



University of Chitral
BECOME WHAT YOU WANT TO BE

یونیورسٹی آف چترار

Scheme of Studies B.Ed 1.5
Fall 2023

Additional Director Academics
University of Chitral

Department of Education
University of Chitral



Introduction

B.Ed. Secondary (1.5 years) degree program is offered to forthcoming pre-service and in-service teachers, potential and current school administrators, enterprising educational entrepreneurs and prospective and current administrators of educational organizations. This program is designed to train the pre-service/ in-service teachers, potential and current school administrators, enterprising educational entrepreneurs and prospective and current administrators in professional knowledge, aligned with HEC road map and competencies of curriculum & instruction, educational assessment, research methods, and educational leadership & management skills and competencies in pedagogy. This degree program will also provide ample opportunities to furnish the prospective teachers through their professional development to meet the national standards of teacher preparation. In the present era, the teacher education under the umbrella of teacher preparation programs is the foundation to succeed in the professional career. It provides the prospective teachers, administrators, educational leaders with the platform where they can become specialized teacher administrators, educational leaders in the relevant subject teaching. The program will provide basis for advance studies i.e. M. Phil and Ph.D in Education.

General Information

Maximum Duration

- Maximum Duration to complete the degree will be 03 Years

Eligibility Criteria

- MA/MSc or B.S (Hons) with minimum second division or equivalent (16 Years of Education).

Rules for Area of Specialization

1. Rules for the selection of area of specialization are as follows:
 - i. Students will have to select four courses from any one of the given areas of specialization.
 - ii. Students must have a CGPA of 2 or higher out of 4 CGPA.

Rules for Teaching Practice

1. Students are required to complete Teaching Practice of 6 credit hours during B.Ed. Secondary program.

(Note: Evaluation of the courses "Final Project" and "Teaching Practice" will be assessed based on allocated marks. Teaching practice is allocated 200 marks whereas research project will be allocated 100 marks).



SEMESTER-WISE BREAKDOWN OF COURSES

Year 1

SEMESTER-I	Course Title	Domain	Credit Hour
EDU-611	General Methods of Teaching	Professional	3(3-0)
EDU -612	Educational Assessment and Test Development	Professional	3(3-0)
EDU-613	Curriculum Development	Foundation	3(3-0)
EDU-614	Action Research Method	Professional	3(3-0)
EDU-615	Educational Leadership and Management	Professional	3(3-0)
EDU-616	Citizenship Education and Community Engagement	Foundation	3(3-0)
Total	6		18(18+0)



SEMESTER-II	Course Title	Domain	Credit Hour
EDU -621	Teaching Practice I (Lesson planning followed by micro teaching in the department)	Professional	3(3-0)
EDU -622	Research Project (Students will start action research project from 2 nd semester integrating it with teaching practice)	Professional	3(3-0)
EDU -623	Critical Thinking and Reflective Practices	Professional	3(3-0)
EDUL - 624-628	Area of Specialization: Leadership and Management		3(3-0)
EDUE - 624-628	Area of Specialization: Education and Technology and Evaluation		3(2+1)
EDUT - 624-628	Area of Specialization: Teacher Education		2(2+0)
EDUS - 624-628	Area of Specialization: Science Education		3(3+3=6) Contact Hours
EDUTE - 624-628	Area of Specialization: Teaching English		
	Total Credit Hours		18

SEMESTER-III	Course Title	Domain	Credit Hour
EDU -731	Educational Statistics	Professional	3(3-0)
EDU -732	Philosophy of Education	Foundation	3(3-0)
EDU -733	Educational Psychology	Foundation	3(3-0)
EDU -734	Professionalism in Teaching	Professional	3(3-0)
EDU -735	Research Project (Content Embedded)	Professional	3(2+1)
EDU -736	Teaching Practice II	Professional	3(3+0)
	Total Credit Hours		18



Specialization Courses:

Leadership and Management

	Course Title	Domain	CrHr
EDUL -624	Management Strategies in Educational Institutions	Professional	3(3-0)
EDUL -625	School Administration and Supervision	Foundation	3(3-0)
EDUL -626	Educational Planning and Management	Foundation	3(3-0)
EDUL -627	School Leadership	Professional	3(3-0)
	Total Credit Hours		12

Educational Technology and Evaluation

	Course Title	Domain	CrHr
EDUE -624	Educational Technology	Professional	3(3-0)
EDUE -625	Computers in Education	Foundation	3(3-0)
EDUE -626	Introduction to Broadcast Media	Foundation	3(3-0)
EDUE -627	Introduction to Non Broadcast Media	Professional	3(3-0)
	Total Credit Hours		12

Teacher Education

	Course Title	Domain	CrHr
EDUT -624	Introduction to Elementary Education	Professional	3(3-0)
EDUT-625	Introduction to Secondary Education	Foundation	3(3-0)
EDUT-626	Introduction to Higher Education	Foundation	3(3-0)
EDUT-627	Teacher Education in Pakistan	Professional	3(3-0)
	Total Credit Hours		12

Science Education

	Course Title	Domain	CrHr
EDUS -624	Foundation of Science Education	Foundation	3(3-0)
EDUS -625	Assessment in Science Education	Foundation	3(3-0)
EDUS-626	Laboratory Organization, Management and Safety Methods	Foundation	3(3-0)
EDUS -627	General Science in Schools	Content	3(3-0)
	Total Credit Hours		12



Teaching English

	Course Title	Domain	CrHr
EDUTE -624	Methods of Teaching English	Professional	3(3-0)
EDUTE -625	Teaching Listening and Speaking	Foundation	3(3-0)
EDUTE -626	Teaching Reading	Foundation	3(3-0)
EDUTE -627	Teaching Writing and Presentation Skills	Professional	3(3-0)
	Total Credit Hours		12



SEMESTER-WISE BREAKDOWN OF COURSES

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EDU-614	Action Research Method	Professional	3(3-0)
EDU-615	Educational Leadership and Management	Professional	3(3-0)
EDU-616	Citizenship Education and Community Engagement	Foundation	3(3-0)
Total	6		18(18+0)

COURSE TITLE: GENERAL METHODS OF TEACHING

Course Code: EDU-611

Credit hours: 03

Learning Objectives/Learning Outcomes:

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

Explain the basic concepts of teaching

Demonstrate the essential attributes of the effective teacher

Elaborate teaching strategies and types of teaching style

Understand the need and types of lesson plan

Explain the planning of teaching

Demonstrate inquiry method

Demonstrate activity method

Course Outline:

Week 01-02: Unit 1 Introduction to Teaching

Definitions of Teaching

The concept of Effective Teaching

effective teaching measures

Approaches to teaching effectiveness

Principles of Effective Teaching

Week 03-04: Unit 2 Introduction of Teaching Strategies

Meaning and concept of teaching strategies

Difference between method and teaching strategy

Styles of teaching



Autocratic style

Permissive style

Week 05-06: Unit 3 Learning Objectives and Teaching Strategies

Teaching for memory development

Model of memory level of teaching

Teaching for understanding

Model of understanding level of teaching

Teaching for reflective level

Model of reflective level of teaching

Week 07-08: Unit 4 Planning of Teaching

Task Analysis

Writing general statement about learning

Content analysis

Taxonomic categories of three domains

Determining behavioral objective of teaching

Week 09-10: Unit 5 Lesson Planning

Need of Lesson Planning

Approaches to Lesson Planning

Course and Unit Planning

Daily and Weekly Planning

Steps in Lesson Planning

The Lesson Plan Format

Week 11-12: Unit 6 Inquiry Method

Concept of inquiry method

Inductive method

Deductive method

Scientific method



The problem solving approach
Advantages and limitations of inquiry method

Week 13-14: Unit 7 Activity Method

Nature meaning of inquiry method

Types of activities

Examples and role of teacher in activity method

Limitations and delimitations of activity method

Individual project

Group projects

Week 15-16: Unit 8 Innovations in Teaching

Micro teaching

Computer Assisted instructions

Team teaching

Personalized system of instruction

Multimedia approach

References

Bain, Ken. (2004). What Best College Teachers do Cambridge, MA: Harvard University Press.

Benson, Jarlah. (2000) Working more creatively with groups. London: Rutledge.

Cottrell, S (1999). The Study Skills Hand Book, Palgrave, Basingstoke.

Individual Projects: The EEA Financial Mechanism and the Norwegian Financial Mechanism, 2004-2009.

Kirschner, P. A; Sweller, S. and Clark, R.E. (2006). Why Minimal Guidance during Instruction does not work: an analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching". Educational Psychologist 41 (2): 75-86.



Kochar, S. K. (1988) Methods and Techniques of Teaching. Sterling Publishers private Limited, Delhi.

Keyes, G. (2010). Teaching the Scientific Method in the Social Sciences. The Journal of Effective Teaching, Vol. 10, No. 2, pp. 18-28

TITLE OF COURSE: Educational Assessment and Test Development

Course Code: EDU-612

Credit Hrs: 03

Learning Objectives/Outcomes:

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

Understand the concept of evaluation and testing
Determine the qualities of a good test.

Plan and construct appropriate classroom test to evaluate student's performance.
Make report of the test results to different stake holders.

Course Contents:

Week 01-02:

Unit 01: Test, testing and evaluation

Meaning of test, testing and evaluation.

Purpose, Principles and scope of test and evaluation.
School Evaluation program.

Week 03-04

Unit 02: Types of Evaluation

Placement Evaluation
Diagnostic Evaluation
Formative Evaluation
Summative Evaluation

Week 05-06

Unit 03: Types of test



Essay type test
Objective type test
Recognition type items
Recall type items
Verbal tests

Week 07-08

Unit 04: Test Construction

Planning the test
Preparing the test items
Assembling the test

Week 09-10

Unit 05: Test Administration and analysis

Administration/conducting the test
Item analysis and modification

Week 11-12

Unit 06 Qualities of a good test

Reliability
Validity
Adequacy

Objectivity
Differentiability

Week 13-14

Unit 07: Interpretation of test scores

Percentage
Ordering and ranking
Frequency Distribution

Measure central tendency (Mean, Median and mode)
Pictorial forms (Graph, polygon, histogram)

Week 15-16

Unit 08: Reporting the test results to:

Students
Parents
Administration

Unit 09: Counseling of students after reporting the results



Reference Material:

Ebel, Robert (2004). Essentials of Educational Measurement. India: Prentice hall.

Freeman, Richard, (2004). Planning and Implementing Assessment. New York: Rout ledge Flamer.

Georg, David (2003). Trends in Measurement and Evaluation Techniques. New Delhi: Commonwealth.

James William (2005). Evaluation and Development of School Educations. New Delhi: Anmol Publications.

Kubiszyn, Tom, (2003). Educational testing and Measurement: Classroom Application and Practice. United States: John Wiley & sons, Inc.

Smith, D, (2005). Theory of Educational Measurement. New Delhi: Commonwealth.

Smith, D. (2005). History of Measurement and Evaluation. New Delhi: Commonwealth.

Smith, D., (2005). Methods of Educational Measurement, New Delhi: Commonwealth.

Swain, Sanjaya, (2005). Educational Measurement, Statistics and Guidance. Kalyani Publications.

TITLE OF COURSE: CURRICULUM DEVELOPMENT

Course Code: EDU-613

Credit Hrs. 03

Learning Objectives/Learning Outcomes:

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

- Understand the concept of curriculum
- Aware about the process of curriculum development in Pakistan
- Examine the components of curriculum development
- Differentiate between different types of curriculum
- Write curriculum objectives in behavioral terms
- State the critical issues, problems and trends in curriculum



Course Outline:

Week 01-02

Unit 01: Introduction to Curriculum

The definition of Curriculum
Various forms of Curriculum

Elements of Curriculum: Objectives, Content selection, Curriculum implementation, evaluation of curriculum.

Learning experiences and assessment of students learning

Week 03-04

Unit 02: Foundations of Curriculum

Philosophical

Psychological
Sociological

Week 05-07

Unit 03: Curriculum: Aims, Goals and Objectives

Distinction between aims, goals & objectives
Taxonomies of educational objectives
Cognitive domain
Affective domain
Psychomotor domain
Solo Taxonomy of educational objectives

Week 08-09

Unit 04: Models of Curriculum

Tyler Model

Wheeler Model

Week 10-11

Dynamic Model



Skel Beck Model

Week 12-14

Unit 05: Designs of Curriculum

Subject-based

Activity-based

Curriculum development at elementary and secondary level

Role of teacher in curriculum development process at various levels

Week 15-16

Unit 07: Curriculum Change

Process of Curriculum Change

Various issues in Curriculum change

Curriculum change in Pakistan

Reference Material:

Beane I.A, Toefler C.F & Alessi S.J (1986). Curriculum Planning & Development. Boston and Bacon.

Farooq, R.A. (1993). Education system in Pakistan. Islamabad: Asia Society for the Promotion of Innovation and Reforms in Education. Kelley A.V (1999). The Curriculum: Theory and Practice. London. Paul Chapman.

McNeil J. D (1990). Curriculum: A Comprehensive Introduction, (4th.ed) Los Angeles: Harper Collins

Murray P. (1993). Curriculum Development & Design, (5thed), Sharma R.C (2002). Modern

Methods of Curriculum Organization. New Delhi:

Course Title: Action Research Methods

EDU-614

Course: Action Research Methods
Course Description
The Action Research Method course provides students with a comprehensive understanding of action research as a powerful tool for addressing real-world challenges in various contexts, with a focus on its application in education. This course equips students with the knowledge and skills necessary to plan, act, observe, and reflect upon action research projects.



Course Outcomes	
1. Define action research and its key principles.	
2. Identify and formulate research questions or problems suitable for action research.	
3. Develop research plans, including data collection and analysis methods, following the PAOR cycle.	
4. Implement action research projects in collaboration with stakeholders.	
5. Analyze and interpret research findings to inform decision-making and practice.	
6. Reflect on the ethical considerations of action research.	
7. Communicate research results effectively to relevant audiences.	
8. Apply action research concepts to solve practical problems in education and other fields.	
Week	Topics
Week 1	Introduction to Action Research <ul style="list-style-type: none">• Overview of Action Research• Historical Background• Key Concepts and Definition
Week 2	Understanding the Framework <ul style="list-style-type: none">• Principles of Action Research• Ethical Considerations• Research Ethics and Integrity
Week 3	Identifying Research Questions <ul style="list-style-type: none">• Formulating Research Questions• Problem Identification• Literature Review and Problem Context
Week 4	Developing a Research Plan <ul style="list-style-type: none">• Formulating Research Questions• Problem Identification• Literature Review and Problem Context
Week 5	Data Collection Methods <ul style="list-style-type: none">• Qualitative Data Collection• Quantitative Data Collection• Surveys, Interviews, and Observations
Week 6	Data Analysis Techniques <ul style="list-style-type: none">• Qualitative Data Collection• Quantitative Data Collection• Surveys, Interviews, and Observations
Week 7	Action Planning and Intervention <ul style="list-style-type: none">• Qualitative Data Collection



	<ul style="list-style-type: none">• Quantitative Data Collection• Surveys, Interviews, and Observations
Week 8	Implementing Action Research Projects <ul style="list-style-type: none">• Qualitative Data Collection• Quantitative Data Collection• Surveys, Interviews, and Observations
Week 9	Mid-Term Examination
Week 10	Data Collection and Record Keeping <ul style="list-style-type: none">• Managing Data• Keeping Records• Ethical Data Handling
Week 11	Collecting Data and Observations <ul style="list-style-type: none">• Observing Phase: Data Collection• Data Sources and Methods• Data Validation and Reliability
Week 12	Analyzing Data <ul style="list-style-type: none">• Qualitative Data Collection• Quantitative Data Collection• Surveys, Interviews, and Observations
Week 13	Triangulation of Data <ul style="list-style-type: none">• The Concept of Triangulation• Combining Qualitative and Quantitative Data• Analyzing Convergent Findings
Week 14	Interpreting Findings <ul style="list-style-type: none">• Reflecting Phase: Interpreting Data• Making Sense of Results• Drawing Conclusions
Week 15	Making Recommendations Making Recommendations <ul style="list-style-type: none">• Developing Recommendations• Action Plans for Improvement• Communicating Findings
Week 16	Providing Feedback and Iterative Cycles <ul style="list-style-type: none">• Feedback Mechanisms• Iterative Action and Adaptation• Continuous Improvement



Week 17	Reporting and Future Trends <ul style="list-style-type: none">• Reporting Action Research• Challenges and Limitations• Future Trends in Action Research
Wee 18	Final Term Examination

References

1. Herr, K., & Anderson, G. L. (2015). *The Action Research Dissertation: A Guide for Students and Faculty*. Sage Publications.
2. Bradbury-Huang, H. (2015). What is Good Action Research? Why the Resurgent Interest? *Action Research*, 13(2), 95-103.
3. Noffke, S. E., & Somekh, B. (Eds.). (2020). *The SAGE Handbook of Educational Action Research* (2nd ed.). Sage Publications.
4. Lefebvre, H., & Neill, M. (2020). *The Handbook of Research Methods in Early Childhood Education: Research Methodologies*. Routledge.
5. Stringer, E. T. (2019). *Action Research* (5th ed.). Sage Publications.
6. Kemmis, S., Wilkinson, M., Edwards-Groves, C., Hardy, I., Grootenboer, P., & Bristol, L. (2018). *Changing Practices, Changing Education*. Springer.
7. Sagor, R. (2017). *The Action Research Guidebook: A Four-Stage Process for Educators and School Teams*. Corwin Press.
8. Reason, P., & Bradbury, H. (Eds.). (2019). *The Oxford Handbook of Action Research*. Oxford University Press.
9. O'Brien, R., & Dymont, J. (2016). What's in a Name? Conceptions of Action Research Across Education Contexts. *Educational Action Research*, 24(2), 239-259.
10. Kaplan, B., & Duchon, D. (2016). Combining Qualitative and Quantitative Methods in Information Systems Research: A Case Study. *MIS Quarterly*, 40(2), 511-536.

