

Institute of Education and Research
Faculty of Education
University of the Punjab, Lahore



Program	Bachelor of Education (B.Ed.)		
Course Title: Education for Sustainable Development		Course Type: Major Course Specialization-19	
Course Code: MCEd-104		Credit Hours: 3	Duration: 16 Weeks
Introduction	<p>The "Learning in STEM" course is designed to provide aspiring educators with a deep understanding of inquiry-based learning approaches in STEM education. The course emphasizes the use of hands-on experiments, problem-solving activities, and real-world applications to engage students in the process of scientific discovery and critical thinking. Participants will explore effective strategies for designing and implementing inquiry-based lessons, fostering students' curiosity, and promoting collaboration and communication skills in STEM subjects.</p>		
Learning Objectives	<p>Upon the successful completion of this course the students will be able to:</p> <ol style="list-style-type: none"> 1. Understand the concept, meaning and scope of Sustainable development 2. know the aims of Education for Sustainable Development (ESD) 3. critique on ESD 4. know the characteristics of SD 5. establish a link between education and SD 6. understand the process of curriculum development in relation to sustainable dimensions 7. identify the challenges in ESD and also find their possible solutions 		
Course Content	<p>1 Introduction: The nature of sustainable development</p> <ol style="list-style-type: none"> 1.1 Sustainable development: concept, meaning, nature, purpose 1.2 Scope of sustainable development 1.3 Principles of sustainable development 1.4 Understand various interpretations of sustainable development 1.5 Demand of sustainability 1.6 Development in globalization Era, challenges and opportunities 1.7 Dimension of Sustainability <p>2 Education, sustainable development and sustainability Education</p> <ol style="list-style-type: none"> 2.1 What is Education, sustainable development and Education for sustainable development (ESD)? 2.2 Function of Education and role of education in Sustainability 2.3 Contribution of sustainable development in education 2. 4 Aims of ESD <ol style="list-style-type: none"> 2.4.1 Improving basic education 2.4.2 Reorienting Existing Education 2.4.3 Public Understanding and Awareness 2.4.4 Formal, Non-formal, and Informal Education 2.5 Core characteristics of ESD <p>3 Sustainability Education Curriculum</p> <ol style="list-style-type: none"> 3.1 Various Meanings of Curriculum <ol style="list-style-type: none"> 3.1.1 Curriculum as a Lesson Plan 3.1.2 Curriculum as a Learning Experience 3.1.3 Curriculum as a Plan for Learning 3.2 Various Views on Curriculum <ol style="list-style-type: none"> 3.2.1 Humanistic Curriculum 3.2.2 Curriculum as a Social Reconstruction 		

	3.2.3 Curriculum as Technology
	3.2.4 Academic Curriculum
	3.3 Relationship between Curriculum and Teaching
	4 Competencies, standards, benchmarks, design of lessons and curricula
	4.1 Definition of competencies
	4.2 Selection of competencies
	4.3 Fundamentals of a model of competencies for ESD
	4.4 Core competencies of ESD
	4.5 Standards: definition, purpose
	4.6 Benchmark: definition, types
	4.7 Designing learning units
	4.8 Guidelines for creating curricula
	4.9 Types of curriculum
	5 Procedures of Curriculum Development
	5.1 Sustainability Education Curriculum Framework
	5.2 The Design of Curriculum
	5.3 Components of Curriculum (objectives, contents, Organization and method, evaluation)
	5.4 Systematic approach to Curriculum Development
	5.4.1 Meaning of System
	5.4.2 System Design in Curriculum Development
	5.5 The Steps in Curriculum Development
	6 Curriculum Objectives
	6.1 The Goals of Education
	6.2 Development of Multiple Dimensions of Intelligence
	6.3 School objectives and Curriculum Objectives
	6.3.1 The Taxonomy of objectives
	6.3.2 Sources for Objective Formulation
	6.3.3 Development of Curriculum Objective
	6.4 Formulating Sustainability Curriculum Objectives
	7 Curriculum Evaluation
	7.1 Principles of Curriculum Evaluation
	7.2 Models of Curriculum Evaluation
	7.2.1 Bradley Model
	7.2.2 Tyler Model
	7.2.3 Stufflebeam Model
	7.2.4 Scriven Model
	7.2.5 Stake Model
	7.2.6 Eisner Model
	7.3 Forms of Curriculum Evaluation
	7.4 Techniques of Evaluation
	8 Teacher education for sustainable development
	8.1 What should people learn? And how could they be taught?
	8.2 Pedagogies and didactics for ESD
	8.2.1 Interdisciplinary approach
	8.2.2 Critical thinking and problem solving
	8.2.3 Multi-method (word art, drama, debate, life experience etc)
	8.2.4 Participatory decision-making
	8.2.5 Applicability
	8.3 Create and implement a plan to reduce personal/ school ecological footprints
	8.4 Identify and compare strategies to influence behavioral change
	8.5 Create or continue to implement an action plan/ activity to make schools and/or communities more sustainable

