (CLT) has as its goal the acquisition of communicative competence by second language learners, and proposes a communicative syllabus and methodology as the way to achieve this goal. Since its inception in the 1980s, CLT has continued to evolve and develop, and current communicative language teaching theory and practice now draw on a number of different educational traditions and methods. As a result of this blend of teaching practices, CLT today refers not to a strict methodology but to a set of generally agreed principles that can be applied in various ways depending upon the cultural context, the level and age of the learners, and the proposed learning outcomes. This course, *Teaching English*, aims to equip prospective teachers with the effective methods and strategies they can use to help their students attain a basic level of communicative competence in English. Some traditional methods such as jazz chants and grammar consciousness-raising will be introduced to the participants as well as more authentic CLT-based methods such as task-based learning and problem solving. By the end of the course, student teachers should be in a position to select the methods, strategies and techniques which are most relevant and appropriate for teaching their students to communicate successfully in speech and writing.

SEMESTER OUTLINE FOR THE COURSE (6 units / 16 weeks)

Unit One: Introduction to Second Language Acquisition (2 weeks / 6 hours)
This unit will cover the first six sessions (two weeks) of the course. The objective is to give the course participants the background they will need for understanding how human beings acquire languages and the most influential ESL teaching methods and approaches that have been used in recent years.

Week One

Week 1	• Introduction to the Course *Teaching English* • Introduction to Unit One and In views of how languages are learned. • What do people need to know to speak a foreign language well? • Four influential ESL approaches • The Grammar-Translation method and its limitations •Behaviourism and the Audio-Lingual Method • The Natural Approach
Week 2	• The Interactionist Approach • Practical teaching activities using the Interactionist Approach • Criticism of the Interactionist Approach • A quiz to review the four approaches to SLA • Implications of the Post-Methods Era • Factors Affecting Second Language Learning: Investigating learner differences and learning styles • What is Communicative Language Teaching (CLT)?

Unit Two: Receptive Skills (Listening & Reading) (4 weeks / 12 hours)

Listening

The listening component of this unit will show the course participants ways of helping young learners to improve their listening skills by offering them a combination of extensive and intensive learning material. This component will also outline the different types of listening activities that have been used in the communicative classroom (including pre-, mid- and post-listening activities). In addition, it will highlight some of the problems learners face in real-life listening and suggest ways of overcoming these problems.

Reading

The reading component of this unit will begin by making the course participants more aware of what is involved in the reading process in the beginning stages (e.g. perceiving and decoding letters in order to read words, gathering meaning from the words in a written text, etc.). It will then go on to examine how teachers can help learners to develop their reading skills so that they are able to deal with more complex texts and become efficient readers who get genuine pleasure out of reading.

Week 3 **Listening**	• What are listening skills? • Listening as a skill: some listening theories • How do children learn to listen? • Some suggestions for classroom listening • What does real-life listening involve? • Extensive and Intensive Listening
Week 4 **Listening**	• Techniques and Activities for Teaching Listening Skills communicatively in the classroom • Pre-Listening, While-Listening, and Post-Listening activities • Designing effective listening materials and activities for the language Classroom • Practical microteaching of **listening** skills in the classroom
Week 5 **Reading**	• What is reading? • What is the purpose of reading inside and outside the classroom? • The power of reading • Reading comprehension skills • Some suggestions for reading activities • Factors affecting learning to read in a second language • The role of the teacher in extensive and intensive reading
Week 6 **Reading**	• Techniques and activities for teaching reading communicatively • Pre-Reading, While-Reading, and Post-Reading activities • Designing and developing effective reading activities for the language Classroom • Practical microteaching of **reading** skills in the classroom

Unit Three: Productive Skills - Speaking and Writing (4 weeks / 12 hours)

Speaking

The aim of this component of the unit is to present student teachers with a principled approach to the teaching of speaking skills so that their students can develop a basic level of communicative competence in English. The unit outlines different types of tasks and activities that can be used by the teacher to help young learners develop fluency and accuracy in their speech.

Writing

This component of the unit will examine some of the approaches to writing that have been used in ESL teaching (controlled writing, guided writing, genre-based writing, the product approach, the process approach) and outline practical activities and tasks that can be used to help young learners develop their writing skills.

Week 7 Speaking	• What are Speaking Skills? • Helping learners to improve their pronunciation through the use of simple exercises and tasks • How to introduce learners to the sound system of English –Use of varied Drills • Ways of helping learners to improve their pronunciation through practical classroom exercises (jazz chants, songs, rhymes, etc.) • Teaching Basic Communication Strategies –relating functions to appropriate language forms
Week 8 Speaking	• Experiencing, Designing and Evaluating Speaking Activities for the Communicative Language Classroom I o Using songs to encourage speaking o Asking and Answering simple questions o A discussion game 'Shipwreck • Experiencing, Designing and Evaluating Speaking Activities for the Communicative Language Classroom II o Using pictures in a speaking exercise o Using a story for acting and developing speaking • Assessing CLT activities –a questionnaire • Practical microteaching of speaking skills in the classroom and evaluation
Week 9 Writing	• Key concepts in teaching second language writing : controlled writing, guided writing, genre-based writing, the product approach, the process Approach • Types of writing tasks that have been used effectively in Communicative Language Teaching • Practical CLT Writing activities such as describing a view, writing about a personal experience, writing a dialogue between two friends, etc.

Week 10 Writing	• How to help students by giving them language scaffolding • Giving useful feedback to learners on their writing. • Designing writing materials and activities for the language classroom • Practical microteaching of writing skills by groups in the classroom and evaluation of the presentations

Unit Four: **Teaching Grammar Communicatively** (2 weeks / 6 hours)

This unit is intended to show course participants how they can teach grammar in a creative, entertaining and communicative manner to help learners improve both their fluency and accuracy in speech and writing. It begins by reviewing some basic grammatical structures in English (such as subject-verb agreement, formation of questions and negatives, etc.) so that student teachers have a clear understanding of how to form and use these structures accurately themselves before they go on to teach this basic grammar to their young students. The unit then suggests ways of presenting grammar in a fun, enjoyable and meaningful way to children.

Week 11	• A review of basic concepts in grammar: tense, subject-verb agreement, formation of interrogative and negative verb forms, SVO word order, simple/compound/complex sentences. • Student teachers work through practical exercises and activities in the above areas to ensure that they have a clear understanding of the appropriate grammatical forms required for the structures outlined above. The course facilitator gives student teachers some tips on how to edit their work for errors. • The place of grammar teaching in the second language acquisition process; evaluating different approaches to grammar teaching taken by course book writers
Week Twelve	• What is a communicative approach to teaching grammar? • Teaching techniques and activities to support communicative-based grammar learning • Designing and evaluating communicative grammar materials for the language classroom • Preparation by student teachers of their own activities for teaching grammar • Micro-teaching by student teachers in groups of the activities they have prepared and evaluation of these activities by the class.

Unit Five: Teaching Vocabulary Effectively (2 weeks / 6 hours)

One aim of this unit is to show the course participants how vocabulary can be divided into function words vs. lexical words, and high frequency words vs. low frequency words. The main focus of the unit, however, is to give student teachers some practical ideas for designing their own activities and tasks for vocabulary teaching/learning.

Week 13	• Function words vs. lexical words • High frequency vs. low frequency words • Discussion of which English words young learners will need to know to be able to speak and write at a basic level. How should these items be presented to the learners? • Student teachers do web searches to choose 50 words they would like to teach to their students. Discussion in class on how and why the 50 words were selected. • Making vocabulary a useful part of a language course –when and how should vocabulary be taught to English learners?
Week 14	• Practical activities for teaching and reviewing vocabulary • Evaluating vocabulary activities • Student teachers prepare 15-minute vocabulary teaching activities in Groups • Micro-teaching by the student teachers in groups of the activities prepared in the previous session

Unit Six: Assessing Language Performance (2 weeks / 6 hours)

This unit introduces the participants to some key concepts in assessment theory and to some practical ways of testing the language skills of young learners. It also outlines the kinds of tests the prospective teachers can develop themselves in order to measure how successfully their course learning objectives have been achieved.

Week 15	• Some basic principles and key concepts in assessment • Basic principles for assessing children's language le • Why do we test students? • Tips and special considerations for Testing Young Learners • Conflicts between classroom learning and classroom testing and ways of reducing these conflicts • Ways of Marking Language Tests and Giving Feedback • Designing Language Tests for Young Learners
Week 16	• Samples of test types that can be used to test young learners • In groups, student teachers prepare their own materials for testing one of the four skills for a 15-minute presentation • Micro-teaching in groups and evaluation of the testing materials by the class

SUGGESTED REFERENCES

- Cameron, L. (2001) *Teaching Languages to Young Learners*. Cambridge: CUP. Fanselow, J. (1987) *Breaking Rules*. New York: Longman.
- Goh, C.M. (2007) *Teaching Speaking in the Language Classroom*. Singapore: SEAMEO-RELC.
- Harmer, J. (2001) *The Practice of English Language Teaching*. Harlow: Pearson Educational. Hughes, A. (2003) *Testing for Language Teachers*. Cambridge: CUP.
- Hyland, K. (2003) *Second Language Writing*. Cambridge: CUP.
- Lightbown, P. and N. Spada (1999). *How Languages are Learned*. Oxford: OUP.
- Nation, P. (2002) *Managing Vocabulary Learning*. Singapore: SEAMEO-RELC.
- Phillips, S. (1993) *Young Learners*. Oxford: OUP.
- Richards, J.C. (2001) *Curriculum Development in Language Teaching*. Cambridge:CUP.
- Richards, J.C. (2005) *Communicative Language Teaching Today*. Singapore: RELC. Swan, M. (2005) *Practical English Usage*. Oxford: OUP.
- Thornbury, S. (2005) *Grammar*. Oxford: OUP
- Ur, P. (1996) *A Course in Language Teaching*. Cambridge: CUP.

COURSE ASSIGNMENTS AND GRADING POLICY

Course participants will be required to submit one short assignment and take a short quiz after completing each unit of the course. Details of these assignments and tests will be shared by the course instructor. It is suggested that course work count for at least 50% of the final grade. In addition to course work, there will be mid and end-of-semester examinations.

EDU-437Teaching of Mathematics (Professional) Semester 4

Syllabus: Teaching Mathematics

Year/Semester: Year 2/Semester 2
Credit value: 3 credit hours
Prerequisite: Successful completion of the General Mathematics course in Semester 2

Course Description
This course will equip prospective teachers with the knowledge and skills to teach math in grades 1 through 8. They will become familiar with expected student learning outcomes. Prospective teachers will learn to use a variety ofinstructional methods that promote active learning of math, including making and using teaching and learning materials. They will plan mathematics lessons and activities, and engage in practice teaching of math.

Learning Objectives:
Students will:

- Deepen their understanding of-8 Nationalkey Mathematics Curriculum.
- Identify and assess areas of youngster' their teaching practices.
- Acquire the pedagogical skills and competencies-8 required inNational Mathematics Curriculum.
- Describe the nature, history, and development of grade 1-8 mathematics education both in Pakistan and internationally.

Course Structure
Each three-session week will focus on three aspects of Math education: Mathematical Content, Learning the Math Content, and Teaching the Math Content. These will be combined to form an integrated instructional model that addresses the above learning outcomes.

4. **Mathematics Content:** The first session of the week will begin working on at least onemath problem. Prospective teachers will engage in solving and discussing the problem and sharing approaches and solutions. The content will be developed so that prospective teachers will engage in mathematics *in depth* to help them connect concepts within and across the four units of the National Curriculum: Number & Operations, Algebra & Algebraic Thinking, Geometry & Geometric Measurement, and Information Handling.

5. **Learning & Pedagogy:** The week will continue with anand teachers' instructional practices. Cl order to experience approaches to teaching and learning that they can use when they teach. They will recognize that there are often multiple ways of approaching a problem (and in some instances more than one correct answer). The instructor will present questions that stimulate curiosity and encourage prospective teachers to investigate further: by themselves, with their classmates, or in local schools.

The course will examine how children learn and develop mathematical understanding and skills and how the way children think should influence the teaching of mathematics in the primary, elementary, and middle grades.

6. **Assignments:** Students are expected to continue learning about math and the teaching of math after class. There will be assi knowledge so that they learn more about teaching math. Assignments will take many forms including independently solving math problems and school-based tasks.

In summary, the Teaching Mathematics is a comprehensive effort so that pre-service teachers will:

1. Build and deepen their math content knowledge
2. Study ways in which young students learn mathematics
3. Learn about and use high-quality instructional practice

Semester Outline

Week #	Mathematics Content	Learning the Math Content	Teacher Decision Making: Teaching the Math Content
Unit 1			
1	•Prime & Composite Numbers •Factors & Multiples	• Anticipated Student Misconceptions	• Setting Goals for: ○ The Program ○ Teaching ○ Learning
2	•Division of Whole Numbers	• Emergent Mathematical Thinking	• Lesson Design Model ○ Launch ○ Explore ○ Summarize
3	•Greatest Common Factor •Least Common Multiple •Prime Factorization	• The Value of Student Errors	• Using Questioning Techniques, Wait Time, Probes, and Prompts to Foster Student Thinking
Unit 2			
4	•Operations with Fractions (1)	• Learning Mathematics with Manipulatives& Visual Aids	• Using Application Problems to Develop Algorithms
5	•Operations with Fractions (2)	• Mathematical Problem Solving Strategies	• Physical Set-up of a Student-Centered Classroom
6	•Fractions-Decimals-Percents	• Mathematical Discourse: Learning by Talking	• Designing & Managing Cooperative Group Work
7	•Pie Charts	• Seeing Connections between Units of the National Curriculum	• Timing of Lessons, Pacing of Units
Unit 3			
8	•Geometric Ratios	• Cognitive Demand of Mathematical Tasks	• Selecting Worthwhile Mathematical Tasks
9	•Rates & Linear Functions	• The Balance Between Concepts & Skills, The	• Bloom's Taxo Learning applied to

		Role of Drill & Practice	Mathematics
10	•Systems of Linear Equations	• Multiple Representations for a Single Mathematical Idea	• Comparing Models of Teaching ○ Deductive-Analytic ○ Inductive-Synthetic
11	•Symmetry	• Mathematical Learning Styles and Modalities, Mathematics & Multiple Intelligence Theory	• Comparing Models of Teaching ○ Heuristic ○ Interactive ○ Hands-on
12	•Volume & Surface Area	• Learning Mathematics by Writing	• Comparing Models of Teaching ○ Problem-based Learning ○ Project-based Learning
13	•Measurement & Precision	• Precision in Mathematical Vocabulary and Syntax	• Differentiating Assignments
Unit 4			
14	•Data: Estimation & Large Numbers	• Learning Mathematics with Available Technology	• Differentiating Assessments
15	•Introduction and/or Review of Seminal Thinkers in Mathematics & Mathematics Education		
16	•Introduction and/or Review of Seminal Islamic Thinkers in Mathematics & Mathematics Education		

Suggested Resources:

These resources provide additional information about math education and the mathematical topics addressed during the course.

- NCTM *Illuminations*: http://illuminations.nctm.org/
- New Zealand's http://nzmathsMathsCurrriculum:.co.nz/
- UK's-RichNMaths site: http://nrich.maths.org/public/
- *How Students Learn: History, Mathematics, and Science in the Classroom* www.nap.edu/catalog.php?record_id=10126#toc Published by National Academies Press.
- *What does Good Mathematics Instruction Look Like?:*
- http://www .naesp.org/resources/2/Principal/2007/S-Op51 .pdf
- *Mathematics for Elementary School Teachers*,byTomBasserear, published by Brooks Cole.
- *Elementary and Middle School Mathematics: Teaching Developmentally*,by John A. Van de Walle,KarenKarp, and Jennifer Bay-Williams, published by Pearson Education.
- *Mathematics Explained for Primary Teachers*,*by*Derek Haylock, published by SAGE Publications.

EDU-405 School, Community and Teacher (Foundation) Semester 4

Syllabus: School, Community and Teacher

YEAR/SEMESTER: Year 2, Semester 2, B.Ed. Elementary (Honors)
CREDIT VALUE: 2 credits + 1 laboratory credit
PREREQUISITES: Successful completion of Semesters 1-3

COURSE DESCRIPTION

The purpose of this course is to provide prospective teachers with a strong foundation for understanding the relationship between and among teachers, the school and the families and community that support the school. Basic conceptualizations of institutions that educate and the role of the teacher in relating to these institutions will be considered. Students will also explore how cultural, social, and historical forces have shaped understanding of the relationship teachers have with schools, communities and families in Pakistan. The course will explore the social context of schooling, examining how the work of teachers is nested within school and community. It will provide orientation to the process of socialization in schools and how social factors affect education. Students will have opportunity to build their ability to put this knowledge into practice in the accompanying 1 credit laboratory by study of a school and its community, so that as teachers, they can mobilize support for educational programs and contribute positively to their communities. Practical application of the course will be emphasized as students explore the teaching and learning within both school and community. They will identify strategies, practices, and relationships that have proven fruitful within the contexts with which they are familiar and learn how to identify and respond to challenges in school, community and teacher relationships. Students will identify how culture, gender, special needs, equity and equality and collaborative working conditions affect the school and community.

COURSE OUTCOMES

Prospective teachers will be able to:

- Analyze and describe relationships between teachers, the school and the families and community that support the school.
- Identify how the teacher's role is influe education in schools and their communities.
- Recognize and value diverse cultural, traditional and religious values and learning needs of their students in school as well as in their community.
- List the social factors affecting education and how it can support the development of education in the country in general and community in particular.
- Explain his/her role as a role model for their students in school and in the community in general.

LEARNING AND TEACHING APPROACHES

The teaching and learning in this course is based on the principles of reflective practice, participatory process, and on critical analysis. Short introductory presentations will be made by the instructor and/or invited guests, but much of the

class time will be spent in discussion and in group activities; such as role play, presentations, aimed at consolidating understandings and exploring issues in more depth.

SEMESTER OUTLINE

Unit 1: Society, Community and Education

One of the basic purposes of the course is to understand the nested relationships between school and community and how to capitalize on these relationships for enhancing student achievement. The prospective teachers need to be introduced to the basic building blocks of these institutions in order to understand the nature of interaction between and among these institutions.

Week 1:	• Introduction and overview of the course • Introduction of society, community and education • Structures and Functions of community and schools in Pakistan
Week 2:	• Impact of education on Society • Role of education in strengthening Pakistani communities • Review of Unit 1

These apparently general topics will be grounded in the personal experiences of the prospective teachers. Prospective teachers will be asked to draw on examples from their own regions of birth/ residence. This will help in identifying the social factors affecting education. It will also bring out the contextual role of schools in supporting the development of education in the country in general and community in particular.

Unit 2: Understanding Social Interaction in Schools and Communities

It is important for the prospective teachers to understand group dynamics to be able to appreciate the nature of the nested relationships between school and community for enhancing student achievement. This theme will expose students to the theoretical bases and practical importance of communication and interaction between and among stakeholders.

Week 3:	• Meaning of Social Interaction and socialization
	• Levels of social interaction
	• Elements of social interaction
	  ○ Social contacts
	  ○ Communication
	  ○ Social attitudes and values

Week 4:	• Types of social Interaction
	  ○ Cooperation
	  ○ Competition
	  ○ Conflict

	○ Accommodation ○ Assimilation • Meaning/types of social Groups • Individual / group behavior •
Week 5:	• Role of school and teacher in developing Social Interaction for peace, harmony and tolerance in Pakistani communities. • Review of Unit 2

Prospective teachers and Instructor/s will be invited to bring in local/ regional examples of working harmoniously with different stakeholders in a diverse cultural, traditional and religious landscape. The unit will highlight the importance of teachers being able to assess the learning needs of their students in school as well as in their community

Unit 3: School and Culture

This theme is meant to expose prospective teacher and 'outside' school (in the community) asthey impact and the relationships between and among stakeholders. The students will be able to identify how the teacher's role is influenced by social and c communities. The major topics to be covered under this theme could include the following:

Week 6:	• Main characteristics of culture • Elementary concepts of culture ○ Cultural trait ○ Cultural complex ○ Cultural pattern ○ Cultural lag • Cultural diversity
Week 7:	• Culture and cultural elements of Pakistani communities • Role of education and school in protection and transmission of culture
Week 8:	• Impact of media on school and culture • Impact of technology on school and culture • Review of Unit 3

Opportunity will be provided to revisit earlier concepts (from themes 1 & 2) to intertwine, for instance, structures of schools and communities where patterns of social interactions can create competitive or cooperative and accommodating climate in schools for marginalized groups. Similarly gender issues and the culture of inclusion/exclusion will also be considered while discussing structures of both school and community and emphasizing the role of schools in creating cultural change. The prospective te school and in the community in general will be highlighted.

Unit 4: Relationships between School and Community

This theme is important for re-conceptualizing the place of school in relation to

community. Prospective teachers need to understand the multi-dimensional identity of school as a social institution which is more than just a place for learning three basic Rs- reading, writing and arithmetic.

Week 9:	• School as a social, cultural and Community Institution o Effects of school on communities o Effects of communities on school
Week 10:	• School as a hub for community services • A critical analysis of effective role of school and teachers in Pakistani Communities • Review of Unit 4

Discussion will be grounded in students own experiences of schools and their observations of communities. Students can contribute case studies as discussion material for this unit.

Unit 5: Social Institutions

This unit is important for grounding the theoretical and practical aspects of social institutions into local realities which students are familiar with. Students will be exposed to the interrelated and interdependent nature of the beliefs and practices that tie schools, families and religious institutions.

Week 11:	• Definition and Types of social institutions • The family • Educational Institutions • Religious institutions
Week 12:	• Critical analysis of the role of Social Institutions in Pakistani school. • Review of Unit 5

Discussion will be grounded in students own experiences of their daily lives.
The unit may be covered in 1.5 weeks

Unit 6: Teacher's Role in School and Community

This is the most important unit of this course where students will identify pre-requisites for promoting collaborative working conditions in order to promote a culture of inclusion in schools as well as community. Through conceptualizing their own role as change agent they will be able to recognize and identify how culture, gender, special needs, equity and equality issues affect the school and community.

Week 13:	• Teacher as an integral part of community • Teacher as a change agent in o Community o School
	• Teacher as role models through their participation in community activities

Week 14:	• Effects of teachers and schools on individual and group behavior • Review of Unit 6

Students will be invited to consider future aspirations while at the same time grounding their discussion in experience of school life, role models.

Unit 7: Working Context of Pakistani Teacher

The focus of this unit will be on the non-traditional roles of Pakistani teachers within their real working context.

Week 15:	• Teacher as a social activist • Teacher's leadership roles
Week 16:	•Teacher'sestablishingrolelinkageamongin stakeholders. • Review of Unit 7

The instructors of this theme need to distinguish traditional roles of teachers (within the classroom only) from non-traditional roles that go beyond the classroom, e.g., teacher as a community mobilizer, or social activist as well as the formal and informal leadership roles that teachers could perform.

Unit 8: Practical Experience
The concluding unit will be a practical task in the community or other field experiences as assigned by the course instructor**.**

SUGGESTED TEXTBOOKS AND REFERENCES

There is no standard textbook for this course. The books listed below should be treated as 'suggested'readingsthat can provide support.
Chapters will be assigned chapters when deemed appropriate.

- Marshall, L & Rowland, F. (2006). *A guide to learning independently*, 4th ed, Pearson Longman, French Forest, NSW.
- Kotley, S.B, (2008*). The Basics of Sociology*, Greenwood Press: USA
- Bashiruddin, A.&Retallick, J, (eds), (2009). *Becoming Teacher Educators*, Aga Khan University-Institute of Educational Development: Karachi
- Hafeez, S, *Pakistani Society*,
- In addition to the above, the following is a list of suggested (recommended) readings that may be used to supplement class sessions where appropriate:

- Abdalla, M.J. &Qureshi, R. (2009). Teacher leadership for school-based professional development: A case study. In Qureshi, R. &Shamim, F.(eds) *Schools and schooling practices inPakistan: Lessons for Policy and Practice,* Oxford University Press: Pakistan

- Qureshi, R. , Pirzado, P. &Nasim, S. (2007), Schooling in Rural Sindh, Pakistan, In Qureshi, R. &Rarieya, J. (eds), *Gender and Education in Pakistan.* Oxford University Press: Pakistan, pp.126-146.

- Qureshi, R. (accepted for publication). Education for Inclusion: what would it take to have an inclusive primary*Educational*school*Awakening*,JournalthePakistan?'IslamicUniversity Malaysia.

- Qureshi, R. (2006). Colonial Legacy: Understanding the historical roots of female Illiteracy in Pakistan, *Muslim Education Quarterly*, vol. 23 (1 & 2): pp.20-37.

- Qureshi, R. (2008). Is Child-Friendly School on the agenda for school reforms? Conversations with PakistaniConferenceschoolproceedings of heads, 'theInternationalConference on the Teacher Education: Transformative Society & Teacher Education Reform, September 19-20,2008, Changchun, China:pp.1-10.

- Pakistan: Aga Khan University-Institute for Educational Development:.pp.558-564.

- Qureshi, R. &Shamim, F.(Eds). (2009). *Schools and schooling practices in Pakistan: Lessons for Policyand Practic*e, Oxford University Press: Pakistan.

- Qureshi, R. &Rarieya, J. (Eds) (2007). *Gender and Education in Pakistan.* Karachi, Pakistan: Oxford University Press: Pakistan.

Additional readings will be handed out in class.

COURSE ASSIGNMENTS

Details of assignments will be listed on a separate handout to be provided by your instructor at the beginning of the course. These assignments will be designed to help you achieve course outcomes.

GRADING POLICY

Grading for this course follows the university in the course and will include both coursework and examinations. IT is recommended that at least50% of the course grade be determined by course work.

EDU-438 Teaching of Social Studies (Professional) Semester 4

Syllabus: Teaching Social Studies

Year/Semester: Year 2, Semester 4
Credit value: 3 credits
Re-requisites: Successful completion of semester 1-3

COURSE DESCRIPTION

This course enables prospective teachers to reflect on the purpose of teaching social studies and help shape their approach to teaching the subject. It prepares them to integrate knowledge with skills, values and attitudes, essential for democratic citizenship, in their teaching, and to encourage informed and responsible civic action.
The teachers of social studies have an added responsibility for helping students understand their world, facilitating the development of a wide range of skills and competencies to enable them to become critical consumers of knowledge, and encouraging them to participate as informed, caring and peace loving citizens to improve the society. The task of the social studies teacher becomes more challenging given the dynamic nature of society and subject matter, the nature and needs of the learners and wide varieties of learning contexts.
This course will prepare prospective teachers to provide for their students activity-rich opportunities for inquiry, cooperative learning, discussion, role play, etc. It will equip prospective teachers with strategies to deal with controversial issues in their classrooms. Hence, this course combines content with different teaching strategies to make the teaching and learning of social studies a valuable and interesting educational experience for both teachers and students.

COURSE OUTCOMES

Students will be able to:

- Review/reflect on the nature, methods, key concepts and skills in the disciplines comprising the Social Studies (history, geography, political science, citizenship, anthropology, sociology, economics) and to deepen their understanding regarding their use to educate for informed, responsible and active citizenship
- Develop an understanding of current, persistent and controversial issues (global warming, cultural diversity, universality of human rights) and acquire the skills to teach controversial issues in their classrooms
- Recognize diversity and differences as assets and learn to evaluate different perspectives and biases
- Encourage and promote inquiry and critical approach in their teaching practice, thereby engage in critical reflection on their experiences (at the university and in real classrooms) to improve their practice
- Broaden their repertoire of content knowledge, pedagogical strategies, and instructional skills

LEARNING AND TEACHING APPROACHES

The course combines elements of all the disciplines as it provides opportunities for students to conduct

inquiry, develop and display data, synthesize findings, and make judgments. The use of a variety of teaching strategies, like active/effective lecturing, discussion, role play, and cooperative learning not only help in the development of a number of skills and values but also facilitates the learning of students with different interests, abilities and styles of learning. It also helps prospective teachers to develop and/or expand their repertoires of engaging, thoughtful teaching strategies for lessons that allow students to analyze content in a variety of learning modes. A variety of skills are also embedded throughout meaningful social studies lessons.

