UNIVERSITY OF SARGODHA

Office of the Registrar

360
22-02-23

Ref: SU/Acad/126
Dated: 20.02.2023

- Chairperson,
  Department of Education
  University of Sargodha

- The Controller of Examinations
  University of Sargodha
  Sargodha

Subject: **APPROVAL ADOPTION OF CURRICULA / SCHEME OF STUDIES OF B.ED (1.5 YEARS) FOLLOWED AT MAIN CAMPUS FOR AFFILIATED COLLEGES**

Please refer to the subject cited above.

2. I am directed to inform you that, on the recommendations of Academic Council made in its 16th (1/2023) meeting held on 02.01.2023, the Syndicate in its 61st (1/2023) meeting held on 27.01.2023, approved that the scheme of studies / syllabi of all programs including B.Ed. (1.5 Years) notified and effective for the main campus under semester system will also be followed / implemented at colleges affiliated under Term System.

3. Further, the colleges affiliated in B.Ed. (1.5 Years) program will get accredited by NACTE.

4. Further necessary action may be taken accordingly.

20/02/23.

Asif Mehmood
Deputy Registrar (Acad)

C.C:

- Deans of the Faculties
- Principals / Directors / Chairpersons / Incharges of Constituent Colleges / Institutes / School / Teaching Departments
- Director Academics
- Director QEC
- Deputy Registrar (Affiliation)
- Secretary to the Vice-Chancellor
- P.A to Registrar

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UNIVERSITY OF SARGODHA

Office of the Registrar

Ref: SU/Acad/ [illegible]
October/ [illegible] 2020

Notification

The Academic Council in its meeting held on 18.06.2020 has approved the following recommendations made by the Board of Faculty of Social Sciences in its meeting held on 04.06.2020. The Syndicate in its meeting held on [illegible].07.2020 has also endorsed the decisions of Academic Council:

1. Revised scheme of studies of BS Education (Hons) under Semester System from session 2020 (Annex-'A')
2. Revised scheme of studies of MA Education under Semester System from session 2020 (Annex-'B')
3. Revised scheme of studies of B.Ed (1.5 year) under Semester from session 2020 (Annex-'C')
4. Revised scheme of studies of B.Ed (1.5 year) ELT program under Semester from session 2020 (Annex-'D')
5. Revised scheme of studies of B.Ed (1.5 year) Science program under Semester from session 2020 (Annex-'E')
6. Revised scheme of studies of B.Ed (Elementary) program under Semester session 2020 (Annex-'F')
7. Revised scheme of studies of MPhil Education program under Semester from session 2020 (Annex-'G')
8. Revised scheme of studies of PhD Education program under Semester from session 2020 (Annex-'H')

Muhammad Farooq
Deputy Registrar (Acad)

Distribution:

- Chairman, Department of Education
- Director, Sub-Campus Bhakkar
- Controller of Examinations
- Principals of all affiliated colleges (concerned)
- Web-Developer *(for uploading on university web-site)*

C.C:

- Focal Person, Faculty of Social Sciences
- Deputy Registrar (Affiliation)
- Deputy Registrar (Registration)
- Secretary to the Vice-Chancellor
- P.A to Registrar

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B.Ed General (1.5 Year) Program

(Semester System)

Scheme of Studies
and
Course Outlines

2020

Department of Education

University of Sargodha

04.09.2020

Chairman
Department of Education
University of Sargodha,
Sargodha

Introduction

The department of education is one of those departments which have the privilege of being set up soon after the establishment of the University of Sargodha and classes for M.A. Education were started w.e.f. 20th March, 2003. Department of Education provides and facilitates pre -service education and in-service training to the teachers and teacher educators. Any program of teacher education is perhaps devoid of sense without the practical training of theory and practice of education. The department has decided to commence bachelor's program in education B. Ed. 1.5 years. Master degree (or 16-year education) is the pre-requisite for this program in view to provide pre-service teacher training with specialization in one subject which is being taught at elementary and secondary level in our country. So in this regard a rigorous teaching practice is also a pre-requisite for awarding the degree. The students of this department also have the capability to render their services in various research and social welfare institutions as managers, researchers and consultants.

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Mission Statement

To render services in the field of education by preparing well-educated, trained, competent and effective teachers and teacher educators; making them independent learners and contributing members of society, providing a dynamic, creative and efficient learning environment in order to improve the quality of education in particular and standard of living in general.

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Salient Features of the Program

- Along with strengthening the knowledge base emphasis is on making students independent learners.
- Focus is on imparting knowledge, skills and attitudes pertinent with the field.
- Emphasis is on imparting pedagogical & communication skills.
- Practical training of presentation and demonstration skills through classroom presentation, seminars, symposia and conferences.
- A detailed analysis of students' teaching skills through microteaching approach to bring about sophistication and refinement in their styles and methods of teaching.
- A full fledge course on "communication skills" in order to sharpen students English communication skills of reading, writing, speaking and listening.
- A dynamic, interactive and creative teaching and learning environment.
- Special emphasis on the comprehensive personality development of the learners.
- Character formation of students through curricular and co-curricular activities in the light of Islamic values and principles
- Development of the competencies and skills of searching, identifying, selecting and developing teaching and instructional materials as per demand of the subject.
- Emphasis on professionalism and entrepreneurship.
- Development of critical thinking, scientific attitude, creativity and innovation.
- Highlighting the importance of learning as a continuous and life-long process.
- Introducing teaching as a life-style and way of living.
- Constructivist approach towards teachings and learning.
- Considerably long practical training of teaching.

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BEd General (1.5 Year) SCHEME OF STUDIES

Total Credit Hours 54
Medium of Instruction English
Passing Marks (Assignments / Exam) 50 %
Entry Qualification: 16 years of Education (Academics Disciplines Other than Education)
MA / MSc. / BA (4 Year) / BS (4 Year) in Minimum Second Division

Semester –I

Code	Course	Credit Hours
EDUC-6401	General Methods of Teaching (Professional)	3(3+0)
EDUC-6402	Educational Assessment and Evaluation (Professional)	3(3+0)
EDUC-6403	Curriculum Development (Foundation)	3(3+0)
EDUC-6404	Research Methods in Education (Professional)	3(3+0)
EDUC-6405	Educational Leadership and Management (Professional)	3(3+0)
EDUC-6406	Educational Psychology (Foundation)	3(3+0)
	Total Credit Hours	**18**

Semester –II

Code	Course	Credit Hours
EDUC-6407	Philosophy of Education (Foundation)	3(3+0)
EDUC-6408	Critical Thinking and Reflective Practices (Professional)	3(3+0)
	Teaching Specialization (Elective Course)	3(3+0)
	Area of Specialization (Course-I)	3(3+0)
	Area of Specialization (Course-II)	3(3+0)
	Area of Specialization (Course-III)	3(3+0)
	Total Credit Hours	**18**

Semester –III

Code	Course	Credit Hours
EDUC-6409	Human Development and Learning (Foundation)	3(3+0)
EDUC-6410	Information and Communication Technology (ICT) in Education	3(3+0)
EDUC-6411	Teaching Practice I	6(0+6)
EDUC-6412	Teaching Practice II	6(0+6)
	Total Credit Hours	**18**

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Teaching Practice

Teaching Practice	12 Cr Hours
Duration	Twelve Weeks
Teaching practice I	Marks 100
Teaching Practice II	Marks 100
Total Marks	200
Two final Lessons	One for teaching practice-I and one for teaching practice-II

Break up of marks for one lesson is as under:

Sr. No	Component	Marks
1	Attendance *	10
2	Draft final lesson plan	05
3	Development of assessment tools and AV-aids	10
4	40 Lesson Plans	35
5	Final Lesson	40
	Total	**100**

*** Break up of Marks of Attendance**

95% or above	=	10
90-94%	=	09
85-89%	=	08
80 – 84%	=	07

Below 80% attendance does not qualify

Elective Courses

Only one of the following elective courses relevant to the subject area of the student may be opted.

Code	Course	Credit Hours
EDUC-6413	Teaching of Social Studies	3(3+0)
EDUC-6414	Teaching of General Science	3(3+0)
EDUC-6415	Teaching of Physics	3(3+0)
EDUC-6416	Teaching of Chemistry	3(3+0)
EDUC-6417	Teaching of Biology	3(3+0)
EDUC-6418	Teaching of Mathematics	3(3+0)
EDUC-6419	Teaching of English Language	3(3+0)
EDUC-6420	Teaching of Urdu	3(3+0)

Areas of Specialization

Student will opt any one area of specialization from the following two areas

	Code	Course	Credit Hours
Area-I		**Leadership and Management**	
Course I	EDUC-6421	Educational Administration and Supervision	3(3+0)
Course II	EDUC-6422	Organizational Behaviour	3(3+0)
Course III	EDUC-6423	Instructional Leadership	3(3+0)
Area-II		**Science Education**	
Course I	EDUC-6424	Foundation of Science Education	3(3+0)
Course II	EDUC-6425	Assessment and Evaluation in Science Education	3(3+0)
Course III	EDUC-6426	Comparative Science Education	3(3+0)

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General Methods of Teaching

Course Code: EDUC- 6401 **Credit Hours:** 3(3+0)

Course Description: This course highlights the essential attributes of the teacher, the importance and types of teacher planning practice related to different teaching methods. Knowledge of Teaching Methods gives a broader perspective of teaching to prospective teachers. 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-based learning). An effective teacher knows several methods, some teacher-directed and others learner-directed. From among these methods, a teacher selects the one method or combination of methods most likely to achieve a particular lesson's objectives with a particular group of students. The course focuses on the development of abilities among prospective teachers to explain the basic concepts of teaching, describe-the-importance, and types-of teacher planning, prepare lesson plans according to individual needs, apply teaching skills on identifying learning difficulties in the classroom, and select, prepare and use appropriate teaching materials. It will also focus on how to relate facts, concepts, and theories to everyday teaching learning experiences.

Learning Outcomes:
After completion of this course students will be able to:

- Explain the basic concepts of teaching.
- Demonstrate the essential attributes of the effective teacher.
- Describe-the-importance and types-of teacher planning
- Practice different teaching methods in classroom.
- Organize classroom discussion and demonstrate its appropriate use.
- Apply various techniques to motivate students.
- Select appropriate audio visual aids in classroom teaching.
- Prepare lesson plans according to Individual Needs.
- Apply teaching skills on identifying learning difficulties in the classroom
- Select, prepare and use appropriate teaching materials

Outline

1. **Introduction to Teaching**
   - **1.1.** Definitions of Teaching
   - **1.2.** The concept of Effective Teaching
   - **1.3.** Role of Teacher for Conducive Learning Environment
   - **1.4.** Professional Characteristics of an Effective Teacher
   - **1.5.** The Concepts of Teaching Methods, Strategies and Techniques
   - **1.6.** Identify Learning Difficulties of Students

2. **Lesson Planning in Teaching**
   - **2.1.** The Need for Lesson Planning
   - **2.2.** Approaches to Lesson Planning
   - **2.3.** Course & Unit Planning
   - **2.4.** Steps in Lesson Planning
   - **2.5.** The Lesson Plan Format
   - **2.6.** Prepare Lesson according to Individual Needs

3. **Student Motivation**
   - **3.1.** Concept of Motivation
   - **3.2.** Intrinsic Motivation

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3.3. Extrinsic Motivation
3.4. Theories of Motivations
3.5. Strategies to Motivate Students

4. Inquiry Methods
4.1. The Inductive Method
4.2. Deductive Method
4.3. Scientific Method
4.4. The Problem Solving Approach
4.5. Advantages and Limitations of Inquiry Method

5. Activity Methods
5.1. Individual Project
5.2. Group Project
5.3. Research Projects
5.4. Advantages and Limitations of Activity Method

6. Discussion Method
6.1. What is Classroom Discussion
6.2. Planning the Discussion
6.3. Organizing the Discussion
6.4. Practicing in Asking Questions
6.5. Practicing in Answering the Questions
6.6. Assessing the Discussion
6.7. Advantages and Limitations of Discussion Method

7. Cooperative learning
7.1. Cooperative Learning
7.2. Techniques of Cooperative Learning
7.3. Advantages and Limitations of Cooperative Method

8. Teaching Tools
8.1. Selecting the Audio Visual Material
8.2. Planning To Use the Materials
8.3. Preparing For the Audio Visual Activity
8.4. Kinds of AV Materials
8.4.1. White Board / Marker
8.4.2. Charts, Posters, Maps, Graphs & Models
8.4.3. Text Books
8.4.4. Hand Outs
8.4.5. Projectors

Recommended Texts:

1. De Vries, M. J. (Ed.). (2018). *Handbook of technology education.* USA: Springer.
2. Marzano, R. J. (2018). *The handbook for the new art and science of teaching.* Bloomington: Solution Tree.

Suggested Readings:

1. Allen & Mendler. (2009). *Motivating students who don't care: Successful techniques for educators.* Bloomington: National Educational Service
2. Shami, P.A. et al. (2016). *Instructional methods.* Lahore: Majeed Book House.
3. Singh, Y.k.(2017). *Teaching of general science.* New Dehli: APH Publishing Corporation

Web-based Resources

Britannica Concise Encyclopedia retrieved from www.answers.com/opic/teaching
To access the Electronic Learning Community (ELC): http://olms.cte.jhu.edu/olms2
https://web.calstatela.edu/faculty/jshindl/teaching/objs.htm
http://www.education.gov.pg/TISER/documents/pastep/pd-tm-7-2-general-teaching-methods-student.pdf
http://bdu.edu.et/capacity/sites/bdu.edu.et.capacity/files/Attachement/Session%20-%202-%20General%20Methods%20of%20Teaching.pdf
http://www.genrica.com/vustuff/EDU301/EDU301_handouts_1_45.pdf
https://www.scribd.com/doc/61713667/General-Methods-of-Teaching

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Educational Assessment and Evaluation

Course Code: EDUC-6402 **Credits Hours:** 3(3+0)

Course Description:
This course addresses the knowledge and understanding of formative and summative learning assessment and how teachers use assessment to inform decisions about teaching and learning. Assessment and evaluation are key directors of education and are pivotal to learning and teaching. Assessment is the process of making a judgement or measurement of the worth of an entity, for example, a person or process. Evaluation in education involves gathering and evaluating data evolving from planned learning activities, delivery of instructions, and/or programs. Students will get an understanding of learning domains and their role in assessment. This course examines the purposes, paradigms, and types of assessment and evaluation used in education, and in particular the innovations associated with them. The course has the following main objectives for the students to understand the concepts and application of classroom assessment, integrate objectives with evaluation and measurement, acquire skills of assessing the learning outcomes, and interpret test scores and results of different assessment techniques.

Learning Outcomes:
After studying this course the prospective tteachers will be able to:

- Understand the concepts and application of classroom assessment.
- Integrate objectives with evaluation and measurement.
- Acquire skills of assessing the learning outcomes.
- Interpret test scores and results of different assessment techniques
- Know about the trends and techniques of classroom assessment
- Understand different alternative classroom assessment techniques

Outline

1. **Measurement, Assessment and Evaluation**
   - **1.1.** Concept of measurement, assessment and evaluation
   - **1.2.** Classroom assessment: Why,What, How and When
   - **1.3.** Types of assessment
   - **1.4.** Characteristics of assessment
   - **1.5.** Role of assessment
   - **1.6.** Principles of Classroom assessment

2. **Objectives and assessment**
   - **2.1.** Purpose of a test
   - **2.2.** Objectives and educational outcomes
   - **2.3.** Writing Cognitive domain Objectives
   - **2.4.** Defining Learning Outcomes
   - **2.5.** Preparation of content outline
   - **2.6.** Preparation of table of specification

3. **Types of Assessment Tests and Techniques**
   - **3.1.** Tests
     - **3.1.1.** Achievement test
     - **3.1.2.** Aptitude tests
     - **3.1.3.** Attitude tests

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- **3.1.4.** Intelligence tests
- **3.1.5.** Personality tests
- **3.1.6.** Criterion referenced and Norm referenced tests

3.2. Techniques
- **3.2.1.** Questionnaire
- **3.2.2.** Observation
- **3.2.3.** Interview
- **3.2.4.** Rating scales

3.3. Standardized Testing

4. Types of Test

4.1. Selection type (Objective type)
- **4.1.1.** Multiple choice questions
- **4.1.2.** True false questions
- **4.1.3.** Matching items
- **4.1.4.** Completion items

4.2. Supply Type (Subjective type)

4.3. Short Answers

4.4. Essay

5. Reliability of Assessment Tools

5.1. Reliability

5.2. Types of reliability
- **5.2.1.** Split half reliability
- **5.2.2.** Test rbtest reliability
- **5.2.3.** Kuder-Richardson reliability
- **5.2.4.** Parallel form Reliability

5.3. Factors affecting reliability

5.4. Usability of assessment tools

6. Validity of Assessment Tool

6.1. Nature of Validity

6.2. Methods of Measuring Validity
- **6.2.1.** Content construct Validity
- **6.2.2.** Concurrent validity
- **6.2.3.** Predictive validity
- **6.2.4.** Criterion Validity
- **6.2.5.** Factors affecting validity
- **6.2.6.** Relationship between Validity and Reliability

7. Planning and Administering Classroom Tests

7.1. Planning a test

7.2. General consideration in constructing objective test items

7.3. General consideration in constructing essay items

7.4. Administering test"

7.5. Scoring of test

8. **Interpreting Test Scores**
   - **8.1.** Introduction of measurement scales and interpretation of test scores
   - **8.2.** Interpreting test scores by percentile
   - **8.3.** Interpreting test scores Percentages
   - **8.4.** Interpreting test scores Ordering and ranking
   - **8.5.** Frequency distribution
   - **8.6.** Interpreting test scores Pictorial forms (graph, polygon, histogram)
   - **8.7.** Measures of central tendency
   - **8.8.** Measures of variability
   - **8.9.** Planning the test
   - **8.10.** Constructing and assembling the test
   - **8.11.** Test Administration

9. **Reporting Test Scores**
   - **9.1.** Functions of test scores and progress reports
   - **9.2.** Types of reporting and marking
   - **9.3.** Calculating CGPA and assigning letter grades
   - **9.4.** Conducting parent teacher conference.