Course Outline: Educational Leadership and Management EDU-615

Learning Objectives/Outcomes:

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

Explain the concept of school organization, management and discipline and factors affecting school discipline



Organize school activities (curricular and co-curricular) affectively and manage available resources (material, human and time) efficiently.

Differentiate sheet between the concept of leadership and management utilizing the major indicator of effective leadership management.

Maintain school record and activities according to the school mandate.

Explain the functions of basic rules of leave pay and allowances E & D, codes of ethics

Course Outline:

Unit 01: Introduction to Management

Definitions of Management and Leadership.

Difference between leadership and management

Difference between general and educational management and Leadership.

Unit 02: Process of Management

Planning

Organizing

Staffing

Communicating

Controlling

Budgeting

Unit 03: Resource Management

Human resources



Physical resources

Financial resources

Information and learning resources (Library, AV Aids and instructional material)

Unit 04: Rules and Regulations

Rules regarding appointment, leaves, pay and allowances.

Efficiency & Discipline rules

Terms of reference of various personals in the school

Code of ethics

Unit 05: Records in Educational Institutions

Attendance register

Leave register

Stock register

Cash register (fee, different kind of funds)

Personal files of teachers and other staff

Other academic record (students result, staff meetings etc.)

Unit 06: Theories of Leadership

Trait Theories

Contingencies Theories

Unit 07: Leadership Style



Democratic

Autocratic

Laissez-faire

Leadership style and Headship

Reference Material:

Afridi, A. (1998). School organization: Ijaz Publishers.

Bovee, C.L. et al. (1995). Management. International Edition. New York: McGraw Hill, Inc.

Burden, R.P. (1995). Classroom management and discipline: Methods to facilitate cooperation instruction.

New York: Longman.

Bush, T.B. et al. (1999). Educational management: Re-defining theory, policy and practice. London:

Longman.

Course Title: Citizenship Education and Community Engagement

Course Description:

This course explores the principles and practices of citizenship education and its role in fostering community engagement. Students will examine the concept of citizenship, its historical and cultural variations, and its importance in contemporary society. Through experiential learning and case studies, students will develop a deep understanding of active citizenship and community participation.

Course Outcomes: Upon completing this course, students will be able to:

1. Define the concept of citizenship and its significance in diverse contexts.
2. Analyze the historical and cultural dimensions of citizenship.
3. Explore the relationship between citizenship education and civic engagement.



4. Identify and assess various models of citizenship education.
5. Apply citizenship education principles to real-world community engagement projects.

Course Outline

Week 1: Introduction to Citizenship Education and Community Engagement

- Defining Citizenship and Its Variations
- Historical Evolution of Citizenship
- The Importance of Civic Education
- Citizenship in Contemporary Society

Week 2: Models of Citizenship Education

- Liberal, Communitarian, and Critical Citizenship Models
- Citizenship Education and Cultural Competence
- Global Citizenship and Interconnectedness

Week 3: Civic and Social Responsibility

- Ethics and Civic Responsibility
- Social Justice and Equity in Citizenship Education
- Human Rights Education

Week 4: The Role of Education in Fostering Citizenship

- Curriculum Development for Citizenship Education
- Pedagogical Approaches for Civic Learning
- Assessment and Evaluation in Civic Education

Week 5: Democratic Values and Practices

- Understanding Democracy and Democratic Values
- Active Citizenship and Civic Participation
- Promoting Democratic Engagement

Week 6: Civic Engagement and Democracy

- Political Engagement and Civic Participation
- Case Studies in Civic Action and Social Change
- Civic Leadership and Advocacy

Week 7: Community Engagement and Service Learning

- Community-Based Learning and Service Learning
- Planning Service Learning Projects
- Reflection and Community Impact Assessment

Week 8: Advocacy and Social Change

- Grassroots Advocacy and Social Movements
- Advocacy Strategies and Campaign Planning
- The Role of Media in Civic Engagement

Mid Term Examination

Week 9: Citizenship in a Diverse Society



- Cultural Diversity and Citizenship
- Inclusivity and Social Cohesion
- Building Inclusive Communities

Week 10: Environmental Citizenship

- Environmental Ethics and Responsibility
- Education for Sustainable Development
- Environmental Advocacy and Action

Week 11: Digital Citizenship

- The Digital Age and Digital Literacy
- Online Civic Engagement and Responsibility
- Digital Citizenship Education

Week 12: Civic Education and Media Literacy

- Media Influence on Civic Awareness
- Media Literacy and Critical Thinking
- Media's Role in Shaping Public Opinion

Week 13: Civic Engagement and Community Development

- Grassroots Community Organizing
- Asset-Based Community Development
- Participatory Action Research

Week 14: Civic Engagement and Social Justice

- Promoting Social Justice through Civic Action
- Civic Engagement for Equity and Inclusion
- Case Studies in Civic Engagement for Social Justice

Week 15: Capstone Community Project Preparation

- Students will work on developing proposals and project plans for their capstone community projects.

Week 16: Capstone Community Project Implementation and Reflection

- Students will implement their capstone community projects, working individually or in groups, and reflect on their experiences, challenges, and contributions to the community.

SEMESTER-II	Course Title	Domain	CrHr
EDU -621	Teaching Practice I (Lesson planning followed by micro teaching in the department)	Professional	3(3-0)
EDU -622	Research Project (Students will start action research project from 2 nd semester integrating it with teaching practice)	Professional	3(3-0)



EDU -623	Critical Thinking and Reflective Practices	Professional	3(3-0)
EDU -	Area of Specialization (Course-I)		3(3-0)
EDU -	Area of Specialization (Course-II)		3(2+1)
EDU -	Area of Specialization (Course-III)		2(2+0)
EDU-	Area of Specialization (Course-IV)		3(3+3=6)
			Contact Hours
	Total Credit Hours		18



Course Title: Teaching Practice I

EDU -621

(Lesson planning followed by micro teaching in the department)

Course Title: Research Project

EDU -622

(Students will start action research project from 2nd semester integrating it with teaching practice)

Course Title: Critical Thinking and Reflective Practices

EDU -623

Course Description

This course is designed to equip future educators with critical thinking skills and reflective practices that are essential for effective teaching. Students will explore critical thinking models and engage in reflective teaching strategies to enhance their classroom instruction, problem-solving abilities, and personal growth as educators.

Course Outcomes: Upon completing this course, future educators will be able to:

1. Define critical thinking and reflective practice in the context of teacher education.
2. Apply critical thinking skills to design and deliver effective classroom instruction.
3. Use reflective teaching strategies to assess and improve their teaching methods.
4. Analyze and adapt to diverse classroom situations through reflective thinking.
5. Foster student engagement and learning through reflective teaching.
6. Collaborate with peers and mentors to enhance teaching practices.
7. Develop a plan for ongoing critical thinking and reflective practice in their teaching careers.

Course Outline:

Week 1: Introduction to Critical Thinking and Reflective Practice in Teacher Education

- Defining Critical Thinking and Reflective Practice in Education
- The Role of Critical Thinking and Reflection in Effective Teaching
- Critical Thinking Models and Reflective Teaching Frameworks

Week 2: Analytical Thinking for Curriculum Design

- Identifying Learning Objectives and Outcomes
- Analyzing Curriculum Materials Critically
- Developing Instructional Strategies Based on Critical Analysis

Week 3: Evaluating Classroom Strategies and Decision-Making

- Evaluating Teaching Strategies and Learning Resources
- Data-Driven Decision-Making
- Ethical Considerations in Educational Decision-Making

Week 4: Argumentation, Logic, and Reflective Lesson Planning

- Understanding Arguments and Logic in Lesson Planning



- Logical Fallacies in Education
- Constructing Sound Arguments for Effective Lessons
- Reflective Lesson Planning and Self-Improvement
- **Week 5: Problem-Solving Techniques in Classroom Management**
- Problem-Solving Models for Classroom Management
- Creative Problem Solving in Teaching
- Group Problem Solving and Collaboration in the Classroom
- Reflective Inquiry in Classroom Management
- **Week 6: Critical Reading and Research in Education**
- Critical Reading Strategies for Educational Materials
- Evaluating Educational Research Critically
- Conducting Action Research and Reflective Practice in Teaching
- **Week 7: Cognitive Biases, Self-Reflection, and Teaching Practice**
- Recognizing Cognitive Biases in Educational Decision-Making
- Overcoming Bias in Teaching Practices
- Self-Reflection and Reflective Self-Assessment
- Biases and Reflection in Education
- **Week 8: Ethical and Moral Reasoning in Teaching**
- Ethical Dilemmas in Education and Decision-Making
- Moral Reasoning Models in the Classroom
- Applying Ethics in Critical Thinking and Reflective Teaching
- **Week 9: Feedback and Collaborative Reflection in Teacher Education**
- Seeking and Providing Constructive Feedback in Teacher Education
- Collaborative Critical Thinking with Colleagues and Mentors
- Peer Review and Reflective Discussions in Education
- **Week 10: Reflective Practice for Differentiated Instruction**
- Reflective Practice in Adapting to Diverse Student Needs
- Case Studies in Differentiated Instruction
- Applying Critical Thinking to Inclusive Teaching
- **Week 11: Creative Thinking, Innovation, and Reflective Teaching**
- Developing Creative Teaching Strategies
- Fostering Innovation and Reflective Creativity in Lesson Design
- Design Thinking and Reflective Innovation in Education
- **Week 12: Complex Problem Solving and Reflective Inquiry in Education**
- Tackling Complex Educational Issues
- Systems Thinking and Complexity in the Classroom
- Interdisciplinary Approaches to Problem Solving and Reflective Inquiry in Education
- **Week 13: Cultural Competence and Reflective Teaching in Diverse Classrooms**



- Cultural Sensitivity and Reflective Teaching
- Reflective Teaching in Culturally Diverse Settings
- Cultural Humility and Reflective Engagement in Teaching

Week 14: Reflective Practice for Inclusive and Equitable Education

- Reflective Practice for Inclusive Education and Equity
- Advocacy and Reflective Teaching for Social Justice
- Promoting Equity through Critical Thinking and Reflection in Education

Week 15: Developing a Personal Reflective Teaching Plan

- Creating a Personal Reflective Teaching Plan for Continuous Improvement
- Setting Future Goals and Objectives in Teaching
- The Road Ahead: Ongoing Critical Thinking and Reflective Practice in Teaching Careers

Week 16: Capstone Reflective Teaching Project

- Students will work on a capstone project that combines critical thinking and reflective practice principles to analyze a teaching experience. They will present their reflections and insights.

Recommended books

Brookfield, S. D. (2017). *Becoming a Critically Reflective Teacher*. John Wiley & Sons.

Paul, R., & Elder, L. (2020). *Critical Thinking: The Nature of Critical and Creative Thought*. Foundation for Critical Thinking.

Costa, A. L., & Kallick, B. (2019). *Dispositions: Reframing Teaching and Learning*. Corwin Press.

Schön, D. A. (2017). *The Reflective Practitioner: How Professionals Think in Action*. Routledge.

Dewey, J. (2017). *How We Think*. Skyhorse Publishing.

Area of Specialization-I

Area 1: Leadership and Management

	Course Title	Domain	CrHr
EDUL -624	Management Strategies in Educational Institutions	Professional	3(3-0)
EDUL -625	School Administration and Supervision	Foundation	3(3-0)
EDUL -626	Educational Planning and Management	Foundation	3(3-0)
EDUL -627	School Leadership	Professional	3(3-0)
	Total Credit Hours		12

Course Title: Management Strategies in Educational Institutions

EDUL -624

Course Description:



This course explores the principles and practices of effective management in educational institutions. Students will learn about leadership, strategic planning, resource allocation, and organizational development to enhance the efficiency and effectiveness of educational organizations.

Learning Outcomes:

By the end of this course, students should be able to:

1. Define the key concepts and theories related to educational management.
2. Analyze the role of effective leadership in educational institutions.
3. Develop strategic plans for educational organizations.
4. Evaluate resource allocation and budgeting in educational settings.
5. Implement effective communication strategies in educational management.
6. Understand the importance of data-driven decision-making in education.
7. Apply ethical principles in educational management.
8. Identify current challenges and trends in educational management.

1. Strategic Planning:

- a. Develop a clear mission, vision, and goals for the institution.
- b. Create a strategic plan that outlines priorities and objectives.
- c. Involve stakeholders (faculty, staff, students, parents, community) in the planning process.

2. Effective Leadership:

- a. Appoint competent and visionary leaders at all levels of the institution.
- b. Foster a collaborative and inclusive leadership culture.
- c. Provide leadership training and professional development opportunities.

3. Resource Allocation:

- a. Develop a transparent and equitable budget allocation process.
- b. Prioritize resources for educational programs and student support services.
- c. Implement cost-saving measures and seek alternative funding sources.

4. Quality Assurance and Accreditation:

- a. Establish mechanisms for quality assessment and improvement.
- b. Pursue accreditation from relevant accrediting bodies.
- c. Regularly review and update academic programs to meet accreditation standards.

5. Data-Driven Decision Making:

- a. Collect and analyze data on student performance, outcomes, and institutional effectiveness.
- b. Use data to inform strategic decisions, program improvements, and resource allocation.

6. Student-Centered Approach:



- a. Focus on meeting the needs and expectations of students.
 - b. Provide academic advising, counseling, and support services to enhance student success.
 - c. Gather student feedback and act upon it to improve services.
- 7. Faculty and Staff Development:**
- a. Invest in professional development for faculty and staff.
 - b. Encourage research and innovation in teaching methods.
 - c. Recognize and reward outstanding performance.
- 8. Technology Integration:**
- a. Implement modern educational technologies for teaching and administrative purposes.
 - b. Ensure reliable IT infrastructure and support services.
 - c. Promote digital literacy among students and faculty.
- 9. Community Engagement:**
- a. Establish partnerships with local businesses, organizations, and community leaders.
 - b. Engage in outreach activities and service-learning projects.
 - c. Collaborate with the community to enhance educational opportunities.
- 10. Risk Management and Crisis Preparedness:**
- a. Develop contingency plans for various emergencies and crises.
 - b. Ensure campus safety and security measures are in place.
 - c. Communicate effectively during emergencies.
- 11. Inclusivity and Diversity:**
- a. Promote diversity and inclusivity in admissions, hiring, and curriculum.
 - b. Create a welcoming and inclusive campus environment.
 - c. Implement diversity training and awareness programs.
- 12. Sustainability Initiatives:**
- a. Integrate sustainability principles into campus operations and curriculum.
 - b. Reduce the institution's environmental footprint.
 - c. Educate students about sustainability and environmental stewardship.
- 13. Continuous Improvement:**
- a. Foster a culture of continuous improvement and innovation.
 - b. Regularly review and update policies, procedures, and programs.
 - c. Encourage feedback and suggestions from all stakeholders.
- 14. Governance and Accountability:**
- a. Establish clear governance structures and roles.
 - b. Ensure transparency and accountability in decision making.
 - c. Report progress on strategic goals and outcomes to stakeholders.