This course is made more meaningful and challenging for prospective teachers through the use of strategies and activities that:

- Engage students
- Facilitate them to connect what they are learning to their prior knowledge and to current issues
- Encourage them to inquire
- Provide them the opportunities to think critically and creatively about what they are learning, and to apply that learning to authentic situations

The old adage "if all you have is a hammer, everything looks like a nail" is equally true of teaching strategies. If the only classroom teaching strategy one knows is traditional lecturing, that's the teaching tool that one is likely to use for all classroom situations. If, on the other hand, a teacher has more tools in his/her toolbox, then he/she will have the opportunity to choose the most appropriate tool for the task at hand. In this course, prospective teachers will explore various teaching strategies in which most students are active rather than passive in the classroom and in which the focus is less on the teacher presenting and more on the student learning.

SEMESTER OUTLINE

Unit 1: Citizenship and Human Rights Education

This unit will introduce prospective teachers to the concept of Citizenship education and equip them with pedagogical strategies and skills required to educate for informed, responsible and active democratic citizenship. It will also help them to understand the concept of Human Rights.

Unit Outcomes

By the end of this unit the students will be able to:

- Define Citizenship and describe its key concepts
- Understand and appreciate the kind of behaviors necessary for the functioning and maintenance of a democratic society
- Become familiar with the use of active learning pedagogies such as role play, debate discussion, group work and presentations in their classrooms
- develop and demonstrate the skills to teach controversial issues in their classrooms
- discuss how different subject areas can be used for engaging with Citizenship ideas
- understand and explain the concept of Human Rights
- Develop a respect for human rights including those of individuals and of minorities
- Recognize the value of reviewing their own practice
- Reflect on their practice, using evidence from classroom, other research and through dialogue with colleagues

Week 1	Introduction to the course, Definitions, Rationale for teaching and learning of Citizenship • Key Concepts of Citizenship education • Controversial Issues—What, Why and How to teach them

Week 2	Towards creating a better world—developing citizenship values, skills and dispositions through the teaching of controversial issues • Links with other subject areas • Citizenship rights
Week 3	The Evolution of the concept of Human Rights • Rights and Responsibilities, Defining Human Rights • Civil, Political, Social, Economic and Cultural Rights
Week 4	Women's rights, Children's right • Human dignity, Justice, Equality, Freedom, • Universality, Indivisibility—Are human rights universal? • Reflection and Review

Unit 2: History - People, Past Events and Societies

Through the study of time, continuity and change, this unit enables students to recognize and evaluate different perspectives and biases in historical writing. Capacities like critical thinking, issue analysis and an examination of perspectives are developed in prospective teachers to enable them to improve the teaching and learning of History.

Unit Outcomes
By the end of this unit the students will be able to:

- develop an understanding of the reasons for teaching and learning history and of the relationships between past and the present
- develop an awareness of the ways in which we learn about the past, and the methods and tools of the historian
- understand the meaning of Time and Chronology and the reasons for Change and Continuity
- analyze the sometimes complex cause-and-effect relationships, and multiple perspectives of ideas and events, also recognizing the ef history

- recognize the interrelatedness of geography, economics, culture, belief systems, and political systems within history
- discuss how history can be used as a vehicle for processes, knowledge and understanding of Citizenship education

Week 5	Definition, Rationale and Methods of History • Key concepts: Time and Chronology • Change and Continuity
Week 6	Cause and Effect • Multiple causation • Multiple perspectives, Interpretation of history • Reflection and Review

Unit 3: Geography - People, Place and Environment
This unit examines the interaction of humans within their spatial environments and the effects on the location and development of place and region. The skills required for teaching and learning geography are also included in this unit.

Unit Outcomes

By the end of this unit the students will be able to:

- explain human and environmental interaction
- compare world regions and their historical, cultural, economic and political characteristics
- evaluate various perspectives on any issue

Week 7	Definition and Rationale for teaching and learning Geography Key Concepts/Themes of Geography: Location, Place, Human-environmental Interactions, Movement, Regions Skills required for teaching and learning Geography
Week 8	Global Warming—exploring the issue • Global Warming—a myth or reality? • Controversy about the theory of, and responses to Global Warming • Reflection and Review

Unit 4 Culture and Diversity

This unit gives the teachers an understanding of culture, diversity, and world view— the similarities and differences reflected in various personal, cultural, racial, and ethnic perspectives. It also includes an understanding of the interdependent relationship among individuals, societies and the environment –locally, nationally, and globally—and the implications for a sustainable future. Peace concepts, the skills and dispositions for prevention, management and resolution of conflict to build more peaceful societies are also included in this unit.

Unit Outcomes

By the end of this unit the students will be able to:

- understand the concept of culture and how it is transmitted
- develop an appreciation for the rich comp understanding of how the parts of a culture interrelate
- recognize the special strategies required to allow the different elements within a pluralistic society to live together amicably
- recognize and appreciate the multicultural and multiethnic dimensions of a society and the contributions made by various groups
- appreciate the similarities and differences that exist among societies of different times and places
- develop an understanding and appreciation for the rational and peaceful resolution of conflicts and settlement of disputes

Week 9	Rationale for the study of Culture • The Dynamic Nature of Culture • Groups and Institutions
Week 10	Society, Socialization • Civilization • Cultural Adaptation
Week 11	Assimilation, Acculturation • Diffusion, Dissonance • Multiculturalism and its implications • Reflection and Review

Week 12	Interdependence

	• Peace and Sustainability • Understanding Peace and Conflict
Week 13:	Why 'Peace Education', Teaching c • Positive attitudes and skills—empathy, cooperation, anger-management, and problem-solving • Communication and Negotiation • Reflection and Review

Unit 5 Power, Authority and Governance

This unit gives teachers an understanding of the various ideologies and forms of power; the origins, functions, and sources of government power and the roles played by individuals and groups.

Unit Outcomes
By the end of this unit the students will be able to:

- develop an understanding of power and its forms and an appreciation for the balance of power established by the constitution between majority and minority, the individual and the state, and government 'by' and 'for'

Week 14	Power, Government Systems and Regimes • Institutions of Government, political processes and participation • Civil society—individuals, groups and institutions • Reflection and Review

Unit 6 Production, Distribution and Consumption

The study of economic concepts, principles, and systems in this unit enables students to understand how economic decisions affect their lives as individuals and as members of society.

Unit Outcomes
By the end of this unit the students will be able to:

- recognize and analyze the economic systems of various societies and their responses to the three basic economic questions: what to produce (value), how and how much to produce (allocation), and how to distribute (distribution)
- recognize and discuss the economic global interdependence of societies

Week 15	Definition of and Rationale for teaching and learning of Economics • Conflict between wants and resources, Choice, Scarcity • Opportunity cost
Week 16	Economic systems • Production and distribution of Wealth • Supply and demand • Reflection and Review

Suggested Textbooks Websites and References

- www.proteacher.com
  This website has teaching ideas and resources, lesson plans etc. for elementary school

- www.moneyinstructor.com
  This website has worksheets, lessons and activities for teaching money, business and life skills. The ideas could be useful for teaching economics topics

- www.educationworld.com
  Educational research blogs, templates, tutorials, worksheets, lesson plans are many other articles with very good ideas for teachers are available on this site

- www.pbs.org
  A variety of videos, on culture and society, history topics, science and nature, etc are available on this site

- www.teachingideas.co.uk
  Lesson ideas, plans, activities, resources which can be used by teachers in their classrooms are available on this site

- www.learner.org
  This site offers Teachers' professional deve the curriculum

- www.geography-site.co.uk
  A comprehensive site exploring geography with online lessons, revision sheets and easy to read information about geography topics
- www.teachervision.fen.com/diversity/teacher resources/33631.html
  Teachers could use the resources on this site to teach students to respect differences among people in their community and around the world
- www.salsa,net/peace/teach/teachers.html
  Peace tools for teachers could be found on this site

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COURSE ASSIGNMENTS

Graded course assignments will be listed on a separate handout. These assignments will be designed to help you achieve course outcomes.

GRADING POLICY

Grading for this course follows the university early in the course and will include both coursework and examinations.

EDU-412 The Teaching Practicum (Teaching Practice) Semester 4

Syllabus: The Teaching Practicum

YEAR/SEMESTER: Year 2/Semester 4
CREDIT VALUE: 3 credits
PREREQUISITES: Successful completion of Semesters 1and 2 of the ADE/B.Ed.(Hons)

The Practicum is a 3 credit course. As this is a practical course, one credit requires additional hours of practice. It is recommended that Student Teachers spend approximately 30 days/six weeks on the school placement in semester 4.
Student Teachers should aim to spend six weeks at school for the practicum in Semester 4.

COURSE DESCRIPTION

The Practicum consists of two important parts:

a. A school placement in an elementary school;
b. A seminar that meets regularly.

a. School Placement:

The practicum experience in Semester 4 should provide elementary grade student teachers with a practicum placement in an elementary classroom This teaching practice builds on experience in semester 3 when student teachers worked with children at two different grade levels. As in semester 3, the practicum should provide student teachers with carefully sequenced and supervised experiences, with student teachers gradually assuming responsibility for teaching several subjects with the whole class, starting with one subject in week 3, and picking up an additional class in week 4, and an additional class in week 5. So for the last two weeks you should assume full responsibility for at least 3 classes
During the practicum, student students are expected to critically select and use appropriate materials, resources (including persons in the community) and technology, and to have experiences with class room management and a variety of evaluation techniques (including authentic assessment). Collaboration with other Student Teachers and professionals in the school setting should be encouraged in order to develop team building skills and utilization of all resources to enhance children's learning.
Ideally, groups of three or four student teachers should be placed in each school. Avoid having too many student teachers in one school and more than one student teacher per class (unless they are doing an activity or assignment that requires them to work together). Opportunities for peer coaching as well as coaching by the cooperating teacher and college/university supervisor should be provided. Student teachers should be encouragedto take advantage of the opportunity to interact with parents and to develop skills for communicating with parents under

the guidance of the cooperating teacher.

b. The Seminar:

As in semester 3, a weekly seminar will accompany the practicum to help student teachers link the content of the pre-service program content to practice. The seminar should provide an opportunity to clarify and revise their teaching goals and their beliefs about a wide range of educational issues. Although the seminar should be related to and build upon classroom observation and teaching experiences, it should be focused on inducting student teachers into professional practice. Habits of thinking that provide the foundation for continued growth as a teacher are as important as strategies for solving immediate classroom issues and problems. The seminar should also provide a forum for student teachers to share and resolve problems or challenges they are experiencing during their practice. Student teachers will be asked to complete several types of assignments. Most, but not all, of these assignments will be directly linked in some way to classroom experiences. For example:

- Present an analysis; of own or a peer's
- Conduct an observation focused on specific classroom practices or an individual child;
- Try out a particular method and reflect on its success in achieving its purpose;
- An interview with of a teacher and a child.

All of the assigned tasks should be flexible enough to allow for adaptation to a wide variety of classrooms.

COURSE OUTCOMES

Student teachers will be able to:

- Reflect on and learn from teaching practice.
- Collaborate with peers, cooperating teacher and college/ supervisor, establishing professional relationships.
- Invite, accept, and utilize feedback from the supervising teacher, peers, and the college/university supervisor in a non-defensive manner.
- Produce and implement plans for teaching and learning which reflect the use of appropriate instructional methods and strategies to meet the needs of all students within the context of the practicum classroom.
- Utilize appropriate instruments or techniques for assessing student learning and learning needs.
- Recognize cognitive and affective needs of students and establish learning environments and use activities appropriate to meeting those needs.

LEARNING AND TEACHING APPROACHES

For the practicum in semester 4, every student enrolled will be assigned to an elementary grade class.

The Practicum Seminar will utilize a variety of teaching and learning approaches, but rely heavily on reflective journals, small group and peer interaction.

SEMESTER OUTLINE

a. School experiences

The way field experiences for the Practicum are organized may vary from semester to semester, and from institution to institution. Your Instructor will provide you specific information about where you will teach or how to obtain a classroom placement, and your schedule for the semester.

Each Student Teacher will develop a plan for gradually increasing responsibility in the classroom, working with the Seminar Instructor, the College/University Supervisor (Seminar Instructors will supervise field experiences, but may also work with a team of supervisors) and the Cooperating Teacher.

Each college or university will have its own plan for the practicum. It may be organized in a variety of ways. Student teachers can expect the following types of activity and progression during the practicum in Semester 4:

Week 1: Introduction to the school and classroom context.

- Complete the Student Teacher Checklist, provided in your handbook.
- Meeting with the cooperating teacher to discuss how he/she plans for instruction, expectations and the like

- Non-observational Assignments, which will provide you with an opportunity to familiarize yourself with the school, staff, school rules, policies etc. The assignments you are required to complete will depend on your current placement. See the note below.

  If you are completing this practicum at a different school than the one you worked in for Semester 3, you will need to complete the assignments provided in your handbook.

  Inventory of School Resources,
  Community/Co-curricular Engagement
  Discipline Procedures and Policies
  Cooperating Teacher Interview
  Interviewa Child/Children
  Classroom Management

  If you are at the same school as you were in Semester 3 –but working with a different teacher you need to complete the assignments provided in your handbook.

  Cooperating Teacher Interview
  Interview a Child/Children
  Classroom Management

- Log of Daily Activities
- Daily Reflections (see the forms provided in your handbook)

- Classroom Observations which will provide you with an opportunity to learn how your teacher engages with the children using verbal behavior and how to pace a lesson
- As requested by the Cooperating Teacher, working with children who need extra help and with small groups of children to carry out the teacher's plans

Week 2: Assisting the teacher in classroom instruction as requested and assuming responsibility for planning, teaching and assessing at least part of the lesson.

- Co-planning and co-teaching with the Cooperating Teacher
- Working with children who need extra help
- Completion of any non-observational assignments still outstanding
- Completion of classroom Observations which will provide you with an opportunity to observe children's engagement through their v interaction occur in the classroom (selective verbatim)

  Working with small groups of children to
- Co-teaching lessons with the Cooperating Teacher
- Finding out about assessment –what strategies does the teacher use

Week 3 Assuming responsibility for planning, teaching and assessing a at least one subject matter's lesson

- Co-plan full lessons with the Cooperating Teacher
- Co-teach lessons for one subject matter each day
- Working with children who need extra help
- Classroom observations that will provide you with information on how to use questions effectively to engage children. You should also consider using the observation tools provided in your Semester 3 handbook to learn about other aspects of teaching and learning.
- Prepare for a formal observation by your Cooperating Teacher using the Formal Observation Cover sheet, pre-observation guide, and post observation reflection sheet.
- Prepare for a formal observation by your College/University Supervisor using the Formal Observation Cover sheet, pre-observation guide, and post observation reflection sheet.
- Prepare for a mid-way triad meeting.
- Use the Notes for Self Assessment sheet indicating all the evidence you have collected and how this meets the NPSTP.

Week 4: Assuming responsibility for planning, teaching and assessing in two subjects.

- Continue activities above, taking over responsibility for planning, teaching and assessing one subject full lesson) throughout the week
- Co-plan and co-teach all other subjects with the Cooperating Teacher
- Prepare for a formal observation by your College/University Supervisor using the Formal Observation Cover sheet, pre-observation guide, and post observation reflection sheet.

Week 5: Assuming responsibility for planning, teaching and assessing at least three subjects

- Continue activities above, taking over responsibility for planning, teaching and assessing three core subjects with the whole class throughout the week (math, Urdu, science/general studies).

- Co-plan and co-teach all other subjects with the Cooperating Teacher
- Prepare for a formal observation by your Cooperating Teacher using the Formal Observation Cover sheet, pre-observation guide, and post observation reflection sheet.
- Prepare for a formal observation by your College/University Supervisor using the Formal Observation Cover sheet, pre-observation guide, and post observation reflection sheet.

Week 6: Assume additional responsibilities as agreed with the Cooperating Teacher

- Continue planning, teaching and assessing the three core subjects throughout the week and add additional subjects as agreed with the Cooperating Teacher
- Co-planning and co-teaching teaching all other subjects with the Cooperating Teacher
- Prepare for a formal observation by your College/University Supervisor using the Formal Observation Cover sheet, pre-observation guide, and post observation reflection sheet.
- Prepare for a final triad meeting.
- Prepare a Professional Portfolio, addressing the NPSTP. (Use the Rubric provided in your handbook as a guide.)

b. The Practicum Seminar

The seminar runs parallel to your experience at school. The content of the seminar will vary with the Instructor every semester that it is offered.

However, students may expect to discuss issues such as:

- Practical issues of teaching in learning in their field placements,
- Language learning,
- Different perspectives on how to organize and manage a classroom,
- Planning units of instruction,
- Content-specific instruction,
- Selecting and using assessments of learning,
- How to use standards for primary school teaching practice,
- Identifying the hidden curriculum in the classroom,
- Creating classroom environments that recognize physical, emotional, affective, social and intellectual needs of children,
- Non-instructional roles of the teacher,
- Working with parents and community

TEXTBOOKS AND REFERENCES

Course readings and assignments will focus primarily on preparation for field assignments. Additional assignments and/or readings will be provided throughout the semester.

COURSE ASSIGNMENTS

Assignments will be listed on a separate handout. These assignments will be designed to help you achieve course outcomes. Some will take place in the classroom and others outside of the classroom.

GRADING POLICY

Grading for this course follows the university early in the course and will include both coursework and examinations. Grades for thePracticum Experience will be assigned in collaboration with the cooperating teacher, college supervisor and Practicum Instructor

GENERAL INFORMATION ABOUT THE COURSE

You will be provided with specific and detailed information about every part of your Practicum Experience. The following will give you a general idea of what to expect this semester.

ROLES AND EXPECTATIONS OF PRACTICUM TRIAD MEMBERS

Every Practicum experience is guided by three critical participants: 1) the student teacher, 2) the Cooperating Teacher and 3) the College/University Supervisor.

What happens in the classroom and how it is interpreted will depend on the views of each member of the triad. It is important for each member of the triad to negotiate common expectations for roles and responsibilities. If expectations are clear and understood by each member, the experience is likely to be more satisfactory to all.

The triad should meet together several times during the semester:

4. At the beginning when roles and relationships are discussed,
5. At mid-point when performance is discussed;
6. At the conclusion of the experience as a final evaluation is made.

Depending on the challenges met during the practicum experience, the triad may feel that it is important to meet more frequently.

The Cooperating Teacher will guide the day -to-day work of the Student Teacher, providing feedback and initiating the Student Teacher into the life of the profession. This will include discussions of how planning, teaching and assessment are made.

The Cooperating Teacher will communicate regularly with the college/university supervisor.
The purpose of supervision is to support good communication between the Student Teacher and Cooperating Teacher. Communication and collegial relationships are important to the Student Teacher and other triad members in their professional development.

The supervisor will also provide feedback on all aspects of the Student Teacher's development including planning and teaching.

SUMMARY OF THE ROLE OF THE STUDENT TEACHER

The Student Teacher should have maximum opportunity to perform to the degree which his or her personal interests, abilities, and individuality allow.

There are three major aspects to the Student Teacher's role during the semester:
1) His or her activities in the classroom, school and community;
2) Participation in the weekly Practicum seminar; and

3) Continued reflection and documentation of professional growth.

The Student Teacher should become involved in the instructional program of the classroom as soon as possible. The experience will begin with observation. Time spent in observation will vary in length according to the situation, the Student Teacher will gradually assume more responsibility for planning and instruction through activities such as:

- Assisting individual students
- Working with small groups
- Taking responsibility for planning and teaching sections of whole class lessons
- Assisting the Cooperating Teacher with planning and teaching whole lessons
- Assuming over-all management for part of the day
- Assuming overall management of the classroom.

During the semester, Student Teachers will engage in a variety of experiences in their classrooms. Attendingmeetings,teacher'sparentmeetingsand the like are encouraged, where this is possible.

The Student Teacher is expected to play an active role in deciding how he or she will take on new activities and in assessing her or his effectiveness.

The Student Teacher is expected to participate as a regular staff member of the school in terms of professional behavior.

SUMMARY OF THE ROLE OF THE COOPERATING TEACHER

The cooperating teacher is expected to:

- Share school and classroom policies and procedures, the curriculum, the daily/semester schedule, and provide the Student Teacher with a class list, guides etc.

- Work with other members of the Practicum triad to set up a program for the Student Teacher's gradual assumption of all classroom responsibilities and building up to the student teacher taking on the planning, teaching, and assessing of at least three subjects. This plan should include provisions for Student Teacher involvement in all instructional tasks as well as non-instructional tasks such as home-school communication, parent conferences and staff development; and
- Work with the Student Teacher and university supervisor to set up a lesson plan format to be used by the Student Teacher. The student is required to provide the supervisor with comprehensive written plans prior to each formal observation. Cooperating teachers may also want to require written plans in addition to those required by the supervisor, for example, for sections of lesson.
- Formally and informally observe and provide feedback to the Student Teacher (use the forms provided in the handbook).
- Meet daily to discuss classroom events and make plans.
- Provide assessment to the college/university supervisor and participate in triad meetings to discuss the Student Teacher's performance.

SUMMARY OF THE ROLE OF THE UNIVERSITY SUPERVISOR

The college/university supervisor is the official representative of the college/university. Therefore, the supervisor has responsibility for the supervision of Student Teachers, serves as

the liaison between the college/university t and maintain positive relationships between the two institutions. Through classroomobservations, conferences, and the weekly seminar the supervisor will:

- Make at least four one-hour observation visits throughout the semester, with at least two of these visits followed by a three-way conference involving the student, cooperating teacher, and university supervisor. The focus of these visits will depend on the needs of individual Student Teachers.
- Guide entry into the profession through discussion of issues of professional practice, providing a guided seminar experience, and conferring with the Student Teacher before and after classroom observations and giving feedback on teaching to the Student Teacher.

EDU-539 English- III (Technical Writing Presentation Skills)
(Compulsory)
Semester 5

Syllabus: English- III (Technical Writing & Presentation Skills)

Credit Hours: 03

Objectives

After the completion of the course the students will be able to:
*enhance language skills and develop critical thinking
* use different presentation skills
* write a research proposal

Course Contents:

1. **Presentation skills**

2. **Essay writing**

2.1 Descriptive
2.2 Narrative
2.3 Discursive
2.4 Argumentative

3. **Academic writing**

3.1 How to write a proposal for research paper/term paper
3.2 How to write a research paper/term paper (emphasis on style, content, language, form, clarity, consistency)

4. **Technical Report writing**

5. **Progress report writing**

Note: Extensive reading is required for vocabulary building

Recommended books:

1. Writing. Advanced by Ron White. Oxford Supplementary Skills. Third Impression 1992. ISBN 0 19 435407 3 (particularly suitable for discursive, descriptive, argumentative and report writing).

2. College Writing Skills by John Langan. Mc=Graw-Hill Higher Education. 2004.

3. Patterns of College Writing (4th edition) by Laurie G.
4. The Mercury Reader. A Custom Publication. Compiled by norther Illinois University. General Editiors: Janice Neulib; Kathleen Shine Cain; Stephen Ruffus and Maurice Scharton. (Note: A reader which will give students exposure to the best of twentieth century literature, without taxing the taste of engineering students).

EDU-506 Foundation of Education (Foundation) Semester 5

Year/Semester
Year 4, Semester 5

Credit hours
3 credits

Prerequisites
Successful completion of semesters 1–4

Course Description

The purpose of this course is to help Student Teachers recognize the worth of the foundations of education, and examine their role and significance in the whole process of education in Pakistan. Student Teachers will develop a comprehensive understanding of the terms *foundations and education* in light of the various ideo-logical, philosophical, psychological, sociological, and historical perspectives that have influenced education. Foundations are essentially basic ways of thinking about schooling and the formal processes of education. The course will inform them about the influence of social forces, such as politics, social structure, culture, history, and economics, on the selection of content, the methods of teaching, and the aims of edu-cation. Student Teachers will examine the classical and contemporary philosophical perspectives on education, the significance of societal culture and its social structure in education, and how education in return strengthens both, as well as the significance of psychology in the teaching-learning process.

Course Goal

To understand the value and worth of the philosophical, sociological, psychological, and historical disciplines and their influence on framing the perspective of education.

Learning Outcomes

At the end of this course, Student Teachers will understand the following:

- the concepts of *foundations and education*
- the influence of the disciplines that constitute the foundations of education on educational thought and practice
- the interaction of the social, political, and economic structures of Pakistani society
- how social structure and culture cause individual action
- how these structures and cultures interact with the disciplines of the *foundations* and actually bear on instruction.

Student Teachers will be able to:

- differentiate between the various schools of thought that have influenced education on the whole and education in Pakistan in particular
- explain the idea of education and the social and philosophical influences on it
- evaluate the social structure of Pakistani society and the role of education in strengthening it.

Essential Questions

- What is education?
- What are the basic thoughts about education?
- How have Pakistanis conceptualized education?
- What has been the history of education in general? In Pakistan?
- How does the history of education influence the future of education in Pakistan?
- What should education be like in the future, both worldwide and in Pakistan?
- What are some of the social influences on education?
- How have philosophies influenced education?
- How has sociology influenced education?
- How has psychology as a discipline influenced the learning and instruction process?

Teaching Approaches

A variety of interactive learning approaches will be used in this course. These approaches will enhance Student Teachers' ability to: generate ideas; discuss, ask, and answer questions; develop social skills; and analyse and critique readings and discussion topics. The learning approaches will contribute to the conceptual development of the topic and enhance the Student Teachers' ability to evaluate and justify their opinions in an informed way.

1 UNIT 1: The ideological foundations of education

This unit intends to help students understand Islamic ideological perspectives on education, as well as the importance of education for society and individuals in the light of the Quran and the Hadith. The influence of peace and social justice in Islam is considered as they influence the role of education for all Pakistanis, including religious minorities.

Week #	Topics/themes
1	The Islamic foundation (objectives) in light of the Quran and the Hadith
2	The Islamic concept of peace
3	The interaction of other religions with Islam in an Islamic state The roles and expectations of the teacher

Understandings to be developed

At the end of this unit, Student Teachers will understand the following:

- the Islamic ideological perspectives on education
- the influence of Islamic perspectives on education
- the role and expectations of a teacher in light of the Quran, the Hadith, and other religions.

Essential questions

- How has the Islamic perspective influenced education, the teacher, and the learner in Pakistan?

- What do the educational and ideological foundations of education say about the obligations of an Islamic state towards its minority members?

Unit 1 assessment performance task

By keeping a reflective journal, Student Teachers will reflect on their learning from the unit and state ways in which this will affect their professional life in this 21st century.

2 UNIT 2:	The philosophical foundations of education This unit deals with the classical and contemporary philosophical perspectives on education. It informs Student Teachers about the significant role of philosophical thoughts and their impact on the aims of education, the selection of content, and the methods of teaching. The study of this unit will assist Student Teachers in understanding and appreciating the philosophical notions of good, true, and aesthetic knowledge.
Week #	Topics/themes
4	The nature, scope, and function of the philosophy of education The role of educational philosophy
5	Main philosophical thoughts or schools of thought Idealism in education
6	Realism in education
7	Pragmatism in education Critical philosophical theories in education

Understandings to be developed

At the end of this unit, Student Teachers will understand the following:

- explain the nature and scope of the philosophy of education
- analyse the role of educational philosophy in curriculum planning and development
- compare and contrast the classical and contemporary educational philosophies and their impact on education
- interpret the influence of educational philosophies on intellectual behaviour and approaches to learning
- give examples that show, in simple terms that knowledge is not free of philosophical underpinnings.

Essential questions

- How have classical and contemporary philosophies influenced your education?
- How have philosophical thoughts influenced the aim, content selection, and instructional practices?
- What evidence do you have of epistemological, ontological, and axiological knowledge within the content of your subject area?

Unit 2 assessment performance task

Student Teachers will analyse and compare any two philosophies and their influence on instruction, the school environment, subject matter, and the teacher's role. They will identify and compare the kind of society the philosophers intend to construct, as well as examine the overlaps and differences. Student Teachers will be required to analyse and explain epistemological, axiological, and ontological forms of knowledge from their subject matter in an essay-type assignment.