Recommended Texts:

1. Blalock, H. M. (2017). *Measurement in the social sciences*. UK: Routledge.
2. Pidgeon, D., & Yates, A. (2018). *An introduction to educational measurement*. UK: Routledge.

Suggested Readings:

1. Gipps, C. (2011). Beyond Testing (Classic Edition): *Towards a theory of educational assessment.* UK: Routledge.
2. Miller, M.D., Linn, R. L. & Gronlund. N. E. (2013). *Measurement and assessment in teaching* (11th Edition). USA: Pearson
3. Wells, C. S., & Faulkner-Bond, M. (2016). *Educational measurement: From foundations to future.* USA: Guilford Publications

Web-based Resources

http://hec.gov.pk/english/services/universities/RevisedCurricula/Documents/2011-2012/Education/MethodsTeaching_Sept13.pdf
https://www.slideshare.net/hernanebuella/general-methods-and-techniques-of-teaching
https://www.jstor.org/stable/1167407?seq=1#page_scan_tab_contents
http://hec.gov.pk/english/services/universities/RevisedCurricula/Documents/2011-2012/Education/ClassroomAssess_Sept13.pdf
http://www.oecd.org/edu/school/46927511.pdf
https://academicaffairs.ucsd.edu/ug-ed/asmnt/resources.html

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Curriculum Development (Foundation)

Course Code: EDUC- 6403 **Credit Hours:** 3(3+0)

Introduction:
This foundation course "curriculum Development" is designed to; enable the learners to discuss concept, history, curriculum development process and various approaches, issues to curriculum development. This course will also provide opportunities to enable and prepare learners to introduce the ideas and procedures involved in curriculum development and further develop their skills in curriculum design. The learner will be informed about various foundations on which the curriculum is based, defining and delineating the objectives, selection of content, its scope and outcomes, teaching strategies, curriculum evaluation, design of instructional materials. This course will also include various factors that affect the process of curriculum development and implementation. The course also assists to develop a deeper understanding of the testing, measurement and evaluation in curriculum. It first examines foundations of curriculum then conceptual framework and approaches to designing a curriculum. Comparative studies will be discussed.

Learning Outcomes:
More specifically, following are the main learning outcomes of this course:

- To introduce the learners to the concept, History and foundation of curriculum development generally and specifically with reference to Pakistan
- To familiarize with conceptual framework of curriculum development, its various types, approaches.
- To introduce the content selection and evaluation process of the curriculum.
- To Compare and contrast the comparative perspectives of curriculum development in different countries of the world.
- To write curriculum objectives in behavioral terms
- Should be able to apply principles of curriculum development, implementation and evaluation in teaching and learning process and curriculum planning.

Outline

1. **Introduction to Curriculum**
   - **1.1.** The Nature of Curriculum
   - **1.2.** Definition of Curriculum
   - **1.3.** Component of Curriculum
   - **1.4.** Need of Curriculum
   - **1.5.** Scope of Curriculum
   - **1.6.** Curriculum Planning and Development
   - **1.6.1.** Characteristics of Curriculum Planning
   - **1.6.2.** Process of Curriculum Development
   - **1.6.3.** Effective Curriculum Planning
   - **1.6.4.** Basic principles of Curriculum Development
   - **1.6.5.** Elements of Curriculum

2. **History of Curriculum Development in Pakistan**
   - **2.1.** Development of Curriculum in Islam
   - **2.2.** Development of Curriculum In the Sub-Continent
   - **2.3.** Curriculum Development Science 1947

2.4. Curriculum Development under various Education Policies

3. **Foundations of Curriculum**
   - **3.1.** Philosophy and Curriculum
   - **3.2.** Psychological Foundations
   - **3.3.** Sociological Foundations
   - **3.4.** Historical Foundations
   - **3.5.** Economic Foundations

4. **Conceptual framework of Curriculum Development**
   - **4.1.** Need for Conceptual Framework of Curriculum Development
   - **4.2.** Models of Curriculum development
   - **4.3.** Relationship Among the Elements
   - **4.4.** A proposed Conceptual Framework
   - **4.5.** Process of Curriculum Development
   - **4.6.** Selection and Organization of Methods
   - **4.7.** Bases for Selecting instructional Methods
   - **4.8.** Curriculum Evaluation

5. **Aims Goals and Objectives of Education**
   - **5.1.** Conceptualization
   - **5.2.** A Brief Review of the objectives Movement in Pakistan
   - **5.3.** Taxonomies of Educational Objectives

6. **Content Selection and Organization Principles and Procedure**
   - **6.1.** Introduction to Content Selection
   - **6.2.** The Selection of Curriculum Content
   - **6.3.** Procedures for Content Selection
   - **6.4.** Principles of Curriculum Organization

7. **Evaluation of Curriculum**
   - **7.1.** Curriculum Evaluation
   - **7.2.** The Aims of Curriculum Evaluation
   - **7.3.** Educational Goals and Curriculum Objectives
   - **7.4.** Designating Evaluation Studies

8. **Curriculum and Development**
   - **8.1.** Introduction
   - **8.2.** Educational policies and Development Trends
   - **8.3.** Educational and Development in Asian Region
   - **8.4.** Analysis and Comparative study of current projects and plans
   - **8.5.** Education and Productive skills Development in Asian Region
   - **8.6.** Education and rural Development

Recommended Texts:

1. Oliva, P.F. (2015). *Developing the Curriculum. (4th ed.).* New Yark: Longman
2. Nicholls, A., & Nicholls, S. H. (2018). *Developing a curriculum: a practical guide.* UK: Routledge

Suggested Readings:

1. Berry, R., & Adamson, B. (Eds.). (2011). *Assessment reform in education: Policy and practice (Vol. 14).* USA: Springer Science & Business Media
2. Wiles J.W & Bondi J.C., (2014). *Curriculum development: A guide to practice (9th Ed.).* UK: Routledge.

Web-based Resources

http://unesdoc.unesco.org/images/0024/002432/243279e.pdf
http://hec.gov.pk/english/services/universities/RevisedCurricula/Documents/2011 2012/Education/CurrDevpt_Sept13.pdf
http://gototheexchange.ca/index.php/curriculum-at-course-level/selecting-learning-resource materials
Leslie Owen Wilson's 'Curriculum index' offers an overview of curriculum development and planning.
http://www4.uwsp.edu/education/lwilson/curric/curtyp.htm
This is a self-directed module on curriculum theory, design, and assessment.
www.col.org/stamp/module13.pdf
https://education.alberta.ca/curriculum-development/what-is-curriculum/?searchMode=3
http://www.edb.gov.hk/en/curriculum-development/index.html

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Research Methods in Education

Course Code: EDUC-6404 **Credit Hours:** 3(3+0)

Course Description:

The course Research Methods in Education is designed to orient Student Teachers to the concept and methods of research in education. Learner will able earners will engage in a critical analysis of different research work and relate it to their own context. The course provides students with the opportunity to engage with the research literature and to establish how different researchers techniques help improve the overall classroom situation. This course focuses on action research, and it aims to equip Student Teachers with the necessary skills to plan and conduct action research in an educational setting. Action research is a form of research that can be used to improve professional practices in the classroom. It can help in both personal development and institutional improvement. This course will also help Student Teachers to write research proposals and research reports and to create presentations to discuss their work.

Learning Outcomes:

At the end of the course, the learners will be able to

- Discuss the meaning, nature & scope of research in education
- Situate themselves as researching professionals
- identify different models and approaches of action research
- identify research problems and develop research questions
- develop a research proposal.
- Conduct research in different educational settings
- Write research report and present it effectively

Outline

1. **Introduction of Educational Research**
   - **1.1.** Sources of Knowledge
   - **1.2.** Scientific method
   - **1.3.** Concept of research in education
   - **1.4.** Need and scope of research in education

2. **Types of Research**
   - **2.1.** Types of research by Purpose
   - **2.2.** Basic Research
   - **2.3.** Applied Research
   - **2.4.** Action Research
   - **2.5.** Types of research by Methods
     - **2.5.1.** Historical research
     - **2.5.2.** Experimental Research
     - **2.5.3.** Descriptive research

3. **Historical Research**
   - **3.1.** Introduction
   - **3.2.** What is history
   - **3.3.** Scope of historical research
   - **3.4.** Formulation of problem for historical research
   - **3.5.** Historical sources

3.6. Historical criticism
3.7. The Historical Hypothesis

4. **Experimental Research**
   4.1. Introduction
   4.2. What is experiment
   4.3. Techniques of controlling extraneous variables
   4.4. Experimental validity
   4.5. Experimental designs

5. **Descriptive Research**
   5.1. Introduction
   5.2. Survey studies
   5.3. Inter relational ship studies
   5.4. Development studies
   5.5. Planning cycle and descriptive research

6. **Tools and Techniques of Research**
   6.1. Introduction
   6.2. Questionnaire
   6.3. Opinionnaire and attitude scale
   6.4. Interview
   6.5. Observation
   6.6. Tests and appraisal instruments

7. **Sampling Technique**
   7.1. Introduction
   7.2. Population and sample
   7.3. Sampling designs
   7.4. Estimating sample size
   7.5. Sampling Errors

8. **Designing a Research Proposal**
   8.1. Introduction
   8.2. Format of the research proposal
   8.3. Statement of the problem
   8.4. Purpose of the study
   8.5. Definitions, assumption and limitations
   8.6. Review of Related literature
   8.7. Theoretical framework
   8.8. Hypotheses and questions
   8.9. Proposed research procedures
   8.10. Time schedule

9. **Writing Research Report**
   9.1. Introduction
   9.2. The research report
   9.3. Writing the report
   9.4. Assembling the research report

Recommended Texts:

1. Geoffrey E. Mills, L. R. Gay (2019). *Educational research: Competencies for analysis and applications, (12th Ed.).* N.Y: Merrill- Prentice Hall
2. Patten, M. L., & Newhart, M. (2017). *Understanding research methods: an overview of the essentials*. UK: Routledge

Suggested Readings:

1. Fraenkel, J. R. &Wallen, N. E. (2015). *How to design and evaluate research in education*: NY: McGraw Hill
2. Gay, L. R. (2010). *Educational research: Competencies for analysis and application.* NY: Pearson Education.
3. Walliman, N. (2017). *Research methods: The basics*. UK: Routledge

Web-based Resources

http://hec.gov.pk/english/services/universities/RevisedCurricula/Documents/2011-2012/Education/ResearchMethods_Sept13.pdf
https://dspace.utamu.ac.ug/bitstream/123456789/182/1/Research-Methods-in-Education-sixth-edition.pdf
http://cw.routledge.com/textbooks/cohen7e/
https://us.sagepub.com/en-us/nam/research-methods-in-education/book229278
https://www.openlearning.com/courses/SPPP3042x
https://www.slideshare.net/sagepublications/remler-van-ryzin-webinar-ppt-presentation
http://www.naspaa.org/JPAEMessenger/Article/Vol15No2-SP2009/Aguado.pdf

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Educational Leadership and Management

Course Code: EDUC-6405 **Credits Hours:** 3(3+0)

Course Description:

It has become the dire need for a society that everyone must have a specialization in every field of life due to the rapid expansion of knowledge. Education modifies the behavior of a person; thus education can perform this duty well if the system of education runs effectively. For making, developing, and establishing the education system administration, management and supervision to play an important role as well as in all other aspects of society. In Pakistan, the existing system of educational management and supervision is considered as a defective system which does not cope the national, and local level needs of education system. There are so many reasons. One, reason is that we cannot yet established a firm administrative structure for education- system. It is always uncertain and wavering. So it is the need of our educational institution to prepare those personnel at higher level who are highly skilled, professionally trained and capable in their field, particularly in school management and leadership. So the present course of educational leadership and management observes and envisages the promotion of educational leadership management and supervision.

Learning Outcomes:

Upon completion of the course, students will be able to:

- Candidates in the Educational Leadership programs will demonstrate willingness to use their skills to benefit and serve society. Within the contexts of their work, candidates promote authentic learning, social and emotional development, and a commitment to social justice in environments that foster respect for diversity and the dignity of all.
- Candidates will adapt at applying their acquired knowledge in the process of evaluating their own professional performance and decision-making with respect to its impact on students and/or clients, organizations, and the wider community.
- Implement authentic and meaningful strategies for supporting and supervising teachers' instructional capacities to maximize student learning and achievement.
- Lead collaborative and systematic inquiry processes that support school improvement.

Outline

1. **Concept of Administration**
   - **1.1.** Educational Administration meaning and nature
   - **1.2.** Approaches to Educational Management and Administration
   - **1.3.** Basic principles of Educational Administration
   - **1.4.** Meaning and spirit of Islamic Administration
   - **1.5.** Fundamental principles of Islamic Administration
   - **1.6.** Dynamics of Islamic Model

2. **Concept of Educational Management**
   - **2.1.** Meaning of basic elements of Management
   - **2.2.** Concepts of Management in education

3. **Concept of Supervision**
   - **3.1.** Meaning of Supervision
   - **3.2.** Kinds of Supervision
   - **3.3.** Nature and Characteristics of Supervision
   - **3.4.** Difference between Administration and Supervision

3.5. Purpose and Need of Supervision
3.6. Qualities of An effective Supervision
3.7. Different Techniques of Supervision
3.8. Role of Supervision in Educational institutions

4. Educational Planning
4.1. Definitions, Aims and objectives of Education
4.2. Approaches of Educational Plan
4.3. Types and Goals of Educational Planning
4.4. The Process of Plan Formulation
4.5. Process of Project Planning

5. School Discipline and Classroom Management
5.1. Meaning and purpose of School discipline
5.2. Factor effecting School discipline
5.3. Meaning of Classroom-and its Management
5.4. Criteria for student Classification
5.5. Psychological factors of Classification

6. Management of Resources
6.1. Physical Aspects (School Building and Hostel etc.)
6.2. Learning resources (Library, A.V. Aids, Instructional Material)
6.3. Educational Financing
6.4. Budgeting

7. School Records
7.1. Need for School Records
7.2. Essential Requirements of School Records
7.3. Kinds of School Records

8. Administrative and Supervisory Structure in Pakistan
8.1. Meaning of Education
8.2. Educational Secretariat
8.3. Provincial Development of Education
8.4. Boards of Secondary and Intermediate Education
8.5. National Bureau of Curriculum and Text Book
8.6. Educational Code

9. Evaluation Management System
9.1. Need and Improvement of Evaluation in
9.2. Management System of Evaluation
9.3. Criteria of evaluation
9.4. Improving Management through Evaluation

Recommended Texts:

1. Adams, D., Piaw, C. Y., Lee, K. C. S., & Sumintono, B. (Eds.). (2019). *Instructional leadership to the fore: research and evidence*. University of Malaya Press
2. Bush, T., Bell, L., & Middlewood, D. (Eds.). (2019). *Principles of educational leadership & management*. SAGE Publications

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Suggested Readings:

1. Eacott, S. (2015). *Educational leadership relationally: A theory and methodology for educational leadership, management and administration*. USA: Springer
2. Shah, S. (2016). *Education, leadership and islam*. UK: Routledge

Web-based Resources:

Day, C., & Sammons, P. (2016). Successful school leadership. Education Development Trust. www.educationdevelopmenttrust.com
http://712educators.about.com/od/discipline/tp/disciplinetips.htm Top Ten Tips for Classroom Discipline and Management
http://www.adprima.com/managing.htm Effective Praise Guidelines
https://www.roehampton.ac.uk/postgraduate-courses/education-leadership-and-management/
http://educationnorthwest.org/webfm_send/1152
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
Mineduc School Management. (2008). Roles, duties and responsibilities of school management team. Retrieved from http://www.mineduc.gov.rw/IMG/pdf/Roles_Duties_and_Responsabilities_of_School_Management_Team-4.pdf
Mahoney, R. (2000). Leadership and learning organisations. The Learning Organization, 7(5), 241–243. Retrieved from http://www.emerald-library.com

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Educational Psychology

Course Code: EDUC-6406 **Credit Hours:** 3(3+0)

Course Description:
The main purpose of the course is to make students aware of how to bridge the gap between theory and practice. In other words, how they can use various concepts of educational psychology to improve their learning and teaching skills. The course is intended to improve the reading, writing and communication skills of students. For this purpose, various structured and unstructured activities will be designed and assigned to the students so that they can better develop their abilities and skills. The student teachers will be introduced with major theories of intelligence, personality, motivation, memory, thinking and instruction. They will also be trained in how these theories can be applied in the classroom teaching. Understanding the psychological basis of these theories will help them to manage classroom in a way that promotes learning and minimizes disruptions. It will also provide them with the tools needed to be a better teacher, counselor and guide.