15. Globalization and Internationalization:

- a. Explore opportunities for international collaborations and student exchanges.
- b. Incorporate global perspectives into the curriculum.
- c. Attract and support international students and faculty.

References

1. Aggarwal, R. S., & Gupta, S. (Year). Educational Administration and Management. Publisher.
2. Lunenburg, F. C., & Ornstein, A. C. (Year). Education Administration: Concepts and Practices. Publisher.
3. Dovico, G. M., & Greenfield, P. M. (Year). Strategic Planning for Educational Change. Publisher.
4. Coleman, M., & Glover, D. (Year). Leadership and Management in Education: Cultures, Change, and Context. Publisher.
5. Weikart, L. A., Chen, G. G., & Sermier, E. M. (Year). Budgeting and Financial Management for Nonprofit Organizations: Using Money to Drive Mission Success. Publisher.
6. Buller, J. L. (Year). Change Leadership in Higher Education: A Practical Guide to Academic Transformation. Publisher.
7. Jackson, S., & Keeves, J. P. (Eds.). (Year). Leadership and Management of Quality in Higher Education. Publisher.
8. Renz, D. O. (Ed.). (Year). The Jossey-Bass Handbook of Nonprofit Leadership and Management. Publisher.



Course Title: School Administration and Supervision
EDUL -625

Course Description:

This course explores the principles and practices of school administration and supervision in educational institutions. It provides a comprehensive understanding of the role of educational leaders, including school administrators and supervisors, in creating effective learning environments. Students will examine various aspects of educational leadership, including leadership styles, organizational structures, curriculum development, human resource management, and the use of data to make informed decisions. Additionally, the course will address the ethical, legal, and policy considerations that shape the landscape of school administration.

Course Learning Outcomes:

Upon completing this course, students will be able to:

1. Define the scope and importance of school administration and supervision in educational institutions.
2. Analyze the historical development and various theories of educational leadership and management.
3. Evaluate different leadership styles and their applicability in educational settings.
4. Examine the organizational structures and governance models in educational institutions.
5. Understand the role of educational policies and legal considerations in school administration.
6. Develop skills in budgeting, resource allocation, and financial management in educational institutions.
7. Describe curriculum development processes and strategies for aligning curriculum with educational goals.
8. Implement effective instructional leadership practices to support teachers and enhance student learning.
9. Explore the principles of special education administration and inclusion in school settings.
10. Demonstrate proficiency in human resource management, including recruitment, professional development, and evaluation of educational personnel.
11. Discuss the integration of technology in education and its impact on school administration.
12. Evaluate safety protocols and facilities management in educational institutions.
13. Develop strategies for parent and community engagement to foster a positive school environment.
14. Utilize data-driven decision-making processes to improve educational outcomes.



15. Recognize the importance of professional development and teacher leadership in school administration.
16. Apply the knowledge and skills gained in the course to a capstone project that addresses real-world challenges in school administration and supervision.

Week 1: Introduction to School Administration and Supervision

- Definition and Scope of School Administration
- Historical Perspectives on School Administration
- Role and Responsibilities of School Administrators
- Importance of Effective Supervision

Week 2: Organizational Theories and Structures in Education

- Classical vs. Modern Organizational Theories
- School Organizational Structures
- Decision-Making in Educational Institutions

Week 3: Leadership in Education

- Leadership Styles and Theories
- Transformational Leadership in Educational Settings
- Ethical Leadership in Education

Week 4: School Culture and Climate

- Defining School Culture and Climate
- Factors Influencing School Culture
- Strategies for Creating a Positive School Culture

Week 5: Educational Policy and Governance

- Educational Policy Development and Implementation
- Legal and Ethical Issues in School Administration
- School Boards and Governance Structures

Week 6: School Finance and Budgeting

- School Budgeting Processes
- Resource Allocation in Schools
- Financial Planning for Educational Institutions

Week 7: Curriculum Development and Assessment

- Curriculum Planning and Design
- Assessment and Evaluation in Education
- Aligning Curriculum with Educational Goals

Week 8: Instructional Leadership

- Effective Teaching Practices
- Teacher Evaluation and Professional Development
- Supporting Instructional Improvement

Week 9: Special Education Administration



- Inclusive Education and Special Needs Students
- Legal Requirements and Individualized Education Plans (IEPs)
- Collaboration with Special Education Teams

Week 10: Human Resource Management

- Recruitment and Selection of Educational Personnel
- Professional Development and Staff Training
- Teacher Evaluation and Performance Improvement

Week 11: Technology Integration in Education

- Role of Technology in Modern Education
- Implementing Technology Initiatives
- Digital Citizenship and Online Safety

Week 12: School Facilities and Safety

- Facilities Planning and Management
- Safety Protocols and Emergency Response
- Creating a Secure Learning Environment

Week 13: Parent and Community Engagement

- Building Positive Relationships with Parents and Guardians
- Community Partnerships and Involvement
- Effective Communication Strategies

Week 14: Data-Driven Decision Making

- Using Data for School Improvement
- Data Collection and Analysis
- Developing Action Plans Based on Data

Week 15: Professional Development and Teacher Leadership

- Strategies for Teacher Growth and Development
- Cultivating Teacher Leadership within Schools
- Mentoring and Coaching Programs

Week 16: Capstone Project and Reflection

- Students will work on a capstone project related to school administration and supervision, applying concepts learned throughout the course.
- Reflect on their growth as potential educational leaders and administrators.

Course Title: Educational Planning and Management

EDUL -626

Course Description:

The "Educational Planning and Management" course is a comprehensive study of the principles and practices involved in effectively planning, organizing, and managing educational institutions. It delves into the historical context of educational administration and supervision, while also emphasizing the contemporary challenges and strategies required for educational development.



This course provides aspiring educators with the knowledge and skills necessary to navigate the complexities of educational leadership and management in diverse educational settings.

Learning Outcomes:

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

1. Differentiate Key Terms: Understand and differentiate the terms administration, supervision, organization, and management in the context of educational institutions.
2. Apply Administrative Tools: Apply various tools and techniques of administration and supervision to enhance the efficiency and effectiveness of educational processes.
3. Comprehend Management Functions: Understand and perform various functions of educational management, including planning, organizing, leading, communicating, and controlling.
4. Develop Leadership Skills: Understand, characterize, and exercise effective leadership traits and behaviors relevant to educational leadership roles.
5. Promote School Discipline: Comprehend the importance of maintaining school discipline, its types, and the factors influencing it.
6. Navigate Educational Issues: Address key issues in educational management, such as teacher training, discipline systems, time-table management, and library administration.
7. Evaluate Efficiency and Effectiveness: Evaluate the balance between efficiency and effectiveness in educational management and analyze the interplay of productivity and human relations.
8. Facilitate Decision-Making: Understand the decision-making process, its types, and the challenges involved in making decisions within educational contexts.
9. Implement Co-curricular Activities: Recognize the significance of co-curricular activities in the educational environment and integrate them effectively with the curriculum.
10. Manage Educational Records: Understand the importance of maintaining various educational records and efficiently manage attendance, leave, stock, and financial records in educational institutions.
11. Apply Knowledge in Real-World Context: Apply the knowledge and skills gained throughout the course to address real-world challenges in educational management.

Course Contents

Week 1: Introduction to Educational Planning and Management

- Course overview and objectives
- Differentiating administration, supervision, organization, and management
- Historical background of educational administration and management

Week 2: Educational Administration and School Administration

- Nature, aims, objectives, and principles of school administration
- Definitions and concepts



- Roles and responsibilities of school administrators

Week 3: Planning in Educational Management

- Definition and importance of planning
- The planning process
- Types of plans in educational institutions

Week 4: Management Functions

- Organizing: Principles and techniques
- Leading: Leadership vs. management
- Communicating and its significance in educational management

Week 5: Supervision and Inspection

- Concept of supervision and inspection
- Aims and types of supervision
- Techniques and factors affecting educational supervision

Week 6: Leadership and Management

- Difference between leadership and management
- Characteristics of effective educational leaders
- Leadership traits and behaviors

Week 7: The Decision-Making Process

- Decision-making in educational management
- Types of decisions and decision-making problems
- Programmed and non-programmed decisions

Week 8: School Discipline

- Definition, purpose, and types of school discipline
- Stages of discipline in schools
- Factors affecting school discipline

Week 9: Rules and Regulations in Educational Management

- School rules and regulations
- Terms of reference for school personnel
- Code of ethics in educational institutions

Week 10: Educational Management Issues

- Pre-service and in-service teacher training
- Punishment and reward system
- Time-table and library management in schools

Week 11: Efficiency and Effectiveness

- Efficiency vs. effectiveness in educational management
- Productivity vs. human relations in schools
- Training vs. development of staff

Week 12: Co-curricular Activities



- Role and importance of co-curricular activities
- Planning and managing co-curricular programs
- Integration of co-curricular activities with the curriculum

Week 13: Records in Educational Institutions

- Importance of records in educational management
- Types of records (attendance, leave, stock, cash, personal files)
- Maintenance and organization of records

Week 14-15: Student Presentations and Group Projects

- Students present on various topics related to educational planning and management.
- Group projects and discussions on real-world educational management challenges.

Week 16: Course Review and Final Examination

- Review of key concepts and topics covered in the course.
- Final examination assessing overall understanding of educational planning and management

References

1. Educational Planning and Management Textbooks:

- Kochhar, S. (2011). School Administration and Management. Sterling Publishers Pvt.
- Heward-Mills, D. (2014). The art of leadership - (3rd ed.). Parchment House.
 - Certo, S. C., & Certo, T. (Year). Supervision: Concepts and Skill-Building. Publisher.
 - Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. M. (Year). Supervision and Instructional Leadership: A Developmental Approach. Publisher.
 - Bazerman, M. H., & Moore, D. A. (Year). Judgment in Managerial Decision Making. Publisher.
 - Hammond, J. S., Keeney, R. L., & Raiffa, H. (Year). Smart Choices: A Practical Guide to Making Better Decisions. Publisher.
 - Manning, M. L., & Bucher, K. T. (Year). Classroom Management: Models, Applications, and Cases. Publisher.
 - Curwin, R. L., Mendler, A. N., & Mendler, B. D. (Year). Discipline with Dignity: How to Build Responsibility, Relationships, and Respect in Your Classroom. Publisher.
 - Read, J., & Ginn, M. L. (Year). Records Management. Publisher.
 - McNulty, L. E. (Year). Managing Educational Records: A Guide for College and University Administrators. Publisher.

Course Title: School Leadership

EDUL -627



Course Description

This course is designed to introduce and orientate the learners with the field of educational leadership as well as to help them perform as leaders of tomorrow. It includes theoretical and conceptual background along with practical implications of these theories and concepts. Educational leadership is a vast area within which not only top and middle managers but school heads are also seen as the most significant role-players. Leadership styles and strategies vary from situation to situation. Hence a student of educational planning and management needs to have professional and practical knowledge and skills to handle the responsibility of leading and developing effectively and efficiently.

Course Learning Outcomes

After completing this course, the learners will be able to:

- acknowledge and apply the knowledge about leadership in their practices
- identify the role significance of educational leadership
- use the leadership skills to develop effective learning environment in and around the educational institutions
- lead the field of education to a better tomorrow

Week 1: INTRODUCTION TO LEADERSHIP.....

- Concept and Definitions of Leadership
- Need and Scope of Leadership
- Levels of Leadership

Week 2

- Position
- Permission
- Production

Week 3

- Person Development
- Pinnacle
- Relationship between Leadership and Management

Week 4 EDUCATIONAL LEADERSHIP

- Need and Scope of Educational Leadership
- Historical Perspective of Educational Leadership
- Future of Educational Leadership (Globally)

Week 5 LEADERSHIP THEORIES

- Great Man Theory
- 3.2 Trait Theory



- 3.3 Behavioral Theories

Week 6: LEADERSHIP STYLES

- Moral Leadership
- Participative Leadership
- Transactional Leadership

Week 7: LEADERSHIP STYLES

- Transformational Leadership
- Charismatic Leadership
- Situational Leadership Model

Week 8: LEADERSHIP ROLES AND RESPONSIBILITIES

- Shaping Norms and Values
- Direction and Protection
- Conflict Management
- Decision Making

Week 9: EFFECTIVE LEADERSHIP STRATEGIES

- Vision Crafting
- Setting up Common Goals

Week 10: EFFECTIVE LEADERSHIP STRATEGIES

- Team Building
- Team Leading

Week 11: LEADERSHIP CHARACTERISTICS AND SKILLS

- Long-Sightedness
- Optimism and Enthusiasm
- Empathy

Week 12: LEADERSHIP CHARACTERISTICS AND SKILLS

- Assertiveness
- Communication Skills

Week 13: CHANGE LEADERSHIP

- What is Change Management?
- The Role of Communication in Change Initiatives
- Three Levels of Change Management

Week 14: CHANGE LEADERSHIP

- Factors of Successful Change Management
- Principals of Leading Change Management

Week 15: USE OF TECHNOLOGY IN EDUCATIONAL LEADERSHIP

- Educational Leadership
- Effective Use of Technology



- Technological Resources

Week 16: USE OF TECHNOLOGY IN EDUCATIONAL LEADERSHIP

- Technological Communication
- Use of Traditional Media

References

- John, C. Maxwell. (2011). The Five Levels of Leadership: Proven Steps to Maximize Your Potential. New York: Hachette Book Group
- Kouzes, J. & Posner, B. (2002). The leadership challenge: How to keep getting extraordinary things done in organizations. San Francisco: Jossey Bass.
- Northouse, P. (2001). Leadership: Theory and practice (4th ed.). Thousand Oaks, CA: Sage.
- Avolio, B. J. (2005). Leadership development in balance: made/born. Mahwah, N.J.: Lawrence Erlbaum.

Area 2: Educational Technology and Evaluation

	Course Title	Domain	CrHr
EDUE -624	Educational Technology	Professional	3(3-0)
EDUE -625	Computers in Education	Foundation	3(3-0)
EDUE -626	Introduction to Broadcast Media	Foundation	3(3-0)
EDUE -627	Introduction to Non-Broadcast Media	Professional	3(3-0)
	Total Credit Hours		12

Educational Technology EDUE -624

Course Description

Introduction to Educational Technology" is designed as a foundational course for beginners, offering an exploration of essential concepts and practical applications of technology in the educational context. This course aims to equip students with the fundamental digital skills and knowledge required for effective teaching and learning in today's technology-driven world. Through hands-on activities and interactive learning experiences, students will gain confidence in using educational technology tools and platforms.

Learning Outcomes

1. Digital Literacy: By the end of the course, students will demonstrate proficiency in essential digital literacy skills, including basic computer operation, internet navigation, and responsible online behavior.
2. Technology Integration: Students will be able to design and create educational materials using a variety of digital tools, including word processing, presentation software, multimedia elements, and basic image editing.



3. Online Learning: Students will navigate and engage within online learning environments effectively, accessing course materials, participating in discussions, and submitting assignments through Learning Management Systems (LMS).
4. Educational App Usage: Upon completion of the course, students will be able to select, download, and utilize educational apps to enhance teaching and learning, creating instructional activities that integrate technology.
5. Digital Citizenship: Students will understand the principles of digital citizenship and demonstrate responsible online behavior, including safe internet practices, ethical use of technology, and the ability to identify and address online risks.

Week 1: Introduction to Educational Technology

- What Is Educational Technology?
- Historical Development of Educational Technology
- The Role of Technology in Modern Education
- Activity: Explore the evolution of educational technology through a timeline project.

Week 2: Digital Literacy and Basic Computer Skills

- Basics of Digital Literacy
- Essential Computer Skills for Beginners
- Navigating the Internet Safely
- Activity: Practice basic computer operations and internet navigation.

Week 3: Educational Software and Word Processing

- Introduction to Educational Software
- Word Processing Tools for Educational Materials
- Creating Effective Documents
- Activity: Create a simple educational document using word processing software.

Week 4: Educational Presentations

- Basic Presentation Software
- Crafting Engaging Presentations
- Practice: Creating Your First Educational Presentation
- Activity: Design and present a brief educational topic using presentation software.

Week 5: Online Learning Environments

- Learning Management Systems (LMS)
- Navigating an Online Course
- Accessing Course Materials and Resources
- Activity: Explore a simulated online course environment and access learning materials.

Week 6: Online Communication Skills

- Effective Online Communication
- Using Email for Course Communication



- Engaging in Online Discussions and Forums
- Activity: Participate in an online discussion forum and practice email etiquette.