3 UNIT 3:	The sociological foundations of education The unit intends to foster an understanding of how society and culture, social structure, history, and economics influence schooling. It will explore the formal processes of education and how education in return strengthens the societal culture and its social structure. The unit informs Student Teachers about the three different sociological perspectives (functionalist, conflict, and interactionist). This will assist them in identifying the kind of education that prevails in our society.
Week #	Topics/themes
8	The functionalist perspectives on education
9	The conflict perspectives on education
10	The interactionist perspectives on education

Understandings to be developed

At the end of this unit, Student Teachers will understand the following:

- explain the sociological perspectives on education
- examine the structures of Pakistani society
- infer how social structure and culture influence individual action and vice versa
- analyse how societal cultures affect schooling and formal education (content formulation).

Essential questions

- How have economic, political, and social structures historically influenced education and individual action?
- What relationships historically exist between economic, political, and social structures and how schools, teachers, and learners work?
- How has social change influenced education throughout the history of education?

Unit 3 assessment performance task

Student Teachers will prepare a presentation (graphic organizer, poster session, PowerPoint, etc.) on how social structure and culture influence individual action, education, and schooling and how education in turn influences social structure and culture.

4 UNIT 4: The psychological foundations of education

Psychology, as a foundation discipline, has a significant bearing on education because of its influence on the various factors related to teaching, learning, and assessment. This unit intends to foster an understanding of how psychology and education are interrelated. It aims to equip Student Teachers with insights into studentbehaviour and learning. They will consider the significant influence of psychology on educational objectives, student characteristics, learning processes, teaching methods, and evaluation procedures.

Week #	Topics/themes
11	The behaviourist perspective on education The constructivist perspective on education
12	The social cognitivist perspective on education The humanist perspective on education
13	Instruction, learning process, and assessment strategies in light of the psycholog-ical perspective

Understandings to be developed

At the end of this unit, Student Teachers will understand the following:

- analyse the four psychological perspectives on education, and identify and explain the major features of each of the perspectives
- identify which specific areas of schooling are addressed by the psychological perspective on education
- construct an assessment procedure for their own subject area by applying any one of the perspectives
- understand how psychological perspectives influence them to change their instructional strategies for promoting teaching-learning processes.

Essential questions

- Which of the four psychological perspectives are most applicable in today's classroom situations in Pakistan?
- What facts and ideas show that these four psychological perspectives on education are the best guidelines for classroom teaching, learning, and assessment?
- How would you apply your learning to develop an assessment procedure for your students?

Unit 4 assessment performance task

Construct an assessment procedure for your students that will represent any one of the psychological perspectives, and show how it helps to explain classroom practices.

5	UNIT 5:	The historical foundations of education The aim of this unit is to develop an understanding of the history of education from the time of the Muslim rulers of the subcontinent to the current education system in Pakistan. The unit unfolds the works of individuals and organizations that provide religious and secular education. It examines the methods and sources people used to develop individuals through education. The unit assists Student Teachers in thinking critically about their own and others' assumptions and assertions about past education.
	Week #	Topics/themes
	14	The education system before the British invasion of the subcontinent DarulUloomDeoband DarulUloomNadwat-ul-Ulma
	15	Mohammedan Anglo Oriental College
	16	Pakistan's education system (in light of education policies) • The state of elementary education • The state of secondary education • The state of tertiary education and the role of the HEC • The influence of the 18th amendment on education and thereafter

Understandings to be developed

At the end of this unit, Student Teachers will understand the following:

- analyse the methods of teaching, the ways of learning, and the ways of grooming the learners from the times of the Mughals to the end of the colonial era on the subcontinent
- elaborate the major issues that need to be addressed within education because of the 18th amendment
- critically compare and analyze the pre-partition education system with the post-partition system of education.

Essential questions

- What changes would you make to improve the condition of education?
- What facts or ideas are evidence that we still strongly hold on to historical practices in education?
- What is the role of the HEC in the education system in Pakistan?
- What conclusions can you draw from history to guide our present education system?

\Unit 5 assessment performance task

- Compare and contrast the education system during the Mughal period with the current education system in Pakistan. In your opinion, which system is a better means for human development?
- Critically analyze the work of Sir Syed on education.
- Discuss the position and place of education in the 18th amendment. In your opinion, what steps need to be taken by the provinces to provide quality education to all their citizens?
- Compare education in different periods and link this with pre-partition and post-partition education in Pakistan.

Course Performance Assessment

Student Teachers will demonstrate their knowledge of the whole course by exploring the relationships between the different philosophies of education, comparing the similarities and differences and the coherence between the philosophical, sociological and psychological perspectives on education through PowerPoint presentations, written assignments, and/or debates. Their performance should also be assessed after each unit through quizzes, tests, academic prompts, observations, homework and reflective journals.

Textbooks and References

The course will draw on textbooks, journal articles, and websites. A list of these will be distributed in class.

Resources

The following resources may be helpful in choosing appropriate readings. A choice of readings may be included in the syllabus or distributed in class, but include only resources that you expect students to use throughout the course. Other readings should be distributed as they are needed. Identify specific chapters from recommended books.

- Canestrari, A. & Marlowe, B. A. (eds.) (2009). *Foundations of education: An anthology ofcritical readings*. New York: Sage Publications.
- Semel, S. F. (2010). *Foundation of education: The essential text*. New York: Routledge.
- Holt, L. C. &Kysilka, M. (2005). *Instructional patterns: Strategies for maximizing studentlearning*. New York: Sage Publications.
- Moore, R. (2004). *Education and society: Issues and explanation in the society of education*. Cambridge: Cambridge Press.
- Sharma, A. (1999). *Modern educational technology*. New Delhi: Commonwealth Publishers.

EDU- 507 Curriculum Development (Foundation) Semester 5

Year, semester
Year 3, semester 5

Credit value
3 credits (48 contact hours)

Prerequisite
Successful completion of semesters 1–4

Course Description

This course is designed to assist Student Teachers in understanding the various philosophies and key concepts related to curriculum, the challenges of curriculum design, factors influencing decision-making, and the roles played by various stakeholders in curriculum. Student Teachers will also review various assessment strategies, the implementation of different evaluation procedures, and the effective reporting of results as this relates to curriculum design. Student Teachers will be involved in examining existing curriculum and curriculum policy documents as well.

During this course, the key features of a curriculum will be discussed. Various curriculum development processes, how a curriculum differs from a syllabus, evaluation strategies, and factors influencing the curriculum development process will be considered. Change is an important aspect of human society. To cope with changes occurring in society, curriculum must be revised. This course discusses the implications related to the change process and appreciates the factors and stakeholders involved in this process.

This course is designed for Pakistani Student Teachers. Therefore, the process of curriculum development with reference to Pakistan and the agencies responsible for curriculum development at the national and provincial levels will be covered. Student Teachers will have an opportunity to apply their learning through identification of a unit developed for another course and analyzing it in light of their new curriculum knowledge.

Learning Outcomes

At the end of this course, Student Teachers will be able to do the following:

- describe the key concepts of curriculum
- explain various types of curriculum and design models
- identify philosophical, sociological, psychological, and economic underpinnings of various models
- identify internal and external factors that influence the curriculum development, implementation, and change process
- review the models, purposes, and problems of curriculum assessment and evaluation
- understand the process of curriculum development with reference to Pakistan and the agencies responsible for curriculum development at the national and provincial level
- apply curriculum knowledge to analysis of a unit plan developed for another course in the program.

Course Outline

The course will cover selected topics from those listed in each unit, as time permits.

Each unit will provide Student Teachers with an overview of the fundamental concepts of curriculum and their philosophical underpinnings. Student Teachers will be introduced to the purposes and goals of different types of curriculum and the key elements of curriculum.

Unit 1: Curriculum fundamentals (3 weeks)

Unit 1 provides an overview of the fundamental concepts, key elements, philosophical underpinnings, and purposes and goals of curriculum.

Unit outcomes

By the end of this unit, Student Teachers will be able to do the following:

- explain the various meanings of curriculum and the importance of curriculum
- understand the philosophical considerations, purposes, and goals of different types of curriculum
- identify the key elements of curriculum.

1	UNIT 1:	Curriculum fundamentals (3 weeks)
	Week #	Topics/themes
	1	**Key concepts** Introduction Definitions of curriculum Function, goals, characteristics, and importance of curriculum How curriculum differs from: • Syllabus • Course of study • Educational programme • Teaching • Instruction
	2	**Types of curriculum** Core curriculum Broad-based curriculum Integrated curriculum Activity-based curriculum Teacher-centred curriculum Learner-centred curriculum Hidden curriculum Formal and informal curriculum

Elements of curriculum

Curriculum aims

Learning outcomes and objectives (knowledge, skills, and attitudes) Contents

Teaching and learning methods

3 Assessment methods
Supporting elements

- Learning resources (teachers, support staff, funding, books and journals, IT support, and teaching rooms)
- Monitoring and evaluation procedures
- Practicum or internship placement activities
- Student support and guidance mechanisms

Unit 2: Foundations, Theories, and Approaches to Curriculum Development (2 Weeks)

Unit 2 introduces various theories and approaches for curriculum development and the differences and similarities among them.

Unit outcomes

By the end of this unit, Student Teachers will be able to do the following:

- understand the varying conceptions of the term curriculum foundations
- identify various theories and approaches to curriculum design
- define the philosophical considerations, purpose, and goals of curriculum.

2 UNIT 2:	Foundations, theories, and approaches to curriculum development (2 weeks)
Week #	Topics/themes
5)	**Curriculum foundations** Philosophical foundation Psychological foundation Sociological foundation Economic foundation **Theories and approaches for curriculum development** Academic rationalism Social reconstruction Social efficiency Socio-cultural reproduction Self-actualization and others

Unit 3: Curriculum Development Processes and Influencing Factors (3 Weeks)

Unit 3 covers various processes of curriculum development as well as internal and external factors that influence the curriculum development process. A unit of study prepared for another course in the program will be analyzed in light of the content of this course.

Unit outcomes

By the end of this unit, Student Teachers will be able to do the following:

- understand various curriculum development processes
- discuss internal and external factors and their influences on the curriculum development process
- apply curriculum knowledge to their own work through analysis of a curriculum unit prepared for another course.

- UNIT 3: Curriculum development processes and influencing factors (3 weeks)

Week #	Topics/themes
6	**Curriculum development processes** Analysis of situation Formulation of aims and objectives Selection of learning experiences Selection of content Organization of experiences and content Selection of teaching-learning strategies Evaluation
7	**Internal factors influencing the curriculum development process** Teacher Pupil School environment and others
8.Knowledge Ideology	**External factors influencing the curriculum development process** Technology
Economics	

Unit 4: Change Process and Curriculum Evaluation (3 Weeks)

Unit 4 explores the curriculum change process; factors and stakeholders involved in the change process; and the basic concepts, meanings, types, content organization, and evaluation of curriculum.

Unit outcomes

By the end of this unit, Student Teachers will be able to do the following:

- understand the change process and identify stakeholders involved in the curriculum development process
- know basic concepts, meanings, types, and stages of planning for evaluation.

4 UNIT 4:	Change process and curriculum evaluation (3 weeks)
Week #	Topics/themes
	Curriculum evaluation
4)	Basic concepts, meanings, and types of curriculum evaluation Stages of planning for evaluation
	Curriculum evaluation models
	Models of curriculum evaluation
4)	The purposes and problems of curriculum evaluation tools
	Delimiting evaluation
	Change process
	Change process: Innovation, dissemination, adaptation Stakeholders
5)	Curriculum products
	Standards
	Guides
	Other

Unit 5: Curriculum Development In Pakistan (3 Weeks)

Unit 5 provides an overview of primary school programs and related curriculum issues; various aspects of curriculum development with reference to Pakistan; the role and responsibilities of various agencies responsible for curriculum development at the national and provincial levels; and critical evaluation of the prevailing curriculum situation.

Unit outcomes

By the end of this unit, Student Teachers will be able to do the following:

- understand the basis of the primary school program and its organization
- identify the agencies responsible for curriculum development at the national and provincial levels
- critically evaluate the prevailing system of education in Pakistan.

5 UNIT 5:	Curriculum development in Pakistan (3 weeks)
Week #	Topics/themes
12	**Primary school programs and issues** Basis of the primary school program Organizing the curriculum Determining appropriate primary school curriculum content Educating children with disabilities in a regular classroom Inclusion: What does it mean? Gifted and other students with needs Learning styles and systems Organization and grouping in primary schools
13	**Middle school programs and issues** Functions of the middle school Establishing an identity for the middle school Middle school student and teachers Managing middle school programs Organizing for instruction in the middle school Comprehensive planning for middle schools The role of technology Evaluating the middle school The middle school as a part of the total curriculum

5 UNIT 5: Curriculum development in Pakistan (3 weeks)

14

Curriculum development in Pakistan

The curriculum planning process in Pakistan in light of the 18th Amendment to the constitution

Agencies responsible for curriculum development at a national level Agencies responsible for curriculum development at the provincial level Critical evaluation of the prevailing process of curriculum development

Textbooks and References

The course will draw on textbooks, journal articles, and websites. A list of these will be distributed in class.

Notes for Faculty Teaching This Course

The following resources may be helpful for choosing appropriate readings. You may include your chosen list of readings on the syllabus or distribute it in class. However, readings should include only those resources that you expect students to use throughout the course. Other readings should be distributed as they are needed. Identify specific chapters from recommended books.

Suggested Readings

- Oliva, P. F. (2009). *Developing the curriculum* (7th ed.). Boston: Allyn& Bacon.
- Walker, D. F. (2002). *Fundamentals of curriculum: Passion and professionalism* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
- Wiles, J. W. &Bondi, J. C. (2011). *Curriculum development: A guide to practice* (8th ed.). Boston: Allyn& Bacon.
- Bilbao, P. P., Lucido, P. I., Iringan, T. C., & Javier, R. B. (2008). *Curriculum development*. Manila: Lorimar Publishing Inc.
- Glatthorn, A. A., Boschee, F. A., & Whitehead, B. M. (2008). *Curriculum leadership:Strategies for development and implementation* (2nd ed.). Beverly Hills, CA: SagePublications.
- Kridel, C. (2010). *Encyclopedia of curriculum studies*. Beverly Hills, CA: Sage Publications.
- Harrison, J. M., Blakemore, C. L., & Buck, M. M. (2001). *Instructional strategies forsecondary school physical education* (5th ed.). Boston: McGraw-Hill. See Basic principlesof curriculum design (pp. 131–148).

EDU- 508 Educational Psychology (Foundation) Semester 5

Year, semester
Year 3, semester 5

Credit value
3 credits (48 contact hours)

Prerequisite
Successful completion of Child Development course

Course Description
This course is designed to provide Student Teachers with up-to-date information oneducational psychologyand its application in the teaching and learning processes. Thiscourse will provide an opportunity for Student Teachers to develop an understandingof different concepts and principles of educational psychological and to analyzetheirapplication through readings, discussions, and small projects.Student Teachers will develop a working knowledge of theories of educationalpsychology based on varying viewpoints and developmental influences and thatprovide guidance on practical application and teaching methods.They will study waysto approach the learning process, intelligence, motivation, and learning difficulties of Students in an educational context.

Learning Outcomes
At the end of this course, Student Teachers will be able to:

- demonstrate their understanding of the concept of educational psychologyand its implication for educational practices
- apply learning principles to their teaching to help students maximize theirlearning
- compare various theories of learning and human learning capabilities
- analyze the role of motivation theories and principles in their instructionalactivities
- understand various concepts of intelligence and apply this understandingin monitoring class performance of their students.

Main idea
During curriculum planning and design, the role of the learner and the learningprocess must be considered.

Unit 1: Understanding Educational Psychology
In this unit, Student Teachers will explore various schools of thought throughout thehistory of educational psychology as well as educational psychology's nature, scope,and impact on classroom practices.

Essential questions

- What do we study in educational psychology?
- Why is it important for a Student Teacher to study educational psychology?
- How do theories and knowledge of educational psychology apply to dailyclassroom practices?

Skills to be practiced by Student Teachers

- Reading
- Analyzing
- Describing
- Classifying
- Categorizing
- Synthesizing
- Decision-making
- Critical thinking

Activities in which Student Teachers will be engaged

Discussions
Role plays
Case study analyses

Modes of assessment

Quizzes
Group work to define educational psychology
Written tasks

Unit 2: Intelligence and individual differences

In this unit, Student Teachers will explore the concept of intelligence in an educational context. This unit will include an analysis of the theory of multiple intelligences and identify approaches to address the specific needs of learners. Because multiple intelligences theory has been challenged by research, critiques of the theory will be considered. Individual differences will be discussed with regard to diversity in our surroundings.

Essential questions

i. Why do we study intelligences and individual differences?

To help them develop intelligence, how can we address the needs ofindividual learners?

Skills to be practiced by Student Teachers

Reflecting
Analyzing
Engaging in interactive discussions

Activities in which Student Teachers will be engaged

Discussions
Role plays
Presentations (e.g. PowerPoint, video clips) on individual differences
Case studies
Socratic questioning

Modes of assessment

Assignments
Weekly reflection
Group presentations
Minor research tasks

Unit 3: Learning

This unit will help Student Teachers explore different learning theories and analyzetheir application in the teaching and learning processes.

Essential questions

Why is the concept of learning essential for teachers?
How can teachers enhance student learning in different areas?
How does knowledge of learning theories help teachers enhance the processof teaching?

Skills to be practiced by Student Teachers

Analyzing
Describing
Critical thinking

Modes of assessment

- Presentation on different learning theories
- Unit reviews
- Tests
- Midterm exams

Unit 4: Motivation

The unit will help Student Teachers investigate the relationship between motivationandstudent learning. Student Teachers will analyze different theories of motivationand explore the effect of motivation on their teaching.

Essential questions

- Why is motivation so important?
- What are the different types of motivation that facilitate effective learning?

Skills to be practiced by Student Teachers

- Describing
- Analyzing

Activities in which Student Teachers will be engaged

- Interactive lectures
- Case studies
- Role plays
- Socratic questioning
- Presentations (e.g. PowerPoint)

Modes of assessment

- Written assignments
- Midterm exams

Unit 5: Learning difficulties and disabilities

This unit will explore the difference between learning difficulties and disabilities andhow this knowledge can help teachers facilitate learning.

Essential questions

- Why is it essential for teachers to study learning disabilities and learningdifficulties?
- How does an understanding of learning difficulties help teacherstofacilitate learning?

Skills to be practiced by Student Teachers

- Describing
- Interpreting
- Explaining
- Resolving case studies

Activities in which Student Teachers will be engaged

- Interactive lectures
- Focused readings
- Interactive discussions
- Case studies
- Role plays
- Small-group discussions

Modes of assessment

Written assignments
Group presentations

Weekly Distribution of Course Content

UNIT 1: Understanding Educational Psychology

Weeks Content

1–4

Definitions, meaning, objectives, and scope of educational psychology
Educational psychology methods and techniques
Recent developments in educational psychology

UNIT 2: Intelligence and Individual Differences

Weeks Content

5–7

Defining intelligence
The meaning of intelligence
Intelligence as a process
Approaches to intelligence
Multiple intelligences
Diversity, individual differences, and working memory

UNIT 3: Learning

Weeks Content

8–11

1) Historical perspectives on learning
2) Six schools of educational psychology
   - Psychoanalytic
   - Behavioral
   - Cognitive (and information processing)
   - Humanistic
   - Social constructivist
   - Cognitive constructivist
3) Application of theory to education

UNIT 4: Motivation

Weeks Content

12–13

1) Motivation
2) Types of motivation
   - Maslow's theory of motivation
   - Weiner's attribution theory
3) Implication for educators
4) Other strategies of how to help motivate learners

UNIT 5: Learning Difficulties and Disabilities

Weeks Content

14–16

- Learning difficulties and disabilities
- Signs and symptoms of learning disabilities and disorders
- Helping children with learning difficulties

Major Assignments

At the end of this course, Student Teachers will be required to submit their weeklyreflections in a journal that documents their responses to the course content.Reflections will be evaluated on the basis of what Student Teachers have learned andhow their learning can be used effectively in the classroom. The journal willaccountfor 10% of the final grade.

Grading Policy

University grading policy, the details of which will be provided in class, will befollowed.

Textbooks and References

The course will draw on textbooks, journal articles, and websites. A list of these willbe distributed in class.

Resources

The following resources may be helpful for choosing appropriate readings. You mayinclude your chosen list of readings on the syllabus or distribute it in class. However,readings should include only those resourcesthat you expect Student Teachers touse throughout the course. Other readings should be distributed as they are needed.Identify specific chapters from recommended books.

- Coon, D., &Mitterer, J. O. (2007). *Introduction to Psychology: Gateways to Mind and Behavior*.Melbourne: Wadsworth.
- Dash, N., & Dash, B. N. (2004). *A Textbook of Educational Psychology* (4th ed.). New Delhi: Shipra Publications.
- Mangal, S. K. (2007). *Advanced Educational Psychology* (2nd ed.). New Delhi: Prentice Hall of India.
- Plotnik, R. (2005). *Introduction to Psychology* (7th ed.). Melbourne: Wadsworth.
- Santrock, J. W. (2004). *Life Span Development* (9th ed.). Boston: McGraw-Hill.
- Woolfolk, A. E. (2010). *Educational Psychology* (11th ed.). Boston: Allyn& Bacon.

EDU- 521 Contemporary Issues and Trends in Education (Professional)
Semester 6

Course Description

This course aims to help Student Teachers understand current trends and issues in education. It encourages a practical approach to exploring the effects of technology, gender issues, and national development. It also aims to enable them to teach the values necessary for peace in a multicultural society, such as tolerance. Student Teachers will identify the challenges of today's classrooms, learn to devise different strategies, and apply them to classroom practice.

Course Outcomes

After completing this course, Student Teachers will be able to:

- understand and analyze the role of modern technological developments in education and identify prospective challenges
- analyze gender issues in education and devise strategies to reduce gender disparity
- recommend strategies to promote quality education throughout the country
- think critically about and suggest solutions for learning environments, school effectiveness, psychosocial problems, and disciplinary issues.

Teaching and Learning Approaches

The teaching and learning in this course is based on the principles of reflective practice, participatory process, and critical analysis. The Instructor will make short introductory presentations, but much of the class time will be spent in discussions and group activities, such as role play or presentations aimed at consolidating, understanding, and exploring the issues in more depth. Student Teachers will be directed to certain readings, including online materials. As ready-made material on the topics relevant to this course content (i.e. technological development in the Pakistani context, technological access in Pakistan, and the repositioning of current classrooms) may not presently be available, they will also be expected to share their own experiences with peers.

Teaching approaches may include PowerPoint presentations, individual and group activities, mini-lectures, and open discussions. Additional approaches may include videos on topics, followed by classroom discussions; opportunities for role play; presentations based on field visits; and critical analysis of talk shows and current affairs programs on television. Assignments that are practical in nature may be given as well. Observation activities for data collection and its analysis and interpretation are highly desirable.

Semester Outline

Unit 1: Technological Advancement and Curriculum

Unit description

Unit 1 will enable Student Teachers to understand the relationship between technological developments and curriculum. They are expected to use technology in their classroom teaching; therefore, this unit will help them realize how media and computers might be used in teaching. They will also contrast the changing needs of the curriculum in the knowledge explosion of today with the outdated needs of older curricula. Student Teachers will determine how e-learning works and how new avenues of learning can be created.

Learning outcomes

At the end of this unit, Student Teachers will be able to:

- explain the role of modern technological developments in education
- develop ways to use technology in the classroom for teaching and learning.

1 UNIT 1:	Technological advancement and curriculum
Week #	Topics/themes
1	• What is the importance of technology in the curriculum? • How can technology be used in classroom teaching? • How can new avenues of technology be effectively used for teaching and learning?
2	• The use of Information and Communication Technologies (ICTs) in the classroom • Standardized and uniform curriculum

Unit 2: Moral Education

Unit description

Unit 2 examines moral development as an integral part of education. Student Teachers are expected to devise strategies to focus on moral values, such as truthfulness, trustworthiness, honesty, loyalty, patience, and caring, through routine activities, such as morning assembly and classroom teaching.

Learning outcomes

At the end of this unit, Student Teachers will be able to:

- suggest ways to teach values of universal morality via the school curriculum
- explain the role of the teacher as an ethical model.

2 UNIT 2:	Moral education
Week #	Topics/themes
3	• The concept of moral and value education in different contexts • Discussion on general ethical foundations • Ethical foundations to follow
4	• What is a moral system? • Teaching values for character-building • The teacher as a role model
5	• Teaching as a moral craft • School as a moral nursery: Learning about right and wrong • Moral reasoning and action

Unit 3: Peace Education And Student Learning

Unit description

Unit 3 provides Student Teachers with the chance to deliberate on the current status of peace within Pakistan and the importance of peace education. It also provides a concept of how different philosophical views, beliefs, and values influence our peace education. Student Teachers will collect different news clippings related to conflicts within Pakistan and will select one from which to prepare an action to promote peace. The unit also highlights the use of peace education to promote critical thinking.

Learning outcome

After completing this unit, Student Teachers will be able to describe the role of peace education in the smooth functioning of a multicultural society.

3 UNIT 3:	Peace education and student learning
Week #	Topics/themes
6	• The meaning of peace education • National integrity, harmony, and ideology with reference to peace education • Practicing tolerance in life
7	• What is a multicultural society? • Behaviours in a multicultural society • Cooperative learning, tolerating others, and promoting peace

Unit 4: Gender Equality in Education

Unit description

It is expected that Student Teachers will play an effective role in minimizing the gender disparity in education. Unit 4 highlights the importance of education as a

basic human right of every individual—male and female. It also analyses the role of educated women in the socio-economic development of a country.

Learning outcomes

After competing this unit, Student Teachers will be able to:

- identify and analyze the role of different stakeholders in maintaining effective human relationships within the school system
- persuade people in favor of educating girls.

4 UNIT 4:	Gender equality in education
Week #	Topics/themes
8	• Education as a basic human right (irrespective of gender, class, etc.)
9	• Gender disparity in education
10	• Girls' education • The role of educated mothers • The role of women in socio-economic development

Unit 5: The School and Learning Environment

Unit description

Unit 5 introduces Student Teachers to the concept of the educational environment and the role of the teacher in making this environment healthy, competitive, and conducive to learning. It will also help Student Teachers understand the effects of schools on the community in general and on learners in particular. The unit will bring to light the concept of the classroom environment, the physical and psychosocial environment, students' disciplinary (cheating, bullying, and other ethical) problems, and corporal punishment.

Learning outcome

After completing this unit, Student Teachers will be able to suggest ways to manage both environment and discipline without resorting to corporal punishment and other coercive tactics.

5 UNIT 5:	The school and learning environment
Week #	Topics/themes
11	• The concept of the school environment • The classroom learning environment • Disciplinary problems
12	• The effects of the school environment on academic performance • Corporal punishment and its effects • The social environment of the school and students' psychosocial problems

Unit 6: The Quality of Education

Unit description

Unit 6 highlights the concept and indicators of quality education. Student Teachers will understand how quality education can be ensured through higher-level thinking and discouraging rote learning and memorization. The unit also teaches the importance of using child-centered teaching approaches. It brings to light issues related to teacher preparation; recruitment policies; the problems of overcrowded classrooms, bullying, teacher-student ratios, and single teacher schools; issues related to uniform curricula; and the challenges presented by the privatization of education.

Learning outcomes

After competing this unit, Student Teachers will be able to:

8 identify indicators that affect the quality of education

9 suggest best practices for improvement at the classroom and school levels.

6 UNIT 6:	The quality of education
Week #	Topics/themes
13	• What is quality education? • Rote memorization versus active learning • Learner-centred teaching strategies
14	• High dropouts and poor academic performance (National Education Assessment System reports) • Assessment practices and challenges of examinations • Teachers' preparation and employment and recruitment policies
15	• Overcrowded classrooms and teacher-student ratios • Diversified curriculum • The privatization of education in Pakistan and associated problems
16	• Medium or language of instruction • Review of the unit

Reference Books:

- Khan, S. I. (2011, 16 Nov.). Gender discrimination in Pakistan. *Pakistan Today*. Retrieved from
- http://www.pakistantoday.com.pk/2011/11/16/comment/editors-mail/gender-discrimination-in-pakistan/

- Blunch, N., & Das, M. B. (2007). *Changing norms about gender inequality in education:Evidence from Bangladesh*. Retrieved from
- □□□http://elibrary.worldbank.org/content/workingpaper/10.1596/1813-9450-4404
- Abbasi, M. N., Malik, A., Chaudhry, I. S., &Imdadullah, M. (2011). A study on student satisfaction in Pakistani universities: The case of BahauddinZakariya University.
- *Pakistan: Asian Social Science, 7*(7).