Learning Outcomes:
After the successful completion of the course, the participants will be able to:

- Understand the need and importance of psychology in education
- Comprehend the scope, methodology and usefulness of educational psychology in effective teaching
- Develop an insight into various concepts and theories of educational psychology pertaining to motivation, intelligence, personality, classroom management effective teaching and their educational implications
- Develop skills to understand and identify the individual differences among the students to improve their teaching by adopting appropriate strategies
- Adopt the measures to enhance the creative potentials of themselves as well as of their students

Outline

1. **Introduction**
   - **1.1.** Meaning and nature of psychology
   - **1.2.** Meaning and nature of educational psychology
   - **1.3.** Educational psychology: Some basic problems to solve simultaneously
   - **1.4.** Scope and utility of the study of educational psychology: Teachers, teaching & educational psychology
   - **1.5.** Methods of educational psychology Conclusion: Teachers, teaching and learners; learning, and educational psychology

2. **Learning and Instruction**
   - **2.1.** Educational psychology and teaching
   - **2.2.** Objectives for learning
   - **2.3.** Mastery learning
   - **2.4.** Direct instruction
   - **2.5.** Expository learning &teaching
   - **2.6.** Constructivist & situated learning
   - **2.7.** Inquiry & problem –based learning
   - **2.8.** Group work & cooperation in learning

3. **Motivation: Theory and Practice**
   - **3.1.** Concept of motivation.
   - **3.2.** Theories of motivation.
   - **3.3.** Strategies for motivation

4. **Creating Learning Environments**
   - **4.1.** The ecology of classroom
   - **4.2.** Creating a possible learning environment
   - **4.3.** Maintaining a good learning environment
   - **4.4.** Special programs for classroom management to create a better learning
   - **4.5.** Environment
   - **4.6.** The need for better communication
   - **4.7.** Some guidelines

5. **Teaching for Learning (i.e. Effective Teaching)**
   - **5.1.** Planning for effective teaching
   - **5.2.** Teaching large & small groups effectively
   - **5.3.** Characteristics of effective teachers
   - **5.4.** Matching methods to goals

6. **Individual Differences / Variations**
   - **6.1.** Nature, types causes and measurement of individual differences(Individual differences in intelligence , creativity , cognitive and learning styles& students with learning challenges or disorders)
   - **6.2.** Handling with individual differences in the classroom

7. **Intelligence and Personality Theories**
   - **7.1.** Intelligence: Meaning, nature and theories of intelligence
   - **7.2.** Personality: Meaning, nature and theories of personality

8. **Complex cognitive processes**
   - **8.1.** Thinking & understanding: Needs & importance
   - **8.2.** Concepts of problem solving: Nature, steps, strategies, factors
   - **8.3.** Teaching & learning about thinking
   - **8.4.** Teaching for transfer

Recommended Texts:

1. Duchesne, S., & McMaugh, A. (2018). *Educational psychology for learning and teaching.* AU: Cengage
2. Santrock, J. W. (2017). *Educational psychology.* Boston: NY: McGraw –Hill

Suggested Readings:

1. Evans, E. G. S. (2017). *Modern educational psychology: an historical introduction.* UK: Routledge
2. Ravi, V. (2016). *Advanced educational psychology.* USA: Lulu Publications

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Web-based Resources:

http://www.thedailyriff.com/articles/howard-gardner-shares-his-justreleased-97.php
http://web.utk.edu/~rmcneele/classroom/theories.html
http://teachingasleadership.org/sites/default/files/Related-Readings/LT_ Ch1_2011.pdf
http://webspace.ship.edu/cgboer/maslow.html
http://www2.raritanval.edu/departments/HumanitiesSocSci/Part-Time/Wolfe/edpsych/notes.html
http://www.karencrawfordphd.com/default.asp
http://www.ibe.unesco.org/fileadmin/user_upload/archive/publications/EducationalPracticesSeriesPdf/prac10e.pdf
http://www.ehow.com/how_4422139_teach-psychology-class.html
http://www.coitweb.uncc.edu/~dcassidy/A%20Primer%20on%20Educational%20Psychology.htm
http://www.mhhe.com/socscience/education/elliott/book/ today.htm
http://eprints.me.psu.ac.th/ILS/info/Understanding_Differences.pdf
http://peoplelearn.homestead.com/BEduc/Chapter_7.pdf

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Philosophy of Education

Course Code: EDUC-6407 **Credit Hours:** 3(3+0)

Course Description:
This course will provide learners with an opportunity to consider a variety of educational issues from a philosophical perspective. The course will explore general questions such as: What is the ultimate goal of education? This course positions philosophy within various historical contexts and uses historical thinking tools to engage with philosophical thinking tools. The course introduces students to a wide range of philosophers and a wide range of philosophical schools of thought as they relate to education. This course provides a study of the educational implications of Idealism, Realism, Neo Thomism, Experimentalism, and Existentialism. Significant factors will include the curricula emphasis, preferred method, ethics, and aesthetics stressed by each philosophy. Attention is placed on the learner's ability to identify and describe his or her own philosophy of education. The course will assist in developing abilities of students to understand the meaning of the term Philosophy, understand the subdivisions of philosophy, as well as to explain the leading philosophies and theories of education.

Learning Outcomes:
- Understand the meaning of the term Philosophy
- Understand the subdivisions of philosophy, how they are defined, and
- How do they reflect their own beliefs and their teaching about truth and values?
- Understand the leading philosophies and theories of education
- Understand whether they (the teachers) have certain philosophies and
- Theories present in their educational experiences?

Outline

1. **Philosophy**
   - **1.1.** Definition and scope of philosophy
   - **1.2.** Metaphysics, Epistemology, Axiology, Logic: Deductive logic, Inductive logic

2. **Western Philosophies of Education**
   - **2.1.** Idealism: Its metaphysics, epistemology, axiology, educational implications. Proponents: Plato.
   - **2.2.** Realism: Its metaphysics, epistemology, axiology, educational implications. Proponents: Aquinas, Aristotle, Bacon, Locke.
   - **2.3.** Naturalism: Its metaphysics, epistemology, and axiology, educational implications Proponents: Rousseau.
   - **2.4.** Pragmatism (Experimentalism: Its metaphysics, epistemology, axiology, educational implications. Proponents: Dewey
   - **2.5.** Postmodernism: Its metaphysics, epistemology, axiology, educational implications. Proponents: Derrida, Foucault.

3. **Muslim Philosophical Perspective on Education**
   - **3.1.** Imam Ghazali
   - **3.2.** Ibne-Khaldun
   - **3.3.** Shah waliullah
   - **3.4.** Sir Syed Ahmed Khan

3.5. Allama Iqbal

4. Theories of Education:

4.1. Progressivism (rooted in pragmatism): Aims, Curriculum, and Educational Implications. Proponents: Dewey, Kilpatrick,Parker, Washburne.

4.2. Critical Theory rooted in neo Marxism and postmodernism): Aims, Curriculum, and Educational Implications. Proponents: McLaren, Giroux.

4.3. Perennialism (rooted in realism): Aims, Curriculum, and Educational Implications. Proponents: Adler, Bloom, Hutchins, Maritain.

4.4. Essentialism (rooted in idealism and realism): Aims, Curriculum, Educational implications. Proponents: Bagley,Bestor, Conant, Mor.

5. Role of Values in Education

5.1. Definition, meaning, and kinds

5.2. Identification and importance of social and moral values

5.3. Teaching of social and moral values through education

5.4. Role of religious values in individual and social life.

Recommended Texts:

1. O'Connor, D. J. (2016). *An introduction to the philosophy of education*. Routledge:UK
2. Mead, G. H., Biesta, G. J., & Trohler, D. (2015). *Philosophy of education*. UK: Routledge

Suggested Readings:

1. Kleinig, J. (2016). *Philosophical issues in education*. UK: Routledge
2. Shami, P.(2015). *Educational philosophy*. (1st Ed.). Sargodha: Pakistan
3. Phillips, D. C. (Ed.). (2014). *Encyclopedia of educational theory and philosophy*. USA: Sage Publications.

Web-based Ressources

Http://www.islamicity.com/mosque/ihame/Sec5.htm (09/25/2003)
www.utm.edu/research/iep
The Internet Encyclopedia of Philosophy
Siddiqui, B. H. (n.d.) Evolution of philosophical activity in Pakistan. Retrieved from Ø
http://www.allamaiqbal.com/publications/journals/review/apr89/9.htm Dewey, J. (1897). My pedagogic creed. School Journal, 54, 77–80. Retrieved from
http://dewey.pragmatism.org/creed.htm
Book review: Saiyidain, K. G. (1977). Iqbal's educational philosophy. Retrieved from
http://education5.net/i/iqbal%E2%80%99s-educational-philosophy-e757
Interview with Dr Ashfaque Ahmad. Retrieved from
http://www.afed.itacec.org/document/aziz_kabani_and_somaiya_ayoob.pdf
Freire, P. (1993). Pedagogy of the oppressed. Chapter 2. New York: Continuum Books.
Retrieved from http://www.webster.edu/~corbetre/philosophy/education/freire/freire-2.html
Boeree, C. G. (2000). The Ancient Greeks, Part Two: Socrates, Plato, and Aristotle.
Retrieved from http://webspace.ship.edu/cgboer/athenians.html

Critical Thinking and Reflective Practices

Course Code: EDUC-6408 **Credit hours:** 3(3+0)

Course Description: This course is designed for the undergraduate program of teacher preparation. It is expected that the teachers of twenty first century should be able to not only learn and review the current policies and practices in education but may also have the ability to think critically and reflect upon the current practices to bring positive changes. This course will introduce the prospective teachers to critical theory, and help them to become reflective practitioners in their professional careers. This course will also help them to initiate action research culture within education and strengthen the community of practice in the profession of teaching. The course will focus on the development of abilities among students to analyze the content and design classroom instruction in an innovative manner, ask and analyze thought-provoking questions, review and reflect upon their own teaching practices for further improvement and apply critical thinking in different content areas. They will also learn mind mapping techniques as well as tools and techniques of critical thinking and reflective practices.

Learning Outcomes:
After completing this course the prospective teachers will be able to:

- Apply critical thinking and critical pedagogy in teaching
- Analyze the content and design classroom instruction in innovative manner
- Ask and analyze thought provoking Questions
- Review and reflect upon their own teaching practices for further improvement
- Apply critical thinking in different content areas
- Become a cautious and active member of community of teaching and learning

Outline

1. **Introduction to Critical Thinking**
   - **1.1.** Origins of critical approaches in social science
   - **1.2.** Critical theory in Education
   - **1.3.** Essential aspects of Critical Thinking
   - **1.4.** Teacher as a Critical Thinker

2. **Critical Theory and Pedagogy**
   - **2.1.** Politics of Education (Marginalization)
   - **2.2.** Social Class Theory and Education
   - **2.3.** Race Religion and Minority Issues in Education
   - **2.4.** Work of Foucault and Paulo Freire
   - **2.5.** Roots of Critical Pedagogy

3. **Teaching Strategies to help promote Critical Thinking**
   - **3.1.** Cooperative Teaching and Learning Strategies
   - **3.2.** Discussion and Debate
   - **3.3.** Critical Question - Answer Forums
   - **3.4.** Classroom Assessment Techniques

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4. **Reflective Practice**
   - **4.1.** What is reflection?
   - **4.2.** Theoretical Perspectives
     - **4.2.1.** John Dewy
     - **4.2.2.** Donald A. Schon
     - **4.2.3.** David A. Kolb
     - **4.2.4.** Graham Gibbs
   - **4.3.** Reflective Model of Professional Development
   - **4.4.** Action and Reflection

5. **Reflective Cycle**
   - **5.1.** Gibb's Reflective Cycle
   - **5.2.** Description (Stage 1)
   - **5.3.** Feelings
   - **5.4.** Evaluation
     - **5.4.1.** Description (Stage 2)
     - **5.4.2.** Conclusion
     - **5.4.3.** Action Plan

6. **Action Research**
   - **6.1.** Teacher as Researcher
     - **6.1.1.** Designing Action research
     - **6.1.2.** identification of Problem
     - **6.1.3.** Action Plan
   - **6.2.** Execution and Recording
     - **6.2.1.** Reflection
     - **6.2.2.** Improved Plan

7. **Reflective and Critical Writing**
   - **7.1.** Critical Review and Analysis
   - **7.2.** Reflective writing
   - **7.3.** Critical Writing
   - **7.4.** Journal Writing

8. **Tools and Techniques of Critical Thinking and Reflective Practices**
   - **8.1.** Mind Mapping
   - **8.2.** Portfolio Development
   - **8.3.** Assessment Schedules
   - **8.4.** Mentoring and Peer Support

9. **Communities of Practice and Knowledge**
   - **9.1.** Concept of Perceived knowledge
   - **9.2.** Concept of Reflective Knowledge
   - **9.3.** Sharing and publishing
   - **9.4.** Building Communities of Knowledge

Recommended Texts:

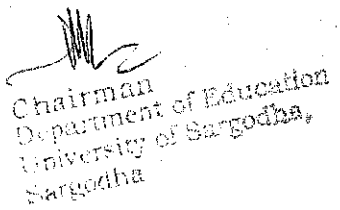
1. Brookfield, S. (2012). T*eaching for critical thinking: tools and techniques to help students question their assumptions.* USA: Jossey-Bass
2. Cottrell, S. (2017). *Critical thinking skills: Effective analysis, argument and reflection.* UK: Macmillan International Higher Education

Suggested Readings:

1. Bolton, G. (2010). *Reflective practice: writing and professional development (3rd Ed.).* Los Angeles: Sage
2. Wink, J. (2011). *Critical pedagogy: notes from the real world (4th Ed.).* NJ: Pearson Education

Web-based Resources:

https://www.marjon.ac.uk/student-life/library/electronic-resources/critical-and-reflective-practice-in-education/critical-and-reflective-practice-in-education-volume-1/Fisher-CRPE-vol-1-issue-1.pdf
https://www.futurelearn.com/courses/learning-teaching-university/0/steps/26381
http://www.education.leeds.ac.uk/research/projects/critical-thinking-and-reflective-practice-in-deaf-education
http://www.napavalley.edu/people/jhall/Documents/JHallUsing%20Critical%20Reflection%20Exercises%20F2012.pdf
http://dspace-unipr.cineca.it/bitstream/1889/91/2/BP100%20Vezzosi.pdf
https://www.sheffield.ac.uk/lets/toolkit/learning/reflective



Human Development and Learning (Foundation)

Course Code: EDUC-6409 **Credit Hours:** 3(3+0)

Course Descriptions:
This course will cover the major theoretical and methodological approaches in the study of human development and learning. Learning remains continuous throughout human life whereas human development across the lifespan (from infancy to adulthood) is presented with an interdisciplinary perspective, focusing on physical, psychological, sociological, and cognitive aspects of development. This course will give prospective teachers a detailed insight into the phenomenon of human development and learning through a topical approach within an educational context. In doing so, they will learn about the physical, cognitive, social, personality, emotional, and moral development across the lifespan. The major life issues, milestones, and transitions from conception to death will also be explored. The course has the following objectives to serve the students in developing basic concepts in human development, growth and learning, the process of human development and its classroom application, and understanding various aspects and stages of human development. This course will also guide the students to study approaches to learning and individual differences among students.

Learning Outcomes:
After studying this course, students will be able to understand

- Basic concepts in human development, growth and learning
- Process of human development and its classroom application
- Various aspects and stages of human development
- Different approaches to human learning
- Individual differences and their effect on teaching learning.