	8.6 Identify resources and organizations to help bring about environmental change in schools and communities 9 Challenges and Barriers to ESD 9.1 Challenges of SD & Sustainable Solutions 9.2 Promoting sustainability in Education
Textbook(s)	Bell, R. L., Smetana, L. K., & Binns, I. C. (2020). Simplifying inquiry instruction. National Science Teachers Association (NSTA) Press. Keeley, P. (2015). Science formative assessment: 75 practical strategies for linking assessment, instruction, and learning. Corwin
Reading Materials	Allen, W (2007). <i>Learning for Sustainability: Sustainable Development</i> Ali, M. Sustainability Education. Elliott, J.H. (2013). <i>An Introduction to Sustainable Development</i> . New York: Routledge. Laboy-Nieves, E.N., Schaffner, F.C., Abdelhadi, A.H. and Goosen, M.F.A. (2009). <i>Environmental Management</i> . London: CRC Press. McKeown, R (2002). <i>Education for Sustainable Development Toolkit</i> . Center for Geography and Environmental Education University of Tennessee 311 Conference Center Bldg. Free copy can be downloaded from http://www.esdtoolkit.org Midgley, J. (1995). <i>Social Development: The Developmental Perspective in Social Welfare</i> . London: Sage. Mohamed Salih, M.A. (2002). <i>Globalization, sustainable development and environment: A balancing act</i> . In F.J. Schuurman (Ed.), <i>Globalization and Development Studies: Challenges for the 21st Century</i> . New Delhi: Vistaar Pub. Munasinghe, M. (2009). <i>Sustainable Development in Practice</i> . New York: Cambridge. Obrecht, A., Pham, M., Spehn, E., Payne, D., Brémond, A. C., Altermatt, F., ... & Geschke, J. E. (2021). Achieving the SDGs with biodiversity. Akademie der Naturwissenschaften Schweiz (SCNAT), Forum Biodiversität Schweiz. https://boris.unibe.ch/156991/1/SDG_Factsheet_E_DEF.pdf Print, M. (2021). <i>Curriculum Development and Design</i> . Taylor & Francis. Rieckmann, M. (2017). <i>Education for sustainable development goals: Learning objectives</i> . Unesco Publishing. Schmandt, J. and Ward, C.H. (eds.) (2012) <i>Sustainable Development: The Challenge of Transition</i> . Cambridge: Cambridge University Press Schreiber, J. R., & Siege, H. (2016). <i>Curriculum framework: Education for sustainable development</i> . Engagement global, Bonn. Scott, W & Gough, S (2003). <i>Sustainable development and learning: framing the issues</i> . Routledge Falmer:USA UNESCO. (2015). Sustainable Development. Retrieved 6 September 2021. https://en.unesco.org/themes/education-sustainable-development/what-is-esd/sd UNESCO. (2018) Guidebook on education for sustainable development for educators: effective teaching and learning in teacher education institutions in Africa. Paris, France.
Teaching/Learning Strategies	Lecture Discussion Cooperative Learning Class activities Applied Projects
Evaluation Criteria	Assignment/Project/Presentation 25% Mid Term 35% Final Term 40%