- Ali, T. (2011). Understanding how practices of teacher education in Pakistan compare with the popular theories and narrative of reforms of teacher education ininternational context. *International Journal of Humanities and Social Science, 1*(8), 208–222.
- Dahar, M., &Faize, F. (2011). Effect of the availability and the use of instructional material on academic performance of students in Punjab (Pakistan). *Middle EasternFinance and Economics, 11*.

- Dilshad, M. &Iqbal, M. (2010). Quality indicators in teacher education programmes.*Pakistan Journal of Social Sciences, 30*(2), 401–411.

- Finch, C., &Wirtanen, L. (2000). *Children and conflict: An opportunity for learning in theearly childhood classroom*. Retrieved from:
- □□□http://www.naeyc.org/store/node/166

- Gulzar, M. A., &Qadir, S. (2010). Issues of language(s) choice and use: A Pakistani perspective. *Pakistan Journal of Social Sciences, 30*(2), 413–424.

- Nayyar, A. H., &Salim, A. (2002). *The subtle subversion: The state of curricula andtextbooks in Pakistan*. Islamabad: Sustainable Development Policy Institute.

- Rasheed, M. I., Aslam, H. D., &Sarwar, S. (2010). Motivational issues for teachers in higher education: A critical case of IUB. *Journal of Management Research, 2*(2).

- Sarwar, M., &Hussain, S. (2010). Teacher training in Pakistan: Problems and solutions for student teaching preparatory programs. *European Journal of Scientific Research,46*(2), 179–185.

EDU-522 Comparative Education (Professional) Semester 6

Year/Semester
Year 3, Semester 6

Credit value
3 credits

Prerequisites
Successful completion of semesters 1–5

Course Description

Comparative education is a gateway to a global view of diversity in education. It is an innovative idea in the context of Pakistani universities. A course on comparative education should offer Student Teachers a deep understanding of the social, cultural, geographical, and economic factors underlying an educational system. A comparison of Pakistan's education system with those of other developing and developed countries will help Student Teachers to learn about levels of competition, to benefit from experience, and ultimately to achieve excellence from a global perspective. Through this course, they will be able to form a global idea of education system by studying selected countries, their educational environments, their standards, and their local needs. Through the comparison of international trends, standards, and local demands, they will learn to draw conclusions about various types of education systems, and which of their features are most suitable for Pakistan.

Learning Outcomes

After studying this course, Student Teachers will be able to:

- define the concept of comparative education
- identify the elements, approaches, and methods of comparative education
- compare the education systems of selected developed and developing countries
- critically analyze the education system of Pakistan in a global perspective
- evaluate global issues in comparative education.

Learning and Teaching Approaches

A variety of teaching and learning approaches will be used throughout the course, among them group work, peer learning, class debates, and discussions (small and large groups). The course involves different levels of tasks, such as making informational posters, engaging in interactive presentations, participating in group discussions based on experience, sharing information, exchanging ideas, reading, and cooperative learning. There will be home-based assignments to make effective use of extended hours.

The course also links learning approaches and assessments in order to provide more information on Student Teachers' learning. Through various in-class and out-of-class assignments, using comparison and contrast, Student Teachers will learn to evaluate critically the need and rationale for reforms in Pakistan's system of education.

1	UNIT 1:	Introduction to comparative education (2 weeks/6 hours)
		The first unit will assess the concept of comparative education. In this unit, Student Teachers will learn about the meaning of comparative education, the need for it, and its scope, objectives, and importance.
	Week #	Topics/themes
		Introduction to the Comparative Education course
	•	The meaning of and need for comparative education
		The objectives and purpose of comparative education
		The scope of comparative education
	•	The importance and advantages of comparative education Conclusion of the unit
2	UNIT 2:	Approaches and methods of comparative education (2 weeks/6 hours)
		This unit discusses in detail the various approaches and methods used in comparative education.
	Week #	Topics/themes
		Descriptive method
	•	Historical method
		Psychological method
		Social approach
	•	Quantitative and statistical approach Scientific approach

3	UNIT 3:	Comparative view of the education system in Pakistan (2 weeks/6 hours)
		This unit will explore and compare the current situation of private and public, madrassah, and formal, distance and non-formal education in Pakistan.
	Week #	Topics/themes
	5	Private and public education Madrassah and formal education
	6	Non-formal and distance education

4	UNIT 4:	Comparative education in developed countries (3 weeks/9 hours)
		This unit will explore and compare the education systems of selected developed countries. It will analyse the relevance and applicability of certain practices that could be adopted from the experience of developed countries.
	Week #	Topics/themes
	7	United Kingdom France
	8	United States Japan Singapore
	b)	Comparison and contrasting of education systems in the selected developed countries with education in Pakistan

5	UNIT 5:	Comparative education in developing countries (3 weeks/9 hours)
		This unit will discuss the education systems of three selected developing countries. Topics will include challenges that those countries face in the education sector and strategies for dealing with them, as well as an analysis of ways of adapting the more successful strategies to Pakistan.
	Week #	Topics/themes
	10	India China
	11	Malaysia Pakistan
	•	Comparison and contrasting of three other developing countries' education systems with the system of Pakistan

6

UNIT 6:Global issues in a comparative perspective (focusing on developed and developing countries) (4 weeks/12 hours)

	The final unit will discuss global education issues from a comparative perspective, keeping in view the selected developed and developing countries that were discussed in Units 4 and 5.
Week #	Topics/themes
13	Literacy and Education for All Educational reforms
14	Recruitment of teachers at primary and secondary levels Admission procedures at higher education levels
15	Resources and their utilization The globalization of education
16	Conclusion of the unit Review and conclusion of the entire course

Grading Policy

Every university follows its own grading policy for assessment purposes. However, the following structure is recommended: 20 marks should be given on the basis of internal evaluation (assignments), 30 marks should be awarded on the basis of the midterm examination, and 50 marks should be allotted for the final term examination.

Course Assignments

Assignments comprise several non-graded tasks and two graded assignments. According to the requirements of the course, Student Teachers have to complete graded as well as non-graded tasks. The Instructor will share details regarding graded assignments with the class.

Textbooks and References

The course will draw on textbooks, journal articles, and websites. A list of these will be distributed in class.

NOTE TO FACULTY TEACHING THE COURSE: The following resources may be helpful in choosing appropriate readings. A list of readings may be included in the syllabus or

distributed in class, but it should include only resources that you expect Student Teachers to use throughout the course. Other readings should be distributed as needed. Identify specific chapters from recommended books.

- Afridi, A. K., &Rahman, M. (2002). Critical issues in higher education in Pakistan.
- *Journal of Education and Research*, 5(2), 13–22.
- Asghar, M., Rauf, M., Iqbal, Z., & Ahmad, M. (2010). Job satisfaction of elementary teachers. *Journal of Education and Research*, 7(1), 63–67.

- Ghaffar, S. A. (1995). Government policies and initiatives on reforms in examination in Pakistan. *Journal of Education and Research*, 1(2), 95–112.
- Khan, W. (2002). The social status of teachers in Pakistan. *Journal of Education andResearch*, 5(2), 153–158.
- Reba, A., & Ibrahim, K. (2010). People's perception of the NGO, public and private schools. *Journal of Humanities and Social Sciences*, 8(2), 55–61.
- Shahid, S. M. (2006). *Comparative education*. Lahore: Majeed Book Depot, pp. 15–163, 224–236, 286–305, 376–400.
- Surya, B., &Bhaskara, D. (2004). *Comparative education*. New Delhi: Discovery Publishing House, pp. 53–64, 80–137, 151–353.
- Sharma, Y. K. (2007). *Comparative education: A comparative study of educational systems*. New Delhi: Kanishkar Publishers, pp. 14–22, 29–109, 127–191, 329–423.

EDU-509 Introduction to Guidance and Counseling (Professional) Semester 6

Year and Semester
Year 4, Semester 7

Credit value
3 credits (contact hours: 3 hours per week)

Prerequisites
Successful completion of the Child Development and Educational Psychology courses

Course Description

This is a compulsory course in the B.Ed. (Hons) program. It is designed to give teachers and other stakeholders an in-depth understanding of the ideas of guidance and counseling. It also covers trends and issues, including an Islamic perspective, a global perspective, and challenges of the 21st century. The major focus is on how these concepts are applied to students to maximize their learning by resolving their issues and to develop them as balanced personalities. The course covers an introduction to guidance and counseling, the major areas in which guidance is provided to schoolchildren, and different theories, types, and techniques of counseling. Student Teachers will be equipped with the skills and qualities of a counselor, so that they can effectively perform this function in schools in particular and more generally in society. Finally, the action plan is included to prepare Student Teachers to perform counseling functions in real-life situations.

Course Learning Outcomes

After studying this course, Student Teachers will be able to:

- define different concepts associated with the field of guidance and counseling, as well as different trends in and perspectives on guidance and counseling in relation to the present scenario
- identify different guidance and counseling needs and provide appropriate services in the educational, vocational, and social life of students
- develop and demonstrate the attributes and qualities of a good counselor
- utilize appropriate techniques in the light of counseling theories in an educational setting
- develop mechanisms for establishing guidance and counseling services in their institutions
- implement the action plan in collaboration with internal and external stakeholders of their institutions.

Teaching and Learning Strategies

The following learning and teaching strategies will be used:

- Interactive lecture method
- Demonstrations
- Inquiry approach
- Group discussions
- Fieldwork
- Library assignment
- Project work
- Individual assignment or self-study
- Handouts

Unit 1: Introduction to Guidance and Counseling

Duration of the unit: 3 weeks

Unit Description

This course is designed to give Student Teachers an overview of the concept, nature, needs, functions, and principles of guidance and counseling. Islamic and global perspectives are reviewed, while present challenges and issues are also discussed.

Unit Learning Outcomes

After completing this unit, Student Teachers will be able to:

- describe the nature of guidance and counseling
- highlight the difference between guidance and counseling
- advocate the importance of guidance and counseling programs in an educational setting
- discuss concepts and processes of guidance and counseling in a global and Islamic perspective
- deliberate on the need for and issues in establishing guidance and counseling in Pakistani schools.

1 UNIT 1:	Introduction to guidance and counseling
Week #	Content
1	• The nature of guidance and counseling (1 hour) • The difference between guidance and counseling (2 hours)
2	• The need for and functions of guidance and counseling (2 hours) • Principles of guidance and counseling (1 hour)
3	• Islamic and global perspectives on guidance and counseling (2 hours) • Challenges in guidance and counseling (1 hour)

Teaching Strategies

The course Instructor will use a variety of teaching strategies, like video sessions; think, pair, share; presentations; inquiry learning; and so on, according to the requirement of the topic, and will emphasize active learning.

References

- Barki, B. G., &Mukhopadhyay, B. (2008). *Guidance and counseling: A manual* (10th reprint). New Delhi: Sterling.
- Gibson, R. L., & Mitchell, M. H. (2007). *Introduction to counseling and guidance* (7th ed.). Upper Saddle River, NJ: Prentice Hall.
- Kinra, A. K. (2008). *Guidance and counselling*. New Delhi: Dorling Kindersley.
- Kottler, J. A., & Shepard, D. S. (2008). *Introduction to counseling: Voices from the field*
- (6th ed.). Belmont: Thomson.

Unit 2: Areas and Services

Duration of the unit: 3 weeks

Unit Description

Guidance and counseling cannot be confined to educational settings. There may be problems that relate to different areas. During this course, Student Teachers are provided with different services to ensure their smooth progress in school. This unit covers the major areas of guidance and counseling, and also the services that are provided within the premises.

Unit learning outcomes

By the end of this unit, Student Teachers will be able to:

- realize that students need guidance and counseling services for their optimum growth and development
- identify areas of difficulty
- explore different areas of guidance and counseling
- plan actions, collect information, and develop motivation in school personnel for guidance and counseling program.

2 UNIT 2:	Areas and services
Week #	Content
10 a. b. c.	Major areas • Educational • Vocational Social Health
3.	• Moral • Personal
5.	Services provided Pre- and admission service Orientation service Information service • Counseling service Placement service Remedial service Follow-up service Evaluation service

Teaching Strategies

The course Instructor will use a variety of teaching strategies, such as video sessions; think, pair, share; presentation; inquiry learning; and so forth, according to the requirement of the topic, and will emphasize active learning.

References

- Kocher, S. K. (2008). *Educational and vocational guidance in secondary schools*. New Delhi: Sterling.
- Dimmitt, C., Carey, J. C., & Hatch, T. (2007). *Evidence-based school counseling: Making adifference with data-driven practices.* Thousand Oaks, CA: Corwin.
- Henderson, D. A., & Thompson, C. L. (2011). *Counseling children* (8th ed.). Belmont: Cengage Learning.

Unit 3: Theories and Techniques

Duration of the unit: 4 weeks

Unit Description

This unit specifically deals with the governing theories of guidance and counseling and the types and techniques applied for this purpose. Theories will provide the rationale for different techniques used in guidance and counseling to address the problems of the students.

Unit Learning Outcomes

After studying this unit, Student Teachers will be able to:

- understand the concepts of human development as described by various theorists
- identify the individual needs of primary schoolchildren
- develop attitudes that support different theories in their dealing with children
- explain types of guidance and counseling
- appreciate and practice techniques of guidance and counseling in dealing with students' problems.

3 UNIT 3:	Theories and techniques
Week #	Content
7	Theories • Carl Roger (1.5 hours) • Alfred Adler (1.5 hours)
8	• B. F. Skinner (1.5 hours) • Erik Erikson (1.5 hours)
9	Types of guidance and counseling • Individual (1.5 hours) • Group (1.5 hours)
10	Techniques of counseling (one session per technique) • Directive • Non-directive • Eclectic

Teaching strategies

The course Instructor will use a variety of teaching strategies, like video sessions; think, pair, share; presentations; inquiry learning; and so forth, according to the requirement of the topic, and will emphasize active learning.

References

- Barki, B. G., &Mukhopadhyay, B. (2008). *Guidance and counselling: A manual* (10th reprint). New Delhi: Sterling.
- Corey, G. (2008). *Theory and practice of group counseling* (7th ed.). Stanford: Cengage Learning.
- Henderson, D. A., & Thompson, C. L. (2011). *Counseling children* (8th ed.). Belmont: Brooks/Cole.
- Kottler, J. A., & Sheppard, D. S. (2008). *Introduction to counseling: Voices from the field*
- (6th ed.). Belmont: Thomson.
- Sharif, R. S. (2011). *Theories of psychotherapy and counseling: Concepts and cases* (5th ed.). Stamford: Cengage Learning.

Unit 4: Skills and Qualities of a Counselor

Duration of the unit: 3 weeks

Unit Description

This unit explores the role and qualities of personnel involved in the provision of guidance and counseling. It focuses on developing basic guidance and counseling skills among Student Teachers, so that they may use their competencies in selecting, sequencing, and implementing different techniques of guidance and counseling.

Unit Learning Outcomes

Student Teachers will be able to:

- explore the role and qualities of a school counselor
- develop basic guidance and counseling skills and use their competencies in selecting, sequencing, and implementing different techniques of guidance and counseling
- explore various ethical issues involved in guidance and counseling and their impact on the process of guidance and counseling.

4 UNIT 4:	Skills and qualities of a counselor
Week #	Content
11	Personnel involved in counseling The role and qualities of a school counselor
12	Skills for the counseling process
13	Ethical issues

Teaching Strategies

The course Instructor will use group, individual, and pair work to develop interactive learning and an environment that builds confidence. Discussion, projects, reflective journaling, and portfolios will also be used to develop analytical and inquiry skills among Student Teachers.

References

- Geldard, K., &Geldard, D. (2008). *An integrative approach: Personal counseling skills.*
- Springfield: Charles C. Thomas.
- Ivey, A. E., Ivery, M. B., &Zalaquett, G. P. (2010). *International interviewing andcounseling: Facilitating client development in a multicultural society* (7th ed.). Belmont:Brook/Cole, Cengage Learning.
- Sutton, J., & Stewart, W. (2004). *Learning to counsel: Develop the skills you need to counselothers*. Oxford: How To Books.

Unit 5: Implementation Strategies and Action Plan

Duration of the unit: 3 weeks

Unit Description

This unit deals with procedures and strategies required in the process of guidance and counseling. It aims to develop knowledge and skills among Student Teachers, so that they can find information about students, identify those who need guidance and counseling in their classrooms, and then select appropriate strategies for intervention.

Unit Learning Outcomes

After studying this unit, Student Teachers will be able to:

- prepare different data-gathering tools according to the data required for the provision of guidance and counseling
- use different data-gathering tools and collect information about students who need guidance and counseling
- devise an action plan to develop a school-wide guidance and counseling program.

5 UNIT 5:	Implementation strategies and action plan
Week #	Content
14	Data-gathering tools • Test • Observation • Questionnaire and anecdotal record • Interview
4)	• Checklist Rating scale Projective techniques
16	Developing an action plan for a school-wide guidance and counseling program • Planning orientation seminar: Administrative and teaching staff • Planning orientation seminar: Parents and other external stakeholders • Dossier

Teaching Strategies

The course Instructor will use group, individual, and pair work to develop interactive learning and an environment that builds confidence. Discussion, projects, reflective journaling, and portfolios will also be used to develop analytical and inquiry skills among Student Teachers.

References

Cormier, S., Nurius, P. S., & Osborn, C. J. (2013). I*nterviewing and change strategies forhelpers*(7th ed.). Belmont: Brooks/Cole.

Dimmitt, C., Carey, J. C., & Hatch, T. (2007).*Evidence-based school counseling: Making adifference with data-driven practices.* Thousand Oaks, CA: Corwin.

Ivey, A. E., Ivery, M. B., &Zalaquett, G. P. (2010).*International interviewing andcounseling: Facilitating client development in a multicultural society* (7th ed.). Belmont:Brook/Cole, Cengage Learning

EDU- 523 Learning Innovations and Interactive Teaching (General) Semester 6

Credit Hours: 02

Objectives:

At the end of the course students will be able to:

1. learn new teaching techniques and teach through an innovative way.
2. compare and contrast the new teaching methodologies.
3. implement innovative and interactive methodologies in the classroom.

1. Teaching Strategies

1.1 Cognitive load and its types

1.2 Providing multiple outcomes and strategies of teaching

1.3 Self-perceived efficacy of learner

2. Social Constructivist Approaches to Teaching

2.1 Social constructivism in the broader constructivist context

2.2 Situated cognition

3. Teachers and Peers as Joint Contributors to Students' Learning

3.1 Scaffolding
3.2 Mentoring
3.3 Tutoring

3.4 Cooperative learning

4. Structuring Small-Group Work

4.1 Composing the Group

4.2 / Team-Building skills

4.3 Structuring group interaction

4.4 Fostering a community of learners

5. Micro - Teaching

5.1 Definition

5.2 Components

5.3 Steps

5.4 Advantages and Limitations.

6. Models of Teaching

6.1 Meaning and definition of models of teaching

6.2 Introduction to models of Teaching

6.3 Function and characteristics of models of teaching

Reference Books

1. Santrock, J.W. (2006). *Educational Psychology.* New Delhi: McGraw Hill PublishingCo.
2. Riaz, M.N. (2007). *Areas of Psychology.* Karachi: Oxford University Press.
3. Woolfolk, A. (2004). *Educational Psychology.* Singapore: Pearson Education

EDU-613 Pedagogy-I (Methods of Teaching Related to Specialization-I)

Semester 7

Year and Semester
Year 4, Semester 7

Credit value
3 credit hours

Prerequisites
Mathematics 1, Mathematics 2

Course Description

Mathematics is the mother of all subjects. It appears in all walks of life; even a mason has to calculate the area of the building when claiming his wages. But teachers' existing beliefs about and perceptions of teaching mathematics in our context are not promising. We are more focused on the transmission of knowledge by engaging students in memorizing mathematical rules and formulae, rather than on engaging them in constructing mathematical knowledge and understanding mathematical concepts. Mathematics learning can inculcate problem-solving, logical-thinking, and reasoning skills in students only when they are taught in such a way that they learn conceptually instead of by drill and practice. In previous semesters, we have focused on mathematics content, but this course intends to extend Student Teachers' understanding of pedagogy as well as build their understanding of the nature of mathematics, teacher beliefs and perceptions, and mathematics teaching and learning. This will enable Student Teachers to develop students' problem-solving, logical-thinking, and reasoning skills. This course will help in creating awareness of the history of mathematics as well as its scope and significance. Also Student Teachers will be able to design plans for integrating Information and Communications Technology (ICT) to develop students' mathematical learning. The importance of designing effective assessment items to facilitate students' learning is also considered.

The following main ideas are discussed in this course:

- The nature and scope of mathematics
- The attitude of teachers towards mathematics learning and their perception of it
- Research in mathematical processes
- Planning for assessment and teaching

Course Outcomes

After completing this course, Student Teachers will be able to:

- attain a better understanding of mathematical ideas
- revisit beliefs, ideas, and perceptions about teaching and learning mathematics

- acquire the skills and competencies required for teaching mathematics at elementary level
- effectively apply the various methods, techniques, and strategies of teaching mathematics
- appreciate mathematical processes and discover the power of mathematical thinking
- appreciate learning by doing rather than instrumental learning
- develop a positive attitude towards teaching and learning mathematics
- design a unit plan for teaching and managing a classroom effectively
- design assessments for/of/as learning to facilitate students' learning
- use ICT in teaching and learning mathematics.

Learning and Teaching Approaches

The following approaches will be used in the course.

- Activity-based teaching
- Inquiry method
- Discovery method
- Exploration method
- Demonstration method
- Lecture method
- Discussion with peers and Instructor
- Use of ICTs to facilitate learning and teaching

Also refer to the link available on the HEC website:

➢ http://www.hec.gov.pk/InsideHEC/Divisions/LearningInnovation/Documents/Learning%20Portal/NAHE%20(Presesation)/COMMON%20TEACHING%20METHODS.pdf

The site provides a PowerPoint presentation on the above-mentioned methods of teaching, listing their strengths and weaknesses. This will help Student Teachers explore the advantages and disadvantages of teaching methods and take informed decisions on selecting appropriate teaching methods, considering the content and concept of teaching, the learning environment, and the resources available for teaching.

Semester Outline

Unit 1: The Nature, Nurture, and Scope of Mathematics

- The nature of and philosophical thoughts underlying mathematics
- Transmission versus construction of mathematical knowledge
- Instrumental versus relational understanding
- Discussion on the National Curriculum of Mathematics

Unit 2: Teacher Beliefs, Perceptions, and Attitudes Towards Mathematics and its Teaching And Learning

- Teachers' beliefs and perceptions about the nature of mathematics
- Teachers' beliefs and perceptions about mathematics teaching and learning
- Challenging teachers' beliefs and perceptions
- Conceptual learning
- Contextual learning

Unit 3: Exploring Mathematical Processes Through a Review of Classroom-Based Research

- Review of classroom-based research studies conducted in the Western as well as the local context to identify best practices
- Analysis of the research studies to explore how to teach mathematical content to students, using a variety of teaching techniques and methods
- Implications for Student Teachers

Unit 4: Planning for teaching

- Assessment for learning and assessment of learning
- Designing mathematical tasks and an assessment of mathematical content to facilitate students' learning
- Unit planning, with detailed lesson planning
- Classroom management (behaviour, time, and resources) and ways to handle students' responses
- Integration of ICTs

Unit 1: The Nature, Nurture, and Scope of Mathematics

A philosophical basis defines the nature and scope of a discipline. In this unit, Student Teachers will examine the different philosophies of mathematics. They will identify possible connections and influences on mathematics teaching and learning. This unit will also cover development in the subject of mathematics over of time.

Learning outcomes

After completing this unit, Student Teachers will be able to:

- explore different schools of thought, such as absolutist, fallibilist, constructivist, and social constructivist
- identify possible connections between and influences of perspectives on the nature of mathematics and its teaching and learning
- differentiate between the different approaches to teaching mathematics that develop instrumental and conceptual understanding
- relate the importance of mathematics in daily life
- explain the relationship of mathematics to other subjects
- criticallyanalyze mathematics content and students' learning outcomes in light of the mathematics philosophy proposed in the National Curriculum for Mathematics (Grades I–VIII).

Week 1: Introduction to the course

- Reviewing previous courses in light of mathematics concepts and processes learnt
- Assessing Student Teachers' understanding of previous courses in mathematics
- Sharing the course outline and outcomes

Week 2: The nature and significance of mathematics

The nature of mathematics: absolutist, fallibility, constructivist, and social constructivist view

Week 3: Instrumental versus relational understanding

11 Instrumental and relational understanding

12 Exploring mathematics concepts, rules, and formulae to develop conceptual understanding

Week 4: National Curriculum for Mathematics (2006) (Grades I–VIII)

- The use of mathematics learning in daily life
- Identifying the underlying philosophy of mathematics in curriculum standards and benchmarks
- Student learning outcomes defined in the National Curriculum
- Aligning the student learning outcomes with approved textbooks and other resources
- The relationship of mathematics to other subjects

Unit 2: Teacher Beliefs, Perceptions, and Attitudes Towards Mathematics and its Teaching and Learning

This unit will help Student Teachers recognize that teachers' beliefs influence their practices. It will give ample opportunity to challenge their own beliefs, perceptions, and attitudes toward mathematics and its teaching and learning.

Learning outcomes

After completing this unit, Student Teachers will be able to:

- discuss how teachers' beliefs, perceptions, and attitudes influence their teaching practice
- list the common misconceptions about teaching and learning mathematics
- critically review their own beliefs and attitudes towards teaching and learning mathematics and discuss how to develop students' conceptual understanding
- develop teaching activities from their own context for teaching mathematical concepts
- use the developed teaching activities for the progression of mathematical concepts.

Weeks 5 and 6: Teachers' beliefs, perceptions, and attitudes

- Defining beliefs, perceptions, and attitudes and discussing their effects on students' learning
- Reviewing research studies conducted in both the Western and the local context in order to identify mathematics teachers' beliefs about mathematics and its teaching and learning
- Identifying common misconceptions people generally have about (learning) mathematics

Week 7: Challenging teachers' beliefs, perceptions, and attitudes

- Identifying their own beliefs and attitudes towards mathematics and its teaching and learning based on their learning experiences in school
- Challenging their own beliefs and attitudes towards mathematics and its teaching and learning

Week 8: Conceptual learning

- What is conceptual learning?
- How does conceptual learning make mathematics meaningful?

Week 9: Contextual learning

c) Contextual learning

d) How does contextual learning enhance understanding?

e) Introducing different activities based on contextual learning

Unit 3: Exploring Mathematical Processes Through A Review of Classroom-Based Research

This unit will use recent articles explaining different mathematical processes related to elementary-level mathematics. After the overview of processes, Student Teachers will select best practices and present these to peers. Overall, this unit will help them link mathematics philosophy and teachers' beliefs with teaching practices to enhance students' conceptual understanding.

Learning outcomes

After completing this unit, Student Teachers will be able to:

- review research articles relevant to teaching and learning mathematics
- discuss and elaborate on the basic mathematical processes identified in these articles
- find best practices in these research studies to be incorporated in the learning-teaching process in their own context.

Weeks 10 and 11: Reflection on research papers

- Searching relevant research papers that discuss mathematics processes to teach for conceptual understanding
- Reviewing the identified research studies
- Discussing different teaching practices highlighted in the papers
- Writing key lessons learnt or a critical reflection on the reviewed research papers

Week 12: Identification of best practices

9 Discussing the benefits of practices indicated in research across the globe

10 Discussing the usability of the identified practices in a Pakistani context in light of the National Curriculum for Mathematics

11 Presenting some concrete examples on best practices for teaching mathematical concepts, rules, and formulae

Unit 4: Unit Planning

This unit focuses on using unit planning. It will provide an opportunity for Student Teachers to explore the importance of unit planning and also to develop unit plans for teaching mathematics concepts included in the National Curriculum for Mathematics. Different types of lesson designs will be emphasized in order to create variety in methods to explore mathematical concepts. The use of ICT, teaching strategies, and assessment techniques will also be discussed at length, so that Student Teachers will be at ease with the use of such technologies, techniques, and assessments.