Outline

1. **Human development and growth**
   - **1.1.** Definitions of Human Development and Growth
   - **1.2.** Difference between Growth and Development
   - **1.3.** General Principles of Human Development
   - **1.4.** Factors influencing Human Development
   - **1.5.** A Frame work for studying Human Development

2. **Physical Development**
   - **2.1.** Concept and definition of individuals
   - **2.2.** Physical Development from Infancy to Adolescence
   - **2.3.** Physical Characteristics of Learners of all school levels
   - **2.4.** Role of Teacher in Physical Development

3. **Intellectual Development**
   - **3.1.** IntellectualDevelopment from infancy to Adolescence
   - **3.2.** Intellectual Characteristics of Learners of all school levels:
   - **3.3.** Role of Teacher in Intellectual Development

4. **Social Development**
   - **4.1.** Social Development from Infancy to Adolescence
   - **4.2.** Social Characteristics of Learners of all school levels

4.3. Role of Teacher in Social Development

5. **Emotional Development-**
   - **5.1.** Emotional Development from Infancy to Adolescence
   - **5.2.** Emotional Characteristics of Learners of all school levels
   - **5.3.** Role of Teacher in Emotional Development

6. **Moral Development**
   - **6.1.** Morality as Rooted in Human Nature
   - **6.2.** Morality as the Adoption of Social Norms
   - **6.3.** Moral Reasoning
   - **6.4.** Development of Morally Relevant Self-Control
   - **6.5.** Correlates of Moral Conduct

7. **Language Development**
   - **7.1.** Definition and Components of Language?
   - **7.2.** The Stages of Language Development
   - **7.3.** Biological and Environmental Influences on Language Development

8. **Human Learning**
   - **8.1.** Definition and Concept of Learning
   - **8.2.** Process of Learning
   - **8.3.** Factors Affecting Learning
   - **8.4.** Thorndike's Laws of Learning
   - **8.5.** Transfer of Learning
   - **8.6.** Approaches to Learning
     - **8.6.1.** Behavioral Approach
     - **8.6.2.** Cognitive Approach
     - **8.6.3.** Social Learning Approach
     - **8.6.4.** Humanistic Approach

9. **Individual Differences**
   - **9.1.** Sources and Types of Individual Differences
   - **9.2.** Dealing with Academic Ability Grouping
   - **9.3.** Differences in Learning and Thinking Styles
   - **9.4.** Effects of Individual Differences on Learning
   - **9.5.** Role of Teacher to organize individual differences in classroom

Recommended Texts:

1. Kail, R. V., & Cavanaugh, J. C. (2018). *Human development: a life-span view.* USA: Cengage Learning
2. Moore, R. C. (2017). *Childhood's domain: play and place in child development.* UK: Routledge

Suggested Readings:

1. Arif, H. A. (2003). *Human development and learning.* Majeed Book Depot: Lahore
2. Benson, J. (2019). *Advances in child development and behavior*, volume 56 (1st Ed.). USA:

Elsevier Academic Press
3. Pritchard, A. (2017). *Ways of learning: learning theories for the classroom*. UK: Routledge

Web-based Sources
http://childdevelopmentinfo.com Early Childhood Development (ECD) Pakistan website
http://www.ecdpak.com Encyclopedia on Early Childhood Development
http://www.child-encyclopedia.com/en-ca/home.html
http://www.ecdpak.com/nurture/about_nurture.html
http://www.search-institute.org/developmental-assets/lists
https://link.springer.com/chapter/10.1007/978-94-017-3368-7_25
https://archive.org/details/psychologicalfou013678mbp
https://www.coursehero.com/file/9335686/Chapter-1-Notes/
https://www.studocu.com/en/document/ryerson-university/introduction-to-psychology-ii/lecture-notes/lecture-notes-lecture-10-human-development/218489/view
https://www.slideshare.net/janettecbalagot/2nd-lecture-human-development-meanin concepts-and-approaches

Information and Communication Technology in Education

Course Code: EDUC-6410 **Credit Hours:** 3(3+0)

Course Description:
This course will help the prospective teachers to understand, use, and apply a range of Information Communications Technologies (ICTs)—such as computers and the Internet, other audio and video equipment, mobile phones, and online resources and tools—as part of the teaching and learning process. During this course, they will learn to collaborate with their peers to develop a learning activity that uses digital tools and resources to support student-centered learning. The course focuses on teaching with technology. Technology in this course largely means computers/laptops, though instruction is largely similar to whether a teacher is using a laptop or cell phone. The focus of this course is to provide prospective teachers with the knowledge and skills regarding how ICTs can be used to engage students in the learning process, improve understanding of content as well as instructional and assessment practices, and enhance communication and collaboration in the classroom. To attain this end, students will design and create instructional units in which technology plays a central role and implement these units with students.

Learning Outcomes:
After completion of this course learners will enable learners to:

- Understand the meaning, concept and importance of instructional technology in education process.
- Know the meaning of learning and appreciate what is effective teaching and learning by using latest instructional technology.
- Select, arrange and use appropriate methods/strategies and material for effective use of technology.
- Develop indigenous materials as instructional aids.
- explain why technologies are appropriate (and not appropriate) for certain types of learning (knowledge) •
- utilize a range of technologies (radio, video, computer, online tools, and others) to create, plan, and deliver instruction (application)
- Provide a well-articulated perspective on ICTs in education informed by personal experience and critical examination of resources, curriculum, and educational practice (evaluation)

Outline

1. **Introduction:**
   - **1.1.** Meaning and definition of educational technology
   - **1.2.** Origin of educational technology
   - **1.3.** History of educational technology
   - **1.4.** Types of educational technology
   - **1.5.** Components of educational technology
   - **1.6.** Classification Of AV-aids
   - **1.7.** Merits and demerits of educational technology in the field of education

2. **Types of Educational Technologies, Media and Their Uses in Learning Process**
   Introduction: Basic concepts, Tape-Recorder, Radio, Television and video, Educational telecasting, Videotext and electronic mail, Interactive video, Video and

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film, Projectors, types and uses, Computer, Internet and intranet, Multimedia, Language laboratories, Models and modeling, Reprography, Board work: Bulletin and flallen boards, Use of locally available low cost material of educational technology, Media: Meaning and concept, Use of Mass Media in Education.

3. **Current types of the educational technology systems and their application**
   - **3.1.** Computer-based educational technology
   - **3.2.** Interactive video and multimedia stations
   - **3.3.** Virtual reality systems: Simulations & games
   - **3.4.** Teleconferencing
   - **3.5.** Personal digital assistants (PDAs)
   - **3.6.** Laboratory and workshop instructions

4. **Planning and implementation for effective technology integration in**
   - **4.1.** Teaching
   - **4.2.** Preparing / planning for technology integration
   - **4.3.** Obtaining the right material and personnel resources
   - **4.4.** Choosing the right software & hardware for yours needs
   - **4.5.** Training the teachers for using educational technology
   - **4.6.** Introduction to technology support tools
   - **4.7.** Using graphics tools
   - **4.8.** Using planning and organizing tools
   - **4.9.** Using tools to support specific content areas
   - **4.10.** Using interactive videodisc technology in teaching
   - **4.11.** Using hypermedia in teaching and learning

5. **Integrating Technology into the Curriculum and Instruction**
   - **5.1.** Introduction
   - **5.2.** Technology in science and mathematics instruction
   - **5.3.** Technology in social science instruction
   - **5.4.** Technology in language arts and foreign language instruction
   - **5.5.** Technology in music and art instruction
   - **5.6.** Technology in exceptional student education
   - **5.7.** Issues and trends related to technology use in instruction
   - **5.8.** Educational technology resources

6. **Media and Teaching**
   - **6.1.** Concept of teaching: Structure and features
   - **6.2.** Professionalism in teaching
   - **6.3.** Teaching as an art or science
   - **6.4.** Teaching competence
   - **6.5.** Factors affecting teaching competence
   - **6.6.** Effective teaching or effective teacher

Recommended Texts:

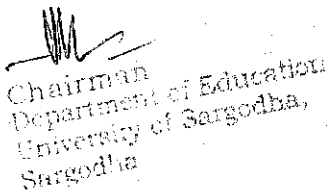
1. Harasim, L. (2017). *Learning theory and online technologies*. UK: Routledge
2. Rashid, M. (Ed.). (2015). *Allied material on teaching strategies*. Islamabad: AIOU
3. Spector, J. M. (2015). *Foundations of educational technology: Integrative approaches and interdisciplinary perspectives*. UK: Routledge

Suggested Readings:

1. Laurillard, D. (2013). *Teaching as a design science: Building pedagogical patterns for learning and technology*. UK: Routledge
2. Peters, M. A., & Roberts, P. (2015). *Virtues of openness: Education, science, and scholarship in the digital age*. UK: Routledge

Web-based Recourses:

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
National Geographic Channel: http://maps.google.com/Videos – National Geographic: http://video.nationalgeographic.com/video/player/national-geographic-channel/
http://www.elmoglobal.com/en/html/ict/01.aspx
https://learningportal.iiep.unesco.org/en/improve-learning/curriculum-materials/appropriate-educational-technologies
http://unesdoc.unesco.org/images/0012/001295/129538e.pdf
http://www.riemysore.ac.in/ict/unit__1__information_and_communication_technology.html"
Computer Input Devices – Tutorials Point' http://www.tutorialspoint.com//computer_fundamentals/computer_input_devices.htm accessed on 12-01.2016
'Troubleshooting Common Computer Problems' http://www.baylor.edu/business/mis/nonprofits/doc.php/192118.pdf accessed on 16-01-2016
If you wish to learn more about anatomy of computer, you may read this module available at: http://kevinhaghighat.com/RLOs/ComputerAnotomy/ComputerAnatomy_RLO.pdf



Course Code: EDU-6411 **Teaching Practice I** **Credit hours:** 6(0+6)

Course Code: EDU-6412 **Teaching Practice II** **Credit hours:** 6(0+6)

Teaching Practice 12 Cr Hours

Duration Twelve Weeks

Teaching practice I Marks 100

Teaching Practice II Marks 100

Total Marks 200

Two final Lessons One for teaching practice-I and one for teaching practice-II

Break up of marks for one lesson is as under:

Sr. No	Component	Marks
1	Attendance *	10
2	Draft final lesson plans	05
3	Development of assessment tools and AV-aids	10
4	40 Lesson Plans	35
5	Final Lesson	40
	Total	**100**

*** Break up of Marks of Attendance**

95% or above = 10

90-94% = 09

85-89% = 08

80 – 84% = 07

Below 80% attendance does not qualify

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Teaching Specialization (Elective Courses)

Only one of the following elective courses relevant to the subject area of the student may be opted.

Code	Course	Credit Hours
EDU-6413	Teaching of Social Studies	3(3+0)
EDU-6414	Teaching of General Science	3(3+0)
EDU-6415	Teaching of Physics	3(3+0)
EDU-6416	Teaching of Chemistry	3(3+0)
EDU-6417	Teaching of Biology	3(3+0)
EDU-6418	Teaching of Mathematics	3(3+0)
EDU-6419	Teaching of English Language	3(3+0)
EDU-6420	Teaching of Urdu	3(3+0)

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Teaching of Social Studies

Course Code-EDUC-6413 **Credit Hours:** 3(3+0)

Course Description:

The major purpose of teaching this course is to develop mastery and command over the contents and competency of teaching the contents of social sciences from Class I to Class X (in both public and private sectors) by using a variety of methods and techniques. Physical sciences deal with the study of physical objects (matter), their interaction, interdependence, and predictability, etc. While the social sciences deal with the study of human behavior through naturalistic observation as well as in laboratory settings. All social sciences aim at studying the interaction, interdependence of human beings, and predictability of human behavior. Owing to the complexity of human nature and behavior, it is very difficult and almost impossible to predict it with 100% accuracy and objectivity. Numerous attempts, however, have been made to make social sciences more and more systematic and organized by applying the scientific methodology. The course objectives for students are to teach history and geography of the world and subcontinent, inculcate in their students the passion of patriotism through teaching the history of Pakistan Movement, and explain different concepts of Islamic and Pakistan studies.

Learning Outcomes:

After the successful completion of this course the students will be able to:

- Teach history and geography of the world and subcontinent
- Inculcate in their students the passion of patriotism through teaching the history of Pakistan Movement
- Understand different concepts of Islamic and Pakistan studies and teach them successfully at elementary and secondary level
- Understand and appreciate the basic concepts of Pakistan Studies
- Distinguish facts and infer from the events related to Pakistan Movement
- Develop and demonstrate the passion of patriotism and nation-hood.
- Know the causes of making Pakistan and importance of its existence
- Appreciate the role and sacrifices of the founder leaders of Pakistan movement
- Understand the concept of Social Studies
- Teach various concepts of Social Studies
- Identify various social problems and can appreciate their possible solutions
- Evaluate achievements of students in the field of Social Studies
- Develop among them love and respect for law, society, humanity.

Outline

1. **Meaning, importance, scope and objectives of social studies**
   - **1.1.** Concept of sovereignty in Islam
   - **1.2.** Characteristics of Islam
   - **1.3.** Pakistani society and culture
   - **1.4.** Comparison of rural and urban cultures/societies
   - **1.5.** Pakistani society and teaching social studies
   - **1.6.** Objectives of teaching social studies in Pakistan
   - **1.7.** Instruction of social studies in the light of National Curriculum Committee's provisions
   - **1.8.** Important and repeated topics for Social Studies

1.9. Sources for material on social studies
1.10. Identification of sources (books, newspapers, journals, reports etc.
1.11. Kinds of sources (primary& secondary sources etc.)

2. **Problems in teaching Social Studies**
   2.1. Lack of trained teachers
   2.2. Problems of course books and instructional material
   2.3. Problems of resources and opportunities
      2.3.1. Social problems
      2.3.2. Civic education
      2.3.3. Economic problems
      2.3.4. Problems of local resources
      2.3.5. Political problems
      2.3.6. Educational problems

3. **Study Resources for Social Studies at Elementary and Secondary Level**
   3.1. What are study resources?
   3.2. Need and importance of study resources at secondary level
   3.3. Different types of resources
   3.4. Survey of community /resources
   3.5. Problems of Social Studies' subjects
   3.6. Who should teach social studies?
   3.7. Characteristics of the effective teachers
   3.8. Understanding of community
   3.9. Maps, charts, globes, atlas, time map, time line, pedigrees, graph, models, museum, boards etc,

4. **Different teaching methods as given below will be demonstrated practically in the class room using appropriate content: e g.**
   4.1. Lecture method
   4.2. Discovery method
   4.3. Project method
   4.4. Discussion method
   4.5. Problem solving
   4.6. Unit based or modulary method
   4.7. Inductive and deductive method
   4.8. Supervised study method
   4.9. Team teaching, etc
   4.10. Questioning- answering
   4.11. Illustration and Demonstration
   4.12. Debates
   4.13. Case studies
   4.14. Symposium
   4.15. Dramatization
   4.16. Programmed Instructions

5. **Trends and Issues in teaching of Social studies**

6. **Lesson Planning in Social Studies.**

Recommended Texts:

1. Cohen, M. L. (2016). *Asia: case studies in the social sciences-a guide for teaching.* UK: Routledge
2. Russell III, W. B., Waters, S., & Turner, T. N. (2017). *Essentials of elementary social studies.* UK: Routledge

Suggested Readings:

1. Banks, J. A. (2015). *Cultural diversity and education: Foundations, curriculum, and teaching.* UK: Routledge
2. Brophy, J., Alleman, J., & Halvorsen, A. L. (2016). *Powerful social studies for elementary students.* USA: Cengage Learning

Web-based Resources
http://www.csun.edu/~hcedu013/
http://www.ilovethatteachingidea.com/ideas/subj_social_studies.htm
http://www.socialstudies.org/standards/introduction
http://www.socialstudies.org/standards
http://pers-www.wlv.ac.uk/~le1810/thss.htm
http://ssol.tki.org.nz/Social-studies-years-1-10/Teaching-and-learning/effective_teaching_in_social_studies
http://ssol.tki.org.nz/Social-studies-years-1-10/Teaching-and-learning/effective_teaching_in_social_studies/Teaching-strategies
https://www.isres.org/books/chapters/NASSE12017-12_11-09-2017.pdf

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Teaching of General Science

Course Code-EDUC-6414 **Credit Hours**: 3(3+0)

Course Description:

Science has become an essential and integral part of our life. Without the knowledge of basic principles, concepts, theories, and laws of science one cannot understand and explain a number of daily-life processes and many phenomena which one observes and experiences in one's life. Hence a basic knowledge about the fundamentals of science has become a necessity of everyone. Furthermore, science is not only a knowledge rather it is an attitude towards nature I a way of thinking as well as a way of life. Keeping this in view, science has been given the status of a compulsory subject in any education system in the form of "general science". So it is being taught even to the students of arts, literature, and social sciences. It is due to this large scale demand of science teaching that we need a large number of science teachers. These science teachers must be equipped with in-depth knowledge with full understanding and well-developed skills to communicate (teach) the concepts, principles, theories, and laws of science at the elementary and secondary levels.