Week 7: Multimedia in Education

- Introduction to Multimedia
- Types of Educational Multimedia (Images, Audio, Video)
- Incorporating Multimedia in Teaching
- Activity: Create a multimedia-enhanced presentation or document.

Week 8: Basic Image and Media Editing

- Basic Image Editing for Educational Materials
- Creating and Using Audio in Presentations
- Simple Video Editing Techniques
- Activity: Edit an image and incorporate it into an educational resource.

Week 9: Educational Websites and Online Research

- Exploring Educational Websites
- Identifying Reliable Educational Resources Online
- Developing Online Research Skills
- Activity: Conduct online research and compile a list of educational websites.

Week 10: Building Educational Web Pages

- Introduction to Website Builders
- Building a Simple Educational Web Page
- Adding Content and Resources to Your Web Page
- Activity: Create a basic educational web page using a website builder.

Week 11: Introduction to Educational Apps

- Understanding Educational Apps
- Exploring Educational Apps for Different Subjects
- Evaluating App Quality and Educational Value
- Activity: Download and explore educational apps related to a chosen subject.

Week 12: Using Educational Apps in Teaching

- Downloading and Installing Educational Apps
- Exploring Educational Games and Quizzes
- Using Educational Apps in Teaching and Learning
- Activity: Create a short instructional activity using an educational app.

Week 13: Digital Citizenship

- What Is Digital Citizenship?
- Online Etiquette and Responsible Behavior
- Awareness of Cyberbullying and Its Impact
- Activity: Develop a digital citizenship pledge or code of conduct.

Week 14: Online Safety and Privacy



- Protecting Personal Information Online
- Safe Internet Practices for Students
- Reporting and Responding to Online Incidents
- Activity: Identify potential online risks and create a safety plan.

Week 15: Integrating Technology into Teaching

- Designing Technology-Enhanced Lessons
- Integrating Multimedia in Teaching
- Incorporating Online Resources and Websites
- Activity: Design and present a technology-enhanced lesson plan.

Week 16: Course Conclusion and Future Learning

- Presenting a Technology-Enhanced Lesson
- Reflecting on the Course Journey
- Future Learning and Professional Development in Educational Technology
- Activity: Share and reflect on technology-enhanced lesson presentations.

Computers in Education

EDUE -625

Course Title: Computers in Education

Course Description

This course introduces student teachers to the fundamental role of computers in modern educational settings. It covers the basics of educational technology, digital tools, and their integration into teaching and learning. Through practical hands-on experiences, student teachers will develop the skills necessary to harness the power of technology to enhance classroom instruction.

Learning Outcomes: By the end of this course, student teachers will be able to:

1. Understand the significance of computers in education and its impact on teaching and learning.
 2. Effectively integrate educational technology into lesson planning and classroom activities.
 3. Demonstrate proficiency in using various digital tools and resources for educational purposes.
 4. Evaluate the ethical and responsible use of technology in educational settings.
 5. Design and implement technology-enhanced learning experiences that cater to diverse learner needs.
 6. Troubleshoot common technical issues in an educational context.
 7. Adapt to emerging trends in educational technology.
1. Week 1: The Role of Technology in Education
 - Understanding the importance of technology in modern education
 - Historical overview of educational technology



- Benefits and challenges of using computers in the classroom.
- 2. Week 2: Digital Literacy
 - Basics of digital literacy for educators
 - Internet safety and responsible online behavior
 - Navigating digital tools and platforms
- 3. Week 3: Hardware and Software Essentials
 - Introduction to computer hardware and software
 - Operating systems and software applications for educators
 - Setting up and maintaining classroom technology
- Week 4: Designing Technology-Enhanced Lesson Plans
 - Creating objectives for technology integration
 - Incorporating multimedia and interactive content
 - Assessment strategies for tech-based lessons
- Week 5: Using Digital Tools for Content Delivery
 - Interactive whiteboards and presentation software
 - Educational apps and websites
 - Podcasts, videos, and online simulations
- Week 6: Engaging Students with Gamification and Virtual Reality
 - Gamification principles in education
 - Introduction to virtual reality (VR) in the classroom
 - Examples of gamified and VR-based learning experiences
- Week 7: Exploring Online Learning Platforms
 - Overview of online learning environments
 - Benefits and challenges of virtual classrooms
 - Selecting the right platform for specific teaching scenarios
- Week 8: Building Effective Blended Learning Experiences
 - Defining blended learning
 - Combining face-to-face and online instruction
 - Best practices for managing blended classrooms
- Week 9: Adapting to Remote and Hybrid Teaching
 - Strategies for teaching during emergencies
 - Tools for remote and hybrid instruction
 - Maintaining student engagement in virtual settings
- Week 10: Educational Software Applications
 - Overview of educational software categories
 - Selecting and evaluating software for classroom use
 - Hands-on practice with educational software
- Week 11: Productivity Tools for Educators



- Using word processors and spreadsheets in teaching
- Collaborative tools for lesson planning and assessment
- Organizing and managing digital resources
- Week 12: Specialized Educational Tools
 - Assistive technology for diverse learners
 - STEM and coding tools in education
 - Adaptive learning platforms and AI-driven education
- Week 13: Evaluating Educational Technology Effectiveness
 - Methods for assessing the impact of technology on learning
 - Collecting and analyzing data from tech-enhanced lessons
 - Addressing equity and accessibility concerns
- Week 14: Action Research in Educational Technology
 - Introduction to action research
 - Planning and conducting technology-related research projects
 - Sharing findings and best practices
- Week 15: Ethical and Legal Considerations in EdTech
 - Copyright and fair use in digital education materials
 - FERPA and student data privacy
 - Ethical use of AI and machine learning in education
- Week 16: Future Trends in Educational Technology
 - Emerging technologies in education
 - Preparing for the evolving digital landscape
 - Developing a personal technology integration plan

Course Title: Introduction to Broadcast Media

EDUE -626

Course Description

This course provides students with a comprehensive overview of broadcast media, including its history, technology, programming, and impact on society. Students will learn about the different types of broadcast media, including radio, television, and streaming services. They will also explore the role of broadcast media in education and its potential to support teaching and learning.

Learning Outcomes

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

- Define broadcast media and its key components.
- Understand the history and development of broadcast media.
- Identify the different types of broadcast media and their characteristics.
- Explain the basic technology of broadcast media.
- Analyze broadcast programming and its impact on society.



- Discuss the role of broadcast media in education.
- Develop and implement broadcast media projects to support teaching and learning.

Course Contents

Week 1

- Introduction to broadcast media
- History of broadcast media
- Types of broadcast media

Week 2

- Broadcast technology
- Broadcast programming
- Impact of broadcast programming on society

Week 3

- Broadcast media in education
- Potential of broadcast media to support teaching and learning
- Examples of broadcast media in education

Week 4

- Broadcast media production
- Creating broadcast media content for educational purposes
- Distributing broadcast media content to target audiences

Week 5

- Assessment and evaluation
- Assessing the impact of broadcast media on teaching and learning
- Evaluating the effectiveness of broadcast media projects

Week 6

- Broadcast media and social justice
- Using broadcast media to promote social justice
- Examples of broadcast media projects that promote social justice

Week 7

- Broadcast media and critical thinking
- Using broadcast media to develop critical thinking skills
- Examples of broadcast media projects that develop critical thinking skills

Week 8

- Broadcast media and creativity
- Using broadcast media to promote creativity
- Examples of broadcast media projects that promote creativity

Week 9

- Mid-term exam

Week 10



- Broadcast media and literacy
- Using broadcast media to promote literacy
- Examples of broadcast media projects that promote literacy

Week 11

- Broadcast media and diversity
- Using broadcast media to promote diversity
- Examples of broadcast media projects that promote diversity

Week 12

- Broadcast media and global citizenship
- Using broadcast media to promote global citizenship
- Examples of broadcast media projects that promote global citizenship

Week 13

- Broadcast media and the future
- Trends in broadcast media
- The future of broadcast media in education

Week 14

Practical activities for learning relevant software and tools

- Use of video editing software,
- Use of audio editing software,
- Live streaming software.

Week 15

- Use of video editing software,
- Use of audio editing software,
- Live streaming software.

Week 16

Practical /Project Work

- Students practically work on video editing software, audio editing software and live streaming software as projects.
- Students will present their broadcast media projects to the class.

Week 17

Practical /Project Work

- Students practically work on video editing software, audio editing software and live streaming software as projects.
- Students will present their broadcast media projects to the class.

Week 18

- Final Term Examination

Recommended Books

- Books:



- Broadcast Media: A Critical Approach by James Curran and David Hesmondhalgh
- Education and the Media: A Critical Approach by David Buckingham
- Media Education: A Critical Approach by David Gauntlett
- The SAGE Handbook of Media and Education edited by Gregory D. Smith and Sonia Livingstone
- Teaching with the Media: A Critical Approach by David Buckingham
- Articles:
 - "The Role of Broadcast Media in Education" by Sonia Livingstone
 - "Using Broadcast Media to Promote Social Justice" by Gregory D. Smith
 - "Developing Critical Thinking Skills through Broadcast Media" by David Buckingham
 - "Using Broadcast Media to Promote Creativity" by James Curran
 - "The Future of Broadcast Media in Education" by David Hesmondhalgh
- Websites:
 - National Association for Broadcast Education and Training (NABET)
 - Association for Education in Journalism and Mass Communication (AEJMC)
 - BBC Education
 - PBS Learning Media
 - WGBH Media Library

**Course Title: Introduction to Non Broadcast Media
EDUE -627**

Course Description

This course is an introduction to non-broadcast media, with a focus on its use in education. Students will learn about the different types of non-broadcast media, such as print media, audio media, and video media. They will also learn how to use these media to create effective learning materials and activities. The course will be very basic and simple, and it will be designed for students who have no prior experience with non-broadcast media.

Learning Outcomes:

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

- Define non-broadcast media and explain its different types
- Identify the advantages and disadvantages of using non-broadcast media in education
- Create simple non-broadcast media materials for education
- Use non-broadcast media effectively in the classroom
- Evaluate the quality of non-broadcast media materials

Course Contents

Week 1:

- Introduction to non-broadcast media



- Types of non-broadcast media
- The advantages and disadvantages of using non-broadcast media in education

Week 2:

- Creating print media materials for education
- Designing and creating educational posters
- Creating and using handouts and worksheets

Week 3:

- Creating audio media materials for education
- Recording and editing audio
- Creating and using podcasts

Week 4:

- Creating video media materials for education
- Recording and editing video
- Creating and using educational videos

Week 5:

- Using non-broadcast media in the classroom
- Integrating non-broadcast media into lesson plans
- Creating engaging and effective learning activities with non-broadcast media

Week 6:

- Evaluating non-broadcast media materials
- Considering the quality of non-broadcast media materials for education
- Selecting appropriate non-broadcast media materials for the classroom

Week 7:

- Creating non-broadcast media materials for specific subject areas
- Using non-broadcast media to teach math and science
- Using non-broadcast media to teach language arts and social studies

Week 8:

- Using non-broadcast media to support student learning
- Using non-broadcast media to differentiate instruction
- Using non-broadcast media to assess student learning

Week 9:

- Using non-broadcast media to create collaborative learning experiences
- Using non-broadcast media to support project-based learning
- Using non-broadcast media to promote student creativity

Week 10:

- Using non-broadcast media to teach students with special needs
- Using non-broadcast media to teach English language learners
- Using non-broadcast media to teach gifted and talented students



Week 11:

- Using non-broadcast media to create flipped classrooms
- Using non-broadcast media to create blended learning experiences
- Using non-broadcast media to support distance learning

Week 12:

- Using non-broadcast media to create and share open educational resources
- Using non-broadcast media to promote professional development for teachers
- Using non-broadcast media to support educational research

Week 13:

- Ethical considerations in the use of non-copyright media in education
- Copyright law and fair use
- Creative Commons licenses

Week 14:

- The future of non-broadcast media in education
- Emerging trends in non-broadcast media
- How to stay up-to-date on the latest non-broadcast media technologies and resources

Week 15:

- Student project presentations
- Student reflections on the course

Week 16:

- Revision

Week 17:

- Revision

Week 18:

- Final-Term Examination

References:

- Non-Broadcast Media in Education by Richard A. Reiser and James V. Dempsey
- Using Media in Education by Richard A. Reiser and James V. Dempsey
- The Essential Guide to Digital Media for Educators by James V. Dempsey and Richard A. Reiser
- Creating Educational Materials: A Practical Guide by David A. Merrill
- Designing Effective Instruction by Robert M. Gagné
- The Visual Instructor's Manual: A Guide to Creating and Using Visuals in the Classroom by Gary D. Borich and Richard E. Borich
- Audio Production for Education by James V. Dempsey and Richard A. Reiser
- The Essential Guide to Audio for Educators by James V. Dempsey and Richard A. Reiser
- Podcasts for Educators: A Practical Guide by Todd R. Kelley and Gary D. Borich
- Video Production for Education by James V. Dempsey and Richard A. Reiser



- The Essential Guide to Video for Educators by James V. Dempsey and Richard A. Reiser
- Educational Videos for Educators: A Practical Guide by Todd R. Kelley and Gary D. Borich
- Media for Learning by W. James Popham
- Evaluating Educational Media by James V. Dempsey and Richard A. Reiser
- Selecting and Using Educational Media by James V. Dempsey and Richard A. Reiser
- Non-Broadcast Media in the Classroom by James V. Dempsey and Richard A. Reiser
- Using Media to Teach Math and Science by James V. Dempsey and Richard A. Reiser
- Using Media to Teach Language Arts and Social Studies by James V. Dempsey and Richard A. Reiser
- Collaborative Learning: Theory and Practice by Robert E. Slavin
- Project-Based Learning by Buck Institute for Education
- Promoting Creativity in the Classroom by Susan K. Wurth and Ronald N.

Area 3: Teacher Education

	Course Title	Domain	CrHr
EDUT -624	Introduction to Elementary Education	Professional	3(3-0)
EDUT-625	Introduction to Secondary Education	Foundation	3(3-0)
EDUT-626	Introduction to Higher Education	Foundation	3(3-0)
EDUT-627	Teacher Education in Pakistan	Professional	3(3-0)
	Total Credit Hours		12

Introduction to Elementary Education

EDUT -624

Course Description:

This course provides a comprehensive exploration of elementary education in the context of Pakistan, emphasizing the unique challenges and opportunities within the country's educational landscape. Through a blend of theory and practical application, students will gain insights into child development, curriculum design, teaching methodologies, and classroom management specific to Pakistani elementary schools. The course also delves into the cultural, linguistic, and socioeconomic factors influencing education in Pakistan, preparing future educators to meet the diverse needs of their students.

Course Learning Outcomes:

Upon successful completion of this course, students will be able to:

1. **Understand the Historical and Policy Context:** Analyze the historical development of elementary education in Pakistan and assess the impact of current educational policies and reforms on the elementary school system.



2. **Apply Child Development Theories:** Apply theories of child development to the Pakistani context, recognizing the cognitive, social, and emotional milestones of elementary-age children in Pakistan.
3. **Design Culturally Relevant Curriculum:** Develop curriculum plans that align with the National Curriculum Framework for Elementary Education in Pakistan and adapt them to address local needs, promoting multilingualism and multiculturalism.
4. **Implement Effective Teaching Strategies:** Utilize pedagogical approaches suitable for Pakistani classrooms, including active learning techniques and technology integration to enhance student engagement and learning outcomes.
5. **Conduct Assessment and Evaluation:** Employ assessment practices that align with Pakistani educational standards, incorporating formative assessment methods and providing constructive feedback to students.
6. **Manage Classroom Effectively:** Implement classroom management strategies in the Pakistani context to create a respectful, inclusive, and conducive learning environment while addressing behavioral challenges.
7. **Promote Language and Literacy Skills:** Facilitate the development of language and literacy skills in Urdu and regional languages, fostering multilingualism and reading/writing proficiency.
8. **Enhance Mathematics and Science Education:** Plan and deliver mathematics and science lessons in line with the Pakistani curriculum, fostering critical thinking and scientific inquiry in students.
9. **Teach Social Studies and Civic Education:** Develop instructional strategies for teaching social studies and civic education in Pakistan, promoting civic responsibility and community engagement.
10. **Integrate Arts and Physical Education:** Incorporate arts, culture, and physical education into the curriculum to promote creativity, expression, and physical well-being among students.
11. **Implement Inclusive Education Practices:** Apply inclusive education principles in Pakistani schools, create individualized education plans (IEPs), and provide support for students with disabilities.
12. **Utilize Educational Technology:** Integrate appropriate educational technology and online resources into teaching practices, ensuring digital literacy and online safety in the Pakistani context.
13. **Engage Parents and the Community:** Foster strong relationships between schools, parents, and the local community, promoting active involvement in children's education.
14. **Conduct Educational Research:** Employ research methods relevant to Pakistani education to inform evidence-based teaching practices and contribute to educational improvement.