Learning outcomes

After completing this unit, Student Teachers will be able to:

- articulate the importance of unit planning
- develop unit plans by taking informed decisions about what to teach and how to teach and assess it
- develop lesson plans aligned with the unit aims and objectives, integrating appropriate ICTs and other teaching aids
- develop relevant assessment techniques to assess students' learning
- plan to manage resources and time effectively while implementing lesson plans.

Week 13: Assessment techniques and their use in mathematics learning

15 The difference between assessment and evaluation

16 Understanding the purposes and tools of assessment

17 Different types of assessment

- Formative assessment

  -- Portfolio

  -- Project work

  -- Mathematical investigation

- Summative assessment

18 Test and rubric construction

19 Designing questions to promote thinking

Week 14: The integration of ICTs

5) Exploring mathematics concepts using ICT

6) Identifying appropriate and relevant technologies that could facilitate mathematics learning

Week 15: Classroom management

5) Resource management – teaching resources, including ICT

6) Time management

7) Handling students' responses

Week 16: Unit planning

4) Key components of unit planning

5) Different models of lesson planning

LES (Launch, Explore, and Summarize)

5E (Engage, Explore, Explain, Elaborate, and Evaluate)

4P (Preparation, Presentation, Practice, and Production)

MTA (Motivate, Teach, and Assess)

6) Developing unit plans with integrated lesson plans to achieve the unit aims and objectives
7) Micro-teaching: Delivering lessons to peers
8) Reviewing the unit planning based on the feedback received

Course Assignments and Assessment

Student Teachers will be assessed using both formative and summative assessments. Formative assessments will occur during coursework, such as using pencil-and-paper tests; quizzes and games – competition; instructor observation; peer observation; teacher or group projects; worksheets; simulations; portfolios; performance tasks; presentations, whether individual or group; and student self-assessment. The focus is on supporting Student Teacher to improve their learning process. With summative assessments, Student Teachers will be evaluated upon completion of the work and the focus will be on the written test.

Assessment and grading

1. Formative assessment	**50%**
• Developing unit plans	20%
• Reviewing research articles (at least two)	20%
• Presentations (at least two)	10%
2. Summative assessment	**50%**

Note: Grades will be assigned as per the criteria of the university or institution.

References

Textbooks, journal articles, and web resources are included in this section.

- Amirali, M. (2010). Students' conceptions of the nature of mathematics and attitudes towards mathematics learning. *Journal of Research and Reflections in Education*, 4(1), 27–41.
- Anthony, G., &Walshaw, M. (2009). *Effective pedagogy in mathematics.* International Bureau of Education: UNESCO. Retrieved from:
- ➢ http://www.ibe.unesco.org/fileadmin/user_upload/.../EdPractices_19.pdf
- Berwick, K. (2005). Pre-service teachers' understandings of relational and instrumental understanding. In H. L. Chick & J. L. Vincent (Eds.), *Proceedings of the29th Conference of the International Group for the Psychology of Mathematics Education*, 2,161–168.
- Dossey, J. A. (1992). The nature of mathematics: Its role and its influence. In D. A. Grouws (Ed.), *Handbook of research on mathematics teaching and learning* (pp. 39–48). New York: Macmillan.
- Ernest, P. (1994). *Constructing mathematical knowledge: Epistemology and mathematicaleducation*. London: Taylor and Francis.

- Kinach, B. M. (2002). A cognitive strategy for developing pedagogical content knowledge in the secondary Mathematics Methods course: Toward a model of effective practice. *Teaching and Teacher Education*, 18, 51–71.

- Skemp, R. R. (1976). Relational understanding and instrumental understanding.*Mathematics Teaching*, 77, 20–26.

- Thwaites, A. (2008). *100 ideas of teaching primary mathematics*. London: Continuum International Publishing.

- Mathematical activities and lesson plans:
  - http://illuminations.nctm.org/

- Additional activities and lesson plans:
  - http://www.nctm.org/

- Research-based papers:
- ➢ http://ecommons.aku.edu/pakistan_ied_pdck/

EDU-614 Pedagogy-II (Methods of Related to Specialization-II)

Semester 7

Year/Semester
Year 4/Semester 7

Number of weeks
16

Credit value
3 credits**Prerequisites**
Science I (Semester 1) and Science II (Semester 3)

Course Description

Science education needs reform in the philosophical, instructional, and pedagogical dimensions of current practice. Particularly, instructional settings and strategies used by teachers can create an environment that fosters a constructive and active view of the learning process. Learning does not occur by passive absorption of scientific facts; rather, it involves learners in constructing their own meaning and assimilating new information to develop new understandings. In Science III, the overall thrust of the course is on the development of scientific knowledge, skills, and attitudes in Student Teachers in the areas of life science, physical science, and Earth and space science. Therefore, this course emphasizes developing inquiry, problem-solving, and decision-making abilities in Student Teachers so they may maintain a sense of wonder and curiosity about the world around them.

We believe that to make learners scientifically literate citizens requires diverse learning experiences that provide opportunities to explore, analyze, evaluate, synthesize, appreciate, and understand the interrelationships among science, technology, society, and the environment. This experiential learning will affect learners' personal lives, careers, and their roles as global citizens. Hence, the aim of developing this course is to address all of these facets of curriculum and instruction.

Course Outcomes

Knowledge

By the completion of the course, Student Teachers will be able to:

- discuss the concepts related to life science, physical science, and Earth and space science
- apply these understandings to interpret, integrate, and extend their knowledge
- discuss important features differentiating the traditional science classroom and the interactive science classroom.

Science, Technology, Society, and Education (STSE)

By the completion of the course, Student Teachers will be able to:

- describe and discuss the nature of science and technology
- explain the relationships between science and technology and between the social and environmental contexts of science and technology
- develop and use the related skills and conceptual knowledge necessary for making connections between scientific, technological, social, and environmental issues
- apply the aspects of environmental education in their personal and social lives.

Skills

By the completion of the course, Student Teachers will be able to:

- exhibit the skills required for scientific and technological inquiry
- use these skills for solving problems as well as communicating scientific ideas and results
- work collaboratively
- make informed decisions in their personal and social lives
- use a variety of teaching skills while planning and conducting science lessons.

Attitudes

By the completion of the course, Student Teachers will be able to:

- use their understanding to support the responsible acquisition and application of scientific and technological knowledge to the mutual benefit of self, society, and the environment
- develop an interest in and motivation toward science education and related careers.

Teaching and learning approaches

Student Teachers would be introduced to science concepts through the inquiry approach, constructivism, and learning by doing. They would be encouraged to engage in independent learning, group projects, assignments, and presentations guided by the Instructor. Literature suggests that students learn more through experience, which makes learning more interactive and interesting. Therefore, the Instructor's role would be that of a facilitator who will bridge theoretical concepts with daily life experiences. This will provide Student Teachers an opportunity to learn science through the application approach.

Overview of the course

1	UNIT 1:	Overview of Science III: Creating linkages
	Learning Outcomes	It is expected that Student Teachers will: • describe the course outline, pedagogy, and assessment criteria • build connections between their learning in different science courses • explain the role of science in daily life.
	Week #	Topics
	I	Introduction to course project/s, intended topics to be covered, and assessment criteria Connections of Science III with earlier courses Science in daily life

Theme 1: Life science

2	UNIT 2:	The constructivist approach to teaching the concept of heredity
	Learning Outcomes	It is expected that Student Teachers will: • experience the concept of heredity through the constructivist approach to teaching science • explain different cell components through analogies • discuss the implication of a constructivist approach for learning science in the classroom • explain that cell components play an important role in heredity • explain the structure of chromosomes with reference to their function • elaborate the importance of DNA in terms of its function and importance for life • differentiate between acquired and inherited traits.
	Week #	Topics
	2	Social constructivism and its implication for teaching science Cell components and cell division Basis of heredity (chromosomes, DNA, and genes in plant and animal cells) Human traits (acquired and inherited)

3	UNIT 3:	Teaching biotechnology through daily life applications
	Learning Outcomes	It is expected that Student Teachers will: • discuss the role of genes in determining characteristics and traits • recognize the potential role (both positive and negative) of genetic Engineering • describe the common application of biotechnology in various fields • discuss the ethical implication of biotechnology
	Week #	Topics
	•	Introduction to biotechnology General applications of biotechnology (agriculture, environment, health, food production and preservation) Ethical issues involved in biotechnology

Theme 2: Physical science

4	UNIT 4:	Laboratory work in the science classroom
	Learning Outcomes	It is expected that Student Teachers will: • use different laboratory instruments to measure physical quantities • discuss safety and planning considerations for laboratory work in science Teaching • explain the need for units when considering physical quantities • explain derived quantities and obtain their units in terms of base units • discuss the meaning and significance of accuracy and precision in science • identify the nature and properties of elements

- discuss the arrangements of elements in the periodic table
- perform laboratory work to investigate chemical reactions in different Compounds
- differentiate different groups of elements based on their chemical and physical properties
- investigate properties and uses of acid, alkalis, and salts
- prepare and use natural indicators to determine pH of different solutions.

Week #	Topics
l l	Physical quantities (length, volume, mass, time) SystemInternational (SI) units (meter, liter, kilogram, second) Instruments for measurement (meter rule, measuring cylinder, flasks, pipettes) Accuracy and precision in measurements Laboratory work: Planning, precautions, and safety measures Different types of elements in the periodic table
l	Distribution of electrons: Valence shell configuration Arrangements of elements in the periodic table
6	Physical properties of different elements in the periodic table Chemical properties and the reactivity of elements in the periodic table
7	Properties and uses of acids, alkalis, and salts pH and its range (1–14) in aqueous medium Natural indicators (from fruits and vegetables) Significance of laboratory work in science teaching

5	UNIT 5:	Low-cost, high-thought materials when teaching force and pressure
	Learning Outcomes	It is expected that Student Teachers will: • investigate the relation between pressure, force, and area by using low-cost, high-thought resources • discuss the hydraulic system • explore water pressure and its application • discuss the significance and implications of low-cost materials • prepare low-cost, high-thought resources for their own teaching practice
	Week #	Topics
	8	Use of low-cost, high-thought resources in the science classroom Relation between pressure, force, and area Hydraulics and hydraulic systems Water pressure

6	UNIT 6:	Teaching heat and light through the inquiry approach
	Learning Outcomes	It is expected that Student Teachers will: • discuss the inquiry approach of teaching science and its implications for science teachers • observe the effects of heat (thermal expansion and contraction) in different states of matter • discuss the phenomena of thermal expansion and contraction at the molecular level • discuss the application of thermal contraction and expansion in daily life • explore the nature of light (phenomena such as transmission, absorption, and reflection) • differentiate between reflection and reflection phenomena (process, effect, and causes) • differentiate between different types of lenses • compare the working of the human eye with a camera lens.
	Week #	Topics
	•	Activitymania vs. inquiry Thermal expansion and contraction (solids, liquids, and gases) Effects of heat (explanation at macro and micro levels) Factors affecting the contraction and expansion process
	I	Application of expansion and contraction of solids in everyday life (concrete road surfaces, railway tracks, bridges, overhead power lines, telephone lines, pipelines) Nature of light Reflection and refraction
	11	Types and uses of lenses Image formation in a simple camera and the human eye

7	UNIT 7:	Common misconceptions about electricity
	Learning Outcomes	It is expected that Student Teachers will: • identify students' misconceptions about electricity • design activities to teach the concept(s) based on students' misconceptions • define *current* • investigate different types of circuits • explain the process and factors of generating electricity • design an experiment to generate electricity
	Week #	Topics
		Common misconceptions about electricity and its implications in the science Classroom

12	Static vs. moving charges: The concept of electric current Production of electricity • Circuits • Conductor • Power source Explanation at the molecular level

Theme 3: Earth and space sciences

8	UNIT 8:	Space exploration through ICT integration
	Learning Outcomes	It is expected that Student Teachers will: • compare the physical characteristics of different environments (planets and space) with that of Earth • explore the force of gravity and its implications in space • investigate how aircraft, satellites, and spaceships have improved our knowledge about space and how they are used for space research • discuss the importance and levels of ICT integration in the science classroom.
	Week #	Topics
	13	Levels and pros and cons of ICT integration Comparison of different environments (space, Earth) Force of gravity and factors responsible for it Aircraft, satellites, and spaceships

9	UNIT 9:	Science, Technology, Society, and Environment (STSE): A new approach to teaching science

Learning Outcomes	It is expected that Student Teachers will: • reflect on teaching strategies to make learners aware of STSE issues, how to investigate, and how to make intelligent decisions • describe the effects of human activity on the environment • participate in environmental safety through social action • understand the process of human growth and development • discuss factors that affect the development process • develop awareness about health care and its importance in daily life.

Week #	Topics
14	Science, Technology, Society, and Environment (STSE) Benefits and challenges related to teaching science through STSE
15	Effects of human activity on the environment Saving the Earth project
	Healthy life: Growth and development Factors affecting growth and development Balanced diet

References

National Curriculum for General Science Grades IV–VIII (2006).Government of Pakistan, Ministry of Education, Islamabad.

Additional Resources

- Chiappetta, E. L., &Koballa, T. R. (2010). *Science instruction in the middle and secondaryschools: Developing fundamental knowledge and skills* (7th ed.) Boston: Allyn& Bacon.

- Driver, R., Rushworth, P., Squires, A., & Wood-Robinson, V. (1994). *Making sense ofsecondary science: Research into children's ideas*. London: Routledge.

- Fensham, P. J., Gunstone, R. F., & White, R. T. (1994). *The content of science:A constructivist approach to its teaching and learning*. Bristol, PA: Falmer Press.

Suggested Articles for Reading

- Gupta. A. (2013). *Learning science through activities and toys*. (Also many relevant materials.) Retrieved from
- ➢ http://arvindguptatoys.com

- Halai, N. (2010). Teaching teachers and students about the nature of science. *Journalof Educational Research, 13*(1), 171–179.

- Moscovici, H., & Nelson, T. H. (1998). Shifting from activitymania to inquiry. *Science& Children*, 14–18. Retrieved from
- ➢ http://thecenter.spps.org/uploads/shifting_from_activitymania.pdf

- Steinert, Y., & Snell, L. S. (1999). Interactive lecturing: Strategies for increasing participation in large group presentations. *Medical Teacher, 21*(1), 37–42.

Course Assignments

Suggested assignments are included in the unit guides of the course. Some are short-term assignments and others take several weeks to complete. Individual and group assignments are also provided.

These assignments are designed to deepen Student Teachers' learning and allow them to research and apply their knowledge to topics of personal interest. All the assignments count toward the final grade.

Examples of assignments include:

13 Conduct an investigation on a science topic and present your findings and conclusions.

14 Develop hands-on activities around a core science concept for an elementary grade.

15 Plan and conduct a science activity with a group of children using the inquiry approach.

Grading Policy

The university and its affiliated colleges will determine the course grading policy. The policy should be shared with Student Teachers at the beginning of the course. It is recommended that at least 50 per cent of the final grade be determined by coursework completed by Student Teachers. Coursework may include work assignments completed in or outside the classroom, or assignments completed while practice teaching at school.

EDU-691 Research Methods in Education (Professional)

Semester 7

Year, semester
Year 4, year 7

Credit value
3 credits

Prerequisite
Successful completion of semesters 1–6

Course Description

This course aims to help Student Teachers develop a basic understanding of educational research. Its purview will be on improving teaching and learning practices in primary classrooms. This course will cover features of educational research in general, while the main focus will be on developing Student Teachers' understanding of action research and preparing them to conduct it in a school setting.

Learning Outcomes

After the completion of this course, Student Teachers will be able to:

- define what research is and identify different types of research
- describe the importance of action research for improvement in classroom practices
- review literature for research purposes
- identify data collection tools
- explain data analysis procedures
- prepare a research proposal.

Interactive Teaching Strategies

This course will apply an interactive approach to teaching and will involve brainstorming, discussions, and other activities to cover the material. It will also include instruction on data collection using both primary and secondary sources, particularly through the use of library resources, online resources, and original government records and documents.

Course Content

Unit 1: Introduction (weeks 1–2)

The unit covers basic knowledge about research.

Topics

7 What is research?

8 The importance of and need for research

9 Types of research methods

- Historical research
- Descriptive research
- Causal comparative research

Unit 2: Action research: Types and reflective practices (weeks 3–4)

The unit covers action research more deeply through the study of different types of action research.

Topics

- Action research
  - Participatory
  - Collaborative
  - Reflective practices
- Critical thinking
- Induction and deduction
- Assumptions and revisiting ideas

Unit 3: Literature review (weeks 5–6)

The unit contains knowledge about literature review techniques, resources, and procedures in a systematic manner.

Topics

- Concept and meaning of literature review
- Information sources
  - Primary sources
  - Secondary sources
- Forms of literature review sources
  - Digital sources
  - Paper sources
  - Material sources
- The importance of and need for literature reviews
  - Clarity and focus
- Broaden knowledge base of research

Unit 4: Research methodology (weeks 7–9)

The unit covers research methodology.

Topics

- Research design
- Population and sampling
- Data collection tools
- Data collection procedure

Unit 5: Data analysis and interpretation (weeks 10–11)

The unit provides knowledge about both qualitative and quantitative data analysis as well as data interpretation techniques in an action research context.

Topics

- Qualitative analysis
  - Coding
  - Arranging data according to themes and patterns
- Quantitative analysis
- Statistical tools

Unit 6: Findings, summary, and recommendations (weeks 12–13)

The unit covers writing styles and patterns regarding findings, summary, and recommendations.

Topics

- Findings and drawing conclusions
- Summary
- Recommendations

Unit 7: Referencing and writing a research proposal (weeks 14–16)

The unit covers essential knowledge about citing material from books, journals, and other sources. The unit also covers techniques and procedures for writing a research proposal.

Topics

- Research proposal
- Contents of research proposal
- Referencing
- APA reference format with type of reference
- Summing up and conclusion

Suggested Literature

- Creswell, J. W. (2008). *Research design: Qualitative, quantitative, and mixed methodsapproaches*. Thousand Oaks, CA: Sage Publications.
- Flower, F. J. (2008). *Survey research methods: Applied social research methods.* Thousand Oaks, CA: Sage Publications.
- Marshall, J. C. (2010). *Classroom test construction*. Boston: Addison-Wesley.
- McNiff, J., Lomax, P., & Whitehead, J. (1996). *You and your action research project.* New York: Routledge.
- Salkind, N. J. (2006). *Exploring research*. New Jersey: Pearson Prentice-Hall. Wiersma, W. (2000). *Research methods in education*. Boston: Allyn and Bacon.

EDU- 615The Teaching Practicum

Teaching Practice
(Short Term)
Semester 7

as in Semester 3 & 4.

EDU-624 School Management (Professional) Semester 8

Year and semester

Year 4, Semester 8

Credit value

3 credits

Course Description

The progress of any school system largely depends on the efficiency of school management. This course will empower Student Teachers with knowledge, attitudes, professional skills, and competencies to take up managerial roles to establish efficient school management within their local school contexts.

This course focuses on the conceptual understanding and implications of school management at the elementary level, enabling Student Teachers to develop their managerial and leadership skills and attitudes. The course material will allow them to develop the requisite skills and attitudes to contribute to creating learning communities within the learning organizations where they will work.

Learning Outcomes

After completing this course, Student Teachers will be able to:

- perform managerial functions to effectively manage primary schools
- explore and analyse relationship patterns at the school level
- utilize effective techniques in developing and maintaining positive relationships within their schools
- conceptualize their leadership role in building a learning organization
- take an active role in transforming their school into a learning organization.

Unit 1: Introduction to School Management

Unit Description

Schools are expected to serve the primary purpose of teaching and learning. In recent times there has been a call for greater attention to the role of teachers as participants and leaders in developing the school as a learning organization. The progress of a school system largely depends on the efficiency of school management. This unit provides introductory information about various aspects of school management. It deals with some basic knowledge, skills, and dispositions required to understand the nature, structure, and functions of school management.

Learning Outcomes

After completing this unit, Student Teachers will be able to:

- conceptualize school management and its principles and dynamics
- develop management skills to be implemented at different levels of the management hierarchy.

1	UNIT 1:	Introduction to school management
	Week #	Topics/themes
	1	Introduction to school management Conceptualizing school management and its principles and dynamics The structure of school management
	2	Management skills and their implications at different levels of the management hierarchy

Unit 2: The Operations Of School Management

Unit Description

School management is an operational activity. This unit explores the knowledge and skills required for Student Teachers to perform their duties as managers in a school system. It will develop the skills of good planning, organizing, leading, coordinating, controlling, and evaluating the different operations in a school system. Student Teachers will also be able to use a feedback process for the improvement of different operations in a school.

Learning Outcomes

After completing this unit, Student Teachers will be able to:

- plan and prepare year calendars and schedulers
- plan and organize health, safety, and other co-curricular activities
- explore and analyse the head teacher's role in managing day-to-day activities
- explore and analyse the challenges to school management processes faced by contemporary educational leaders in Pakistan
- explore and analyse various academic, material, and financial records available in schools.

2	UNIT 2:	The operations of school management
	Week #	Topics/themes
	3	The functions of management: Planning • Basic concepts of planning • Planning for school management • Planning and preparing a year calendar

	• Preparing a timetable and day-to-day activities schedulers
4	Organizing • The value of organizing for schools • The teacher's role in planning and organizing different curricular and co-curricular activities • Planning and organizing health, safety, and other co-curricular activities
5	The head teacher's role in managing day-to-day activities • Arranging classes • Staffing arrangement • Material provision

2 UNIT 2: The operations of school management

6 Leading
- Leadership qualities

1) Challenges in school management processes faced by contemporary educational leaders in Pakistan

7 Controlling for balance in management
- The process of controlling (avoiding overspending and under spending human, physical, and financial resources)
- Evaluation and feedback

8 Record-keeping in school
- Academic records (attendance, student registration and progress, library, laboratory, etc.)
- Material records (furniture, equipment, etc.)
- Financial records (budget, purchases, fee collection, salaries, etc.)

Unit 3: School and Human Relationships

Unit Description

This unit highlights the importance of school and human relationships within and outside the school premises. It identifies different types of interactions that assist in developing sound relations, which in turn contribute to the ultimate success of the school. It covers broad ranges of stakeholders that directly and indirectly influence how the school functions. This unit also explores inter- and intra-school relations and how they can contribute to the overall success of the institution.

Learning Outcomes

After completing this unit, Student Teachers will be able to:

- identify and analyze the role of different stakeholders in maintaining effective human relationships within the school system
- differentiate between inter- and intra-school relationships
- explore effective techniques for developing and maintaining positive relationships within a school.

3	UNIT 3:	School and human relationships

Week #	Topics/themes
	Introduction: Stakeholders and relationship
9	Inter- and intra-school relationships
	Principles and dynamics of school relationships
	The head teacher and teachers
6)	The head teacher and students The head
	teacher and support staff Teachers and
	students
7)	Teachers and teachers Teachers and
	support staff Students and support staff
8)	Students and students
	Cooperation between the school and parents

Unit 4: Leadership In a Learning Organization

Unit Description

School management is a multidimensional task. Current research informs us that schools, like any other organization, are in a learning mode; hence, Student Teacher will be introduced to the concepts of a learning organization and leadership within

the learning organization. This unit will help them conceptualize the leadership role in building a learning organization and develop the skills required for promoting an environment conducive to developing a learning organization.

Learning Outcomes

After completing this unit, Student Teachers will be able to:

- conceptualize the leadership role in building a learning organization
- analyze and justify the styles and skills needed to provide an environment conducive to developing learning organizations
- participate in a team-building and visioning process of a learning organizatio

4	UNIT 4:	Leadership in a learning organization

Week #	Topics/themes
13	Building a learning organization • Empowering leaders: Becoming a learning organization

	• Learning organization and leadership styles
14	Organizational leadership • Leading a learning organization • Charismatic and transformational leadership
15	Team leadership • The leader as a teacher: Shaping the shared vision of a learning Organization
16	• Communication, coaching, and conflict management skills • Team leadership and self-managed teams

Teaching and Learning Approaches

Different teaching and learning approaches will be used during the course. They are based on developing the critical thinking, creativity, communication, and leadership skills of the Student Teachers. The following approaches will be employed during the course: interactive lecturing, PowerPoint and video presentations, role play, discussion, and cooperative learning strategies.

Textbooks and References

The course will draw on textbooks, journal articles, and websites. A list of these will be distributed in class.

NOTE TO FACULTY USING THE CHAUDHARY ET AL. SYLLABUS: The following resources may be helpful in choosing appropriate readings. You may include your chosen list of readings in the syllabus or distribute it in class, but it should include only those resources that you expect students to use throughout the course. Other readings should be distributed as needed.

Textbooks

- Bush, T., & Bell, L. (Eds.) (2002). *The principles and practice of educational management*. London: Paul Chapman Publishing.
- Copland, M. A., & Knapp, M. S. (2006). *Connecting leadership with learning: A frameworkfor reflection, planning, and action*. Virginia: Association for Supervision and CurriculumDevelopment.
- Donaldson, G. A. (2006). *Cultivating leadership in schools: Connecting people, purpose, andpractice*(2nd ed.). New York: Teachers College Press.
- Government of Punjab, Punjab Middle School Project. (2000). *Changing school cultures:Follow up—case studies of Punjab*. Lahore: Lahore School Education Department.
- Lussier, R. N., &Achua, C. F. (2007). *Leadership: Theory, application, skill development.*
- Stamford, CT: Cengage Learning.
- Lunenburg, F. C., & Ornstein, A. C. (2007). *Educational administration: Concepts andpractices*. Belmont, CA: Wadsworth Publishing Company.
- Razik, T. A., & Swanson, A. D. (2010). *Fundamental concepts of educational leadership andmanagement*. Upper Saddle River, NJ: Pearson.
- Reeves, D. B. (2008). *Reframing teacher leadership: To improve your school*. Virginia: Association for Supervision and Curriculum Development.
- Sidhu, K. S. (2005). *School organization and administration*. New Delhi: Sterling Publishers

Web-based sources

- Brandt, R. (2003). *Is this school a learning organization: 10 ways to tell*. Journal for Staff Development, 24(1), 10–16. Retrieved from
- http://www.scsk12.org/SCS/departments/Professional-Development/pdfs/ Is-This-School-Lrn-Org.pdf

- Brewster, C., &Railsback, J. (2003). *Building trusting relationships for school improvement:Implications for principals and teachers*. Retrieved from
- ➢ http://educationnorthwest.org/webfm_send/463

EDU-625 Test Development and Evaluation (Professional) Semester 8

Year, semester
Year 4, semester 8

Credit value
3 credits

Prerequisite
Successful completion of the Classroom Assessment course

Course Description

Awareness of test development, measurement, and evaluation principles and procedures is essential for teachers to monitor students' academic progress. This course is designed for Student Teachers to enhance their level of knowledge, understanding, and practical skills in testing and evaluation. It mainly deals with test development, standard setting, evaluation strategies, grading, and reporting. This course also aims to integrate and implement theory and practice to strengthen the fundamentals of measurement and assessment learned in the Classroom Assessment course. After completing this course, Student Teachers will be in a position to apply the methodology of test development and evaluation in the classroom.

Course Outcomes

By the end of the course, Student Teachers will be able to:

1) understand the key concepts, methods, and paradigms of test development and evaluation
2) apply the key concepts, methods and paradigms of test development and evaluation
3) develop, assemble, administer, score, and analyse appropriate tests to interpret and provide feedback on students' progress
4) provide balanced assessment aligned with standards and outcomes to improve the teaching-learning process
5) apply peer evaluation and self-evaluation tools and techniques (e.g. portfolio assessment, expert evaluation) for feedback purposes
6) identify emerging trends in test development and evaluation for future implementation.

Learning and Teaching Approaches

Teaching Approaches

4) Lecture and discussion
5) Brainstorming
6) Self-directed learning and self-study
7) Group-based learning (e.g. cooperative learning)
8) Literature reviews

Learning Tools

4) Homework assignments and projects
5) Field work, including data collection and analysis
6) Maintaining a log or journal

Unit 1: Test Development (3 Weeks)

A key goal of test development is to create a valid measure of standard-referenced student performance. For this purpose, Student Teachers must know the theoretical principles, issues, and required decisions to develop tests for different purposes. This unit is comprised of three parts: introducing key terms such as *testing* and *measurement*, skills and tools required for test development, and assessment of testtools' credibility.