Learning Outcomes:

After completion of this course learner would be able to:

- Understand and apply the concepts of science in daily life.
- Develop scientific thinking and scientific attitude among their students
- Plan, organize and teach a lesson on a given topic of science in the light of theory and research in science education
- Understand recent trends and issues in methods and techniques of teaching science at elementary and secondary level
- Comprehend and teach theories , Laws and principles of science effectively upto secondary level
- Understand and apply the scientific method in daily life
- Understand and apply various methods and techniques for teaching concepts of science
- Develop scientific thinking and scientific attitude among their students
- Select an appropriate method or technique for teaching a given topic of science by developing and arranging necessary materials and conditions
- Plan organize and teach a lesson on a given topic of science in the light of theories and research in science education
- Understand recent trends and issues in methods and techniques of teaching science at elementary and secondary levels

Outline

1. **Introduction & history of Science:**
   - **1.1.** Nature, scope and importance of science education
   - **1.2.** Scientific Method
   - **1.3.** Branches of science
   - **1.4.** Science and society
   - **1.5.** Important scientist
   - **1.6.** Islam and science

2. **Use of A.V-aids in teaching general science**
   - **2.1.** Planning lessons
   - **2.2.** Activities in science classrooms
   - **2.3.** Imparting instruction

3. **Different methods used in the teaching of general science (A detailed study of the nature, scope procedures, merits, demerits and application of the following methods and techniques)**
   - **3.1.** Expository method
   - **3.2.** Laboratorial or practical method
   - **3.3.** Logical puzzles
   - **3.4.** Demonstration
   - **3.5.** Discussion method
   - **3.6.** Problem solving method
   - **3.7.** Project method
   - **3.8.** Modeling
   - **3.9.** Discovery and inquiry method
   - **3.10.** Modular instruction
   - **3.11.** Activity base

4. **New Trends in Science Teaching**
   - **4.1.** CAI and ICT
   - **4.2.** Science technology and society
   - **4.3.** Science technology and literacy
   - **4.4.** New trends in teaching of General Science at Elementary and Secondary level

5. **Laboratory Skills**

Recommended Texts:

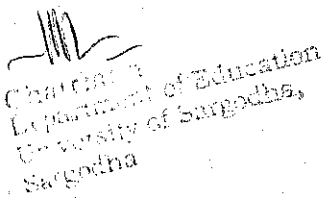
1. Gilbert, J. K., & Justi, R. (2016). *Modelling-based teaching in science education (Vol. 9).* Switzerland: Springer International Publishing
2. Textbook Board. (2018). *General science for Class VIII.* Lahore: Textbook Board

Suggested Readings:

1. Higher Education Commission. (2012). *Methods of teaching.* Pakistan: Higher Education Commission (HEC)
2. Singh, Y.K. (2017). *Teaching of General Science.* New Dehli: APH Publishing Corporation

Web-based Resources:

Sabaq Foundation Trust 2012-2017. General Science Book for Class 9-10.
http://www.sabaq.pk/book-page.php?b=p&c=9-10&s=gs
http://elearn.punjab.gov.pk/
http://www.nativeaccess.com/teachers/links_general_science.html
http://www.reachoutmichigan.org/funexperiments/quick/alphalist.html
http://www.teachingideas.co.uk/science/contents.htm
http://www.teachscienceandmath.com/tag/general-science-misconceptions/
http://science.sciencemag.org/content/56/1451/433
http://www.edu-nova.com/teaching-techniques-for-science-teachers.html
http://ddceutkal.ac.in/Syllabus/MA_Education/Education_Paper_5_SCIENCE.pdf
https://www.nap.edu/read/5287/chapter/3
https://www.sensepublishers.com/media/3095-designing-and-teaching-the-secondary-science-methods-course.pdf
https://www.fizyka.umk.pl/~pdf/EU_ISE/files/new/EUISEBookHR.pdf
https://www.suttontrust.com/wp-content/uploads/2014/10/What-makes-great-teaching-FINAL-4.11.14-1.pdf
Science Class 9 & 10. NCERT. www.www.flexiprep.com
Read more at: https://www.flexiprep.com/Subject-Wise-NCERT-Books-PDF/Science/NCERT-Class-9-Science.html#pdfsection_df6c9e79-page_1



Teaching of Physics

Course Code-EDUC-6415 **Credit Hours**: 3(3+0)

Course Description:

Physics is a very important natural science which deals, in a very broader sense, with the study of matter and energy as well as their interrelationship. It involves the study of simple electronics to the most complex nuclear reactions in modern physics. In this mechanical age, every machine from the simplest household appliances to supper computer is based on principles of physics. It plays a vital role in the industrial as well as economic development and scientific advancement of a country. It is also a vital part of engineering science. Hence, the teaching of physics holds a pivotal position in science education. However, in spite of all, this teaching of physics, like other sciences, is not up to the mark in our country. It involves the teaching of some of the most abstract and complex concepts of the science which require much advance and highly technical education and practical training of teachers. But unfortunately, in our country, teachers of physics are either untrained or superficially trained. They are mostly unaware of the principles of theory and practice of teaching physics.

Learning Outcomes:

After the successful completion of this course the student teachers will be able to:

- Comprehend the basic as well as advance concepts and achievements of physics.
- Understand and apply the theories, laws and principles of physics in their daily life.
- Teach the concepts, principles, theories and laws of physics up to secondary level.
- Evaluate and appraise the concepts and principles (theories and laws) of physics. Design and conduct experiments in the lab.
- Teach practically how to set and conduct the experiments in the labs
- Understanding and apply the laboratorial techniques of practical work in physics.
- Develop the helpful teaching materials e.g., charts concept maps models and for better and effective teaching of physics.
- Assign and handle the projects (practical work) of the students.
- Use and operate various types of apparatus and machines used in practicals, skillfully.
- Develop scientific attitude and scientific thinking in them.

Outline

1. **Physics Teaching**
   - **1.1.** Scientific process / method : Its nature , steps ,stages and characteristics
   - **1.2.** Scientific attitude , nature and importance
   - **1.3.** Physics teaching in Islamic perspective

2. **Use of A.V-aids in teaching Physics**
   - **2.1.** Planning lessons
   - **2.2.** Developing required instructional & helping materials for teaching physics
   - **2.3.** Imparting instruction

3. **Different methods used in the teaching of physics**
   - **3.1.** A detailed study of the nature, scope procedures, merits, demerits and application of the following methods and techniques:
   - **3.2.** Lecture method
   - **3.3.** Expository method

3.4. Laboratorial or practical method
3.5. Logical puzzles
3.6. Demonstration
3.7. Discussion method
3.8. Problem solving method
3.9. Project method
3.10. Modeling
3.11. Discovery and inquiry method
3.12. Using computer technology
3.12.1. (Simulations, PDA'S, Artificial Intelligence System, Programmed Instructions, Integrated Learning Systems)
3.13. Modular instruction
3.14. Activity based

4. New Trends in Physics Teaching
4.1. CAI and ICT
4.2. Science technology and society
4.3. Science technology and literacy
4.4. New Trends in teaching of Physics

5. Laboratory Techniques, Practical and Practical Work in Physics

Section I

- Draw a Graph Between Volume and Height of water column in graduated Cylinder
- Measure the length and diameter of a solid cylinder With venire's Caliper and calculate its Volume
- Study the principles of moments
- Find the resultant of two vectors
- Determine the acceleration down a plane of low angle of inclination
- Determine the center of gravity of a thin lamina
- determine the coefficient of sliding friction using horizontal plane
- study the relationship between load and extension of a helical spring by drawing a graph
- determine the diameter of a small sphere using a screw gauge and calculate its volume
- Determine the diameter of a given wire by using s crew gauge and calculate its are of cross section
- Find the density of body heavier then water by Archimedes principle
- Determine the mechanical advantage of an incline plane
- determine the mechanical advantage and efficiency of a simple fix pulley

Section II

- Study the effect of length of a simple pendulum and the time period
- Study the relationship between current and voltage
- study the effect of length of a wire on its resistance and plot a graph between the length and resistance
- study the resistances in series and parallel circuits
- plot the magnetic field due to a war magnet
- Plot the magnetic field near a long straight wire carrying current
- measure the length resonating column in resonance tube for two different tuning forks

- find specific heat of a solid
- draw a graph between temp and time when ice is converted into water and then to steam by slow heating
- determine latent heat of fusion of ice

Section III

- Study the laws of reflection of light
- Determine the focal length of a concave mirror by one pin method
- Study the laws of refraction of light using a glass slab
- determine the focal length of a convex lenses by two pin method
- trace the path of ray of light through prism and measure the angle of deviation
- determine critical angle of glass using a prism and calculate refractive index of the material of the prism
- symbol and astronomical telescope
- assemble compound microscope

Recommended Texts:

1. Alsop, S. and Hicks, K. (2013). *Teaching Science: A hand book for primary & secondary school teachers.* New Delhi: Kogan Page
2. Mohapatra , J.K . and Mathapatan, M .(2011) . *New dimensions of science curriculum: An operational approach.* New Delhi: Commonwealth.

Suggested Readings:

1. Higher Education Commission. (2012). *Methods of teaching.* Pakistan: Higher Education Commission (HEC)
2. Meltzer, D. E. and Shaffer, P. S. (2011). *Teacher education in physics research, curriculum, and practice.* USA: American Physical Society.

Web-based Resources:

http://www.teachscienceandmath.com/tag/general-science-misconceptions/
http://xkcd.com/895/
http://tap.iop.org/
http://www.aapt.org/Resources/
http://www.csun.edu/science/physics/index.html
http://physicslessons.com/demos.html
http://www.edu-nova.com/teaching-techniques-for-science-teachers.html
http://ddceutkal.ac.in/Syllabus/MA_Education/Education_Paper_5_SCIENCE.pdf
https://www.nap.edu/read/5287/chapter/3

Teaching of Chemistry

Course Code-EDUC-6416 **Credit Hours**: 3(3+0)

Course Description:

Chemistry is one of the most organized and systematic natural sciences. It deals with the study of the structure, composition, and properties of matter and changes which occur in matter and energy. The teaching chemistry usually referred to as chemical education, is considered generally a difficult subject because of a lot of abstractions involved. Numerous researchers' books and countless articles and journals are available on chemical education/teaching of chemistry. All these things have provided us with the latest advancements in the fields of curriculum, technologies, techniques, and methods of teaching (pedagogy). A chemistry teacher hence requires in-depth knowledge of teaching chemistry and the latest technologies and evaluative processes of chemical education. These courses are intended to introduce our prospective teachers with all these things mentioned above. They deal with the content of chemistry. The prospective teacher will be able to understand and explain the concepts theories and laws of chemistry up to the secondary level in the public sector and O' level, relate and apply various concepts, principles and laws of chemistry in their daily life. Teach the concepts, laws, and principles of chemistry up to the secondary level.

Learning Outcomes:

The Teaching of this course is intended to enable the students to:

- Understand and explain the concepts theories and laws of chemistry up to secondary level in public sector and O' level
- Develop scientific attitude and inquiry skills required for teaching chemistry
- Relate and apply various concepts, principles and laws of chemistry in their daily life.
- Teach the concepts, laws and principles of chemistry up to secondary level. Design, construct and use different glass tools and instruments required in experiments of chemistry.
- Prepare and use different types of solutions, chemicals and reaction mixtures employed in chemistry experiments.
- Design, construct and use different glass tools and instruments required in experiments of chemistry
- Prepare and use different types of solutions, chemicals and reaction mixtures employed in chemistry experiments
- Maintain & repair laboratorial equipment & apparatus
- Teach how to design and conduct chemistry experiments, in the lab
- Understand and apply the basic laboratorial techniques used in the Chemistry experiments
- Develop scientific thinking and attitude an inquiring among the students
- Operate and teach how to operate various types of machines and apparatus used in Chemistry experiments
- Teach how to develop chemistry models, charts, simulations and other helpful teaching materials

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Outline

1. **Laboratory Techniques-Practical's & Practical work in Chemistry**
   - **1.1.** Cutting and bending of glass tubes and drawing a Jet etc.
   - **1.2.** Determination of weight of an object using balances e.g, glass stopper, cork etc.
   - **1.3.** Measurement of volume of a liquid with the help of pipettes and burettes and cylinders
   - **1.4.** Determine the density of a liquid with the help of measuring cylinders and balance
   - **1.5.** Preparation and separation of a mixture of sand and common salt
   - **1.6.** Determine the melting point of an organic compounds
   - **1.7.** Determine the boiling point of organic liquids
   - **1.8.** Measure the conductivity of different electrolytic and non –electrolytic solutions

2. **Chemistry teaching**
   - **2.1.** Scientific process
     - **2.1.1.** Scientific attitude, nature and importance
     - **2.1.2.** Chemistry teaching in Islamic perspective
     - **2.1.3.** Using computer technology (Simulations, PDA'S, Artificial Intelligence System, Programmed Instructions, Integrated Learning Systems)

3. **Use of A.V-aids in teaching chemistry**
   - **3.1.** Planning lessons
   - **3.2.** Developing required instructional & helping materials for teaching chemistry
   - **3.3.** Imparting instruction

4. **Different methods used in the teaching of chemistry**
   - **4.1.** A detailed study of the nature, scope procedures, merits, demerits and application of the following methods and techniques:
   - **4.2.** Lecture method
   - **4.3.** Expository method
   - **4.4.** Laboratorial or practical method
   - **4.5.** Demonstration
   - **4.6.** Discussion method
   - **4.7.** Problem solving method
   - **4.8.** Project method
   - **4.9.** Modeling
   - **4.10.** Discovery and inquiry method
   - **4.11.** Modular instruction

5. **New Trends in Chemistry Teaching**
   - **5.1.** CAI and ICT
   - **5.2.** Science technology and society
   - **5.3.** Science technology and literacy
   - **5.4.** New Trends in teaching of Chemistry

6. **Evaluation of student's achievement in chemistry**

Recommended Texts:

1. Taber, K. S. (2016). 24. *Teaching and learning chemistry: An international course companion.* USA : Springer
2. Punjab Text Book Board. (2018). *Text book of chemistry.* Lahore: Punjab Text Book Board

Suggested Readings:

1. Eilks, I., & Byers, B. (Eds.). (2015). *Innovative methods of teaching and learning chemistry in higher education.* UK: Royal Society of Chemistry
2. Gilbert, J. K., & Justi, R. (2016). *Modelling-based teaching in science education (Vol. 9).* Switzerland: Springer International Publishing

Web-based Resources:
http://www.chemistryteaching.com/
http://www.worldofteaching.com/chemistrypowerpoints.html
http://www.csun.edu/science/chemistry/
http://www.rsc.org/
http://organic.rogerfrost.com/
http://www.edu-nova.com/teaching-techniques-for-science-teachers.html
http://ddceutkal.ac.in/Syllabus/MA_Education/Education_Paper_5_SCIENCE.pdf
https://www.nap.edu/read/5287/chapter/3

Chairman
Department of Education
University of Sargodha,
Sargodha

Teaching of Biology

Course Code-EDUC-6417 **Credit Hours**: 3(3+0)

Course Description:

Biology is an important natural science it deals with the study of living organisms both plants and animals. The science which we teach at elementary level consists mainly of the biological concepts. Biology is taught separately at higher and higher secondary level. Hence, there is a genuine need for trained and well educated biology teachers who have an in-depth knowledge of content and expertise in applying the latest methods and techniques as well as instructional technologies available in the market. The basic purposes of these courses on the teaching of biology are to enable prospective teachers to develop competency in the above mentioned fields in both theoretical and practical aspects and comprehend and appreciate the concepts, principles, theories and laws of biology, describe and apply the basic concepts & principles of biology in daily life, develop scientific thinking & scientific attitude in themselves and in their students bring out creativity through solving problems as well as to analyze the biological problems of mankind and propose solutions to them.

Learning Outcomes:

After studying this course the future teachers will be able to:

- Comprehend and appreciate the concepts, principles, theories and laws of biology
- Understand and apply the basic concepts & principles of biology in daily life
- Develop scientific thinking & scientific attitude in themselves and in their students bring out creativity through solving problems
- Analyzes the biological problems of mankind and propose solutions to them.
- Maintain & repair laboratorial equipment & apparatus
- Teach how to design and conduct Biological experiments, in the lab
- Understand and apply the basic laboratorial techniques used in the Biological experiments
- Develop scientific thinking and attitude among the science students.
- Operate and teach how to operate various types of machines and apparatus used in Biological experiments.
- Understand and apply the scientific method in daily life
- Understand and apply various methods and techniques for teaching concepts of Biology
- Develop scientific thinking and scientific attitude among their students
- Select an appropriate method or technique for teaching a given topic of Biology by developing and arranging necessary materials and conditions
- Plan organize and teach a lesson on a given topic of Biology in the light of theories and research in Biology education
- Understand recent trends and issues in methods and techniques of teaching Biology at secondary levels
- Teach how to develop Biological models, charts, simulation and other helpful teaching materials.