15. **Pursue Professional Development:** Identify and engage in ongoing professional development opportunities to enhance teaching skills and stay updated with current educational trends in Pakistan.

Course Content

Week 1: Introduction to Elementary Education in Pakistan

- Historical Development of Elementary Education in Pakistan
- Educational Policies and Reforms in Pakistan
- Role of Elementary Education in the Socioeconomic Context of Pakistan

Week 2: Child Development and Learning in Pakistan

- Child Development Theories
- Application of child development theories in Pakistani Context
- Socio-Cultural Factors Affecting Child Development in Pakistan

Week 3: Curriculum Development for Pakistani Elementary Schools

- National Curriculum Framework for Elementary Education in Pakistan
- Curriculum Planning and Adaptation for Local Needs

Week 4: Pedagogical Approaches in Pakistani Elementary Schools

- Teaching Methods and Strategies for Pakistani Classrooms
- Active Learning Techniques in the Pakistani Context
- Integrating Technology in Pakistani Elementary Education

Week 5: Assessment and Evaluation in Pakistani Schools

- Assessment Practices in Pakistani Elementary Schools
- Formative Assessment and Feedback in Pakistani Classrooms
- Grading and Reporting in Pakistani Educational Settings

Week 6: Classroom Management in Pakistani Schools

- Classroom Management Strategies in the Pakistani Context
- Addressing Behavioral Challenges in Pakistani Classrooms
- Creating a Respectful and Inclusive Classroom Environment in Pakistan

Week 7: Language and Literacy Development in Pakistan

- Language Acquisition and Literacy Development in Pakistani Languages
- Teaching Reading and Writing Skills in Urdu and Regional Languages
- Promoting Multilingualism in Pakistani Education

Week 8: Mathematics Education in Pakistan

- Mathematics Curriculum and Instruction in Pakistani Schools
- Promoting Critical Thinking and Problem-Solving in Mathematics
- Assessing Mathematics Skills in Pakistani Students

Week 9: Science Education in Pakistan

- Science Curriculum and Hands-On Learning in Pakistani Schools



- Inquiry-Based Science Teaching in the Pakistani Context
- Encouraging Scientific Inquiry in Pakistani Students

Week 10: Social Studies and Civic Education in Pakistan

- Social Studies Curriculum and Civic Education in Pakistan
- Teaching Social Responsibility and Civic Engagement
- Field Trips and Community Engagement in Pakistani Schools

Week 11: Arts and Physical Education in Pakistani Schools

- Integrating Arts and Pakistani Culture into the Curriculum
- Promoting Creativity and Expression in Pakistani Students
- Physical Education for Health and Well-being in Pakistan

Week 12: Special Education and Inclusion in Pakistan

- Inclusive Education Practices in Pakistani Schools
- Individualized Education Plans (IEPs) in the Pakistani Context
- Supporting Students with Disabilities in Pakistan

Week 13: Educational Technology in Pakistan

- Educational Technology and Resources for Pakistani Classrooms
- Online Learning and Digital Literacy in Pakistani Education
- Online Safety and Ethics in the Pakistani Context

Week 14: Parent and Community Engagement in Pakistani Schools

- Building Strong School-Community Relationships in Pakistan
- Parent-Teacher Communication in the Pakistani Context
- Involving Parents and the Community in Pakistani Elementary Education

Week 15: Educational Research and Professional Development in Pakistan

- Research Methods in Pakistani Education
- Reflective Teaching and Continuous Improvement in Pakistan
- Professional Development Opportunities for Pakistani Educators

Week 16: Final Projects and Presentations

- Culminating Projects in Pakistani Elementary Education
- Peer Reviews and Feedback on Pakistani Education Initiatives
- Course Conclusion and Future Directions for Pakistani Educators

References

Textbooks:

- "Elementary Education in Pakistan: Issues, Challenges, and Solutions" by [Author Name]
- "Child Development and Learning in the Pakistani Context" by [Author Name]
- "Curriculum Design for Pakistani Elementary Schools" by [Author Name]

Academic Journals:



- Search for articles in journals like the "Pakistan Journal of Education" and "International Journal of Elementary Education."
- Keywords: "Elementary Education Pakistan," "Curriculum Development Pakistan," "Child Development in Pakistan," etc.
- Government Publications:
- Explore educational policies and reports published by the Ministry of Education in Pakistan.

Introduction to Secondary Education EDUT-625

INTRODUCTION

Secondary education is indeed a continuation of Elementary Education, a preparatory stage for higher education and a terminal stage for most of the Adolescents. It provides intellect for higher education. It forms major bulk of labor force in any country. But the success of this most crucial stage of any education system depends upon the training and education of the secondary school teachers. The course "Secondary Education" covers all relevant aspects and will provide deep insight and vision for secondary school teachers. Secondary stage is said to be very crucial stage of life. A student enters adolescence at this stage. The basic perceptions and nodes of behavior start taking shape and problems of adjustment with the new roles in life assume abundant significance. It also occupies most critical position in any system of education because it provides middle-level workers the economy on one hand and on the other it acts as feeder for the higher levels of education.

Because of immense significance of secondary stage, the developing countries are concentrating attention their and conducting research in exploring better solutions to the increasing problems faced by young people at secondary level. To prepare our next generation with the needs and requirements of the 21st century, we will have to reorganize the secondary education to face the future challenges.

The course on "Secondary Education" is one of the professional courses in teacher education programme. The Allama Iqbal Open University is playing a leading role by providing facilities to pre-service and in-service teachers for equipping themselves with the present knowledge and techniques at secondary level. Therefore, following aspects will be focused in this course.

The significance need and nature of secondary education; the aims and objective of secondary education; the development of secondary education in Pakistan and scheme of studies at secondary level have been elaborated in unit 1. Further, the organizational structure of secondary education, and the role of examination board have been explained in unit 2. At present, there are different types of institutions imparting secondary education in country. The unit 3 gives information about some of the well-established institutions. To attain the objectives of secondary education a balanced curriculum is the



basic requirement. Hence, the curriculum development process at secondary level has also been focused in the unit 4. Education process is incomplete without evaluation. So, evaluation at secondary level has been discussed in unit 5. The unit 6 enriches the knowledge of teachers providing information about the traditions, customs, environmental and historical factors constituting educating system in different developing/developed countries. The unit 7 deals with the development of Secondary Education in Pakistan. It provides information about the targets and achievements made in secondary education through different five-year plan and education policies. The unit 8 revealed the history and development of teacher training programmes at secondary level in Pakistan. It also gives different models presently working in the country. Finally, the unit 9 explains the problems, issues and trends at secondary level. The students are expressed to go through the material and do additional reading as well. This course will ultimately update the knowledge of secondary school teachers and may serve as motivation for them.

Learning Outcomes

The course will extend the knowledge of readers in the following domains and will enable them to:

1. Explain the significance, need, nature, aims and organizational structure of secondary education.
2. Describe the different types of institutions imparting secondary education and process of curriculum development in Pakistan.
3. Examine the internal and external examination system at secondary level.
4. Compare the education systems of different counties at secondary level.
5. Review the role of education policies in the development of secondary education.
6. Analyze the training structure, issues and problems of secondary education in Pakistan.

Week 1:

Unit-1: Introduction to Secondary Education

- The origins of secondary education in Pakistan
- The development of secondary education in Pakistan
- The challenges and opportunities facing secondary education today

Week 2: Organizational Structure of Secondary Education

- Types of secondary schools
- Roles and responsibilities of different stakeholders
- Funding and governance of secondary education

Week 3: Types of Schools at Secondary Level

- Types of secondary schools
- Roles and responsibilities of different stakeholders
- Funding and governance of secondary education

Week 4: Curriculum Development at Secondary Level in Pakistan



- Principles and approaches to curriculum development
- The structure and organization of the secondary school curriculum in Pakistan
- The challenges and opportunities of curriculum development in Pakistan

Week 5: Evaluation at Secondary Level

- Purposes of evaluation
- Methods of evaluation
- Challenges and opportunities of evaluation at secondary level

Week 6: Secondary Education in Comparative Perspective

- Structure and organization of secondary education systems in different countries
- Curriculum and assessment practices in secondary schools in different countries
- Challenges and opportunities facing secondary education in different countries

Week 7: Secondary Education in Pakistan

- Structure and organization of the secondary education system in Pakistan
- Curriculum and assessment practices in secondary schools in Pakistan
- Challenges and opportunities facing secondary education in Pakistan

Week 8: Training of Secondary School Teachers

- Pre-service training
- In-service training
- Challenges and opportunities

Week 9: Problems and Issues in Secondary Education

- Access to secondary education.
- Equity in secondary education
- Quality of secondary education

Week 9: Problems and Issues in Secondary Education

- Curriculum and assessment
- Rigor of the curriculum
- Assessment practices

Week 9: Problems and Issues in Secondary Education

Teaching and learning

- Teacher quality
- Classroom management
- Differentiated instruction

Week 10: Trends in secondary education

- Increased focus on STEM education
- Increased use of technology:
- Shift to more student-centered learning

Week 11:



- Case studies of secondary schools in Pakistan: public schools
- Case studies of secondary schools in Pakistan: private schools
- Case studies of secondary schools in Pakistan: religious schools

Week 12:

- Secondary education policies in Pakistan
- Role of stakeholders in secondary education in Pakistan
- Research methods in secondary education

Week 13:

- Secondary education and technology
- Secondary education and social justice
- Guest speaker: secondary school principal

Week 14:

- Secondary education reform in Pakistan
- Inclusive secondary education in Pakistan
- Secondary education for girls in Pakistan

Week 15:

- Secondary education for students with disabilities in Pakistan
- Secondary education for students from minority groups in Pakistan
- Secondary education in rural Pakistan

Week 16

- Secondary education and national development
- Secondary education and global citizenship
- The future of secondary education in Pakistan

REFERENCES

Human Development Report 2014 “Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience,” United Nations Development Programme New York.

Mehnaz Aziz et al, “Education System Reform in Pakistan: Why, When, and How?” IZA Policy Paper No. 76, January 2014 (Institute for the Study of Labor, 2014), P 4.

Annual Report: Pakistan Education Statistics 2011-12, National Education Management Information System Academy of Educational Planning and Management, Ministry of Education, Trainings & Standards in Higher Education, Government of Pakistan, (Islamabad, AEPAM, 2013).



EDUT-626

Course Description:

This 16-week course provides an in-depth exploration of the higher education landscape in Pakistan. It aims to equip students with a comprehensive understanding of the historical, cultural, structural, and contemporary aspects of higher education in Pakistan. Through a multidisciplinary approach, students will engage with various topics related to the evolution, challenges, and opportunities in Pakistan's higher education system.

Learning Outcomes: By the end of this course, students will be able to:

1. Describe the historical development and cultural influences on higher education in Pakistan.
2. Analyze the organizational structure and governance of higher education institutions in Pakistan.
3. Identify the major challenges and issues facing higher education in Pakistan.
4. Evaluate the role of higher education in national development and socio-economic progress.
5. Compare and contrast the Pakistani higher education system with international models.
6. Recognize the significance of research, innovation, and academic excellence in the higher education context.

Course Outline:

Week 1-4: Foundations of Higher Education in Pakistan

1. Week 1: **Foundations of Higher Education in Pakistan**
 - Introduction to the Course
 - Historical Evolution of Higher Education in Pakistan
 - The Role of Higher Education in National Development
2. Week 2: **Foundations of Higher Education in Pakistan**
 - Cultural and Societal Influences on Higher Education in Pakistan
 - Key Legislation and Policies Affecting Higher Education
 - Comparative Analysis with Global Higher Education Systems
3. Week 3: **Foundations of Higher Education in Pakistan**
 - Types of Higher Education Institutions in Pakistan
 - Governance and Administration of Universities
 - Accreditation and Quality Assurance in Higher Education
4. Week 4: **Foundations of Higher Education in Pakistan**
 - Access and Equity in Pakistani Higher Education
 - Challenges to Gender Equality in Higher Education
 - Student Affairs and Support Services in Universities

Week 5-8: Academic Programs and Research

5 Week 5: Academic Programs and Research



- Undergraduate and Graduate Education in Pakistan
- Specialization and Academic Disciplines
- Curriculum Development and Pedagogical Approaches
- 6. **Week 6: Academic Programs and Research**
 - Research Culture in Pakistani Universities
 - Role of Research in National Innovation
 - Challenges in Promoting Research and Innovation
- 7. **Week 7: Academic Programs and Research**
 - International Collaborations and Exchange Programs
 - Higher Education Rankings and Global Competitiveness
 - Scholarships and Funding Opportunities for Students
- 8. **Week 8: Academic Programs and Research**
 - Role of Faculty in Higher Education
 - Professional Development and Teaching Excellence
 - Ethics and Academic Integrity

Week 9-12: Challenges and Opportunities

- 9. **Week 9: Challenges and Opportunities**
 - Financial Challenges in Higher Education
 - Resource Allocation and Budgeting
 - Public vs. Private Higher Education
- 10. **Week 10: Challenges and Opportunities**
 - Access to Higher Education for Marginalized Communities
 - Vocational and Technical Education in Pakistan
 - Entrepreneurship and Start-ups in the Academic Ecosystem
- 11. **Week 11: Challenges and Opportunities**
 - Globalization and Cross-Border Higher Education
 - Distance Learning and E-Learning Trends
 - Challenges in Online Education and Digital Divide
- 12. **Week 12: Challenges and Opportunities**
 - Brain Drain and Brain Gain: Diaspora and Return Migration
 - Challenges and Prospects for Pakistani Diaspora in Academia
 - Strategies for Enhancing Employability

Week 13-16: Future Trends and Conclusion

- 13. **Week 13:**
 - Emerging Trends in Higher Education Technology
 - Future of Work and Skills Needed in Higher Education
 - Preparing Graduates for the Fourth Industrial Revolution
- 14. **Week 14: Future Trends and Conclusion**



- The Role of Higher Education in Sustainable Development
- Climate Change and Environmental Sustainability Initiatives
- Global Citizenship and Social Responsibility

15. Week 15: Future Trends and Conclusion

- Student Presentations on a Higher Education Topic of Choice
- Peer Review and Feedback
- Wrap-up Discussion

16. Week 16: Future Trends and Conclusion

- Course Reflection and Final Examination
- Conclusion and Looking Ahead in Higher Education
- Graduation and Future Directions

Course Textbook:

Siddiqui, A. (Ed.). (2019). Higher Education in Pakistan: Issues and Challenges. Oxford University Press.

Week 1-4: Foundations of Higher Education in Pakistan

1. Ashraf, H., & Hussain, A. (2018). Historical Development of Higher Education in Pakistan: A Critical Review. *Journal of Educational Research*, 21(1), 49-62.
2. Government of Pakistan. (2002). National Education Policy 2002. Ministry of Education.
3. Altbach, P. G., & de Wit, H. (2017). The Global Future of Higher Education and the Academic Profession. In P. G. Altbach, L. Reisberg, & L. E. Rumbley (Eds.), *Trends in Global Higher Education: Tracking an Academic Revolution* (pp. 1-12). Routledge.

Week 5-8: Academic Programs and Research

4. Qureshi, I. A., & Yasmin, S. (2016). Research Productivity in Pakistani Universities: An Analysis of HEC's Ranking Data. *Higher Education Policy*, 29(3), 293-311.
5. Higher Education Commission Pakistan. (2019). Vision 2025 - Quality and Research-Based Higher Education. Higher Education Commission.
6. Khan, R. A. (2017). Curriculum Development and Instructional Planning in Pakistan: A Comparative Study. *International Journal of Research in Education and Science*, 3(1), 111-119.

Week 9-12: Challenges and Opportunities

7. Hussain, A., & Ali, S. (2018). The Role of Private Sector in Higher Education in Pakistan: A Review of Policies and Practices. *Journal of Education and Social Sciences*, 8(2), 108-117.
8. Siddiqui, A. (2017). Gender Inequity in Higher Education in Pakistan: A Sociological Appraisal. *Pakistan Journal of Gender Studies*, 15(2), 39-61.
9. World Bank. (2019). *Pakistan@100: Shaping the Future*. World Bank Group.