This unit elaborates on the steps involved in test development. It includes performance assessment, which measures what students can do rather than how much they know, as well as related tasks, which are based on what is most essential in the curriculum and what is interesting to students.

Finally, this unit covers the development of tools and determining the right way to collect data. For example, when designing evaluation tools and selecting evaluation methods, Student Teachers should consider the cultural contexts of the communities in which programs operate. Overall, this unit aims to impart on Student Teachers the fundamental information, skills, and disposition that will allow them to manage assessment and evaluation programs at the desired level.

Unit Outcomes

After completing this unit, Student Teachers will be able to:

- define *test, measurement,*and*evaluationassessment,*
- understand the purpose, principles, and scope of test and evaluation
- describe the concept and process of test development
- comprehend the theory and practice of norm- and criterion-referenced tests
- recognize the role of performance assessment in enhancing the quality of the teaching-learning process
- understand the importance of measuring students' interest, attitude, and creative thinking abilities
- demonstrate a high level of competence in developing and administering different, context-specific evaluation tools
- reduce unnecessary complexity in test items
- overcome language barriers that can threaten the validity of content-based assessment.

Unit content

- Overview of the meaning of*test, testing, measurement, assessment*and*evaluation*
- Test development process
- Common issues in test development (e.g. language of test, readability, feedback)

- Performance assessment of students
- Developing assessment tools (e.g. rubrics, rating scale, checklist)
- Test administration
- Item analysis

Unit 2: Psychometric Properties of Formative and Summative Assessment (2 Weeks)

This unit discusses emerging trends in formative and summative assessment. The first section of this unit examines formative and summative assessment as assessments *of* learning and assessments *for*learning.
The second section looks at essential psychometric techniques that provide useful information for the improvement of student learning and assessment procedures. This unit also focuses on improving Student Teachers' competence in classroom assessment in order to yield accurate information about student achievement. It also aims to develop Student Teachers' ability to use the classroom assessment process and its results to enhance learning. Finally, Student Teachers will be provided opportunities to engage in hands-on activities.

Unit Outcomes

After completing this unit, Student Teachers will be able to:

- describe the different purposes of formative and summative assessments
- explain formative assessment as a process
- explain summative assessment as a product of learning
- describe the concepts of validity and reliability
- understand evidence of validity and reliability
- explain the threats to the validity of formative and summative assessment
- explain the threats to the reliability of formative and summative assessment.

Unit Content

1) Relationship between formative and summative assessment
2) Test validity
3) Test reliability
4) Types of reliability

Unit 3: Grading and Reporting (3 Weeks)

Statistics play a vital role in our daily educational lives. From time to time, a teacher has to collect, organize, and analyze data in order to make decisions about the teaching-learning process. This unit will provide information about basic descriptive statistics (measures of central tendency and measures of variability) so that the Student Teachers can analyze measurements and present conclusions. It aims to help Student Teachers understand the functions of grading and different types of grading procedures. This unit will enable Student Teachers to assign grades to students by using the most effective grading practices, criteria, and standards to provide accurate, specific, and timely feedback that can help improve student performance. Additionally, this unit will offer hands-on experience in interpreting test scores and reporting student performance.

Unit outcomes

After completing this unit, Student Teachers will be able to:

- recognize the basic symbols of elementary statistics
- compute measures of central tendency and variability
- analyze the results of measurements
- comprehend the function, types, and uses of grades
- apply principles and strategies and establish criteria to make grading efficient, consistent, and fair
- communicate learning expectations to students by establishing grading standards
- interpret test results with necessary caution and describe problems in grading.

Unit content

- Elementary statistics
- Effective grading in the classroom
- Establishing criteria and standards for grading
- Interpreting test scores
- Reporting assessment results to students, teachers, parents, and school administration
- Problems in grading and reporting

Unit 4: Curriculum and Test Development (3 Weeks)

This unit is focused on the relationship between curriculum and test development. In this unit, Student Teachers will develop an understanding of how learning outcomes are used to create achievement tests. It also provides an overview of the National Professional Standards for Teachers of Pakistan with special reference to Standard-05, which is based on assessment and curriculum. This unit will examine the role of curriculum in test development and assessment, and discuss the role of teacher's expectations of students' performance. It will also throw light on how a teachercan give feedback directly related to student performance that supports, rather than hinders, student potential.

Unit Outcomes

After completing this unit, Student Teachers will be able to:

- understand the relationship between curriculum and the process of test development
- analyse the best strategies for sharing and communicating assessment results
- communicate positive expectations to their students effectively.

Unit Content

- Norm-referenced and criterion-referenced tests
- Linking curriculum with test development
- Communicating and sharing standards (National Professional Standards for Teachers and National Curriculum 2006)
- Effect of teacher expectations on student achievement

Unit 5: Outcomes of Assessment Results (3 Weeks)

This unit aims to enable Student Teachers to assess student progress by improving teaching and learning. There are a number of formats, tools, and methods available to assess student progress, but in Pakistan, teachers are bound to follow the format provided by the provincial Directorate of Education. This unit will provide a taste of other formats to which adaptations can be made to better suit the local educational context. Assessment results are not only important for students and teachers but also for school effectiveness, improvement, and development. The overall focus of the unit is to train Student Teachers to assess students' progress, develop students' portfolios, make decisions in terms of instructional purposes, and use assessment results for school effectiveness and improvement.

Unit Outcomes

After completing this unit, Student Teachers will be able to:

- understand the concept of student progress
- develop student portfolios and evaluate them
- make instructional decisions by assessing student progress
- apply instructional decisions for effectiveness and school improvement.

Unit Content

10. Student progress
11. Decision-making for instructional purposes
12. School effectiveness and classroom improvement

Unit 6: Emerging Trends (2 Weeks)

This unit covers emerging assessment techniques, models, and approaches that will enhance Student Teachers' understanding of assessment in the current educational climate. Self-assessment and peer assessment are new trends in educational assessment. International assessments, including the Trends in International Mathematics and Science Study (TIMMS) and the Program for International Student Assessment (PISA), and national assessments, such as the National Education Assessment System (NEAS) and the Annual Status of Education Report (ASER), are different from classroom tests and school examinations. The information is aimed to equip Student Teachers with the knowledge, understanding, and skills to adapt some emerging trends in assessment for their future primary school classes.

Unit Outcomes

After completing this unit, Student Teachers will be able to:

- predict their position relative to their past learning
- predict their relative position with respect to their peers
- differentiate between self-assessment and peer assessment
- compare and contrast assessments by international and national assessment agencies.

Unit Content

- Measuring student growth
- Self-assessment, peer assessment, and reducing the burden on teachers
- International and national assessment agencies – NEAS, AKU-EB, and Federal Board of Intermediate and Secondary Education (FBISE)

Course Assignments

Suggested course assignments involve the development and administration of test items with subsequent item analysis and report preparation. Student Teachers will also be asked to develop a portfolio.

Grading Policy

The grading policy depends upon the individual university. For example, the University of the Punjab, Lahore, follows the following pattern for its four-year undergraduate programs:

Mode of assessment	Percentage
Assignments	25%
Midterm exam	35%
Final exam	40%

Recommended Books

- Alastair, I. (2007). *Enhancing learning through*London: *formative asses*
- Routledge.
- Banks, R. S. (2005). *Classroom assessment:*.UpperSaddleRiver,*Issues*NJ: *and practice* Pearson Education.
- Black, P., Harrison, C., Marshell, B., &Wiliam, D. (2003). *Assessment for learning:Putting.it*Milton*into*Keynes,UK:*practice*OpenUniversityPress.
- Ebel, R. L., &Frisbie, D.A. (1991). *Essentialseducationalof*.NewDelhi:*measurement* Prentice Hall of India.

EDU-626 Educational Law (General) Semester 8

Objectives

After completion of the course, the students will:

- analyze the legal rights and responsibilities of school management, administrators, teachers, other educational personnel, students, and parents;
- apply selected legal principles to the formulation of educational policies and procedures;
- demonstrate the ability to understand legal terminology, read and interpret case law, and use selected legal information sources.

Contents

1 **What is Law?**
2 Types and Basis of Law
3 Benefits of Law
4 Different Terms:
Constitution, Policy, Jurisprudence, Rules and Regulation, Statutes
5 Educational Law in Educational Administration, Legal System to Education
6 Some examples of Educational Law from other countries
7 Various Rules and Regulations in Pakistani Educational Institutes

7.1 Education Code
7.1.1 General Rules
7.1.2 Building,
7.1.3 Fees
7.1.4 Scholarship
7.2 Handbook of Circulars
7.3 Leave Rules and Study Leave Rules, Employment types & issues
7.3.1 Casual leave
7.3.2 Earned leave
7.3.3 Medical leave
7.3.4 Maternity leave
7.3.5 Extraordinary leave
7.3.6 Study leave
7.4 Pension Rules & Gratuity
7.5 Civil Service Rules (1962)

7.5.1 Appointment
7.5.2 Promotion
7.5.3 Seniority
7.5.4 Confirmation
7.5.5 Termination
7.6 Registration and Recognition of Private Educational Institutions
7.7 Efficiency and Discipline Rules for Educational Employees
7.8 Financial Rules
7.9 Benevolent Fund
7.10 Group Insurance and Advances
7.11 TA / DA (transfer and official visits)
7.12 University Calendar
7.12.1 Service Structure
7.12.2 Different bodies (i.e. Senate, Syndicate, Academic Council, BOS, BASR, Various Committees)
7.13 Budget Manual, PC-I, SNE
7.14 Delegation of Powers (Purchase, Appointment, Pay Scales for Teachers, Move over)
7.15 School Funds, Income Tax, GP Fund
7.16 Registers Forms and Other Record in Educational Institutions
7.17 Legal Problems in our Educational Institutions / Offices

8. **Registration of Privately Managed Educational Institutions**
8.1 Definition
8.2 Authority
8.3 Procedure
8.4 Conditions
8.5 Powers
8.6 Refusal & withdrawal registration

Recommended Readings:

1. KPK Government ESTA Code 2007
2. KPK Government Education Code
3. KPK Government Civil Servants Rules(CSR) 1981
4. University Academic Calendars, SBBWUP University, (2006 till date)

EDU-616 Teaching Practice (Long Term) Semester 8

Objectives:

At the end of the course the students will be able to:

1. prepare lesson plan on prescribed format.
2. design instructional activities effectively.
3. prepare and use Audio-Visual aids appropriately.
4. create conducive environment for learning.

Same as Semester 1, 2 & 3

Teaching Practice	Lesson	Marks	Examiner
Short Term (Marks merge with the respective subject's internal assessment marks)	I	10	Supervisor-I
	II	10	Supervisor-II
Final Lesson	I	10	Internal Examiner (Principal of School)
	II	10	
	I	20	External Examiner (Expert Appointed by University)
	II	20	
Long Term (Full Month)	I	20	All course teachers will act as supervisors and will evaluate every student in two lessons out of 20 marks for each lesson.

EDU-699 Research Project (Professional) Semester 8

RESEARCH PROJECT

In this section you will find syllabi that have been written by faculty. Using the HEC Scheme of Studies for the course, they considered the balance between the demands of the subject itself, active learning pedagogies, their students, and the particular university milieu in which they work. The syllabi all reflect the same key concepts and broad goals, but they vary in sequence and emphasis.

SYLLABUS 1

By
AsimaIdress, DrFazalurRahman, Dr M. AjmalChaudhary,
andSafiaWazir

Year, semester
Year 4, semester 8

Credit value
3 credits

Prerequisite
Successful completion of semesters 1–7

Course Description
The Research Projects in Education course is a practical course in which Student Teachers will be involved in the action research process. The course will enable them to plan, act, observe, and reflect during action research. As the action research process entails an ongoing analysis of data, Student Teachers will be engaged in the same process for their individual projects and will receive guidance from their supervisors. Student Teachers will disseminate their findings in the form of reports.

Course Outcomes
At the end of this course, Student Teachers will be able to do the following:

- conduct action research
- review related literature
- use appropriate research methodologies
- construct a research tool and analyze the data
- prepare a project report.

Teaching-Learning Methodology
An orientation will be provided for Student Teachers. Instructors will supervise Student Teachers using individualized and activity-based methods. A schedule will be provided that outlines meetings with their supervisor. There will be 10 meetings. Each Student Teacher will present a progress report, and the supervisor will give comments, assign further tasks, and provide overall guidance and supervision throughout the action research process.

Meetings Timeline

First meeting (week 1)

Each Student Teacher will be assigned a supervisor. During this first meeting, Student Teachers will do the following:

- present their project proposals
- review their project proposals
- receive feedback and suggestions from their supervisor
- be asked to collect relevant literature and develop a research instrument.

Second and third meetings (weeks 2–4)

During these meetings, Student Teachers will do the following:

- present a written progress report to their supervisors for feedback
- present reconnaissance (school, class climate, student profile, and teaching/learning process)
- discuss intervention strategies (e.g. small group work, reading, and activities)
- discuss and finalize the research instrument (e.g. observation sheets, anecdotal records, checklists, interviews, and diaries).

Student Teachers will start their first cycle of action research.

Fourth and fifth meetings (weeks 5–7)

During these meetings, Student Teachers will do the following:

- present collected data that has been coded for analysis
- identify themes, findings, and conclusions
- revise their strategy for the second cycle based on the findings and conclusions drawn.

Student Teachers will start their second cycle of action research.

Sixth and seventh meetings (weeks 8–10)

During these meetings, Student Teachers will do the following:

- share their collected data
- analyze data to draw further findings and conclusions
- revise their strategy for the third cycle (and for implementation in the classroom) based on the findings and conclusions drawn.

Student Teachers will start their third cycle of action research.

Eighth meeting (weeks 11–12)

During this meeting, Student Teachers will do the following:

- discuss on overall collected data and data analysis patterns
- begin data analysis (which will continue for two weeks).

Ninth meeting (weeks 12–13)

During this meeting, Student Teachers will do the following:

- discuss a written project report (dissertation)
- discuss writing their final research report.

Tenth meeting (week 14)

During this meeting, Student Teachers will finalize preparations for the presentation of their action research report in the seminar.

Seminar (weeks 15–16)

During this meeting, Student Teachers will do the following:

- present their project report in a departmental seminar
- submit their final action research report for evaluation

SYLLABUS 2

By

Dr Muhammad Ilyas Khan, DrAsafNiwaz, Dr Allah Noor, Dr Hafiz Inamullah, and DrArshad Ali

Year, semester

Year 4, semester 8

Credit value

3 credits (16 weeks)

Prerequisite

Successful completion of semesters 1–7

Course Description

The Research Projects in Education course is a compulsory part of the four-year B.Ed. (Hons) Elementary program. The course will involve Student Teachers conducting action research and will be supervised by a tutor. The research will be conducted by each Student Teacher individually, under supervision. The project will culminate with a final report that will be assessed on the basis of 100 marks.

Course Objectives

- To sensitize Student Teachers to the issues and problems faced by students in the classroom
- To help Student Teachers critically examine educational issues
- To analyse and review relevant literature
- To use data collection tools and analytical skills
- To act as self-reflective professionals and independent learners
- To develop and perform independent action research projects

Teaching-Learning Methodology

This is not taught as a traditional course. Rather, Student Teachers and supervisors will be involved in the following activities during the course of the project:

- one-to-one meetings between Student Teachers and supervisors
- seminars
- group discussions and peer review
- presentations

Supervisory Process and Timeline

There are eight meetings between Student Teachers and their respective supervisors. As there are 16 weeks in the course, meetings will be scheduled with supervisors on certain weeks.

First meeting

Orientation

Second meeting

Discussion, refinement, and finalization of research proposal

Third meeting

Seminar about development and critical analysis of literature review

Fourth meeting

- Seminar/group discussion on the significance of the research problem
- Discussion on the significance of selected research topics
- Discussion about data collection tools such as interviews, observations, and questionnaires

Fifth meeting

Discussion on fieldwork and the data collection process

Sixth and seventh meetings

16 Discussion about data analysis

17 Seminar

Eighth meeting

- Final discussion on report writing
- Submit project

Suggested Readings

- Arnot, M., McIntyre, D., Pedder, D., &Reay, D. (2004). *Consultation in the classroom:Developing dialogue about teaching and learning*. Cambridge, UK: Pearson Publishing.
- Cochran-Smith, M. (1994). The power of teacher research in teacher education. In S. Hollingsworth & H. Sockett (Eds.), *Teacher research and educational reform* (pp. 22–51). Chicago: University of Chicago Press.
- Denzin, K., & Lincoln, Y. S. (Eds.). (1994). *Handbook of qualitative research.* London: Sage Publications.
- Feldman, A. (2007). Validity and quality in action research. *Educational ActionResearch, 15,* 5–21.
- Lunenberg, M., Ponte, P., & van der Ven, P. H. (2007). Why shouldn't teachers and teacher educators conduct research in their own practices? *European EducationalResearch Journal, 6*: 13–24.
- Martin, M. (2005). Reflection in teacher education: How can it be supported?
- *Educational Action Research, 13,* 525–43.
- McNiff, J., Lomax, P., & Whitehead, J. (1996). *You and your action research project.* New York: Routledge.
- Ponte, P., (2002). How teachers become action researchers and how teacher educators become their facilitators. *Educational Action Research, 10,* 399–423.
- Ponte, P., Ax, J., & en Beijaard, D. (2004). Don't wait till the cows come home: Action research and initial

teacher education in three different countries. *TeachersandTeaching: Theory and Practice, 20,* 591–621.

SYLLABUS 3

By
DrMussaret Anwar Sheikh, TariqueBhatti, and IntizarHussain

Year, semester
Year 4, semester 8

Credit value
3 credits

Prerequisite
Successful completion of semesters 1–7

Course Description
The research project is based on the research proposal prepared in the Research Methods in Education course in semester 7 of the B.Ed. Hons Elementary program. In the Research Projects in Education course, the proposal will be put into action and research conducted. Because it is not a traditionally taught course, the course will be in the form of face-to-face meetings with the supervisor, field visits linked with action research, and group discussions. Collaborative meetings for five milestones will be held with the supervisors to address common issues that arise during the action research process.

Learning Outcomes
After completion of this course, Student Teachers will be able to do the following:

- identify areas for action research
- develop research questions and research tools
- conduct action research
- identify different styles of referencing, citing, and presenting research work
- choose a relevant and appropriate methodology for research work.

Course Outline
The following table can be used for meetings/milestones between Student Teachers and supervisors to keep a record of their work.

Date of meeting (milestone)	Discussion Points	Actions to be taken	Possible Feedback	Signature of supervisee/ supervisor

Milestone 1 (weeks 1–2)
This meeting will be an initial orientation and introduction to the project. Student Teachers and supervisors will aim to accomplish the following:

- prepare a timeline of the project
- identify the supervisor's role and the supervisee's responsibilities
- plan the meeting schedule

- discuss the schedule of conducting of research
- discuss the meeting form as a record of research process.

Milestone 2 (weeks 3–5)

This meeting will involve a discussion on the steps to take before Student Teachers begin conducting research. Student Teachers and supervisors will aim to accomplish the following:

- discuss getting consent and completing entry negotiations with concerned authorities
- discuss data collection tools
- consider the required data on variables such as the school, school schedule, school facilities, information on the class, the students, the teachers, and family background.

Milestone 3 (weeks 6–9)

In this meeting, Student Teachers and supervisors will aim to accomplish the following:

- discuss points arising from the first research cycle and needed changes in data collection
- follow up on feedback of the first cycle
- discuss ongoing data analysis.

Milestone 4 (weeks 10–13)

This meeting will involve reviewing the changes that have been made after the previous discussion on the first cycle. Student Teachers and supervisors will aim to accomplish the following:

f) plan for the second cycle
g) review up-to-date written documents on the research process prepared by the Student Teachers.

Milestone 5 (weeks 14–16)

This meeting will involve discussing continued improvements and refinements as well as the ongoing cyclic process. Student Teachers and supervisors will aim to accomplish the following:

- discuss data analysis and the writing process
- present the action research project.

Role of Supervisor

The supervisor should provide guidance to Student Teachers completing their research projects by doing the following:

- facilitating project planning
- setting the meeting schedule
- conducting seminars on issues arising out of the research project
- specifying the nature of the seminar so Student Teachers may share their success stories
- monitoring timelines to ensure that the research project is completed in a timely manner
- sharing rubrics for evaluation of the project
- providing guidelines for project presentations
- offering guidelines for publishing and dissemination.

Suggested Literature

- Creswell, J. W. (2008). *Research design: Qualitative, quantitative, and mixed methodsapproaches.* Thousand Oaks, CA: Sage Publications.
- Flower, F. J. (2008). *Survey research methods: Applied social research methods.* Thousand Oaks, CA: Sage Publications.
- Marshall, J. C. (2010). *Classroom test construction*. Boston: Addison-Wesley.
- McNiff, J., Lomax, P., & Whitehead, J. (1996). *You and your action research project.* New York: Routledge.
- Salkind, N. J. (2006). *Exploring research*. New Jersey: Pearson Prentice-Hall.
- Wiersma, W. (2000). *Research methods in education*. Boston: Allyn and Bacon.

TEACHING NOTES

By AsimaIdress, DrFazalurRahman, Dr M. AjmalChaudhary, and SafiaWazir

Detailed weekly plan

Week 1: Orientation meeting

Objective
To orient Student Teachers to the research project

In the first week, the Instructor will hold an orientation session with Student Teachers. In this meeting, the Instructor will familiarize Student Teachers with the process of the research project and prepare them for the steps to be completed during the semester.

Weeks 2–3: Reviewing and refining the research proposal

Objectives

2 To give feedback on Student Teachers' research proposals
3 To assign supervisors to the Student Teachers
4 To guide Student Teachers through the next step of their research

In weeks 2 and 3, Student Teachers will work on different sections of their proposals. They will then present their proposals, and their Instructor will offer feedback and suggestions. Instructors will also offer guidance in collecting relevant literature.
Based on the area of study and nature of the research project, Student Teachers will be assigned a project supervisor.

4–5: Constructing and finalising the research instrument

Objectives

- To discuss intervention strategies with supervisors
- To construct a research instrument

In weeks 4 and 5, Student Teachers will develop a research instrument, the reliability and validity of which will be examined. Student Teachers will submit their written work to their supervisor for feedback. Supervisors will discuss intervention strategies (such as small group work, reading, and activities) and reconnaissance (school, class climate, student profile, and teaching and learning process) with Student Teachers. Supervisors will also provide feedback and suggestions on an appropriate instrument to collect authentic data (e.g. an observation sheet, anecdotal records, checklists, and interview). The instrument will be finalised during this session.

Weeks 6–7: Conducting action research and applying interventions and research instruments

Objectives

20 To discuss using the research instrument to collect the data
21 To start the cyclic process of action research

Student Teachers will start the first cycle of their action research in the field. They will work according to the plan they devised with their supervisor.

Weeks 8-9: Analyzing collected data

Objectives

- To present collected data to supervisors
- To code items for data analysis

Student Teachers will present their collected data to their supervisors, who will provide feedback. Supervisors will also guide Student Teachers on coding items for data analysis and checking the reliability and validity of data obtained from a given item. Student Teachers will analyze the collected data per instructions from their supervisor.

Weeks 10–11: Revising strategies and drawing conclusions

Objectives

- To draw a conclusion
- To revise strategy
- To share findings with supervisors

After identifying themes, Student Teachers will draw the conclusion and elucidate findings accordingly. On the basis of findings, they will revise their implementation plan and strategy for the second cycle.

Weeks 12–13: Implementing the revised strategy

Objective

To implement the revised strategy in the second cycle.

Engage Student Teachers in the second cycle of action research.

Weeks 14–15: Writing the research report

Objective

To discuss writing the project report.

Supervisors and Student Teachers will discuss writing the research report (dissertation). Student Teachers will then have two weeks to write the report per the supervisor's instruction.

Week 16: Seminar presentation

Objective

To disseminate the action research project.
Student Teachers will present their action research projects in a departmental seminar.

Roles and duties of supervisors and supervisees

Supervisor's role

The supervisor will play the role of a facilitator, which will involve the following:

- helping plan activities
- giving orientation to Student Teachers

- monitoring Student Teachers' work
- providing motivation and giving feedback
- offering guidance to Student Teachers on:
  - finalizing the research proposal
  - locating resources for a literature review
  - developing an instrument for data collection
  - organizing and analyzing collected data
  - discussing findings and drawing a conclusion
  - writing the report
  - presenting the action research project.

Supervisee's role

As supervisees, Student Teachers will be expected to do the following:

- take initiative and responsibility
- discuss meeting schedules with their supervisor
- complete assigned tasks for each meeting
- take timely feedback from the supervisor and incorporate it as needed
- identify areas that need guidance from their Supervisor
- conduct the project in an ethically appropriate manner
- follow institutional rules and regulations
- submit their research report in a timely manner.

Rubrics for action research project (dissertation)

Level 1: Major changes needed	**Level 2: Minor changes Needed**	**Level 3: Conditionally Approved**	**Level 4: Approved**
Ambiguous, unclear proposal	Clear statement, but unclear objectives Methodology	Clear statement and objective, but methodology needs more clarity	Clearly stated and detailed proposal
Introduction, research objectives, and research questions			
Missing and ambiguous parts	Clear background information but needs more justification	Clear background but needs more detail	Proper background Clear and definite objectives, methodology, and significance of research
Literature review			
Irrelevant literature review Possible plagiarism Not well organized	Relevant literature review, but lacks Sequence Literature not up-to-date	Relevant but insufficient literature review	Relevant, well-organized, and up-to-date literature review with sufficient references

Research tools for data collection			
Improper sequencing of questions and formatting Inappropriate research tools for research question(s)	Objectives not addressed by the tools Tools irrelevant to and insufficient for the Project	Addressed objectives completely Appropriate but improperly designed research tools for answering research questions	Appropriate number of questions, addressed objectives, and proper sequence and formatting Properly designed research tools that answer research questions

Level 1: Major changes needed	**Level 2: Minor changes Needed**	**Level 3: Conditionally approved** cont.	**Level 4: Approved**
Data analysis and reflection			
Poor data analysis Missing reflection and next steps	Results of the intervention somewhat addressed by reflection	Results of the intervention and next steps somewhat addressed by reflection	Appropriate data analysis Results of the intervention and next steps clearly and thoughtfully addressed by reflection
Recommendations/ discussion			
Recommendations not based on findings Missing discussion	Some recommendations not linked with findings Missing discussion	Recommendations based on findings More elaboration needed on discussion	Recommendations based on findings Conclusion included in discussion
Format and structure			
References seldom cited to support statements	References occasionally provided, but many statements seem Unsubstantiated Sources of information Unclear	References generally cited to support claims Sources of information clear and fairly represented	Compelling references from reputable sources to support claims Sources of information clear and fairly represented
Many errors that obscure meaning and potentially confuse readers	Many errors that potentially distract Readers	Occasional errors, but they do not distract readers	Error-free (or nearly error-free) writing

SYLLABUS AND TEACHING NOTES

By Dr Muhammad Ilyas Khan, DrAsafNiwaz, Dr Allah Noor Khan, Dr Hafiz Inamullah, and DrArshad Ali

Research Project Procedure

The Research Projects in Education course is a compulsory part of the four-year B.Ed. (Hons.) Elementary program. Student Teachers will individually complete the project by conducting action research, which will be supervised by a tutor. The project will culminate in the form of a final report that will carry 100 marks.

Course Objectives

- To sensitize Student Teachers to the issues and problems faced by students in the classroom
- To help Student Teachers critically examine educational issues
- To analyse and review relevant literature
- To use data collection tools and analytical skills
- To act as self-reflective professionals and independent learners
- To develop and perform independent action research projects

Teaching-Learning Methodology

This is not taught as a traditional course. Rather, Student Teachers and supervisors will be involved in the following activities during the course of the project:

13. One-to-one meetings between Student Teachers and supervisors
14. Seminars
15. Group discussions and peer review
16. Presentations

Timeline and Supervisory Process

First (orientation) meeting (week 1)

Supervisors will introduce themselves as well as their academic and research backgrounds to Student Teachers. Similarly, Student Teachers will highlight their own academic and research interests in this initial meeting. Student Teachers will also be given an opportunity to discuss their action research plan, the proposal developed by in the Research Methods in Education course. After learning more about Student Teachers' proposed projects, supervisors may provide initial guidance by suggesting books and other materials for further study.