Outline

1. **Biology teaching**
   - **1.1.** Scientific process / method: Its nature, step, stages and characteristics
   - **1.2.** Scientific attitude, nature and importance
   - **1.3.** Use of A.V-aids in teaching Biology
   - **1.4.** Planning lessons
   - **1.5.** Developing required instructional & helping materials for teaching Biology
   - **1.6.** Imparting instruction

2. **Different methods used in the teaching of Biology**
   2.1. (A detailed study of the nature, scope procedures, merits, demerits and application of the following methods and techniques):
      2.1.1. Lecture method
      2.1.2. Laboratorial or practical method
      2.1.3. Demonstration
      2.1.4. Discussion method
      2.1.5. Problem solving method
      2.1.6. Project method
      2.1.7. Discovery and inquiry method
      2.1.8. Using computer technology (Simulations, PDA'S, Artificial Intelligence System, Programmed Instructions, Integrated Learning Systems)

3. **New Trends in Biology Teaching**
   3.1. CAI and ICT
   3.2. Science technology and society
   3.3. Science technology and literacy
   3.4. New Trends in teaching of Biology

4. **Evaluation of student's achievement in Biology**

5. **Lesson Planning in Biology.**

Recommended Texts:

1. Kampourakis, K., & Reiss, M. J. (Eds.). (2018). *Teaching biology in schools: Global research, issues, and trends.* UK: Routledge
2. Punjab Text Book Board. (2018). *Text book of biology.* Lahore: Punjab Text Book Board

Suggested Readings:

1. Boyle, M., Senior, K., Greenwood, T., Clegg, C. J., Clegg, C. J., Mackean, D. G., & Read, G. (2017). *Collins advanced science-biology.* UK: Philip Allan for Hodder Education
2. Wells, H. G. (2018). *Text-book of biology.* UK: BoD–Books on Demand

Web-based Resources:

http://www.biology-resources.com/
http://www.worldofteaching.com/biologypowerpoints.html
http://www.csun.edu/science/biology/index.html
http://biology-teaching.com/
http://www.edu-nova.com/teaching-techniques-for-science-teachers.html
http://ddceutkal.ac.in/Syllabus/MA_Education/Education_Paper_5_SCIENCE.pdf
https://www.nap.edu/read/5287/chapter/3

Chairman
Department of Education
University of Sargodha,
Sargodha

Teaching of Mathematics

Course Code-EDUC-6418 **Credit Hours**: 3(3+0)

Course Description:

.Mathematics is pure science which is often referred to as "mother of sciences'. The importance of mathematical knowledge can be realized from the fact that almost all educational philosophies have emphasized its teaching at all levels because it develops the abilities of logical and critical thinking among the students. Mathematics is a highly conceptual science and teaching mathematics is not an easy job. It requires highly trained teachers who know concept learning and concept teaching in detail. Moreover, an in-depth knowledge and understanding of latest methods and techniques in the teaching of mathematics as better teaching of Maths leads to a better understanding of Maths which in turn results in the development of science and technology. This course will help the prospective teachers in understanding the concepts, principles, and laws of mathematics, solve practical problems about various concepts, principles, and laws of Maths included in the syllabi of elementary level, learning the concepts, principles and laws of Mathematics effectively through the practical problems at elementary level and applying the basic concepts, laws, and principle of Maths in solving daily life problems related to Mathematics.

Learning Outcomes:

On the successful completion of this course the prospective teachers will be able to:

- Understand the concepts, principles and laws of mathematics
- Solve practical problems about various concepts, principles and laws of Maths included in the syllabi of elementary level
- Teach the concepts, principles and laws of Mathematics effectively through the practical problems at elementary level
- Apply the basic concepts, laws and principle of Maths in solving daily life problems related to Mathmatics
- Develop analytical thinking, critical thinking and reasoning through mathematical problem solving
- Understand the concepts, principles and laws of mathematics in 'O' & 'A' levels
- Solve practical problems about various concepts, principles and laws of Maths included in the syllabi in 'O' & 'A' levels
- Teach the concepts, principles and laws of Maths, effectively through the practical problems at secondary level.
- Apply the basic concepts, laws and principles of Maths in solving their daily life problems related to Maths.
- Develop analytical thinking, critical thinking and reasoning through mathematical problem solving.
- Understand the concepts, principles and laws of mathematics
- Solve practical problems about various concepts, principles and laws of maths included in the syllabi up to secondary level
- Teach the concepts, principles and laws of mathematics effectively through the practical problems at elementary level
- Teach the concepts, principles and laws of math, effectively through the practical problems at secondary level
- Apply the basics concepts, laws and principles of maths in solving daily life problems related to maths
- Develop analytical thinking, critical thinking and reasoning through mathematical problem solving

Outline

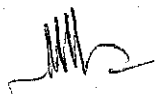
1. **Teaching Methodologies of Mathematics (O' Level) Theoretical Perspective**
   - **1.1.** Introduction
   - **1.2.** What is Mathematics?
   - **1.3.** The nature of mathematics : The science of logical reasoning
   - **1.4.** Mathematical language and symbolism
   - **1.5.** Pure and applied mathematics
   - **1.6.** Topology
   - **1.7.** The educational value of mathematics :
   - **1.8.** Practical, disciplinary, social, moral, aesthetic, intellectual, vocational, artistic, economical and scientific values of mathematics
   - **1.9.** The place of mathematics (scope) in everyday life

2. **Pedagogical Perspective**
   - **2.1.** Aims and objectives of teaching mathematics
   - **2.2.** Objectives of teaching mathematics at elementary level
   - **2.3.** Objectives of teaching mathematics at secondary level
   - **2.4.** Formulation of objectives

3. **Curriculum of Mathematics**
   - **3.1.** Approaches to curriculum development in mathematics
   - **3.2.** Principles & criteria of curriculum development and design in mathematics
   - **3.3.** Mathematical projects & problems: Puzzle problems, catch problems, unreal and real problems, oral & written problems, theoretical / conceptual & practical problems
   - **3.4.** Analyzing & critically evaluating a mathematics syllabus
   - **3.5.** Why revision of the present curriculum of mathematics and by whom?
   - **3.6.** Defects in the current teaching of mathematics: Causes & remedies
   - **3.7.** Topical vs spiral arrangement of content

4. **Unit Methods and Approaches to Teaching of Mathematics**
   - **4.1.** Lecture method / expository method
   - **4.2.** Dogmatic approach
   - **4.3.** Inductive and deductive approaches
   - **4.4.** Heuristic approach
   - **4.5.** Analytic & synthetic approaches
   - **4.6.** Laboratory / practical / constructivist approach
   - **4.7.** Project method
   - **4.8.** Problem solving method
   - **4.9.** Topical & concentric approaches
   - **4.10.** Conceptual approach : Concept teaching & concept building
   - **4.11.** Activity-based method
   - **4.12.** Selecting & applying an appropriate method or technique of teaching a mathematical topic.

5. **Planning and Delivering Lessons**
   - **5.1.** How to plan a mathematics lesson?
   - **5.2.** Lesson planning using a computer
   - **5.3.** Planning a lesson manually
   - **5.4.** Delivering a mathematics' lesson



5.5. Some sample lesson plans
5.6. Selecting & applying an appropriate method or technique of teaching a mathematics topic
5.7. Acquiring and placing equipment & material in mathematics laboratory
5.8. Establishing and organizing a mathematics library
5.9. Mathematics text books : Need, importance , uses and characteristics of a good text book of mathematics
5.10. Establishing a mathematics club

6. Measurement & Evaluation in Mathematics
6.1. Criteria of measuring tests
6.2. Prognosis & diagnosis
6.3. Different types of tests used in assessment of mathematical achievement
6.4. Construction of a quality test : Nature , steps , process , need & importance
6.5. Scheme for preparing an evaluation tool
6.6. What is special with measurement & evaluation in maths?

7. Technological Perspective
7.1. Using Modern Educational Technology in Teaching of Maths
7.2. Integrating following educational technologies in teaching of mathematics:
7.3. Projectors, filmstrips, radio, T.V., interactive video, computer, internet etc.
7.4. Using following A.V. Aids in teaching of mathematics:
7.4.1. Blackboard, whiteboard, concrete material, number kit, Venn diagrams, place value pockets, fractional parts, charts, models, excursions, puzzlers, online activities, collections of locally prepared / developed low cost teaching material (home-made equipment) and some specials instruments etc.

7.5. Mathematics Laboratory, Library and Text-Books
7.5.1. Setting up a mathematics laboratory
7.5.2. Acquiring and placing equipment & material in mathematics laboratory
7.5.3. Establishing and organizing a mathematics library
7.5.4. Mathematics text books: Need, importance , uses and characteristics of a good text book of mathematics
7.5.5. Establishing a mathematics club

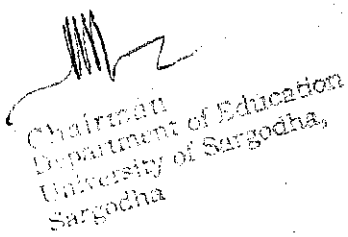
Recommended Texts:

1. Bennett –Jr., A. B. and Nelson. L.T. (2014). *Mathematics for elementary teachers: A Conceptual Approach, (6th Ed.).* Boston: McGrew-Hill, Inc.
2. Punjab Textbook Board. (2019). *Mathematics class 9th & 10th.* Lahore: Punjab Textbook Board
3. Zazkis, R., & Liljedahl, P. (2019). *Teaching mathematics as storytelling.* Netherlands: Brill Sense

Suggested Readings:

1. Anwar, M.; *Qureshi, M.F. et al (2013). Mathematics -10 (Part-II).* Lahore: Punjab Text Board
2. Bennett–Jr., A.B. and Nelson. L.T. (2014). *Mathematics for elementary teachers: A conceptual approach. (6th Ed.).* Boston: McGrew-Hill
3. Thong, H.S. and Hong, K.N. (2015). *New additional mathematics (for O' level).* Karachi: Paramount publishing Enterprise

Web-based Resources
http://www.worldofteaching.com/mathspowerpoints.html
http://www.homeschoolmath.net/teaching/teaching.php
http://www.atm.org.uk/journal/
http://www.nctm.org/Publications/Mathematics-Teaching-in-Middle-School/Blog/Why Teach-Mathematics_/
http://www.generationready.com/wp-content/uploads/2014/06/Effective-Teaching-of-Mathematics.pdf
https://www.homeschoolmath.net/teaching/teaching.php
https://study.com/academy/lesson/teaching-math-methods-strategies.html
https://www.nap.edu/read/9822/chapter/12
http://www.projekt-matematyka.eu/images/Modern_Methods_of_Teaching.pdf



Teaching of English Language

Course Code: EDU-6419 **Credit Hours:** 3(3+0)

Course Description

The course deals with the content, methods, techniques, and approaches to English Language Teaching. It focuses mainly on the latest methods & techniques of teaching English language by especial use of the modern software & simulations available in the market. The course is also designed to assist the prospective teachers to review the English Language syllabi of elementary & secondary level and understand the linguistic units in them. They will also be able to teach different units of the syllabi efficiently and effectively up to the secondary level by applying various language teaching strategies and to exhibit practical skills in teaching English language at secondary level through bringing into use the theoretical knowledge about language teaching as well as to develop the four communication skills of reading, writing, listening & speaking effectively & efficiently. They will also be able to perform error analysis. Students will also learn about developing their own lesson plans on different lesson planning formats.

Learning Outcomes:

On the successful completion of this course the student teachers will be able to:

- Review the English Language syllabi of elementary & secondary level and understand the linguistic units in them
- Teach different units of the syllabi efficiently and effectively up to secondary level
- Exhibit practical skills in teaching English language at secondary level bringing into use the theoretical knowledge about language teaching
- Develop the four communication skills of reading ,writing ,listening & speaking effectively & efficiently
- Understand various methodologies and techniques of English language teaching
- Use these methodologies in the language classroom
- Select and use the most appropriate methodology in a language classroom with particular reference to Pakistani situation
- Develop effective communication skills both oral as well as written
- Evaluate and appreciate the need and importance of the English language and literature in our daily life

Outline

1. **Introduction**
   1.1. Basic concepts

2. **Teaching of English**
   2.1 Teaching Writing
   - **2.1.1.** Approaches to teaching writing at elementary & secondary level
   - **2.1.2.** Simple sentence
   - **2.1.3.** Complex sentence
   - **2.1.4.** Paragraph writing
   - **2.1.5.** Essay writing
   - **2.1.6.** Report writing
   - **2.1.7.** Creative writing
   - **2.1.8.** Story writing
   - **2.1.9.** Letter writing

2.1.10. Application writing

Guided and free exercises in above heads will be used in teaching the above elements of writing.

2.2. Teaching Reading

- **2.2.1.** Approaches to teaching reading
- **2.2.2.** Loud reading
- **2.2.3.** Silent reading
- **2.2.4.** Reading strategies
- **2.2.5.** Scanning
- **2.2.6.** Skimming
- **2.2.7.** Dealing with comprehension question
- **2.2.8.** Reading poetry
- **2.2.9.** Reading prose
- **2.2.10.** Extensive reading
- **2.2.11.** Intensive reading
- **2.2.12.** Checking faulty reading: sub-vocalization, finger pointing, regressions,

Guided and free exercises in above heads will be used in teaching the above elements of reading.

2.3. Teaching Speaking

- **2.3.1.** Approaches to teaching speaking
- **2.3.2.** Teaching pronunciation
- **2.3.3.** Dialogues (simulation)
- **2.3.4.** Monologues (Presentations & paper reading)
- **2.3.5.** Discussions
- **2.3.6.** What is efficient and effective speaking?

Guided and free exercises in above heads will be used in teaching the above elements of speaking.

2.4. Teaching Listening

- **2.4.1.** Approaches to teaching listening
- **2.4.2.** Listening words
- **2.4.3.** Listening utterances
- **2.4.4.** Using different clues for understanding
- **2.4.5.** What is efficient and effective listening ?

Guided and free exercises in above heads will be used in teaching the above elements of listening.

2.5. Teaching Vocabulary

- **2.5.1.** Introducing new words
- **2.5.2.** Vocabulary through reading
- **2.5.3.** Guessing through contexts
- **2.5.4.** Spellings
- **2.5.5.** Prepositions
- **2.5.6.** Approaches to teaching grammar

2.6. Teaching Grammar

- **2.6.1.** What is grammar? Basic concepts

2.6.2. Teaching parts of speech
2.6.3. Phrases
2.6.4. Clauses
2.6.5. Simple sentences
2.6.6. Joining sentences
2.6.7. Punctuation
2.6.8. Tenses
2.6.9. Aspect
2.6.10. Mood
2.6.11. Change of voice
2.6.12. Change of narration
2.6.13. Common grammatical errors

Note. Students will be required to exhibit practical teaching of the above topics based on contents of English language syllabi of elementary & secondary classes.

3. Methodologies

3.1. The grammar translation method
3.2. The direct method
3.3. The audio-lingual method
3.4. The natural approach
3.5. The communicative language teaching
3.6. The eclectic approach

4. Error Analysis

4.1. What is error analysis?
4.2. The purpose of error analysis
4.3. Why do errors occur? (Causes or sources of errors)
4.4. Types of errors:
  4.4.1. Inter-lingual errors (L I interference)
  4.4.2. Intra-lingual errors
  4.4.3. Over generalization
  4.4.4. Faulty teaching & materials
  4.4.5. Literal translations
4.5. Contrast between the behaviorist and mentalist attitudes toward errors
4.6. The different stages of Error Analysis: Recognition, interpretation, reconstruction classification and explanation.

5. Lesson Planning in English

Recommended Texts:

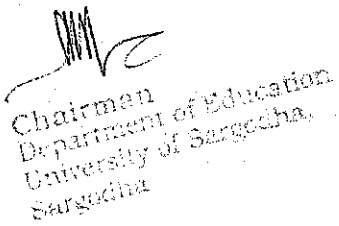
1. Hall, G. (2017). *Exploring english language teaching: Language in action.* UK: Routledge
2. Johnson, K. (2017). *An introduction to foreign language learning and teaching.* UK: Routledge

Suggested Readings:

1. Cook, V. (2016). *Second language learning and language teaching.* UK: Routledge
2. White, R. V. (2017). *Teaching written english.* UK: Routledge

Web-based Resources:

http://www.worldofteaching.com/englishpowerpointspresentations.html
http://teacher2b.com/
http://www.tesol.org/s_tesol/index.asp
http://www.reggie.net/teaching/
http://www.ego4u.com/
http://www.english-to-go.com/
www.sdkrashen.com
http://www.really-learn-english.com/how-to-teach-english.html
http://www2.ncte.org/resources/journals/research-in-the-teaching-of-english/
https://www.slideshare.net/rajakhodave/methods-approaches-and-techniques-of-teaching-english-14214760
http://esl.fis.edu/teachers/support/method.htm
https://www.elc.edu/english-courses/english-teaching-methods/



Teaching of Urdu

Course Code: EDUC-6420 **Credit Hours:** 3(3+0)

اردو ہماری قومی زبان ہے جو تمام صوبوں کے لوگوں میں روابط قائم کرتی ہے۔ اردو زبان کوپرائمری سطح سے لیکر اعلی ثانوی سطح تک بطور ضروری مضمون پڑھایا جاتا ہے۔ لہذا اردو زبان کی تدریس کا کورس زیرتربیب اساتذہ کو تدریس اردو کے لئے مطلوبہ مہارتیں اور طریقہ کار سمجھانے میں انتہائی مدد گار ہے۔ جس کے ذریعے طلبا تدریس اردو کے مختلف پہلوؤں اور مواد کی موثر تدریس کے کئی گُر جان سکتےہیں۔ اس مضمون کی مدد سے زیر تربیت اساتذہ کے اندر یہ صلاحیت پیدا کی جاتی ہے کہ وہ اردو زبان (لسانیات) کی مبادیات پر بحث کر سکیں۔ اردو زبان کی بنیادی اور لازمی مہارتوں کے ذریعے درست اظہار خیال کر سکیں۔ ۔ تدریس اُردو میں استعمال ہونے والے طریقہ ہائے تدریس کی مدد سے اُردو کی تدریس کو موثر اور دلچسپ بنا سکیں۔ جدید ذرائع کی مدد سے طلباء کے لئے تدریس کو دلچسپ اور خوشگوار بنا سکیں۔ موثرسبقی منصوبہ بندی کرسکیں۔ اور ۔ جائزہ اور پیمائش کے جدید طریقوں کو استعمال کر سکیں۔

تدریسی مقاصد:

اِس کورس کو پڑھنے کے بعد طلباء اِس قابل ہو جائیں گے کہ:

1- اردو زبان (لسانیات) کی مبادیات پر بحث کر سکیں۔

2. اردو زبان کی بنیادی اور لازمی مہارتوں کے ذریعے درست اظہارِ خیال کر سکیں۔

3- تدریس اُردو میں استعمال ہونے والے طریقہ ہائے تدریس کی مدد سے اُردو کی تدریس کو موثر اور دلچسپ بنا سکیں۔

4- جدید ذرائع کی مدد سے طلباء کے لئے تدریس کو دلچسپ اور خوشگوار بنا سکیں۔

5- موثرسبقی منصوبہ بندی کرسکیں۔

6- جائزہ اور پیمائش کے جدید طریقوں کو استعمال کر سکیں۔

نصاب کا خاکہ

1- زبان کی تفہیم

--- حروفِ تہجی کی ساخت اور پہچان کے طریقے۔

--- ذولسانی طریقے کے ذریعے آوازوں کی پہچان۔

--- ہم آواز حروف کی ادائیگی کا درست طریقہ

--- الفاظ بنانا جملے بنانا، جملے کی اقسام

2- زبان دانی کی مہارتیں۔

سننا، بولنا، پڑھنا ، لکھنا

3- طریقہ ہائے تدریس

■زبان کی ادائیگی کی عملی مشق سن، بول ،لکھ اور پڑھ کر

■- تدریس نظم بذریعہ رول پلے

- حرکات و سکنات کے ذریعے تقریری اور مظاہراتی طریقہ
- تشریحی و توضیحی طریقہ (ششم تا ہشتم)

4. تدریسِ نثر

- قراءت از معلم (صحیح تلفظ، برجستہ ادائیگی اور معیاری لہجے کے ساتھ)
- قراءت از طلباء (اغلاط کی درستگی، الفاظ کے معانی، عبارت کی تفہیم)

5. تدریسِ انشاء کے طریقے

- مباحثی طریقہ
- سمپوزیم
- پینل بحث
- سوال و جواب
- غیر رسمی بحث
- رسمی بحث
- سیاحتی طریقہ

کتب برائے مطالعہ

- **سفینہ اُردو (قواعد انشاء) از طاہر شادانی**
- **اردو قواعد از مولوی عبد الحق**
- **تدریس اُردو از ڈاکٹر فرمان فتح پوری**

Recommended Texts: ■ **اُردو زبان اوراُس کی تعلیم از ڈاکٹر سلیم فارانی**

1۔ سفینہ اُردو (قواعد انشاء) از طاہر شادانی
2۔ اردو قواعد از مولوی عبد الحق

Suggested Readings:

1۔ اُردو زبان اوراُس کی تعلیم از ڈاکٹر سلیم فارانی
2۔ تدریس اُردو از ڈاکٹر فرمان فتح پوری

Area of Specification

Student will opt any one area of specialization from the following two areas

	Code	Course	Credit Hours
Area-I		**Leadership and Management**	
Course I	EDU-6421	Educational Administration and Supervision	3(3+0)
Course II	EDU-6422	Organizational Behaviour	3(3+0)
Course III	EDU-6423	Instructional Leadership	3(3+0)
Area-II		**Science Education**	
Course I	EDU-6424	Foundation of Science Education	3(3+0)
Course II	EDU-6425	Assessment and Evaluation in Science Education	3(3+0)
Course III	EDU-6426	Comparative Science Education	3(3+0)

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Educational Administration and Supervision

Course Code: EDUC-6421 **Credit Hours:** 3(3+0)

Course Description:

This course covers all aspects needed for managing a class or a school. It also includes historical background of educational administration and supervision. Administration plays a pivotal role in any organization. Administrators are the single most important ingredient in determining an organization's success or failure. The following famous proverb which states that "like the headmaster, like the school" is an indicative proof of it. Whether in business, government, education, medicine, or religion, the quality of an organization's administration determines the quality of the organization itself. A successful administrator anticipates change, vigorously exploits opportunities, rectifies poor performance, and leads the organization towards its objectives. Administrators can turn straw to gold or the reverse. This course also encompasses all aspects needed for managing and supervising a school. It also includes historical background of educational administration and supervision. Students will understand and differentiate the terms administration, supervision, organization and management, apply different tools and techniques of administering and supervising, understand and perform various functions of management review and evaluate the specific organizational conditions and understand, characterize and exercise effective leadership traits and behaviors

Learning Outcomes:

After the successful completion of this course the students would be able to:

- Understand and differentiate the terms administration, supervision, organization and management.
- Apply different tools and techniques of administering and supervising
- Understand and perform various functions of management
- Review and evaluate the specific organizational conditions
- Understand, characterize and exercise effective leadership traits and behaviors
- Perform effectively and efficiently as a head teacher or headmaster/ headmistress
- Understand and analyze the behavior of employees in the light of various theoretical perspectives of education administration
- Manage the human and material resources of an organization efficiently & effectively

Outline

1. **Introduction**
   - **1.1.** Meaning of school administration
   - **1.2.** Difference between administration, supervision & management
   - **1.3.** Educational administration and school administration
   - **1.4.** Nature, aims, objectives and principles of school Administration

2. **School Organization**
   - **2.1.** Meaning and scope of school organization
   - **2.2.** Organization and administration compared
   - **2.3.** Importance and advantages of school organization
   - **2.4.** Elements of organization
   - **2.5.** Principles of school organization

3. **Supervision and Inspection**
   - **3.1.** Concept of supervision
   - **3.2.** Need, importance and aims of supervision and inspection.
   - **3.3.** Types of supervision
   - **3.4.** New trends in supervision
   - **3.5.** Modern vs. old concept of inspection
   - **3.6.** Techniques of supervision
   - **3.7.** Factors affecting educational supervision

4. **Types of Administrators**
   - **4.1.** Meaning , characteristics , merits , limitations and implications of the following types of administrations :
   - **4.2.** Professionals
   - **4.3.** Academicians
   - **4.4.** General Practitioners
   - **4.5.** Disciplinarians
   - **4.6.** Authoritarians/ Autocrats
   - **4.7.** Democratic
   - **4.8.** Bureaucratic
   - **4.9.** Laisses-faire

5. **Decision Making.**
   - **5.1.** Meaning& importance
   - **5.2.** The decision making process
   - **5.3.** Types of decisions and decision-making problems
   - **5.4.** Programmed and non-programmed decisions; group and individual decisions
   - **5.5.** Personal qualities for effective decision making

6. **School Organization and Human Relations / Interpersonal relations**
   - **6.1.** Concept of interpersonal and human relations: Its importance and role
   - **6.2.** Types of interpersonal relations in schools
   - **6.3.** Headmaster and teacher
   - **6.4.** Teacher and student
   - **6.5.** Teacher and teacher

7. **Organizational Structure of our education system**
   - **7.1.** Organization of education at federal level
   - **7.2.** Organization of education at provincial level
   - **7.3.** Organization of education at district level
   - **7.4.** Administration of autonomous bodies in education (Universities and Boards etc.)

8. **School and Community**
   - **8.1.** School as a social institution
   - **8.2.** School as a community center
   - **8.3.** Improving school community relations

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9. **Characteristics of Good Head Teachers and Teachers**
   - **9.1.** Place and importance of H.T. and teachers
   - **9.2.** Qualities of H.T. and teachers
   - **9.3.** Duties of H.T and teachers
   - **9.4.** Problems of H.T and teachers
   - **9.5.** Work load of teachers
   - **9.6.** Common weaknesses of teachers

10. **Key Issues in Educational Management**
   - **10.1.** Challenges in school administration
   - **10.2.** Professionalism in teacher education
   - **10.3.** Pre-service and in-service training
   - **10.4.** Punishment and reward system
   - **10.5.** Management of school time-table
   - **10.6.** Management of school library
   - **10.7.** Democracy and administration
   - **10.8.** Efficiency and effectiveness
   - **10.9.** Productivity vs human relations
   - **10.10.** Training vs development

Recommended Texts:

1. Bush, T., Bell, L., & Middlewood, D. (Eds.). (2019). *Principles of educational leadership & management.* USA: SAGE Publications
2. Northouse, P. G. (2016). *Leadership: theory and practice (7th Ed.).* USA: SAGE Publications

Suggested Readings:

1. Razik, T. A. & Swanson, A. D. (2010). *Fundamental concepts of educational leadership and management (3rd Ed.).* NY: Allyn & Bacon
2. Shah, S. (2016). *Education, leadership and Islam*. London: Routledge
3. *School management: Windows on practice guide (2012).* Islamabad: Higher Education Commission

Web-based Resources:

Day, C., & Sammons, P. (2016). Successful school leadership. Education Development Trust. www.educationdevelopmenttrust.com

http://712educators.about.com/od/discipline/tp/disciplinetips.htm Top Ten Tips for Classroom Discipline and Management

http://www.adprima.com/managing.htm Effective Praise Guidelines

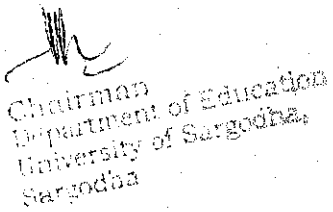
https://www.roehampton.ac.uk/postgraduate-courses/education-leadership-and-management/

http://educationnorthwest.org/webfm_send/1152

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

Mineduc School Management. (2008). Roles, duties and responsibilities of school management team. Retrieved from http://www.mineduc.gov.rw/IMG/pdf/Roles_Duties_and_Responsabilities_of_School_Management_Team-4.pdf



Organizational Behavior

Course Code: EDUC-6422 **Credit Hours:** 3(3+0)

Course Description:

The purpose of one part of this course is to provide a strong conceptual framework for studying, understanding, and applying theory and practice of organization behavior. It also explores the nature of organization and organization theory. This course on organization theory and behavior thus provides knowledge that helps people understand, diagnose, and respond to emerging organizational needs and problems of our educational institutions. Students will understand and narrate the basic concepts and principles of organizational theory, recognize organizational phenomena that can be analyzed and interpreted in the light of the concepts and principles of organizational theory, review and evaluate the specific organizational conditions and understand and analyze organizational behavior of employees in workplace conditions as well as understand group dynamics in developing effective teams and managing organizational change and resolving and avoiding conflicts within and outside organization.

Learning Outcomes:

After the completion of this course the trainee teachers would be able to:

- Understand and narrate the basic concepts and principles of organizational theory
- Recognize organizational phenomena that can be analyzed and interpreted in the light of the concepts and principles of organizational theory
- Review and evaluate the specific organizational conditions
- Understand and analyze organizational behavior of employees in work place conditions
- Comprehend and characterize effective leadership traits and behaviors in prevailing work place/organization conditions.
- Understand and narrate the basic concepts and principles of organization
- Recognize organizational phenomena that can be analyzed and interpreted in the light of the concepts and principles of organization
- Review and evaluate the specific organizational conditions
- Understand and analyze organizational behavior of employees in work place conditions
- Comprehend and characterize effective leadership traits and behaviors in prevailing work place/organization conditions.

Outline

1. **Introduction**
   - 1.1. What Managers Do?
     - **1.1.1.** What is management
     - **1.1.2.** Management Functions
     - **1.1.3.** Management Roles
     - **1.1.4.** Management Skills
     - **1.1.5.** Effective Vs Successful Managerial Activities
   - **1.2.** What is Organizational Behavior
   - **1.3.** The Evolution of Organizational Behaviour
   - **1.4.** Contributing disciplines to the OB field
   - **1.5.** Basic OB Model

1.6. Organizational System Level
1.7. Individual Level
1.8. Group Level
1.9. Challenges and Opportunities for study of OB

2. **Fundamentals of Organizational Behavior**
   2.1. What is an Organizations
      2.1.1. Types of Organizations
   2.2. Components of Organization
      2.2.1. Task
      2.2.2. People
      2.2.3. Structure
      2.2.4. Technology
   2.3. The Basic System View of an Organization
   2.4. Factors Affecting Organizations

3. **Fundamentals of Individual Behaviour: Individual Difference – Personality & Ability**
   3.1. Define the key biographical characteristics.
   3.2. Explain the factors that determine an individual's personality.
   3.3. Describe the Meyers-Briggs Type Indicator personality framework
   3.4. Identify the key traits in the Big Five personality model.
   3.5. Explain how Locus of Control, Self-Monitoring, Self Esteem, Type A & B Behavior and Need for Achievement, Affiliation, & Power are relevant to the organization.
   3.6. Describe ability and how it is managed in an organization.

4. **Perception and Individual Decision Making**
   4.1. What is Perception
   4.2. Factors influencing on perception
   4.3. Person Perception: Making Judgment about Others
      4.3.1. Attribution theory
      4.3.2. Frequently used shortcuts to judging others
   4.4. The link between perception and individual decision making
   4.5. How should decision be made?
      4.5.1. The Rational decision making process
      4.5.2. Creativity in decision making
      4.5.3. Decision making styles
   4.6. How are decision actually made in Organizations?
      4.6.1. Bounded rationality
      4.6.2. Common biases and errors
      4.6.3. Intuition
   4.7. What about Ethics in Decision Mal ing: Three ethical decision criteria

5. **Basic Motivation Concepts**
   - **5.1.** Defining Motivation
   - **5.2.** Early Theories of Motivation
     - **5.2.1.** Hierarchy of Needs theory
     - **5.2.2.** Theory X and Y
     - **5.2.3.** Two factor theory
   - **5.3.** Contemporary Theories of Motivation
     - **5.3.1.** ERG theory
     - **5.3.2.** McClelland's Theory of needs
     - **5.3.3.** Cognitive Evaluation theory
     - **5.3.4.** Goal-setting theory
     - **5.3.5.** Reinforcement theory
     - **5.3.6.** Job design theory
     - **5.3.7.** Equity theory
     - **5.3.8.** Expectancy theory

6. **Foundation of Group Behaviour**
   - **6.1.** Definition of group and team
   - **6.2.** Why do people joins groups
   - **6.3.** Stages of group development
   - **6.4.** Describe the characteristics of a Work Group
   - **6.5.** Describe Group Effectiveness
   - **6.6.** Define Social Loafing
   - **6.7.** Explain how the nature of the groups tasks can affect the group's performance
   - **6.8.** Define group cohesiveness and its effect on performance.

7. **Basic Approaches to Leadership**
   - **7.1.** What is Leadership
   - **7.2.** Trait theories
   - **7.3.** Behavioral theories
   - **7.4.** Contingency theories: Fiedler Model
   - **7.5.** Contemporary Issues in leadership
     - **7.5.1.** Trust: The foundation of leadership
       - **7.5.1.1.** What is trust
       - **7.5.1.2.** Trust and leadership
       - **7.5.1.3.** Three types of leadership
       - **7.5.1.4.** Basic principles of trust
     - **7.5.2.** Framing: Using words to shape meaning and inspire others
     - **7.5.3.** Inspirational approaches to leadership
       - **7.5.3.1.** Charismatic leadership
       - **7.5.3.2.** Transformational leadership
     - **7.5.4.** Emotional intelligence and leadership Effectiveness
     - **7.5.5.** Contemporary leadership roles

7.5.5.1. Providing team leadership
7.5.5.2. Mentoring

8. Organization Change and Stress Management
8.1. Approaches to managing organizational change
8.2. Creating a culture for change
8.3. Work stress and its management

9. Conflict and Negotiations
9.1. Conflict process
9.2. Negotiation process
9.3. Bargaining strategies
9.4. Global Implicaitons

Recommended Texts:

1. Daft, R. L. (2015). *Organizational theory and design*. NY: West Publishing,Co.
2. Judge, T. A., & Robbins, S. P. (2017). *Essentials of organizational behavior*. USA: Pearson Education
3. Osland, J., Devine, K., & Turner, M. (2015). *Organizational behavior*. UK: Wiley Encyclopedia of Management

Suggested Readings:

1. Daft, R. L. (2012). *Organizational theory and design*. NY: West Publishing Co.
2. Kreitner, R. & Kinicki, A. (2011). *Organizational behavior, (5th ed.)*. NY: Mcgraw-Hill.
3. Robins, S. P. (2013). *Organizational behavior* (5th Ed.). Boston: IRWIN McGraw HILL

Web-based Resources:

https://www.tutorialspoint.com/organizational_behavior/
https://study.com/academy/lesson/what-is-organizational-behavior-definition-and-history-of-the-field.html
https://www.investopedia.com/terms/o/organizational-behavior.asp
http://smallbusiness.chron.com/important-organizational-behavior-concepts-new-manager-79374.html
https://iedunote.com/fundamental-concepts-of-organizational-behavior
http://www.tandfonline.com/doi/abs/10.1300/J075v18n02_06

Instructional Leadership

Course Code: EDUC-6423 **Credit Hours:** 3(3+0)

Course Description:

The intent of this course is to provide an overview of various leadership roles teachers can assume when their professional goals focus on student achievement, instructional improvement, school reform, collegiality, and curriculum development at local, regional, state, or national levels, in private or public settings, or in political or professional organizations. Emphasis is placed on research related to these themes and strategies to identify, support, and develop attitudes and skills needed by teacher leaders. This course provides an overview of various leadership roles teachers can assume when their professional goals focus on student achievement, instructional improvement, school reform, collegiality, and curriculum development at local, regional, state, or national levels, in private or public settings, or in political or professional organizations. The course is aimed at developing abilities among students to understand concepts, theories and models of educational leadership and management, differentiate between the concept of leadership and management, describe different roles and responsibilities of leadership, and explain different styles of leadership and their implication for educational institutions improvement.