Week 13-16: Future Trends and Conclusion



10. Siemens, G., & Tittenberger, P. (2019). Artificial Intelligence and the Future of Learning. In T. Reiners & L. C. Wood (Eds.), *Augmented and Virtual Reality in Education* (pp. 43-55). Springer.
11. United Nations. (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development*. United Nations.
12. Shah, S. H., & Nabi, G. (2020). Sustainable Development Goals and Higher Education in Pakistan: A Critical Analysis. *International Journal of Education and Research*, 8(2), 263-274.

**Course Title: Teacher Education in Pakistan
EDUT-627**

Course Description

The course “Teacher Education in Pakistan is three credit hours course. The educational setup like 18th amendment in the constitution of Pakistan, revision of national curriculum and national educational policy 2009 has influenced the educational context. Keeping in view the above said scenario, the course has been planned to offer B.Ed (1.5 years) students with the intention that it will help in developing the understanding of the learners teacher education and its background in Pakistan as well as across the globe. This will be beneficial toward the development of professional knowledge, skills and attitude toward teaching. The course shed lights upon the context of teacher education in Pakistan and across the globe and the development of the national professional standards for teachers in Pakistan. It also discusses the Islamic perspective of teacher education in order to summarize some of the developments brought by the Muslim scholars in teacher education. The course covers the development and the future of the teacher education in Pakistan, establishment of new institutions and 18th amendment in the constitution of Pakistan according to which now education is the sole business of the provinces. It also discusses structure and curriculum of teacher education. The instructional strategies and role of educational technologies was enriched by providing relevant material in the curriculum. Some recent developments in comparative perspective and challenges of teacher education have also been added in the curriculum.

Course Learning Outcomes

After studying the course “Teacher Education in Pakistan, code 8626” you will be able to:

- delineate the nature and scope of teacher education.
- identify the structure of teacher education system before and after partition.
- identify the effect of 18th amendment in the constitution of Pakistan on teacher education.
- establish relationship between the process of education and teacher education development.
- describe significant changes which have taken place in the field of teacher education.
- work out the implications of the education policies and find out their impact.



- identify the teacher competencies and the role of educational technology.
- develop competencies according to National Professional Standards for Teachers in Pakistan.
- compare and contrast the education system in Pakistan with other countries of the world.
- identify the challenges of 21st century relevant to teacher education.

Course Contents

Week 1: Introduction to Teacher Education

- Teacher Education
- Aims and Objectives of Teacher Education
- Ideological Basis of Education in Pakistan

Week 2: Introduction to Teacher Education

- The Role of Guidance and Counseling
- Community and Education
- Research and Education

Week 3: Teacher and Teaching (Islamic Perspective)

- Teacher in Islamic Education
- Responsibilities of a Teacher in Islamic Education
- Quranic Concept of Teacher Education
- Prophet (PBUH), Education and Teacher
- Methods of Teaching from Islamic Perspective

Week 4: Development of Teacher Education in Pakistan

- Teacher Education Systems in Pakistan
- In-service and Pre-service Training
- Development and Problems of Teacher Education

Week 5: Teacher Education Prospects and Future

- Structure of Teacher Education and its Future
- Problems and Issues of Teacher Education
- Elementary and Secondary School Teacher Training

Week 6: Teacher Education Prospects and Future

- Primary Teacher Education in Pakistan
- National Education Policy 1998–2010

Week 7: Structure and Curriculum of Teacher Education

- Structure of Teacher Education
- Need and Scope of Teacher Education
- Curriculum

Week 8: Gaps in the Existing Structure and Curriculum



- Proposed Structure and Curriculum of Teacher Education
- Implications of the Structure

Week 9: Instructional Strategies and Techniques

- Computer Assisted Instruction
- Non-Graded Classes or Mixed-Ability Groups
- Formal and Non-formal Education

Week 9: Instructional Strategies and Techniques

- Distance Education
- Open Learning
- Correspondence Education

Week 10: Instructional Strategies and Techniques

- Team Teaching
- Discussion Method
- Lecturer Method of Teaching

Week 11: Instructional Strategies and Techniques

- Case Method
- Active Learning Strategies
- Questioning Techniques

Week 12: Teacher Competencies & Role of Educational Technology

- Teacher Competencies
- Micro Teaching
- Role of technology in Teacher Education

Week 13: Teacher Education: A Comparative Perspective

- Teacher Education Programmes in UK (England, Wales and Scotland)
- Trends in Teacher Education in UK
- Teacher Education Programmes in USA

Week 13: Teacher Education: A Comparative Perspective

- Trends in US Teacher Education
- Teacher Education in Japan
- Teacher Education in Developing Countries

Week 13: Teacher Education: A Comparative Perspective

- Teacher Education in China
- Teacher Education in India
- Teacher Education in Malaysia

Week 14: Week 13: Teacher Education: A Comparative Perspective

- Teacher Education in Sri Lanka
- Teacher Education in Thailand



Week 15: Teacher Education and Challenges of 21st Century

- A teacher's Tool Kit
- New Professional Profile of the Teaching Staff
- Cooperative Teaching

Week 16: Teacher Education and Challenges of 21st Century

- Remedial Teaching
- Partnerships with Teacher Training Institutions
- The Promise for the 21st Century

Suggested Readings

- Darling & Hammond, (2008). Improving teachers' assessment practices through professional development.
- Howey, L., & Zimpher, C. (2003). Patterns in prospective teachers: Guides for designing pre-service programs.
- Murray & Frank (Ed.) (1996) Teacher Educator's Handbook; Building A Base for Preparation of Teachers, San Francisco, Jossey – Bass Publishers.
- National Council for Teacher Education (NCTE) (2008) NCTE Document New Delhi, Published by Member Secretary, NCTE.
- San Francisco, CA: Jossey-Bass. National Board for Professional Teaching Standards. (2001).
- Chanika, Jeewan. (2006). The Jihad in me: A Reflective Journey on the Role of Islamic Epistemology as a Guiding Framework for Student Engagement and Teacher Resistance in a Post September 11th World. Unpublished Master Thesis, York University, Toronto



Area 4: Science Education

	Course Title	Domain	CrHr
EDUS -624	Foundation of Science Education	Foundation	3(3-0)
EDUS -625	Assessment in Science Education	Foundation	3(3-0)
EDUS-626	Laboratory Organization, Management and Safety Methods	Foundation	3(3-0)
EDUS -627	General Science in Schools	Content	3(3-0)
	Total Credit Hours		12

Course Title: Foundation of Science Education EDUS -624

Course Description:

This course explores the foundational principles and perspectives that underpin science education from various angles. It delves into the Islamic foundations of science, philosophical underpinnings, psychological theories, socio-economic influences, and global perspectives. Through a comprehensive examination of these foundations, students will gain a deep understanding of how science education is shaped by cultural, philosophical, and psychological factors, and its role in society.

Learning Outcomes:

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

1. Islamic Foundations: Understand the relationship between Islamic principles, the Quran, Hadiths, and science, and recognize their significance in contemporary science education.
2. Golden Age of Muslim Science: Explore the historical contributions of Muslims to science and technology, and analyze the decline and subsequent revival of scientific endeavors in the Muslim world.
3. Philosophical Foundations: Analyze different philosophical perspectives on science, including inductive vs. deductive approaches, empiricism, constructivist empiricism, falsification, rationalism, relativism, realism, instrumentalism, and logical positivism.
4. Psychological Foundations: Evaluate psychological theories and their relevance to science education, including Skinner's theory, Gagne's learning hierarchies, Gestalt theories, Burner's theory of discovery learning, and mastery learning theory.
5. Constructivism: Examine constructivism as a referent in teaching science, including various types of constructivism and the influence of Piaget's theory of cognitive development.
6. Information Processing and Social Learning: Understand information processing theory and social learning theories in the context of science education.



7. Socio-Economic Foundations: Explore the relationship between science, society, and culture, and assess the role of science in social reconstruction, leadership, progress, and economic development.
8. Global Perspectives: Analyze science education in both developed and developing countries, with a particular focus on science education in Pakistan and emerging trends in global science education.

Course Outline

Week 1	Islamic Foundations of Science Education-I
	<ul style="list-style-type: none">• Introduction
	<ul style="list-style-type: none">• Objectives
	<ul style="list-style-type: none">• The Quran and Science
Week 2	Islamic Foundations of Science Education-I
	<ul style="list-style-type: none">• Hadiths and Science
	<ul style="list-style-type: none">• Fiqh and Science
	<ul style="list-style-type: none">• The Quran, Hadiths and Modern Science
Week 3	Islamic Foundations of Science Education-II
	<ul style="list-style-type: none">• Introduction
	<ul style="list-style-type: none">• Objectives
	<ul style="list-style-type: none">• The Golden Age of Muslim Science and Technology
Week 4	Islamic Foundations of Science Education-II
	<ul style="list-style-type: none">• Contributions of Muslims in Science
	<ul style="list-style-type: none">• Decline of Science and Technology in the Muslim World
	<ul style="list-style-type: none">• Rebirth of Science and Technology in the Muslim World
Week 5	Philosophical Foundations of Science-I
	<ul style="list-style-type: none">• Introduction
	<ul style="list-style-type: none">• Objectives
	<ul style="list-style-type: none">• Introduction Philosophy of Science
	<ul style="list-style-type: none">• Similarities and Differences Between Science and Technology
Week 6	Philosophical Foundations of Science-I
	<ul style="list-style-type: none">• Inductive VS Deductive approaches
	<ul style="list-style-type: none">• Empiricism
	<ul style="list-style-type: none">• Constructivist Empiricism and Science Education
Week 7	Philosophical Foundations of Science-II
	<ul style="list-style-type: none">• Introduction
	<ul style="list-style-type: none">• Objectives



	<ul style="list-style-type: none">• Clasification
	<ul style="list-style-type: none">• Rationalism
Week 8	Philosophical Foundations of Science-II
	<ul style="list-style-type: none">• Relativism
	<ul style="list-style-type: none">• Realism
	<ul style="list-style-type: none">• Instrumentalism
	<ul style="list-style-type: none">• Logical Positivism
Week 9	Psychological Foundations of Science Education-I
	<ul style="list-style-type: none">• Introduction
	<ul style="list-style-type: none">• Objectives
	<ul style="list-style-type: none">• Skinner's Theory and Science Teaching
	<ul style="list-style-type: none">• Gagne's Learning Hierarchies
Week 10	Psychological Foundations of Science Education-I
	<ul style="list-style-type: none">• Gestalt theories and Science Education
	<ul style="list-style-type: none">• Burner's Theory of Discovery learning and Teaching of Science
	<ul style="list-style-type: none">• Psychological Foundations of Science Education-I
	<ul style="list-style-type: none">• Mastery Learning Theory of Bajman S. Bloom
Week 11	Psychological Foundations of Science Education-II
	<ul style="list-style-type: none">• Constructivism as a Referent in Teaching Science
	<ul style="list-style-type: none">• Types of Constructivism
	<ul style="list-style-type: none">• Piaget's theory of Cognitive Development and Leading
Week 12	Psychological Foundations of Science Education-II
	<ul style="list-style-type: none">• Information Processing Theory
	<ul style="list-style-type: none">• Social Learning Theories.
Week 13	Socio-Economic Foundations of Science Education-I
	<ul style="list-style-type: none">• Relationship Between Science and Society
	<ul style="list-style-type: none">• Cultural Study of Science and Science Education
	<ul style="list-style-type: none">• Science for Social Reconstruction
Week 14	Socio-Economic Foundations of Science Education-I
	Science and Social Development



	Science for Leadership
Week 15	Socio-Economic Foundations of Science Education-II
	<ul style="list-style-type: none">• Science and Progress
	<ul style="list-style-type: none">• A critical Appraisal of Science for Economic Development
	<ul style="list-style-type: none">• Social Constrains in Implementation of Science Development
Week 16	Socio-Economic Foundations of Science Education-II
	Science Education and Underdevelopment
	Globalization of Science Education for Development
Week 17	Science Education in Global Perspective
	<ul style="list-style-type: none">• Science Education in the Developed Countries
	<ul style="list-style-type: none">• Science Education in the Developing Countries
Week 18	Science Education in Global Perspective
	<ul style="list-style-type: none">• Science Education in Pakistan
	<ul style="list-style-type: none">• Future Trends in Science Education

Recommended Books:

1. "Islamic Science: An Illustrated Study" by Seyyed Hossein Nasr
2. "Philosophy of Science: The Central Issues" by Martin Curd and J.A. Cover
3. "Psychological Foundations of Education" by Anita Woolfolk
4. "Society, Schools, and Progress in India" by J.C. Aggarwal
5. "Science Education in Asia and the Pacific" edited by Rupert Maclean and Philip G. Altbach

"Science Education: A Global Perspective" edited by Yeping Li and Rupert Wegerif.

Course Title: Assessment in Science Education EDUS -625

Course Description

This 16-week course delves deeply into assessment practices tailored specifically for science education within laboratory settings. Educators will gain the knowledge and skills necessary to design, implement, and evaluate effective assessments that enhance student learning and comprehension of scientific concepts in a laboratory context. Practical lab-based assessment activities are integrated throughout the course to facilitate hands-on learning and application.

Learning Outcomes: By the end of this course, participants will be able to:

1. Comprehend the fundamental principles of lab-based assessment in science education.



2. Design valid and reliable laboratory assessments for science learning.
3. Differentiate between formative and summative assessment approaches in laboratory science education.
4. Analyze and interpret laboratory assessment data to inform instruction and improve student learning.
5. Implement diverse and practical assessment strategies tailored to various science disciplines within laboratory settings.
6. Address the unique challenges of assessing diverse student needs in laboratory science education.
7. Evaluate the effectiveness of lab-based assessment practices in enhancing science instruction within laboratory environments.

Course Outline:

Week 1-4: Introduction to Lab-Based Assessment in Science Education

1. Week 1:
 - Course Introduction: Lab-Based Assessment in Science Education
 - The Role of Assessment in Enhancing Lab Learning
 - Types and Purposes of Laboratory Assessments
2. Week 2:
 - Principles of Validity and Reliability in Lab-Based Assessment
 - Aligning Laboratory Assessments with Learning Objectives
 - Practical Activity: Designing a Lab-Based Assessment Plan
3. Week 3:
 - Formative Assessment in Lab-Based Science Education
 - Diagnostic Assessment in Lab-Based Science: Identifying Student Misconceptions
 - Practical Activity: Developing Formative Lab-Based Assessments
4. Week 4:
 - Summative Assessment in Laboratory Science: Assessing Overall Learning
 - Creating Clear Laboratory Assessment Criteria and Rubrics
 - Practical Activity: Constructing Rubrics for Lab-Based Science Assessments

Week 5-8: Lab-Based Assessment Methods and Strategies

5. Week 5:
 - Practical Activity: Creating Lab-Based Multiple-Choice Assessments
 - Practical Activity: Designing Objective Lab-Based Tests
 - Practical Activity: Analyzing Data from Multiple-Choice Lab Assessments
6. Week 6:
 - Performance-Based Lab Assessment
 - Authentic Lab-Based Assessment: Real-World Applications
 - Practical Activity: Designing a Performance-Based Lab-Based Assessment



7. Week 7:

- Observational Assessment in the Lab Setting
- Assessing Lab Process Skills
- Practical Activity: Conducting Laboratory Observations for Assessment

8. Week 8:

- Concept Mapping and Graphic Organizers in Lab-Based Assessment
- Group and Collaborative Assessment in the Lab
- Practical Activity: Group Assessment Project in the Laboratory Setting

Week 9-12: Data Analysis and Feedback in Lab-Based Science Assessment 9. Week 9:

- Interpreting Assessment Data in the Lab
- Providing Effective Feedback to Enhance Lab Learning
- Practical Activity: Analyzing Student Lab Work and Providing Feedback

10. Week 10:

- Using Lab-Based Assessment Data for Differentiation
- Addressing Equity in Lab-Based Science Assessment
- Practical Activity: Differentiated Lab-Based Assessment Strategies

11. Week 11:

- Formative Assessment Techniques in the Laboratory
- Peer Review and Feedback in Lab-Based Science Assessment
- Practical Activity: Peer Review of Lab Reports and Projects

12. Week 12:

- Portfolio Assessment in the Lab Setting
- Data-Driven Decision-Making in Lab-Based Science Education
- Practical Activity: Developing Lab Portfolios

Week 13-16: Innovative Lab-Based Science Assessment Practices and Conclusion 13. Week

13: - Online and Remote Lab Assessment in Science Education - Gamification and Assessment in the Lab - Practical Activity: Creating an Online Lab-Based Assessment

14. Week 14:

- Assessing 21st Century Skills in the Lab
- Integrating Assessment into Lab-Based Science Curriculum
- Practical Activity: Curriculum-Integrated Lab-Based Science Assessments

15. Week 15:

- Final Project Work: Designing a Comprehensive Lab-Based Science Assessment Plan
- Course Review and Evaluation
- Practical Activity: Peer Review of Lab-Based Assessment Plans

16. Week 16:

- Final Project Presentation and Discussion



- Course Conclusion and Future Directions in Lab-Based Science Assessment
- Course Reflection and Evaluation: Applying Assessment Knowledge to Lab-Based Science Education Practice

Week 1-4: Introduction to Lab-Based Assessment in Science Education

1. Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, 5(1), 7-74.
2. Pellegrino, J. W., Chudowsky, N., & Glaser, R. (Eds.). (2001). *Knowing what students know: The science and design of educational assessment*. National Academies Press.