Second meeting (week 2)

In the second meeting, the supervisor will provide literature review assistance, particularly with regard to directing S tudent Teachers to relevant materials. The supervisor should also discuss different search methods, such as Google Scholar and other search engines, and potential resources, including free online journals, e-books, and e-theses. Student Teachers will be assigned the task of consulting relevant literature and developing a critical review. With this in mind, supervisors should work with Student Teachers to help them refine and finalize their research plans.

A useful way for Student Teachers to begin their literature review is through an online search for issues or questions related to their topic. Other sources may be found in libraries. Likewise, newspapers and archives could also be useful sources.

While completing their literature reviews, Student Teachers should focus on their research question or topic. This is essential to keep the process under control and to avoid engaging in tangential research that is irrelevant and a potential waste of time and resources.

Third meeting (week 3)

Supervisors should discuss different types of research tools and data collection processes with Student Teachers in this session. Specifically, the supervisor should provide guidance on developing a useful research tool and the pitfalls of the data collection process.

Useful research tools are able to focus on the research question or hypothesis. They may include questionnaires, interviews, and observations, all of which should be thoroughly prepared in light of study objectives and available data and information sources. For instance, sometimes new researchers prepare interview questions that do not serve to answer the research question. Sometimes interviews are selected as data collection tools, but there may be more appropriate data sources or better subjects to interview. Therefore, researchers should have alternative plans to accommodate any such eventualities.

Fourth meeting (week 4)

The supervisor will review Student Teachers' research tools and provide advice (as needed) on revisions or amendments. If a research tool is appropriate, it will be approved for data collection.

Ethical considerations during the data collection process will also be discussed. These are an important component of a valid research process. Ethical considerations include making sure participants' safety, security, and dignity are maintained.This can be done by taking steps to ensure their anonymity and confidentiality. Furthermore, researchers should obtain informed consent from participants regarding the use of data they provide.

Data collection (weeks 5–6)

Student Teachers will collect data during this period. In meetings with their supervisors, they should discuss the data collection process and their initial analyses. Supervisors should help determine if more data collection or more in-depth analysis is needed.

The data analysis process is ongoing, and after every cycle, Student Teachers will revise their previous plan and modify it according to emerged data.

Research seminar/workshop/group discussion (week 7)

Supervisor will conduct a seminar around Student Teachers' experiences during the data collection process. Student Teachers may choose to arrange a follow-up workshop or group discussion to further explore themes covered in the seminar.

Supervisors should be available during this period to discuss any difficulties Student Teachers have encountered during the data collection processes. They may also attend any follow-up sessions among the Student Teachers to learn more about possible issues and problems they are facing and to help them brainstorm solutions.

Continue cyclic procedure (week 8)

Student Teachers will continue the cyclic process of action research after modifying their collection and analysis processes.

Sixth and seventh meetings (weeks 9–10)

In meetings during this period, the supervisor should assess data analysis processes and discuss possible themes emerging from the research process thus far.

Eighth meeting (weeks 11–12)

The meeting during this period will involve fine-tuning the research findings and beginning the writing process.

Report writing is an important aspect of the research process and how the research findings will be disseminated. A research report usually consists of the background, the aims, the methodology adopted for the research process, and the outcomes and findings of the research. The structure and process of report writing depends on the type of research. In a quantitative research project, the report writing is usually completed toward the end of the project. In contrast, in qualitative studies, report writing is usually a continuous and flexible process, as changes are made to the scope, aims, and direction of the research process.

The supervisor should ensure that Student Teachers understand the variations between quantitative and qualitative reports with regard to research theses and papers.

Ninth meeting (week 13)

Student Teachers will submit their research reports to their supervisor.

Tenth meeting (weeks 14–15)

Supervisors will meet with Student Teachers to discuss feedback and revisions for the final draft. Student Teachers will revise their reports accordingly.

Eleventh meeting (week 16)

Student Teachers will submit their final research reports. This should be done on or before the last working day of the semester.

Resources

Online resources

- O'Brien, R. (1998). An overview of the methodological approach of action research. ➢ Available from http://www.web.ca/robrien/papers/arfinal.html

- Seidel, J. V. (n.d.). Qualitative data analysis.
- ➢ Available from http://www.scribd.com/doc/7129360/ Seidel-1998- Qualitative-Data-Analysis

Book

McNiff, J., Lomax, P., & Whitehead, J. (1996).*You and your action research project.* New York: Routledge.

Journals

- *Action Research*
- ➢ http://arj.sagepub.com

- *Educational Action Research*
- ➢ http://www.tandfonline.com/toc/reac20/current

- *Journal of Action Research*
- ➢ http://research.vancouver.wsu.edu/journal-of-action-research

- *International Journal of Action Research*
- ➢ http://www.hampp-verlag.de/hampp_e-journals_IJAR.htm

CONTENT COURSES FROM DISCIPLINE-I

English Elective (Poetry)

Content Course I

(From Selected Discipline I)

Semester 5

Course: English Elective (Poetry)

Semester: 5th **Year: 3** **Credit Value: 3 Hrs.**

Course Description:

Poetry is metrical and rhythmical language which enriches the imagination of readers through its beautiful lines. It arouses the aesthetic sense and it is due to this process that appreciation of poetry is born. This course will refine imagination of readers, through it, they will enjoy the rhythm, harmony and beauty of poetic lines and will also be able to criticize and study human life with all its aspects.

Learning Outcomes:

At the end of this course, students will be able to;

i) Refine and enrich their power of imagination.
ii) Enjoy the rhythm, harmony and beauty of poetic lines.
iii) Develop their Vocabulary and sense of Language.
iv) Criticize and study human life with all its aspects.

Teaching Learning Approaches:

A variety of teaching and learning approaches will be used throughout the course; Such as, identifying rhythm through stress and unstress pattern of syllables in the lines of poetry, reordering of words because in poetry syntax is sometimes subordinate to rhythm and sonic effects so that at places order of the sentences is inverted and it can be shown to the students to reorder the lines which will give them better understanding of the poem under study, deletion is another activity which can be used to give better understanding of the way the poets use words under the sway of the their needs for rhythm and sounds, at times poets use fewer words than the demand of the situation so students can't understand the lines, therefore students should be trained to note deficiency of words and to insert new words, and to substitute emotional words with plan words to note the meanings these lines give. There will also

be different levels of activities; such as, group discussions, presentations and critical appreciation on the part of students under the guidance of teacher in order to point out figures of speech, poetic devices and development of thought.

Week wise Distribution

Weeks	Session 1	Session 2	Session 3
Week 1	• To Dianeme • To Anthea Who may Command him Anything	• To Daffodils	• On his Blindness
Week 2	• The Sick Rose • The Tiger	• Introduction to Songs of Experience	• Love's Secret • The Sun Flower
Week 3	• The Daffodils	• It is a Beauteous Evening Calm and Free • It is not to be thought of	• The world • Composed upon WestminsterBridgeSep, 3, 1802
Week 4	• A slumber did my spirit seal • To Milton (London, 1802).	• The Solitary Reaper	• The Solitary Reaper
Week 5	• Ode: Intimations of Immortality from Recollections of Early Childhood	• Ode: Intimations of Immortality from Recollections of Early Childhood	• Ode: Intimations of Immortality from Recollections of Early Childhood
Week 6	• Kubla Khan	• Kubla Khan	• Kubla Khan
Week 7	• Ode to the West Wind	• Ode to the West Wind	• Ode to the West Wind
Week 8	• Stanzas written in Dejection, near Naples	• Stanzas April – 1814 • To Night	• Song • A widow bird state mourning for her love
Week 9	• On first looking into Champman's Homer	• To Autumn	• Ode to Nightingale
Week 10	• Ode on a Grecian Urn	• To Sheep • Ode on Melancholy	• La Belle Dame Sans Merci
Week 11	• Ulysses	• Ulysses	• Ulysses
Week 12	• The Lotos Eaters	• The Lotos Eaters	• The Lotos Eaters
Week 13	• Break, Break, Break • Tears, Idle Tears	• The Patriot • Love among the Ruins	• My Last Duchess
Week 14	• Sailing to Byzantium	• Sailing to Byzantium • Byzantium	• Byzantium
Week 15	• Among School Children	• Among School Children	• Among School Children
Week 16	• The Hollow Men	• The Hollow Men	• The Hollow Men

Prescribed book:

The Winchester book of verse

Grading Policy ;

Twenty (20) marks will be given on the basis of internal evaluation; i.e

Assignment (A)

Appreciate any two of the following poems;

i.	The Daffodils (William Wordsworth)	5
ii.	Kubla Khan (S.T. Coleridge)	5
iii.	Ode on a Grecian Urn (John Keats).	5

Assignment (B)

Appreciate any two of the following poems;

i.	Ulysses (Alfred Lord Tennyson)	5
ii.	My Last Duchess (Robert Browning)	5
iii.	Sailing to Byzantium (W.B.Yeats)	5

Thirty (30) marks will be allotted to midterm examination and fifty (50) marks will be awarded on the basis of final term examination.

Apart from that there will be several non-graded assignments / informal evaluation.

English Elective (Poetry)
Content Course II
(From Selected Discipline I)
Semester 6

Course: English Elective (Modern English Prose)

Semester: 6th **Year: 3** **Credit Value: 3 Hrs.**

Course Description:

The scope of the book," Modern English Prose" is rather comprehensive. Practically every type of modern prose has been illustrated. There are extracts from professors, critics, journalists, historians, novelists, philosophers, even from an economist and a scientist. Every phase of modern life has been treated in these extracts. In the book, the extracts have been grouped under three heads: (a) History and Biography, (b) Fiction, (c) Essays and Literary Criticism.

Many of the pieces included in the first group are really contemporary history blended with biography. For the second group, fiction is a loose enough term, we have in this section extracts from novels, entire short stories.

The third group is comprised of: pure essays and literary criticism.

Learning Outcomes:

At the end of this course, students will be able to;

i. Develop their language ability
ii. Develop their power of imagination
iii. Enjoy reading and writing
iv. Get acquainted with the lives and deeds of great men
v. Comprehend literary criticism

Teaching and Learning Approaches:

Various types of teaching and learning approaches will be used through out the course; such as, reading for comprehension, students will be motivated to read for enjoying the literary language and knowledge of the content. Students will be given instructions to read intensively in order to understand the theme and other technical aspects of the texts. During the intensive teaching strategies, students will be advised to use judgment, reasoning, interpretation and appreciation in order to grasp the texts from various aspects and angles. Students will be trained to pick writer's intentions, arguments, style in the texts, so that to enjoy the texts and know about its technical and literary aspects. Moreover, students will be involved in activities; such as, group discussions,

pair share, etc. Students will also be prepared for extensive reading strategies e.g. reading for pleasure and fluency.

Week wise distribution

Parts	Weeks	Session 1	Session 2	Session 3
History and Biography (Part 1)	Week 1	The Gentle Shakespeare	The Gentle Shakespeare	The Sack of Rome
	Week 2	Napoleon	Napoleon / The Duke of Willington	The Duke of Willington
	Week 3	Gladstone	The Storm	The Storm
	Week 4	The Lusitania	The Lusitania	Lenin
	Week 5	War Guilt	Lord Oxford and Asquith	The Patriotism of Britain
Fiction (Part 2)	Week 6	The Bridge	The Ghost Ship	The Ghost Ship
	Week 7	At the River's Edge	The Baiting	The Baiting
	Week 8	The Tea Shop	The Farm	The Farm
	Week 9	In Charge	In Charge / The Great Exhibition	The Great Exhibition
	Week 10	A Village Cricket Match	The Last Meal	The Last Meal
Essays and Literary Criticism (Part 3)	Week 11	A Piece of Chalk	A Piece of Chalk / Macbeth	Macbeth
	Week 12	Lord Cantilupe's Political Faith	Lord Cantilupe's Political Faith / Caesar's Funeral	Caesar's Funeral
	Week 13	Walking	Walking / The World of Work	The World of Work
	Week 14	Style	Style / Innovations in Poetry	Innovations in Poetry
	Week 15	The Purpose of Education	The Purpose of Education / Remedying World Finance	Remedying World Finance
	Week 16	The Future of Earth	The Future of Earth	Review of the Course

Prescribed Book:

Modern English Prose

By: Guy Boas, M.A.

Grading Policy:

Twenty (20) marks will be allotted on the basis of internal evaluation; i.e.

Assignment: Attempt all the questions

Q.1. Compare and contrast Belloc's attitude towards Napoleon with Guedalla's attitude towards Wellington. Write a brief comparative estimate of their prose. 07

Q.2. What makes the description of the TayBridge so vivid and gripping? 05

Q.3. What are the prominent features of the world of Dickens as portrayed by QuillerCouch.Explain. 08

Thirty (30) marks will be given on the basis of midterm examination and fifty (50) marks will be awarded on the basis of final term examination.

There will also be informal assessments throughout the semester.

English Elective (Novel)
Content Course III
(From Selected Discipline I)

Semester 7

Course: English Elective (Novel)

Semester: 7th **Year: 4** **Credit Value: 3 Hrs.**

Course Description:

This course is comprised of two novels: 1). “Lord of the Flies” and 2) “A passage to India”. Novel is taken from the French word, “Novela”, which means something new. Novel is a story in fiction having a plot with realistic touches of life.

Lord of the Flies is an allegorical novel dealing with the theme of evil and the conflict between evil and good. Golding himself has said that the novel shows not the triumph of evil over good. But good rescued from the clutches of evil. Golding has shown narrative gift in the novel and a lot of suspense is created in the course of the story and we want eagerly and anxiously for what will happen next. There are realistic pictures of boys behaviour about if there are no social control and parental authority. In this novel, Golding has also shown his gift for character Portrayal. There is suspense and abundance of dramatic situations. If fear and terror are the dominant note of “Lord of the Flies”, Pathos is not far behind.

A passage to India deals with the Anglo Indian relationship in which both the English and the American were interested. Two great races with different heritage and history happened to meet. Aziz and Fielding represent two great races which came into contact on an unequal footing. The Novel expands on the theme of fiction and fission, love and hatred , separation and union , negation and affirmation. Mrs. Moore impelled by her good nature wanted to promote relations with Indians but Adela Quested wanted to know Indians without knowing the Indians. Foster belonged to an age when belief in absolute values were eroded. Foster has shown impartiality in the portrayal of his main characters. His characters are both round and flat.

The novel is an example of classical compactness. It is a balanced combination of apt phrases, ironical remarks and symbolism. Political, Social and Spiritual aspects of life have been touched in this novel.

Learning Outcomes:

At the end of this course Students will be able to;

i. Gain knowledge of some facts and learn some lesson through the story.
ii. Acquaint themselves with the style of story writing/ narrative style.
iii. Comprehend Literary Language and terms.
iv. Improve their reading skills.

Teaching and Learning Approaches:

A number of teaching and learning approaches will be followed through which students will be enabled to demonstrate their understanding of story theme, character development, plot, vocabulary and other story elements. They will be asked to connect a theme of the novel to their own lives. Students will be asked to share their point of view, their interests, concerns or social issues. Students will be helped by the teachers to follow reading skills and strategies; such as, assign each page a title, form anticipatory questions, jot down questions throughout each chapter, underline vocabulary which is critical to understand the text and mark any literary devices, etc.

Week wise Distribution

Novel: Lord of the Flies

Weeks	**Session 1**	**Session 2**	**Session 3**
Week 1	Chapter-1: Sound of the Shell	Chapter-1: Sound of the Shell	Chapter-2 Fir of the Mountain
Week 2	Chapter-2: Fire on the Mountain	Chapter-3: Huts on the Beach	Chapter-3: Huts on the Beach
Week 3	Chapter-4: Painted Faces and Long Hair	Chapter-4: Painted Faces and Long Hair	Chapter-5 Beast from Water
Week 4	Chapter-5 Beast from Water	Chapter-6: Beast from Air	Chapter-6: Beast from Air
Week 5	Chapter-7 Shadows and Tall Trees	Chapter-7 Shadows and Tall Trees	Chapter-8: Gift for the Darkness
Week 6	Chapter-8: Gift for the Darkness	Chapter-9: A View to a Death	Chapter-9: A View to a Death
Week 7	Chapter-10: The Shell and the Glasses	Chapter-10: The Shell and the Glasses	Chapter-11: Castle Rock
Week8	Chapter-11: Castle Rock	Chapter-12: Cry for the Hunters	Chapter-12: Cry for the Hunters

Week wise Distribution

Novel: A Passage to India

Weeks	**Session 1**	**Session 2**	**Session 3**
(Part –I, **Mosque**) Week 9	Chapter- 1	Chapter-2	Chapter- 2
Week 10	Chapter-3	Chapter- 4	Chapter-5
Week 11	Chapter-6	Chapter-7	Chapter-8
Week 12	Chapter-8	Chapter: 9-10	Chapter-11
(Part-2, **Caves**) Week 13	Chapter: 12-13	Chapter: 14-15	Chapter: 16-18
Week 14	Chapter: 19-20	Chapter: 21-23	Chapter - 24
Week 15	Chapter: 25-26	Chapter: 27-29	Chapter: 30-32
(Part-3 **Temple**) Week16	Chapter: 33-34	Chapter: 35-36	Chapter: 36-37

Prescribed Books:

- Lord of the Flies by William Golding.
- A Passage to India by E.M. Foster.

Grading Policy

Twenty (20) marks will be given on the basis of internal evaluation; i.e

Assignment (A): Critically appreciate the novel “Lord of the Flies” while supporting your arguments by giving criticism of prominent literary critics. 10

Assignment (B): Critically appreciate the novel “A Passage to India” while supporting your arguments by giving criticism of prominent literary critics. 10

Thirty (30) marks for mid-term examination and fifty (50) marks for final term examination. There will also be various types of informal evaluation throughout the semester.

Physics

Content Course I

(From Selected Discipline I)

Semester 5

MECHANICS

TOPICS	SCOPES.
1. VECTOR OPERATIONS:	
• Vector in 3 dimensions.	Introduction, Direction Cosines, Spherical polar coordinates, applications.
• Vector Products.	Scalar and Vector Products, Multiple Products
• Vector derivatives and operations.	Divergence and curl of a vector, and gradient of a scalar.
• Gradient, Divergence and	Physical applications of each type,
• curl of a Vector. field, curl and line integral	Divergence and Flux of a Vector
• Vector Integrations	Line, Surface and Volume Integrals
• Divergence Theorem.	Derivation, Physical importance and
• application to specific cases.	
• Converting from differential to integral forms.	
• Stokes' Theorem.	
2. PARTICLE DYNAMICS.	
• [Advanced applications of Newton's laws].	Frictional forces: microscopic basis of this force.
	Dynamics of Uniform Conical pendulum; the rotor, motion the banked curve.
• Equation of motion.	Deriving kinematics equations X(t), V(t) using integrations. Constant and Non constant Forces and special examples.
• Time dependent forces.	Obtaining X(t), V(t) for this case using integration method.
• Effect of drag forces on motion.	Applying Newton's Laws to obtain V(t) for the case of motion with time dependent drag (viscous) forces, terminal velocity. Projectile motion/air resistance.
• Non inertial frames and Pseudo forces.	Qualitative discussion to develop Calculation of pseudo forces for simple
Cases (linearly accelerated referenceframe).	
	Centrifugal force as an example of pseudoforce, carioles force.
• Limitation of Newton's	Discussion.

Laws.

- Suggested level. **Ch:6: Resnick, Halliday and Krane. (R.H.K.) Vector Analysis, Dr. Muhammad Ali Khattak, University of Peshawar. Vector Analysis, Muhammad Afzal. Vector Analysis, Dr. S.M. Yousaf.**
- **3. WORK AND ENERGY.**
- Work done by a constant force, work done by a variable force (1-Dimention). Essentially a review of grade-XII concepts use of integration work done (e.g. in vibration of a spring obeying Hook's Law).
- Work done by a variable force (2-dimemsional case). Obtaining general expression force and applying to simple cases e.g. pulling a mass at the end of a fixed string against gravity.
- Work energy theorem, General proof of work energy theorem. Qualitative Review of work energy theorem. Derivation using integral calculus. Basic formula; and applications.
- **4. Power.**
- Reference Frames frames. Energy changes with respect to observermin different inertial

Recommended book (HollydayResnik&Krane)

5. CONSERVATION OF ENERGY.

- Conservative, and non conservative forces. Definition of either type of force & examples; work done in a closed path. 1-D conservative system; force as the gradient of potential energy, applications in the case of a spring and force of gravity.
- One-dimensional conservative system. Obtaining velocity in terms of U and E; stable, unstable and neutral equilibrium. Analytic solution for x(t).
- 2,3 dimensional conservative system. Change in P.E. for motion in 3-d. Force as the gradient of the potentials. Work done in 2,3, dimensional motion.
- Conservation of energy in a system of particles. Law of conservation of total energy of an isolated system.

Recommended book (HollydayResnik&Krane)

6. SYSTEMS OF PARTICLES.

- Two particle systems and generalization to many particle systems. Centre of mass: Its position velocity and equation of motion.
- Centre of mass of solid objects. Calculating C.M. of; Uniform Rod. Cylinder. Sphere. Calculation of Centre of Mass of solid objects using integral Calculus.
- Momentum changes in a system of variable mass. mass as a function of time). Derivation of basic equation; application to motion of rocket (determination of its

Recommended book (HollydayResnik&Krane)

7. COLLISION.

- Elastic collision, Conservation of momentum during collision.
- Inelastic collision, collision in centre of mass reference frame.

a) One dimensions.
b) Two dimensions (Oblique collisions)
One and two dimension. Simple applications obtaining velocities in c. m. frame.

Recommended book (HollydayResnik&Krane)

8. ROTATIONAL DYNAMICS.

- Overview of rotational Dynamics. Relationships between linear & angular variables, scalar and vector form. Kinetic energy of rotation; Moment of inertia.
- Parallel axis theorem. Prove and Illustrate; apply to simple cases.
- Determination of moment Equations of rotational motion and effects of inertia of various shapes.

  application of torque.
- Rotational dynamics of rigid bodies.
- Combined rotational and transactional motion. Rolling without slipping.

Recommended book (HollydayResnik&Krane)

9. ANGULAR MOMENTUM.

- Angular velocity. Definition, Conservation of angular momentum, effects of Torque.
- Stability of spinning objects. Discussion with examples.
- The spinning Top. Effects of torque on the angular momentum, precessional motion.

Recommended book (HollydayResnik&Krane)

10. GRAVITATION.

- Review of basic Concepts of Mathematical treatment.
- gravitation. Gravitational effect
- of a spherical mass distribution.
- Gravitational potential energy. Develop equation using integration techniques; calculation of escape velocity.
- Gravitational field & potential. Develop the idea of field of force.
- Universal Gravitational law. Motion of planets and Kepler's Laws.

  (Derivation & explanation). Motion of

  satellites.

  Energy considerations in planetary and

  satellite motion, Qualitative discussion

  on application of gravitational law to the

  Galaxy.

Recommended book (HollydayResnik&Krane)

11. BULK PROPERTIES OF MATTER.

- Elastic properties of matter. — Physical basis of elasticity Tension, Compression & Shearing. Elastic Modulus, Elastic limit.
- Fluid Static's. — Variation of pressure in fluid at rest and with height in the atmosphere.
- Surface Tension. — Physical basis; role in formation of drops and bubbles.

Recommended book (HollydayResnik&Krane)

12. Fluid Dynamics.

General concepts of fluid flow; streamline and the equation of continuity.

- Bernoulli's Equation. — Derivation and some applications such as dynamic lift thrust on a rocket.
- Viscosity. — Physical basis; obtaining the coefficient of viscosity, practical example of viscosity, fluid flow through a cylindrical pipe [Poisenille's law].

Recommended book (HollydayResnik&Krane)

13. SPECIAL THEORY RELATIVITY.

- Trouble with classical Mechanics. or paradoxes in classical ideas of time, length, and velocity. — Qualitative discussion of the inadequacy
- Postulates of Relativity. — Statements and Discussion.
- The Lorentz Transformation, inverse transformation. — Derivation, Assumptions on which derived; application of the same Transformation of Velocities.
- Consequences of Lorentz transformation. — Relativity of time; relativity of length.
- Relativistic momentum. — Derivation.
- Relativistic energy. — Derive E = mc2.

Recommended book (HollydayResnik&Krane)

Practical's suggestion

a) During the two years of B.Sc. the students be required to perform one mini project, in addition to 12 experiments per section (i.e. Section-A: 12 Experiments, Section-B: 12 Experiments, + 1 mini project). The distribution of marks between experiments and project would be,

Practical-A : 15 marks, Practical-A : 10 marks,

Practical-B : 15 marks, OR Practical-B : 10 marks,

Project : 10 marks,

Total : 30 marks. Total : 30 marks.

While the students would be expected to construct and submit the report of the project, they would be expected to demonstrate working and be examined in detail for the project at the time of final examination.

b) The projects should conform to a standard requiring a level of construction and data acquisition etc. To specify this level, a list of projects with the detailed write-ups was provided by the committee. It would be the responsibility of the colleges to provide the student with major equipment while the students would be expected to provide consumable parts. The teachers would be expected to help and guide the students in the choice, construction and use of the projects to obtain data.

LIST OF PROPOSED EXPERIMENTS TO BE INTRODUCED AT B.SC. LEVEL IS AS

PRACTICAL – A

TITLE OF EXPERIMENT:

(Mechanics, Properties of matter, Heat, Waves, Electricity and Magnetism).

1. Modulus of rigidity by static and dynamic methods.
2. To study the damping features of an oscillating system using Simple pendulum of variable mass.
3. Measurement of viscosity of liquid by stoke's/ Poiseulli's method.
4. To study the dependence of centripetal force on mass, radius, and angular velocity of a body in circular motion.
5. Investigation of phase change with position in a travelling wave and measure the velocity of sound by C.R.O.
6. Calibration of thermocouple, metal resistance and thermister using a digital multimeter.
7. Determination of stefan's constant.
8. Measurement of refractive index of liquid by Newton's rings.
9. Measurement of velocity of light using Laser and a rotating mirror.
10. Measurement of Planck's constant using spectrometer.
11. To study the characteristics of photo emission and determination of Planck's constant using a photo cell.
12. Measurement of specific rotation of sugar by polarimeter and determination of sugar concentration in a given solution.
13. Determination of wavelength of Laser Light by diffraction grating and comparing the resolution of different grating.
14. Measurement of time constant (T=CR) of capacitor (RC) system and use of the same as differentiator and integrator.
15. Measurement of Dielectric constant of different solids using read switch method.
16. To study variation of magnetic field produced by a Current carrying

(a) Straight Conductor.

(b) Circular Loop as a function of position and current using a search coil and CRO.

17. To study magnetic force law between two current carrying coils.

18. To study the B-H curve and measuring the magnetic parameters.

PRACTICAL – B

(Modern Physics and Electronics)

19. Measurement of Hall effect in a Semi-Conductor wafer.

20. To Study the characteristic curves of a G. M. counter and use it to determine the absorption coefficient of (-Particle in Aluminium.

21. To study the following characteristics in an Acceptor / Rejecter Circuit (i) Frequency response (ii) Band width (iii) phase relation

(iv) Measurement of L.

22. Determination of e/m of electron.

23. To set up a half wave and fullwave rectifier and study the following factors:

(i) Smoothing effect of a capacitor.

(ii) Ripple factor and its variation with load.

(iii) Study of regulation of output voltage with load.

24. To set up a single stage transistor amplifier and measure its

(i) voltage gain

(ii) Band width.

25. To set up an oscillator circuit and measure its frequency by an oscilloscope.

26. To set up and study various logic gates (AND,OR NAND etc.) using diode and to develop their truth table.

27. To set up an electronics switching circuit using transistor LDR and demonstrate its use as a Not Gate.

28. Determination of Range -Energy Curve for particle and determination of air equivalent of Mica and Aluminium.

29. To study randomness of nuclear decay using G. M. counter and determining the decay characteristics of radioactive materials.

30. Detection of Nuclear Radiations by parallel plate ionization chamber and verification of inverse square law.

31. To study the properties of a plasma using a flame and metallic pendulum.

32. To study Voltage-Current characteristics of an Electric discharge in

(i) Neon

(ii) Krypton

(iii) Argon

(iv) Mercury

(Any three) discharge tubes.