Learning Outcomes:

After studying the course, the students will be able to:

- Understand concepts, theories and models of educational leadership and management
- Differentiate between the concept of leadership and management
- Describe different roles and responsibilities of leadership
- List the different qualities and skills of effective leadership
- Explain different styles of leadership and their implication for educational institutions improvement
- Demonstrate effective leadership and management practices
- Apply key theories of leadership to their own working environment
- Explore ways in which educational management and leadership can contribute to improving quality of teaching and learning process

Outline

1. **Introduction to Leadership**
   - **1.1.** Concept of Leadership
   - **1.2.** Educational Leadership
   - **1.3.** Moral dimensions of educational leadership
   - **1.4.** Ethical dimensions of educational leadership
   - **1.5.** Role of Educational Leadership in School Improvement and Management
   - **1.6.** Educational Change and Leadership in National and International Perspectives

2. **Leadership Models and Theories**
   - **2.1.** Philosophical Background: Theory X and Y
   - **2.2.** Trait Theories
   - **2.3.** Behavioural Theories
   - **2.4.** Contingency Theories
   - **2.5.** Transformational Theories
   - **2.6.** Application of Leadership Theories to the Leadership and Management of Education

3. **Leadership Styles**
   - **3.1.** Authoritative/Bureaucratic Leadership
   - **3.2.** Democratic/Participative Leadership
   - **3.3.** Distributed Leadership
   - **3.4.** Instructional Leadership
   - **3.5.** Pedagogical Leadership
   - **3.6.** Teacher Leadership
   - **3.7.** Other Leadership Styles

4. **Roles and Responsibilities of Leadership**
   - **4.1.** Setting Directions
   - **4.2.** Developing People
   - **4.3.** Strengthening School Cultures
   - **4.4.** Providing Instructional Leadership
   - **4.5.** Developing and Executing Strategic Plans
   - **4.6.** Staff Evaluation
   - **4.7.** Budget Management
   - **4.8.** Performance Assessment
   - **4.9.** Held Accountable for Results
   - **4.10.** Community Relations
   - **4.11.** Other Role and Responsibilities

5. **Instructional Leadership**
   - **5.1.** Introducing Principals to the Role of Instructional Leadership
   - **5.2.** Instructional leadership and school improvement
   - **5.3.** Developing Instructional Leaders
   - **5.4.** Beyond Instructional Leadership: Towards Pedagogic Leadership
   - **5.5.** Leadership in Schools
   - **5.6.** Pedagogy and Leadership
   - **5.7.** School Leadership and Change
   - **5.8.** Distributed Leadership
   - **5.9.** How Leadership Influences Student Learning
   - **5.10.** Leading for Learning

6. Leadership: Values and Ethics
   - **6.1.** Caring, Respect for Individual and Group Rights
   - **6.2.** Respect of Roles and Responsibilities
   - **6.3.** Justice, Honesty, Integrity, Fairness, Courage and Good Character
   - **6.4.** Creating Shared Vision
   - **6.5.** Ethical Decision-Making
   - **6.6.** sensitivity to Self and Others

7. **Seminars in instructional Leadership**

Recommended Texts:

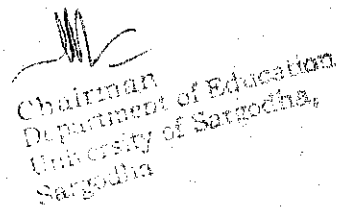
1. Bottery, M. (2016) *The challenges of educational leadership: Values in a globalized age*. London: Chapman
2. Bush, T. (2017) *Theories of educational leadership and management*. London: Sage.

Suggested Readings:

1. Bush, T. (2015). *Understanding instructional leadership.* UK: Routledge
2. Robertson, J. (2016). *Coaching leadership: Building educational leadership capacity through partnership.* New Zealand: New Zealand Council for Educational Research

Web-based Resources:

http://www.sedl.org/pubs/reading100/RF-NB-2005-Spring.pdf
http://www.ascd.org/publications/educational-leadership/dec07/vol65/num04/What-Is-Instructional-Leadership%C2%A2.aspx
http://www.theedadvocate.org/important-concepts-of-instructional-leadership/
http://info.k-12leadership.org/4-dimensions-of-instructional-leadership
https://education.cu-portland.edu/blog/leaders-link/four-instructional-leadership-skills-principals-need/



Foundations of Science Education

Course Code: EDUC-6424 **Credit Hours:** 3(3+0)

Course Description:

This course will focus on the ideological, philosophical psychological socio-economic, and historical foundations of education. The major focus will be on developing an understanding of the participants how different philosophical theories affect education. The course will also include the historical development of education of Pakistan. Emphasize will be given on analyzing various sociological, political, economic, and ideological forces that influence the process of education in our cultural context. This course will also be used to develop the ability in prospective teachers to interpret knowledge within its historical, philosophical, ideological, and social contexts which will lead to produce critical perspectives on education both within, and outside of schools. The major focus will be on developing an understanding of the participants how different philosophical theories affect education. Explain the important features of the foundation of education, specify the role of educational thinkers in education, discuss the modes of education, and discuss the historical development of Pakistan.

Learning Outcomes:

The students will be able to:

- Explain the important features of foundation of education
- Specify the role of educational thinkers in education
- Discuss the modes of education
- Discuss historical development of Pakistan
- Evaluate the issues and problems of education

Outline

1. **Ideological Foundation of Education**
   - **1.1.** Islamic Foundation
   - **1.2.** Islamic concept of Peace
   - **1.3.** Other religious and Islam
   - **1.4.** Ideology and teacher

2. **Philosophical Foundations of Education**
   - **2.1.** Philosophy and Education
   - **2.2.** Main Philosophical Thoughts
   - **2.3.** Idealism
   - **2.4.** Realism
   - **2.5.** Pragmatism
   - **2.6.** Re-construction

3. **Psychological Foundations of Education**
   - **3.1.** Learning and Maturation
   - **3.2.** Individual Differences
   - **3.3.** Self-Concept

3.4. Academic Aptitude
3.5. Instructional strategies and Psychology

4. **Historical Foundations of Education in Pakistan**
   4.1. Pre-Pakistan Period (712 A.D. to onward)
   4.2. Period from 1947- 1958
   4.3. Period from 1959-1971
   4.4. Period from 1972-1979
   4.5. Period from 1980-1991
   4.6. Period from 1992- to date
   4.7. Unit 6 Aims of Education
   4.8. Aims, Goals and Objectives
   4.9. Taxonomies of Objectives
   4.10. Aims and Objectives of Education in Pakistan

5. **Problems and Issues in Education in Pakistan**
   5.1. Universalization of Primary Education
   5.2. Literacy
   5.3. Medium of Instruction
   5.4. Diversification of Education
   5.5. Environmental Education
   5.6. Gender and Education
   5.7. Islamization of Education
   5.8. Special Education
   5.9. Health Education/ Drug Education
   5.10. HIV/Aids, STIs, Hepatitis

Recommended Texts:

1. Canestrari, A. (2016). *Foundations of education.* NY: Sage Publications
2. Samel, S. F. (2018). *Foundations of educations: The essential texts.* UK: Routledge

Suggested Readings:

1. ASER-Pakistan (2019). *Annual status of education Report 2018.* Islamabad: Idara Taleem-O-Agahi
2. Banks, J. A. (2015). *Cultural diversity and education: Foundations, curriculum, and teaching.* UK: Routledge.
3. Pachauri, A. (2016). *Foundations of education.* ND: Pragun Publications
4. Shami, P. A. (2015). *Introduction to education.* Lahore: Ilmi Book House.

Web-based Resources

http://unesco.org.pk/education/teachereducation/files/sa4.pdf
http://educationist.com.pk/journey-of-pakistans-education-policies-since-1947-by-kulsomm-fayyaz/
http://sekho.com.pk/educational-articles/historical-background-of-education-in-pakistan/
http://www.hipakistan.com/levels-education-pakistan
http://www.ipripak.org/education-system-of-pakistan-issues-problems-and-solutions/

Assessment and Evaluation in Science Education

Course Code: EDUC- 6425 **Credit Hours:** 3(3+0)

Course Description:

Classrooms are busy places. Every day in every classroom, teachers make decisions about their pupils, the success of their own instruction, and perform number of other tasks. Teachers continually observe, monitor, and review pupil performance to obtain evidence for decision. Evidence gathering and classroom making are necessary and ongoing aspects of teaches' lives in the classroom. Keeping in view, the tasks teachers have to perform in the classroom, this course, prospective teachers will develop their knowledge and understanding of formative and summative learning assessment and how teachers use assessment to inform decisions about teaching and learning in Science. They will develop a range of practical assessment skills to use in the classroom with students of different ages, grades, and subjects including using questions and tasks to assess learning and giving oral and written feedback on student work. This course highlights the assessment and evaluation procedures in science education. The course will serve the students to study the theory and apply the same for test development purposes. They will be able to understand the concept and nature of testing & evaluation, develop and analyze test items for assessing different abilities of students, recognize and describe the different types of measurement instruments.

Learning Outcomes:

Upon completion of this course, the student will be able to:

- Understand the concept and nature of testing & evaluation:
- Develop and analyze test items for assessing different abilities of students;
- Recognize and describe the different types of measurement instruments;
- Differentiate between standardized and classroom tests;
- Define and apply introductory analytical terms and concepts, including basic statistical knowledge;
- Analyze and explain student profiles based on various outcomes of testing; interpret scores and results of different measurement techniques

Outline

1. **Introduction**
   - **1.1.** Nature and meaning of test, assessment , measurement and evaluation
   - **1.2.** Distinction between test, assessment, measurement and evaluation
   - **1.3.** Role of evaluation in education

2. **Different types of test**
   - **2.1.** Concept of standardized and non-standardized test
   - **2.2.** Norm-referenced test
   - **2.3.** Criterion-referenced test
   - **2.4.** Performance assessment
   - **2.5.** Individual and group test

3. **Characteristics of Test**
   - **3.1.** Reliability
   - **3.2.** Definition of reliability
   - **3.3.** Types of reliability
   - **3.4.** Use of reliability

- **3.4.1.** Validity Definition of validity
- **3.4.2.** Types of validity
- **3.4.3.** Evidence of validity
- **3.4.4.** Reliability and validity

4. **Designing Objectives**
   - **4.1.** Selection of instructional objectives
   - **4.2.** Bloom Taxonomy
   - **4.3.** Solo Taxonomy
   - **4.4.** Methods of stating instructional objectives
   - **4.5.** Preparing a table of specification
   - **4.6.** Use the table of specification as a basis for preparing test

5. **Statistical concepts related with testing**
   - **5.1.** Scale of measurement
   - **5.2.** Measures of central tendency
   - **5.3.** Indices of variability
   - **5.4.** Types of Distributions
   - **5.5.** Correlation

6. **Types of Tests**
   - **6.1.** Supply type items
     - **6.1.1.** Essay type
     - **6.1.2.** Short answer
     - **6.1.3.** Completion
     - **6.1.4.** Advantages and limitations
   - **6.2.** Rules for constructing supply type questions
   - **6.3.** Methods of improvement and effective use (Rules for scoring essay tests etc.)
   - **6.4.** Selection types test
     - **6.4.1.** Multiple choice items
     - **6.4.2.** True false items
     - **6.4.3.** Matching items
     - **6.4.4.** Completion items
   - **6.5.** Rules for constructing various types of objective test items

7. **Item Analysis**
   - **7.1.** Test construction
   - **7.2.** Test administration
   - **7.3.** Item analysis

8. **Assembling, Administering and Evaluating the Test**
   - **8.1.** Reviewing and editing the items
   - **8.2.** Arranging the items in the test
   - **8.3.** Preparing directions
   - **8.4.** The problem of guessing
   - **8.5.** Reproducing the test
   - **8.6.** Administering the test
   - **8.7.** Scoring the test
   - **8.8.** Building test file
   - **8.9.** Item bank

9. **Grading and Reporting**
   9.1. Concept of grading
   9.2. Types of grading
   9.3. Reporting results to different stakeholders

10. **New Trends and Issues**
   10.1. Portfolio Assessment
   10.2. Dynamic Assessment
   10.3. Computer assisted assessment and evaluation

Recommended Texts:

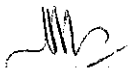
1. Obe, W. H. (2018). *The teaching of science in primary schools*. UK: David Fulton Publishers.
2. Waite, S. (Ed.). (2017). *Children learning outside the classroom: From birth to eleven*. USA: Sage.

Suggested Readings:

1. Mertler, C. A. (2016). *Classroom assessment: A practical guide for educators*. UK: Routledge
2. Wells, C. S., & Faulkner-Bond, M. (Eds.). (2016). *Educational Measurement: From Foundations to Future*. UK: Guilford Publications
3. Miller , M.D., Linn, R. L. & Gronlund. N. E. (2013). *Measurement and assessment in teaching* (11th Edition). USA: Pearson

Web-based Resources:

http://hec.gov.pk/english/services/universities/RevisedCurricula/Documents/2011-2012/Education/MethodsTeaching_Sept13.pdf
https://www.slideshare.net/hernanebuella/general-methods-and-techniques-of-teaching
https://www.jstor.org/stable/1167407?seq=1#page_scan_tab_contents
http://hec.gov.pk/english/services/universities/RevisedCurricula/Documents/2011-2012/Education/ClassroomAssess_Sept13.pdf
http://www.oecd.org/edu/school/46927511.pdf
https://academicaffairs.ucsd.edu/ug-ed/asmnt/resources.html



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Comparative Science Education

Course Code: EDUC- 6426 **Credit Hours:** 3(3+0)

Course Description:

Educators improve their practice by adopting and adapting educational systems and practices that were developed elsewhere. Comparisons of educational systems also provide a basis for assessing the suitability of current practices. This course focuses on training student teachers to compare and contrast educational systems and exposes students to the comparative approaches in education. Furthermore, the course aims at providing prospective teachers a basis for educational comparisons aimed at creating an understanding of issues influencing the focus, structure, organization and practice of education at international level, regional level and local level. With a major focus on Science Education, the course will equip the prospective science teachers with necessary acquaintance regarding issues and trends in the field of Science Education around the world so that they can learn the lessons for improvement and quality enhancement of Science Education in Pakistan. The course highlights to equip the prospective science teachers with necessary acquaintance regarding issues and trends in the field of Science Education around the world so that they can learn the lessons for improvement and quality enhancement of Science Education in Pakistan, compare the education systems of selected developed countries and compare the education systems of selected developing countries

Learning Outcomes:

After studying this course, the students will be able to:

- Describe the meaning and significance of comparative education
- Compare the education systems of selected developed countries
- Compare the education systems of selected developing countries
- Analyze critically the education system of Pakistan

Outline

1. **Introduction to Comparative Education**
   - 1.1. The Meaning of Comparative Education Topic:
   - 1.2. The Purpose and Uses of Comparative Education
   - 1.3. Concept of Globalization
   - 1.4. Comparative Education: Historical Development and Evolution
   - 1.5. Introduction to The WCCES: A Glob. Body in Comparative Education

2. **Comparative Approach. in Education**
   - **2.1.** Bereday's Four-Stage Method
   - 2.2. Holmes' Problem Solving Approach
   - 2.3. Eckstein and Noah's Scientific Method

3. **Comparative Study of International Systems of Education**
   - 3.1. Western Europe
   - 3.2. USA
   - 3.3. East Asia
   - 3.4. Latin America
   - 3.5. Africa
   - 3.6. South East Asia

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4. **Comparative Study of Regional Systems of Education**
   4.1. Anglophone
   4.2. Francophone
   4.3. Lusophone

5. **Comparative Studies in Science Education**
   5.1. Globalization of Science Education
   5.2. Factors affecting globalization of Science Education
   5.3. Nuffield Science Foundation report
   5.4. Analysis of TIMSS reports
   5.5. Analysis of PISA reports

Recommended Texts:

1. Hayhoe, R., Manion, C., & Mundy, K. (2017). *Why study comparative education*. UK: Routledge.
2. Watson, K. (2018). *Key issues in education: Comparative perspectives*. UK: Routledge

Suggested Readings:

1. Beech J. (2016). *The theme of educational transfer in comparative education*. UK: Routledge
2. Noah, H. & Eckstein, M. (2015). *Doing comparative education: Three decades of collaboration*. Hong Kong: Comparative Education Research Centre.

Web-bases Resources

http://www.tc.columbia.edu/cice/
Comparative and International Education Society:
http://www.cies.us
Organisation for Economic Co-operation and Development (OECD) Development Co-operation Directorate: http://www.oecd.org/dac
OECD Programme for International Student Assessment (PISA): http://www.pisa.oecd.org
UNESCO Education for All Global Monitoring Report: http://www.unesco.org/en/efareport
http://www.tandfonline.com/loi/cced20
http://camponotes.blogspot.com/2013/01/methodological-approaches-in.html
file:///C:/Users/comp-fix/Downloads/Comparactive%20Education_%20method.pdf