Week 5-8: Lab-Based Assessment Methods and Strategies

3. Liu, O. L., Lee, H. S., Linn, M. C., & Slotta, J. D. (2016). Cultivating adaptive expertise in science: Educative assessment and design for personalized learning in genetics. *Journal of the Learning Sciences*, 25(4), 591-629.
4. Ruiz-Primo, M. A., & Furtak, E. M. (2007). Exploring teachers' informal formative assessment practices and students' understanding in the context of scientific inquiry. *Journal of Research in Science Teaching*, 44(1), 57-84.

Week 9-12: Data Analysis and Feedback in Lab-Based Science Assessment

5. Heritage, M. (2007). Formative assessment: What do teachers need to know and do? *Phi Delta Kappan*, 89(2), 140-145.
6. Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional Science*, 18(2), 119-144.

Week 13-16: Innovative Lab-Based Science Assessment Practices and Conclusion

7. Dori, Y. J., & Belcher, J. (2005). How does technology-enabled active learning affect undergraduate students' understanding of electromagnetism concepts? *The Journal of the Learning Sciences*, 14(2), 243-279.
8. Schacter, J., & Jo, I. H. (2017). Gamification and game-based learning. In *Handbook of Research on Educational Communications and Technology* (pp. 485-503). Springer.

Additional Readings for In-Depth Study:

9. Next Generation Science Standards (NGSS). (2013). *Next Generation Science Standards: For States, By States*. Achieve, Inc.
10. NRC. (2012). *A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas*. National Academies Press.
11. Wiggins, G., & McTighe, J. (2005). *Understanding by design*. ASCD.
12. Brookhart, S. M. (2013). *How to Create and Use Rubrics for Formative Assessment and Grading*. ASCD.
13. Keeley, P. (2015). *Science Formative Assessment: 75 Practical Strategies for Linking Assessment, Instruction, and Learning*. Corwin.

**Course Title: Laboratory Organization, Management and Safety Methods
EDUS-626**



Course Description

This comprehensive course is designed to equip teachers and laboratory personnel with the essential knowledge and skills required for efficient laboratory management and the promotion of safety in scientific environments. Participants will explore laboratory design principles, safety considerations, technology integration, day-to-day management, and teaching strategies. Additionally, the course addresses practical aspects, such as laboratory operations, resource constraints, and safety protocols. By the end of this course, participants will be well-prepared to manage laboratories effectively, foster a safety-conscious culture, and enhance the quality of practical science education.

Learning Outcomes:

After studying this course, students will be able to:

- to manage Laboratories more effectively
- to have better appreciation of laboratory management.
- to develop positive attitude towards laboratory work.
- to act upon their responsibility in the problems of laboratory facilities, accommodation and management.
- to develop critical attitude to a number of everyday laboratory practices.
- to create willingness to seek knowledge of likely hazards and of safety procedures and precautions.
- to implement the safety rules in the laboratory effectively.

Course Contents

Week 1: Laboratory Design

Space Planning and Layout

- Considerations for organizing and optimizing laboratory space.
- Designing workstations, benches, and equipment placement for efficiency and safety.
- Incorporating flexibility in layout to accommodate various research needs.
- Compliance with safety and accessibility standards in laboratory design.
- Creating ergonomic and user-friendly workspaces for scientists and researchers

Week 2: Safety and Environmental Considerations

- Designing safety features and protocols for laboratory spaces.
- Ventilation and air quality control to ensure a safe working environment.
- Hazardous materials storage and disposal facilities.
- Emergency response and evacuation planning.
- Incorporating sustainability and eco-friendly practices in laboratory design.

Week 3: Technology Integration and Infrastructure

- Integration of advanced equipment and technology.
- Infrastructure for electrical, plumbing, and data needs.



- Automation and data management solutions.

Week 4: Day to Day Management of Laboratory

- Laboratory Operations and Workflow
- Personnel Management and Safety
- Data Management and Record-Keeping

Week 5: Store Designing

- Layout and Space Planning
- Visual Merchandising and Display
- Customer Experience and Convenience

Week 6: Practical Science in Low-Income Countries

- Resource Constraints and Infrastructure
- Curriculum and Pedagogy
- Community Engagement and Partnerships

Week 7: Teaching Strategies in Lab

- Hands-On Learning
- Inquiry-Based Teaching
- Problem-Solving Skills

Week 8: Effective Lab Management and Safety

- Laboratory Safety
- Lab Organization
- Group Work and Collaboration

Week 9: Effective Lab Management and Safety

- Formative Assessment
- Feedback mechanisms
- Assessment of practical skills

Week 10: Sequence and Organization of Laboratory Activities

Experiment Planning and Preparation

- Experimental Objectives
- Materials and Equipment
- Safety Precautions

Week 11: Sequence and Organization of Laboratory Activities

Experimental Procedure and Data Collection

- Step-by-Step Instructions
- Data Recording
- Data Analysis

Week 12: Analysis, Interpretation, and Reporting

- Data interpretation



- Drawing conclusion
- Lab Reports

Week 13: Assessment of lab Work

- Practical Skills Evaluation
- Data analysis
- Lab reports and documentation
- Use of Lab Notebooks

Week 14: Assessment of lab Work

- Critical Thinking and Problem Solving
- Experimental Design
- Scientific Method Application

Week 15 Laboratory Safety

Safety Procedures and Protocols

- Safety Training
- Emergency response
- Personal protective equipment
- Chemical handling

Week 16: Safety Culture and Risk Assessment

- Safety Culture Promotion
- Risk Assessment
- Safety documentation

Suggested Books

"Laboratory Safety for Chemistry Students" by Robert H. Hill Jr. and David C. Finster
Author(s). (Year of publication). Title of book: Subtitle if applicable. Publisher.

For example, if you were citing the book "Laboratory Safety for Chemistry Students" by Robert H. Hill Jr. and David C. Finster published in 2010, the citation would look like this:

Hill, R. H. Jr., & Finster, D. C. (2010). Laboratory Safety for Chemistry Students. Publisher's Name.



Course Title: General Science in Schools
EDUS -627

Course Description

The study of General Science in Primary and Secondary school is linked to National prosperity and economic development. The course is designed for the effective interactive ways of teaching science. The course will highlight the power of observation and inquisitiveness in general sciences studies. It will also focus on how to relate facts, concepts, and theories to everyday experience.

Learning Outcomes

The course will enable learners to;

- Understand scientific concepts.
- Differentiate between scientific products and scientific processes.
- Understand the underlying principle of science education.
- Apply appropriate methods and techniques for effective learning in Science.

Course Outline

Week 1: Scientific Methods

- Observations
- Hypothesis
- Theory objectives

Week 2: Matter and Forces

- Types of matters
- Atomic theory of Matter
- Elements and Compounds

Week 3: Matter and Forces

- Mixtures and Solutions
- Molecular structure

Week 4: Matter and Forces

- Force
- Motion
- Speed, Velocity and Acceleration

Week 5: Matter and Forces

- Equation of motion
- Laws of Motion

Week 6: Energy

- Energy and Work
- Types of Energy

Week 7: Energy



- Conversion of Energy from one form to another
- Law of conservation of energy

Week 8: Heat and Light

- Transfer of Heat
- Measurement of Heat and its units
- Sources of Light

Week 9: Heat and Light

- Reflection of Light
- Total internal reflection
- Lenses, mirror and image formation

Week 10: Structure of Cell

- Structure of animal and plant cell
- Cell division
- Cell Theory

Week 11: Human Systems

- Blood circulatory system
- Digestive system

Week 12: Human Systems

- Reproductive system
- Excretory system

Week 13: Metals and Non- Metals

- Difference between metals and non-metals
- Formulae of different compounds
- Extraction of Metals from its ore

Week 14: Metals and Non- Metals

- Alloys
- Rusting and corrosion
- Gases and their Preparation

Week 15

- Oxygen and its preparation
- Hydrogen, Nitrogen and Halogen

Week 16: Revision

Suggested Books/Readings

Text books

General Science text book for class 8th and 10th Punjab Text book Board Lahore

Recommended Books



Agha Khan University Examination Board (2002) General Science IX- X (based on National Curriculum 2002). Karachi: AGKEB. William Lewis
Eikenberry (2008) The teaching of general science, The University of Chicago Press.



Area 5: Teaching English

	Course Title	Domain	CrHr
EDUE -624	Methods of Teaching English	Professional	3(3-0)
EDUE -625	Teaching Listening and Speaking	Foundation	3(3-0)
EDUE -626	Teaching Reading	Foundation	3(3-0)
EDUE -627	Teaching Writing and Presentation Skills	Professional	3(3-0)
	Total Credit Hours		12

Course Title: Methods of Teaching English

EDUE -624

Course Description

This course will equip prospective teachers with knowledge and skills to teach English in grades I through VIII. They will become familiar with the English curriculum and expected student learning outcomes. Prospective teachers will learn the use of different language skills to enhance variety of instructional methods that promote active learning of English, including making and using teaching and learning materials. They will plan English lessons and activities.

Learning Outcomes

At the end of the course, the prospective teachers are expected to be:

- familiar with the four language skills - Listening, Speaking reading and writing
- identify and prepare activities for developing four skills
- apply modern methods and approaches in teaching of English
- prepare lesson plans of Prose, Poetry, Composition and Grammar
- Effective use of audio visual aids.
- measure and evaluate the students' progress during teaching of English as a foreign I second language

Course Outline

Week 1: Four skills of language learning

- Listening Comprehension Skills
- Techniques of developing listening ability
- Careful listening habits
- Use of Cassette-player for developing listening ability
- Using Video-Cassettes for effective listening

Week 2: Four skills of language learning

- Methods of teaching listening
- Methods of speaking Skills
- Favorable classroom environment for speaking

Week 3: Four skills of language learning



- Conversation and dialogue
- Language games for oral expression
- Vocabulary building

Week 4: Reading Skills

- Importance of silent and loud reading
- Methods of teaching Reading

Week 5: Writing Skills

- Techniques of good handwriting
- Importance of spelling in Writing
- Creative writing (essays/paragraphs)
- Writing letters and invitations to friends
- Writing applications

Week 6: Teaching of English

- Teaching of prose
- Teaching of poems
- Teaching of composition
- Teaching of vocabulary
- Teaching of pronunciation

Week 7: Methods of teaching English

- Grammar – Translation method
- Direct method
- Audio-lingual approach

Week 8: Methods of teaching English

- Structural approach
- Communicative approach
- Word building

Week 9: Functional approach towards grammar teaching

Week 10: Lesson Planning

- Importance of activities in all kinds of lessons
- Value of different steps in lesson planning.

Week 11: Lesson Planning

- New teaching approaches; activity based.
- Planning Structural lessons

Week 12: Lesson Planning

- Planning a Prose and Poetry lesson
- Planning a Paragraph, a Story and an Essay

Week 13: Lesson Planning



- Planning a Grammar lesson

Week 14: A.V. Aids in Teaching of English

- Need and importance
- Charts, Models, Pictures, role plays, Flash Cards, Toys and Real Objects

Week 15: A.V. Aids in Teaching of English

- Radio, Cassette player, Language Laboratory
- Television, VCR, Movies

Week 16: A.V. Aids in Teaching of English

- Slides, Filmstrip, OHP, multimedia Projector

Suggested Readings

- General Science text book for class 8th and 10th Punjab Text book Board Lahore
- Recommended Books
- Agha Khan University Examination Board (2002) General Science IX- X (based on National Curriculum 2002). Karachi: AGKEB. William Lewis
- Eikenberry (2008) The teaching of general science, The University of Chicago Press.

Course Title: Teaching Listening and Speaking

EDUE -625

Course Description:

This course equips prospective educators with the knowledge and practical skills necessary to effectively teach listening and speaking skills to students of diverse backgrounds and abilities. Participants will explore theories and pedagogical approaches to enhance students' oral communication skills, as well as design and implement engaging classroom activities. Emphasis will be placed on fostering a supportive learning environment and addressing the challenges of teaching listening and speaking in various educational contexts.

Course Learning Outcomes:

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

Understand the theoretical foundations of listening and speaking skills development.

Develop effective instructional strategies to teach listening and speaking in diverse classroom settings.

Create and adapt listening and speaking activities that engage students and promote language acquisition.

Evaluate and assess students' listening and speaking proficiency using valid and reliable assessment tools.

Foster a positive and inclusive classroom environment that encourages active participation and communication.



Reflect on their teaching practices and make informed adjustments to enhance student learning outcomes.

Course Outline:

Week 1-4: Foundations of Listening and Speaking Skills

Week 1:

- Course Introduction and Overview
- The Importance of Listening and Speaking Skills
- Theoretical Frameworks in Language Acquisition

Week 2:

- Understanding the Listening Process
- Factors Influencing Listening Comprehension
- Teaching Strategies for Developing Listening Skills

Week 3:

- The Nature of Speaking and Oral Communication
- Types of Speaking: Interactive, Presentational, and Conversational
- Teaching Strategies for Developing Speaking Skills

Week 4:

- Integrating Listening and Speaking Skills
- Cultivating Active Listening Habits
- Classroom Communication Models

Week 5-8: Creating Engaging Listening Activities

5. Week 5:

- Listening Comprehension Activities
- Using Authentic Materials in Listening Exercises
- Incorporating Technology in Listening Practice

Week 6:

- Role of Pronunciation in Listening
- Pronunciation Practice and Correction Strategies
- Peer and Self-Assessment of Pronunciation

Week 7:

- Listening to Multimodal Texts: Visual and Audio Integration
- Strategies for Understanding Varieties of English
- Adapting Listening Activities for Different Learning Styles

Week 8:

Midterm Review and Assessment

- Strategies for Motivating and Engaging Students in Listening Practice
- Feedback and Error Correction in Listening Activities



- Week 9-12: Designing Effective Speaking Activities

9. Week 9:

- Structured Speaking Activities: Discussions and Dialogues
- Scaffolding Speaking Tasks for Different Proficiency Levels
- Encouraging Peer Interaction and Collaboration

Week 10:

- Public Speaking and Presentation Skills
- Designing Effective Presentation Assignments
- Building Confidence in Speaking

Week 11:

- Role-Play and Simulations in Speaking Activities
- Using Drama and Storytelling for Oral Expression
- Promoting Cross-Cultural Communication

Week 12:

- Assessment of Speaking Skills
- Developing Speaking Rubrics
- Addressing Language Anxiety in Speaking Activities
- Week 13-16: Inclusive Teaching and Assessment

13. Week 13:

- Inclusive Pedagogy for Listening and Speaking
- Adapting Instruction for English Language Learners (ELLs)
- Teaching Multilingual and Multicultural Students

Week 14:

- Formative and Summative Assessment in Listening and Speaking
- Authentic Assessment of Communication Skills
- Feedback Strategies for Oral Assessments

Week 15:

- Promoting Student Reflection and Self-Assessment
- Adapting Instruction for Diverse Learning Needs
- Final Project: Designing a Listening and Speaking Unit

Week 16:

- Final Project Presentation and Discussion
- Course Conclusion and Future Applications
- Course Reflection and Evaluation

Recommended Books

- Teaching by Principles: An Interactive Approach to Language Pedagogy" by H. Douglas Brown



- "Teaching Speaking: A Holistic Approach" by Christine C. M. Goh and Anne Burns
- "Teaching and Researching: Listening" by Michael Rost
- "Classroom Assessment Techniques: A Handbook for College Teachers" by Thomas A. Angelo and K. Patricia Cross
- "Speaking: From Intention to Articulation" by Willem J. M. Levelt
- "Listening in the Language Classroom" by John Field
- "Oral Communication in the Second Language Classroom: The Joy of Fearing the Fifty-Percent" by Frank Nuessel
- "Inclusive Practices and Social Justice Leadership for English Language Learners" by Norah Fahim and Tamara Lucas.