LIST OF SUGGESTED PROJECTS

1. Colliding objects.
2. Energy transformations ET-1.
3. Angular Momentum.
4. Energy Transformation-II.
5. Falling objects.
6. Vibrating systems.
7. Electrostatic Force.
8. Building and Electrometer/application.
9. Building high voltage power supply.
10. Building an amplifier using op-amps.
11. Building a low voltage power supply.
12. To Construct an Electrical Resonance system.
13. Magnetic forces.
14. Centripetal force.

Physics

Content Course II

(From Selected Discipline I)

Semester 6

WAVES AND OSCILLATIONS

TOPICS.	SCOPES
1. Harmonic Oscillations.	
• Simple harmonic oscillation (SHM).	Obtaining and solving the basic equations of motion x(t), v(t), a(t) Energy. Considerations in S.H.M.
• Application of SHM	Torsional Oscillator; Physical pendulum, simple pendulum.
• SHM and uniform circular motion, combinations of Harmonic motions.	Lissaajous patterns.
• Damped Harmonic Motion.	Equation of damped harmonic motion, discussion of its solution.
• Forced Oscillation and resonance.	Equation of forced oscillation, discussion of its solution.

Recommended book (HollydayResnik&Krane)

2. WAVES.	
• Mechanical waves Travelling waves. dispersion.	Phase velocity of travelling waves; sinusoidal waves; Group speed and
• Waves speed.	Mechanical analysis.
• Wave equation.	Discussion & solution.
• Power and intensity in wave motion.	Derivation & discussion.
• Principle of superposition (basic ideas)	Interference of Waves, standing Waves. Phase changes on reflection; Natural frequency, resonance.

Recommended book (HollydayResnik&Krane)

3.SOUND.	
• Beats Phenomenon.	Analytical treatment.
• Doppler Effect. object and source moving.	Moving source, moving observer, both

Recommended book (HollydayResnik&Krane)

4. LIGHT.

• Nature of light. • Light as an Electromagnetic wave.	Visible light (Physical characteristics) Speed of light in matter: Physical aspects, path difference, phase difference etc.

Recommended book (HollydayResnik&Krane)

5.INTERFERENCE

`	Coherence of sources; Double slit interference, analytical treatment. Adding of Electromagnetic waves using phasors.
• Interference from thin films. • Michelson Interferometer.	Newton's rings (analytical) treatment. (Discussion to include use of a compensating plate; Michelson interferometer use in determining velocity of light. FresnelsBiprism and its use.

Recommended book (HollydayResnik&Krane)

• Diffraction.	Diffraction at single slit; intensity in single slit diffraction using phasor treatment and analytical treatment using addition of waves. Double slit interference & diffraction combined. Diffraction at a circular aperture.
• Diffraction from multiple slits	Discussion to include width of the maxima.

• Diffraction grating.	Discussion, use in spectrographs. Dispersion and resolving power of gratings.

Recommended book (HollydayResnik&Krane)

• Holography.	Qualitative discussion.
• Polarization.	Basic definition, production of
• polarization by polarizing sheets, by reflection, by double refraction and double scattering.	
• Description of polarization states.	Linear, Circular, elliptic polarization.
• Rotation of plane of polarization.	Use of polarimeter

Recommended book (HollydayResnik&Krane)

7. THERMODYNAMICS

• Temperature, Kinetic theory of the ideal gas, work done on an ideal gas.	Review of previous concepts.
• Internal energy of an ideal gas.	To include the Equipartition of energy.
• Intermolecular forces.	Vander Waals equation of state. Qualitative discussion.

Recommended book (HollydayResnik&Krane)

8. STATISTICAL MECHANICS.

• Statistical Distribution and Mean values.	Mean free path and microscopic calculations of mean free path.
• Distribution of molecular speeds, distribution of energies.	Maxwell distribution; Maxwell Boltzmann energy distribution; internal energy of an ideal gas.
• Brownian motion.	Qualitative description. Diffusion, conduction and viscosity.

Recommended book (HollydayResnik&Krane)

9. HEAT.

• Review of previous concepts.	First law of Thermodynamics & its
• First law of thermodynamics, transfer of heat.	applications to adiabatic, isothermal, cyclic and free expansion.

Recommended book (HollydayResnik&Krane)

10. ENTROPY & SECOND LAW OF THERMODYNAMICS.

• Reversible and irreversible processes, 2nd law. Carnot cycle, Carnot engines.	Definition, discussion. Heat engine. Refrigerators& Second Law. Calculation of efficiency of heat engines.
• Thermodynamic temperature scale.	Absolute Zero: negative temperature, (discussion).
• Entropy.	Entropy in reversible process. Entropy in irreversible process. Entropy & Second Law. Entropy & probability.

Recommended book (HollydayResnik&Krane)

• Low Temperature physics.	Liquefaction of gases: Joule Thomson effect.

Physics

Content Course III

(From Selected Discipline I)

Semester 7

ELECTRICITY AND MAGNETISM

TOPICS.	SCOPE.
1. ELECTROSTATICS.	
• Electric Charge: Conductors and • Insulators Vector form of • Coulomb's Law. • Quantization and conservation of charge. • (Discussion)	(Review of previous concepts) Coulomb's law for point charges.
2. ELECTRIC FIELD.	
• Field due to a point charge; due to • several point charges, electric dipole. • Electric field of continuous • charge distribution. • Point charge in an electric field. • Dipole in an electric field. • Gauss's Law. • (Integral and differential forms) • Applications of Gauss's Law • (Integral Form).	e.g. Ring of charge; disc of charge infinite line of charge. Torque on and energy of a dipole in a uniform field. Electric flux; Gauss's law; Charged isolated conductors; conductor With a cavity, field near a charged conducting sheet. Field of infinite line of charge; Field of infinite sheet ofcharge. Field of spherical shell. Field ofspherical charge distribution.
3. ELECTRIC POTENTIAL.	
• Potential due to point charge. • Potential due to collection of point charges. • Potential due to dipole. • Electric potential of continuous charge distribution. • Equipotent surfaces. • Calculating the field from the potential.	Field as the gradient of derivative of potential. Potential and field inside and outside an isolated conductor.
4. CAPACITORS AND DIELECTRICS.	
• Capacitance; calculating the electric • field in a capacitor. Capacitors of • various shapes, cylindrical, spherical • etc. Energy stored in an electric field.	

- Energy per unit volume. Capacitor with dielectric. — Electric field of dielectric: An atomic view.
- Application of Gauss' Law to capacitor with dielectric.

5. ELECTRIC CURRENT.

- Electric Current. — Current density, Resistance, resistivity,
- conductivity (Microscopic & macroscopic view of resistivity).
- Ohm's Law. — Basic definition. Analogy between current and heat flow. Microscopic view of ohms law. Energy transfers in an electriccircuit.
- Semiconductors, superconductors. — Descriptive, giving basic idea.

6. DC CIRCUITS.

- Calculating the current in a single loop, multiple loops; — Use of Kirchoff'sIst& 2nd Law.
- voltages at various elements of a loop.
- RC Circuits. — Growth and Decay of current in an RC circuit. Analytical treatment.

Recommended book (HollydayResnik&Krane)

7. MAGNETIC FIELD EFFECTS.

- Magnetic field, B. — Basic idea.
- Magnetic force on a charged particle, magnetic force on a current. Torque on a current loop. — Recall the previous results. Do not derive.
- Magnetic dipole. — Define. Energy of magnetic dipole in field. Discuss quantitatively.

Recommended book (HollydayResnik&Krane)

8. AMPERE'S LAW.

- Biot-Savart Law. — Analytical treatment and application to a
- current loop, force on two parallel current carrying conductors.
- Ampere's Law. — Integral and differential forms;
- application to solenoids and
- toriods. (Integral form).

Recommended book (HollydayResnik&Krane)

9. FARADAY'S LAW OF ELECTROMAGNETIC INDUCTION.

- Faraday's Law. — Magnetic flux. consequences of Faraday's Law.
- Lenz's Law. — Discussion, Eddy currents etc.
- Motional E.M.F. — Quantitative analysis.
- Induced electric fields. — Calculation and application.

Recommended book (HollydayResnik&Krane)

10. MAGNETIC PROPERTIES OF MATTER.

- Gauss's Law for Magnetism — Discussing and developing concepts of
- conservation of magnetic flux;
- differential form of Gausses Law.
- Origin of Atomic and Nuclear magnetic moments. — Basic ideas; Bohr Magneton.
- Magnetization. — Defining M, B, U.
- Magnetic Materials. — Paramagnetism, Diamagnetism, Ferromagnetism, Discussion. Hysteresis in Ferromagnetic materials.

11. INDUCTANCE.

- Inductance. — Basic definition. Inductance of a Solenoid; Toroid.
- LR Circuits. — Growth and Decay of Current; analytical treatment.
- Energy stored in a Magnetic field. — Derive. Energy density and the magnetic field.
- Electromagnetic Oscillation. — Qualitative discussion. Quantitative
- analysis using differential equations.(without considering damped and forced oscillations). Forced electromagnetic oscillations and resonance.

Recommended book (HollydayResnik&Krane)

12. ALTERNATING CURRENT CIRCUITS.

- Alternating current. — AC current in resistive, inductive and
- capacitative elements.
- Single loop RLC circuit. — Analytical expression for time dependent solution. Graphical analysis, phaseangles.
- Power in A. C. circuits. — Power: phase angles; RMS values power factor.
- Transformer. — Basic transformer equation.

Recommended book (HollydayResnik&Krane)

13. MAXWELL'S EQUATIONS.

- Summarizing the electromagnetic equations. — Gauss's law for electromagnetism; Faraday Law; Ampere's Law.
- Induced magnetic fields — Development of concepts, application. & displacement current.
- Maxwell's equations. and implications. — (Integral & Differential forms) Discussion

Recommended book (HollydayResnik&Krane)

14. ELECTROMAGNETIC WAVES.

- Generating an electromagnetic wave.
- Traveling Waves and Maxwell's equations. — Analytical treatment; obtaining differential form of Maxwell's equations;
- obtaining the velocity of light from Maxwell's equations.
- Energy transport and the poynting Vector. — Analytical treatment and discussion of physical concepts.

Recommended book (HollydayResnik&Krane)

15. ELECTRONICS.

- Semiconductor materials. — Idea of energy bands and energy
- gaps(qualitative). P-type, n-type materials.
- Junction diode. — Structure, Characteristics and application as rectifiers.
- Transistor. — Basic structure and operation.
- Transistor biasing. — Biasing for amplifiers; Characteristics of common base, common emitter, common collector, load line, operating point, hybrid parameters.
- Transistor as an amplifier. — Common emitter mode.
- Amplification with feedback oscillators. — Positive & Negative feedback. Oscillators. Multivibrators.
- Logic gates. — OR, AND, NOT, NAND, NOR and their
- basic applications.

Recommended book (HollydayResnik&Krane

CONTENT COURSES FROM DISCIPLINE-II

Mathematics
Content Course I
(From Selected Discipline II)
Semester 5

Semester : 05 **Year: 03** **Credit Hours:03**

Course Outline:

1) **Limits and continuity:** Functions, limit of a function. Graphical approach. Properties of limits. Theorems of limits. Limits of polynomials, rational and transcendental functions. Limits at infinity, infinite limits, One-sided limits. Continuity.

2) **Derivatives:** The derivative, techniques of differentiation. Derivatives of polynomials, rational, exponential, logarithmic and trigonometric functions. The chain rule. Implicit differentiation. Rates of change in natural and social sciences. Related rates. Linear approximations and differentials. Higher derivatives, Leibnitz's theorem.

3) **Applications of derivatives:** Applications of the differentiation. Increasing and decreasing functions. Relative extrema and optimization. First derivative test for relative extrema. Convexity and point of inflection. The second derivative test for extrema. Curve sketching. Mean value theorems. Intermediate forms and L'Hospitals rule. Inverse functions and their derivatives.

4) **Integration:** Anti derivatives and integrals. Areas and distances. Riemann sums and the definite integral. Properties of Integral. The fundamental theorem of calculus. Indefinite Integrals and net change theorem. The substitution rule.

5) **Techniques of integration:** Integrals of elementary functions. Integration by parts. Integrals of trigonometric functions. Integrals of logarithmic and exponential functions. Integration by substitution. Integration by partial fractions. Integral tables. Improper integrals.

6) **Applications of integrals:** Area between curves and average value. Volumes. Arc length. Area of a surface of revolution. Applications to economics, physics, engineering and biology.

7) **Infinite series:** Sequences and series. Convergence and absolute convergence. Tests for convergence: divergence test, integral test, p-series test, comparison test, limit comparison test, alternating series test, ratio test, root test. Power series. Convergence of power series. Representation of functions as power series. Differentiation and integration of power series. Taylor and Maclaurin series. Approximations by Taylor polynomials.

8) **Conic section, parameterized curves and polar coordinates:** Curves defined by parametric equations. Calculus with parametric curves: tangents, areas, arc length. Polar coordinates. Polar curves, tangents to polar curves. Areas and arc length in polar coordinates. Cylindrical coordinates, spherical coordinates. Conic section. Conic section in polar coordinates.

9) **Vectors and analytic geometry in space:** Three-dimensional coordinate system, vectors. The dot product, the cross product. Equations of lines and planes. Cylinders and Quadric surfaces.

10) **Vector-valued functions and motion in space:** Vector functions and space curves. Derivatives and integrals of vector valued functions. Arc length. Curvature, normal and binormal vectors.

11) **Multiple integrals:** Double integrals over rectangular domains. Iterated integrals. Double integrals over non-rectangular domains. Double integrals in polar coordinates. Triple integrals. Triple integrals in cylindrical and spherical coordinates. Applications of double and triple integrals. Change of variables in multiple integrals.
12) **Integration in vector fields:** Vector fields. Line integrals. Green's theorem on rectangular domain; Green's theorem over more general domains. Curl and divergence. Surface integrals over scalar and vector fields. Divergence theorem. Stokes' theorem.

Week Plan for Math-1

Week 1: Functions, limit of a function. Graphical approach. Properties of limits. Theorems of limits. Limits of polynomials, rational and transcendental functions. Limits at infinity, infinite limits, One-sided limits. Continuity.
Week 2: The derivative, techniques of differentiation. Derivatives of polynomials, rational, exponential, logarithmic and trigonometric functions. The chain rule. Implicit differentiation.
Weak 3: Rates of change in natural and social sciences. Related rates. Linear approximations and differentials. Higher derivatives, Leibnitz's theorem.
Weak 4: Applications of the differentiation. Increasing and decreasing functions. Relative extrema and optimization. First derivative test for relative extrema. Convexity and point of inflection. The second derivative test for extrema. Curve sketching. Mean value theorems. Intermediate forms and L'Hospitals rule. Inverse functions and their derivatives.
Weak 5: Anti derivatives and integrals. Areas and distances. Riemann sums and the definite integral. Properties of Integral.
Weak 6: The fundamental theorem of calculus. Indefinite Integrals and net change theorem. The substitution rule.
Weak 7: Integrals of elementary functions. Integration by parts. Integrals of trigonometric functions. Integrals of logarithmic and exponential functions. Integration by substitution. Integration by partial fractions. Integral tables. Improper integrals.
Weak 8: Area between curves and average value. Volumes. Arc length. Area of a surface of revolution. Applications to economics, physics, engineering and biology.
Weak 9: Sequences and series. Convergence and absolute convergence. Tests for convergence: divergence test, integral test, p-series test, comparison test, limit comparison test, alternating series test, ratio test, root test.
Weak 10: Power series. Convergence of power series. Representation of functions as power series. Differentiation and integration of power series. Taylor and Maclaurin series. Approximations by Taylor polynomials.
Weak 11: Curves defined by parametric equations. Calculus with parametric curves: tangents, areas, arc length. Polar coordinates. Polar curves, tangents to polar curves.
Weak 12: Areas and arc length in polar coordinates. Cylindrical coordinates, spherical coordinates. Conic section. Conic section in polar coordinates.
Weak 13: Three-dimensional coordinate system, vectors.
The dot product, the cross product. Equations of lines and planes. Cylinders and Quadric surfaces.
Weak 14: Vector functions and space curves. Derivatives and integrals of vector valued functions. Arc length. Curvature, normal and binormal vectors.

Weak 15: Double integrals over rectangular domains. Iterated integrals. Double integrals over non-rectangular domains. Double integrals in polar coordinates. Triple integrals. Triple integrals in cylindrical and spherical coordinates. Applications of double and triple integrals. Change of variables in multiple integrals.

Weak 16: Vector fields. Line integrals. Green's theorem on rectangular domain; Green's theorem over more general domains. Curl and divergence. Surface integrals over scalar and vector fields. Divergence theorem. Stokes' theorem

References

1. G.B. Thomas, R.L. Finney, *"Calculus and Analytic Geometry"*, 11th edition, Pearson Education.
2. J. Stewart, *"Calculus early transcendentals"*, 7th Edition.
3. H. Anton*, "Calculus: A New Horizon",* 6th edition, 1999, John Wiley, New York.

Mathematics

Content Course II

(From Selected Discipline II)

Semester 6

Semester : 06 **Year: 03** **Credit Hours:03**

Algebra and Elements of Topology

1) **Determinants:** Computing of determinants of order two and three. Permutations of order two and three and definitions of determinants of the same order. Definition of higher order determinants. Properties. Expansion of determinants.
2) **Matrices and linear systems:** Matrices. Operations with matrices. The inverse of a matrix. Linear systems of the form $AX = B$ with Aan invertible matrix. General linear systems.
3) **Linear spaces and subspaces:** K*n*(K = R or C) as linear spaces. Linearly dependent and linearly independent systems of vectors in K*n*. Linear subspaces of K*n*. System of generators. Bases and dimension of a vector space. Intersections, sums and direct sums of subspaces.
4) **Groups:** Definition of a group. More examples: dihedral groups, matrix groups, the quaternion group. Free groups. Permutation groups. The cycle decomposition of a permutation. The sign of a permutation. The alternating group. Direct product of two groups. Examples. Definition of a subgroup. Cyclic groups and cyclic subgroups. The subgroups of Z. The subgroup generated by a set. Cossets and Lagrange' s theorem.
5) **Topological spaces:** Topology on a set; open and closed subsets, neighbourhoods. Examples. Limit points and accumulation points. Interior, closure, dense subsets. Constructing new topological spaces: Cartesian products, induced topology, quotient topology. Continuous maps, open and closed maps, homeomorphisms.
6) **Metric spaces:** Metric spaces, isometries. Examples. Cauchy sequences, complete metric spaces. Completion. Function spaces.

Week Plan for Math-2

Week 1: Computing of determinants of order two and three. Permutations of order two and three and definitions of determinants of the same order.
Week 2: Definition of higher order determinants. Properties. Expansion of determinants.
Weak 3: Matrices. Operations with matrices. The inverse of a matrix.
Weak 4: Linear systems of the form AX = B with A an invertible matrix. General linear systems.
Weak 5: Kn (K = R or C) as linear spaces. Linearly dependent and linearly independent systems of vectors in Kn. Linear subspaces of Kn.
Weak 6: System of generators. Bases and dimension of a vector space.
Week 7: Intersections, sums and direct sums of subspaces.
Weak 8: Definition of a group. More examples: dihedral groups, matrix groups, the quaternion group. Free groups.
Weak 9: Permutation groups. The cycle decomposition of a permutation. The sign of a permutation.
Weak 10: The alternating group. Direct product of two groups. Examples. Definition of a subgroup.

Week 11: Cyclic groups and cyclic subgroups.
Weak 12: The subgroups of Z. The subgroup generated by a set. Cosets and Lagrange' s theorem.
Weak 13: Topology on a set; open and closed subsets, neighbourhoods. Examples. Limit points and accumulation points. Interior, closure, dense subsets.
Weak 14: Constructing new topological spaces: Cartesian products, induced topology, quotient topology. Continuous maps, open and closed maps, homeomorphisms.
Weak 15: Metric spaces, isometries. Examples. Cauchy sequences.
Weak 16: Complete metric spaces. Completion. Function spaces

References:

1. Ch. W. Curtis, "*Linear Algebra*", Springer 2004.
2. T. Apostol, "*Multi Variable Calculus and Linear Algebra*", 2nd ed., John Wiley and sons, 1997.
3. D.S. Dummit and R.M. Foote, "*Abstract Algebra*", third edition, Wiley and sons, 2004.
4. J.B. Fraleigh, "*A First Course in Abstract Algebra*", third edition, Wiley and sons, 2003.
5. J. Kelly, "General Topology", Springer, 2005.
6. K. JÄanich, *"Topology"*, Springer, 1994.
7. J. Hocking, G. Young, *"Topology"*, Dover Publications, 1961.
8. J. R. Munkres, "*Topology - A First Course*", Prentice-Hall, 2003.
9. G. Simmons, "*Topology and modern analysis*", McGraw-Hill, 1963.
10. S. Lipschutz, "*General Topology*", McGraw-Hill, 2004.
11. J. Dugundji, "*Topology*", Allyn and Bacon, 1966.

Mathematics
Content Course III
(From Selected Discipline II)
Semester 7

Differential Equations and Mechanics

1) **Preliminaries:** Classification of linear differential equations. Existence and uniqueness of solutions. The notion of initial value problem.

2) **Scalar differential equations:** Homogeneous linear differential equations of order one of the form $x'(t) = a(t)x(t)$; $a(t)$ being a complex scalar valued function. Variation of parameters. Nonhomogeneous linear differential equations of order one of the form $x'(t) = a(t)x(t) + f(t)$; $a(t)$ and $f(t)$ being complex scalar valued functions. Differential equations with separate variables. Differential equations of Bernoulli and Riccatti type. Integrating factors. Clairaut equation.

3) **Linear differential systems of order one:** Homogeneous second order differential equations with constant coefficients. The exponential of complex numbers. Systems of linear differential equations with constant coefficients. Structure of the solutions of such systems. Scalar differential equations of order n with constant coefficients. The undetermined coefficients method.

4) **Statics:** Composition and resolution of forces. Particles in equilibrium. Parallel forces, moments, couples. General conditions of equilibrium of coplanar forces. Principle of virtual work. Friction, centre of mass and gravity.

5) **Dynamics:**Fundamental laws of Newtonian mechanics. Motion in a straight line. Uniformly accelerated and resisted motion. Velocity and acceleration and their components in Cartesian and polar coordinates, tangential and normal components, ratial and transverse, Relative motion. Angular velocity. Conservative forces, projectiles. Central forces and orbits. Simple harmonic motion damped and forced vibrations, elastic strings and springs.

Week Plan for Math-3

Week 1: Classification of linear differential equations. Existence and uniqueness of solutions. The notion of initial value problem.
Week 2: Homogeneous linear differential equations of order one of the form x' (t) = a(t)x(t); a(t) being a complex scalar valued function. Variation of parameters.
Weak 3: Nonhomogeneous linear differential equations of order one of the form x' (t) = a(t)x(t) + f(t); a(t) and f(t) being complex scalar valued functions. Differential equations with separate variables.
Weak 4: Differential equations of Bernoulli and Riccatti type. Integrating factors. Clairaut equation.
Weak 5: Applications of the differentiation. Increasing and Homogeneous second order differential equations with constant coefficients. The exponential of complex numbers.
Weak 6: Systems of linear differential equations with constant coefficients. Structure of the solutions of such systems. Scalar differential equations of order n with constant coefficients. The undetermined coefficients method.

Weak 7: Composition and resolution of forces. Particles in equilibrium. Parallel forces, moments, couples. General conditions of equilibrium of coplanar forces.
Weak 8: Principle of virtual work.
Weak 9: Friction.
Weak 10: Centre of mass and gravity.
Weak 11: Fundamental laws of Newtonian mechanics. Motion in a straight line. Uniformly accelerated and resisted motion.
Weak 12: Velocity and acceleration and their components in Cartesian and polar coordinates, tangential and normal components, radial and transverse,
Weak 13: Relative motion. Angular velocity.
Weak 14: Conservative forces, projectiles.
Weak 15: Central forces and orbits
Weak 16: Simple harmonic motion damped and forced vibrations, elastic strings and springs.

References:

1. V. I. Arnold *"Ordinary Differential Equations",* Springer, 1991.
2. T. Apostol*, "Multi Variable Calculus and Linear Algebra",* 2nd ed., John Wiley and sons, 1997.
3. Synge JL, Griffith BA*, "Principles of Mechanics",* McGraw Hill, New York.
4. F. Chorlton*, "Textbook of Dynamics", 1983,* Ellis Horwood Ltd.
5. L. A. Pars*, "Introduction to Dynamcis", 1953,* Cambridge University Press.
6. Q.K. Ghori*, "Introduction to Mechanics (Revised Edition)"* West Pakistan Publishing Company Limited, Lahore.

Zoology

Content Course I

(From Selected Discipline II)

Semester 5

Objectives:

At the end of the course the students will be able to:

1. identify the importance of zoology.
2. describe basic components of living organisms.
3. explain cell and its organelles.

Course Outline:

Unit-1 Introduction to Zoology

1.1 Branches
1.2 Importance

Unit-2 Basic components of Living organisms

2.1 Carbohydrates
2.2 Proteins
2.3 Lipids

Unit-3 Food and Nutrition

3.1 Balance diet
3.2 Malnutrition

Unit-4 Cell and its organelles

1.1 Composition
1.2 Structure
1.3 Function

Unit-5 Microorganisms

a. Bacteria
b. Viruses
c. Diseases

Unit-6 Diversity of Life

6.1 Basic units of classification

Unit-7 Invertebrate Phyla

1.1 Protozoa to Echinoderms

Reference books:

- Biology Books Peshawar Text Book Board
- Integrated principles of Zoology by Hickman
- Zoogeoraphy and paleontology by S. S Ali
- Ecology by Odum
- Evolution by Moodi
- Animal behaviour by Prasad
- Genetics by Strickberger
- Economic Zoology by S. Chand and Prasad

Zoology

Content Course II

(From Selected Discipline II)

Semester 6

Objectives:

At the end of the course the students will be able to:

1. differentiate between chordates and vertebrates.
2. describe organs and organ systems.
3. identify the relationship between living things and non living things.

Course Outline:

Unit-1: Chordates and Vertebrates

1.1 Pisces
1.2 Amphibians
1.3 Reptiles
1.4 Birds and mammals

Unit-2 Organ and Organ Systems

2.1 Structure
2.2 Function

Unit-3 Genetics

3.1 Laws of Mendel
3.2 Blood Groups
3.3 Linkage
3.4 Crossing over
3.5 Cell division
3.6 Mutation
3.7 Chromosomal aberration

Unit-4 Evolution

4.1 Natural Selection
4.2 Lamarckism
4.3 Darwinism

Unit-5 Ecology

5.1 Ecosystems
5.2 Food chain
5.3 Food web
5.4 Population Ecology
5.5 Community Ecology

Unit-6 Adaptations

d. Aquatic
e. Aerial
f. Cursorial
g. Fossorial
h. Arboreal

Reference books:

- Biology Books Peshawar Text Book Board
- Integrated principles of Zoology by Hickman
- Zoogeoraphy and paleontology by S. S Ali
- Ecology by Odum
- Evolution by Moodi
- Animal behaviour by Prasad
- Genetics by Strickberger
- Economic Zoology by S. Chand and Prasad

Zoology

Content Course III

(From Selected Discipline II)

Semester 7

Objectives:

At the end of the course the students will be able to:

1. identify different stages of development.
2. describe animal behavior.
3. explain scope of biotechnology.

Course Outline:

Unit-1 Developmental Biology

1.1 Stages of development
1.2 Regeneration

Unit-2 Animal Behaviour

2.1 Behaviour
2.2 Learning and its types
2.3 Communication
2.4 Social Organization
2.5 Migration

Unit-3 Zoogeography

3.1 Regions
3.2 Distribution of Animals
3.3 Barriers

Unit-4Economic Zoology

4.1 Cultures
4.2 Zoonosis
4.3 Animal products

Unit-5Biotechnology

5.1 Scope and Importance
5.2 Concept of DNA/ RNA
5.3 Gene
5.4 Protein Synthesis

Unit-6 Research Methodology

6.1 Introduction
6.2 Processes

Reference books:

- Biology Books Peshawar Text Book Board
- Integrated principles of Zoology by Hickman
- Zoogeoraphy and paleontology by S. S Ali
- Ecology by Odum
- Evolution by Moodi
- Animal behaviour by Prasad
- Genetics by Strickberger
- Economic Zoology by S. Chand and Prasad