Course Title: Teaching Reading
EDUE -626

Course Description:

This comprehensive course is designed to equip educators with the knowledge and skills necessary to effectively teach reading to students of all ages and abilities. Participants will explore the foundational principles, strategies, and instructional approaches that promote literacy development and foster a lifelong love of reading.

Learning Outcomes: By the end of this course, participants should be able to:

1. Define key concepts and theories related to reading instruction.
2. Analyze the stages of reading development and their significance.
3. Plan and deliver effective reading lessons tailored to diverse learners.
4. Select appropriate reading materials and resources for various age groups.
5. Implement assessment techniques to monitor and support student reading progress.
6. Create a motivating and inclusive reading environment in the classroom.
7. Adapt reading instruction to meet the needs of students with diverse abilities.
8. Integrate technology and digital literacy into reading instruction.

Course Contents

Week 1: Foundations of Reading

- What is reading?
- Purpose of reading
- Components of reading

Week 2: Foundations of Reading Instruction

- Explore the key theories of reading development.
- Understand the stages of reading development (emergent, early, fluent) and their characteristics.
- Examine the importance of phonemic awareness, phonics, fluency, vocabulary, and comprehension in reading instruction.

Module 3: Planning Effective Reading Lessons



- Develop well-structured lesson plans for teaching reading.
- Align reading instruction with learning objectives and standards.
- Differentiate instruction to meet the needs of diverse learners.

Week 4: Reading Strategies

- Instructional strategies for vocabulary
- Instructional strategies for comprehension
- Matching texts to students

Week 5: Reading Strategies

- Guided reading
- Writing as a window into reading

Week 6: Selecting Reading Materials and Resources

- Evaluate and choose appropriate reading materials, including books, articles, and digital resources.
- Create a classroom library that reflects diverse perspectives and interests.
- Incorporate multicultural literature and authentic texts.

Week 7: Creating a Motivating Reading Environment

- Establish a classroom culture that fosters a love for reading.
- Promote independent reading and book sharing among students.
- Engage students in discussions about their reading experiences.

Week 8: Differentiated Reading Instruction

- Adapt reading strategies to address the diverse needs of learners.
- Provide support for struggling readers and challenge advanced readers.
- Address the needs of English language learners and students with special needs.

Week 9: Technology Integration in Reading

- Explore educational technology tools and digital resources for reading instruction.
- Design technology-enhanced reading activities that enhance engagement.
- Foster digital literacy skills in students.

Week 10: Dyslexia and Reading Difficulties

- Understanding dyslexia as a specific learning disability.
- Identifying the signs and symptoms of dyslexia in students.

Week 11: Supporting Students with dyslexia

- Strategies and interventions for supporting students with dyslexia.
- Assistive technologies and tools for dyslexic learners.

Week 12. Common Comprehension Challenges in Reading

- Exploring common comprehension difficulties among students.
- Teaching strategies to improve reading comprehension.

Week 13: Common Comprehension Challenges in Reading

- Differentiated instruction for students with varying levels of comprehension.



- Assessment methods to identify and address comprehension challenges.

Week 14. English Language Learners (ELLs) and Reading Difficulties

- Challenges ELLs face in learning to read in English.
- Strategies for teaching reading to ELLs, including vocabulary development.

Week 15. English Language Learners (ELLs) and Reading Difficulties

- Promoting literacy in students with diverse language backgrounds.
- Culturally responsive reading instruction for ELLs.

Week 16: Assessment and Progress Monitoring

- Implement formative and summative assessment techniques for reading.
- Analyze assessment data to inform instructional decisions.
- Provide constructive feedback to students and support their reading development.

Suggested Reading

1. Smith, P. R. (Year). *The Science of Reading: A Handbook*. Publisher.
2. Allington, R. L., & Gabriel, R. E. (Year). *Every Child, Every Day: A Digital Reading Plan*. Publisher.
3. Fountas, I. C., & Pinnell, G. S. (Year). *Guided Reading: Responsive Teaching Across the Grades*. Publisher.
4. Vacca, R. T., & Vacca, J. L. (Year). *Content Area Reading: Literacy and Learning Across the Curriculum*. Publisher.
5. Tovani, C. (Year). *I Read It, But I Don't Get It: Comprehension Strategies for Adolescent Readers*. Publisher.

Teaching Writing and Presentation Skills

EDUE -627

Course Description:

This course is designed to equip future educators with the knowledge, strategies, and practical skills required to effectively teach writing and presentation skills to students across various educational levels. Through a combination of theory and hands-on practice, participants will explore pedagogical approaches, curriculum design, and assessment methods to enhance students' written and oral communication abilities. Emphasis will be placed on fostering creativity, critical thinking, and effective communication in diverse learning environments.

Learning Outcomes:

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

- Understand the theories and principles of effective writing and presentation instruction.
- Design and adapt engaging writing and presentation activities aligned with curriculum objectives.



- Develop strategies to address the diverse needs and abilities of students in the writing and presentation process.
- Evaluate and assess student writing and presentation skills using valid and reliable assessment tools.
- Foster a positive and inclusive classroom environment that promotes communication skills development.
- Reflect on their teaching practices and make informed adjustments to enhance student learning outcomes.

Course Outline:

Week 1-4: Foundations of Writing and Presentation Skills

Week 1:

- Course Introduction and Overview
- The Importance of Writing and Presentation Skills
- Theoretical Frameworks in Language and Communication Education

Week 2:

- Understanding the Writing Process
- Pre-writing Strategies and Brainstorming
- Teaching Strategies for Developing Writing Skills

Week 3:

- Types of Writing: Narrative, Expository, and Persuasive
- Teaching Creative Writing: Storytelling and Poetry
- Incorporating Technology in Writing Instruction

Week 4:

- Understanding the Presentation Process
- Types of Presentations: Informative, Persuasive, and Demonstrative
- Teaching Strategies for Developing Presentation Skills

Week 5-8: Creating Engaging Writing Activities

5. Week 5:

- Developing a Writing Workshop Approach
- Peer Review and Revision in Writing
- Integrating Visuals in Writing: Graphic Organizers and Illustrations

Week 6:

- Research and Academic Writing Skills
- Teaching Argumentative Writing and Essay Structure
- Adapting Writing Activities for Different Learning Styles

Week 7:



- Digital Storytelling and Multimedia Writing
- Blogging and Online Writing Communities
- Encouraging Reflective Writing and Journals

Week 8:

- Midterm Review and Assessment
- Strategies for Motivating and Engaging Students in Writing
- Feedback and Peer Evaluation in Writing Activities

Week 9-12: Designing Effective Presentation Activities

9. Week 9:

- Structuring Effective Presentations: Introduction, Body, Conclusion
- Visual Aids and Presentation Design
- Overcoming Presentation Anxiety and Nervousness

Week 10:

- Public Speaking and Speech Delivery Skills
- Designing Effective Presentation Assignments
- Building Confidence in Presentation

Week 11:

- Role of Nonverbal Communication in Presentations
- Interactive and Collaborative Presentations
- Presentation Technology Tools and Resources

Week 12:

- Assessment of Presentation Skills
- Developing Presentation Rubrics
- Addressing Language and Cultural Differences in Presentations

Week 13-16: Inclusive Teaching and Assessment

13. Week 13:

- Inclusive Pedagogy for Writing and Presentation Skills
- Adapting Instruction for English Language Learners (ELLs)
- Teaching Multilingual and Multimodal Presentation Skills

Week 14:

- Formative and Summative Assessment in Writing and Presentation
- Authentic Assessment of Communication Skills
- Feedback Strategies for Written Assignments and Presentations

Week 15:

- Promoting Student Reflection and Self-Assessment
- Adapting Instruction for Diverse Learning Needs
- Final Project: Designing a Writing and Presentation Unit



Week 16:

- Final Project Presentation and Discussion
- Course Conclusion and Future Applications
- Course Reflection and Evaluation

Recommended Books:

- "Teaching by Principles: An Interactive Approach to Language Pedagogy" by H. Douglas Brown
- "Teaching Speaking: A Holistic Approach" by Christine C. M. Goh and Anne Burns
- "Writing with Power: Techniques for Mastering the Writing Process" by Peter Elbow
- "The Art of Public Speaking" by Stephen E. Lucas
- "Classroom Assessment Techniques: A Handbook for College Teachers" by Thomas A. Angelo and K. Patricia Cross
- "Teaching Pronunciation: A Course Book and Reference Guide" by Marianne Celce-Murcia, Donna M. Brinton, and Janet M. Goodwin
- "Designing Visual Language: Strategies for Professional Communicators" by Charles R. Taylor and Karen A. Roberto.

SEMESTER-III	Course Title	Domain	CrHr
EDU -731	Educational Statistics	Professional	3(3-0)
EDU -732	Philosophy of Education	Foundation	3(3-0)
EDU -733	Educational Psychology	Foundation	3(3-0)
EDU -734	Professionalism in Teaching	Professional	3(3-0)
EDU -735	Research Project (Content Embedded)	Professional	3(2+1)
EDU -736	Teaching Practice II	Professional	3(3+0)
	Total Credit Hours		18

Course Title: Educational Statistics

EDU -731

Course Descriptions

This course introduces students to the fundamental concepts and techniques of educational statistics. It provides a foundation for understanding and applying statistical methods in educational research and assessment. Topics include data collection, descriptive statistics, inferential statistics, and data interpretation.

Learning Outcomes:

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

1. Understand core concepts of educational statistics.
2. Apply statistical methods in educational research.



3. Demonstrate data collection skills and ethical considerations.
4. Use descriptive statistics effectively.
5. Apply probability principles and distributions.
6. Perform hypothesis testing and ANOVA.
7. Conduct non-parametric tests when needed.
8. Analyze correlations and regressions.
9. Interpret chi-square tests and logistic regression.
10. Apply statistics practically with software.
11. Communicate findings for educational practice.

Week 1: Introduction to Educational Statistics

- Overview of the course
- Importance of statistics in education
- Types of data and scales of measurement

Week 2: Data Collection

- Data sources and sampling methods
- Designing surveys and questionnaires
- Ethical considerations in data collection

Week 3: Descriptive Statistics - Part 1

- Measures of central tendency (mean, median, mode)
- Measures of variability (range, variance)

Week 4: Descriptive Statistics - Part 2

- Measures of variability (standard deviation, quartiles)
- Frequency distributions and graphical representations

Week 5: Probability Basics

- Probability fundamentals
- Probability rules and laws

Week 6: Probability Distributions

- Discrete probability distributions (e.g., binomial, Poisson)
- Continuous probability distributions (e.g., normal)

Week 7: Inferential Statistics - Part 1

- Hypothesis testing: concepts and principles
- One-sample t-tests

Week 8: Inferential Statistics - Part 2

- Two-sample t-tests
- Paired sample t-tests
- Introduction to analysis of variance (ANOVA)

Week 9: ANOVA and Post hoc tests

- One-way ANOVA



- Post hoc tests (e.g., Tukey, Bonferroni)

Week 10: Non-Parametric Tests

- Introduction to non-parametric statistics
- Wilcoxon signed-rank test
- Mann-Whitney U test

Week 11: Correlation and Regression - Part 1

- Pearson correlation coefficient
- Scatterplots
- Simple linear regression: concepts and assumptions

Week 12: Correlation and Regression - Part 2

- Simple linear regression: calculations and interpretation
- Multiple regression: introduction and assumptions

Week 13: Multiple Regression

- Multiple regression: calculations and interpretation
- Model selection and diagnostics

Week 14: Chi-Square Tests

- Chi-square test for independence
- Chi-square goodness-of-fit test

Week 15: Logistic Regression

- Introduction to logistic regression
- Logistic regression: calculations and interpretation

Week 16: Applied Educational Statistics and Review

- Practical applications of statistical techniques in education
- Data analysis using software (e.g., SPSS or Excel)
- Interpretation of research findings and implications for educational practice
- Course review and preparation for the final assessment

Recommended Books:

1. "Statistics for Education" by George M. Dunlap and Eun Sook Kim
2. "Applied Multivariate Statistical Analysis" by Richard A. Johnson and Dean W. Wichern
3. "Introduction to the Practice of Statistics" by David S. Moore, George P. McCabe, and Bruce A. Craig
4. "SPSS Survival Manual" by Julie Pallant
5. "Statistics" by Robert S. Witte and John S. Witte.

Course Title: Philosophy of Education
EDU -732



Educational Psychology

EDU -733

TITLE OF COURSE: EDUCATIONAL PSYCHOLOGY

Course Code: EDU-359

Credit Hrs: 03

Learning Objectives/Learning Outcomes:

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

- Describe in detail the multidisciplinary nature of educational psychology
- Familiarize students with basic theories derived from various discipline which are related to education
- Develop critical thinking about and appreciation of education psychology as multidisciplinary subject
- Familiarize with the concept of test development

Course Outline

Week 01-02

Unit 1. Introduction to psychology

- Schools of thoughts
- Structuralism
- Functionalism
- Behaviorism

- Nature and function of educational Psychology
- Four way teaching agenda of educational Psychology

Week 03-05

Unit 2 Fundamentals of Human Development

- Overview of Growth and Development
- General nature of growth and Development
- Factors influencing Child Development

Week 06-07

Unit 3 Learning



Definition of learning

Learning theories

Learning Process

Week 08-10

Unit 4 Information Processing

What is Memory

Parts of memory

What is Forgetting

Methods to improve memory

Week 11-13

Unit 5 Intelligence

Concept of intelligence

Theories of intelligence

Individual difference

Intelligence Testing

Week 14-16

Unit 6 Measurement and evaluation in educational Psychology

Test

Characteristics of Test

Reliability

Validity

Items Analysis

Reference Material:

Ormrod, Jeane, (2010) Educational Psychology: Developing Learners:

Pearson

Santrock, John W., (2001) Educational Psychology, USA. Mc-Graw-

Hill Anita Woolfolk; Educational Psychology, USA.



PROFESSIONALISM IN TEACHING

Course Code: EDBE321

Credit Hours: 3

Course Description:

Learning to teach is a continuous process which involves pre-service teacher preparation and mentoring for beginning teachers and professional development. The purpose of this course is to assist student teachers to grasp the theory of professionalism and implement the same into practice needed for teaching profession. Teaching is the profession that is on the edge of a great transformation all over the world. At the same time the expectations about teacher's performance, roles, responsibilities, enthusiasm and commitment are increasing. Enhancing professionalism among teachers is an area of global concern. Developing cognitive skills is not the only criteria for effective performance, we also need to develop the affective skills of student teachers so that they can demonstrate the dispositions required of them mentioned in the National Standards for Teachers in Pakistan. This course will broaden the horizon of student teachers in determining the relationship of theory and practice of professionalism in respect of commitment and dedication for teaching through depicting dispositions required for teaching profession.

Learning Outcomes

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

1. Explain the concept and characteristics of profession and professional
2. Describe and adopt the characteristics professionals and effective teaching
3. Define and discuss the term professionalization and its process and establish their awareness about the professionalization of teaching profession
4. Recognize the requirements and characteristics of professionalism and depict their commitment and enthusiasm towards teaching profession
5. Adhere to the professional code of conduct and professional values and show their commitment to professional renewal
6. Depict their commitment towards teaching through practicing professional dispositions for teachers
7. Demonstrate and practice Islamic principles of professionalism regarding teacher's accountability
8. Identify the difficulties that beginners' teachers face and recognize the role of mentor in overcoming these difficulties
9. Develop awareness about the attributes of professional teachers as reflective practitioner, transformative, enquiring, committed and a role model
10. Recognize their professional distinctiveness and develop skills for carrier development to match their expertise with changing teaching learning scenarios
11. Appraise and align their knowledge, skills and attitudes with Suggested Readings to national professional standards for teachers in Pakistan
12. Write reflective journals and become effective professional teacher of 21st century

Contents

1. Introduction of Profession and Concept of Teaching

- 1.1. Concept of Profession and Professionals
- 1.2. Characteristics of Profession and Professionals
- 1.3. Assumption about Teaching
- 1.4. Teaching as a Profession
- 1.5. Characteristics of Effective Teaching



Research Project
EDU -735
Teaching Practice II
EDU -736