

**Department of STEM Education, Faculty of Education,
Lahore College for Women University
Bachelor of Education (B. Ed. Science Education)
Fall 2023 and on wards**

Scheme of Studies with Semester Break Up

S. #.	Course Code	Title of the Course	Credit Hours
SEMESTER-I			
1	GEDU-101	Functional English	3
2	GEDU-102	Islamic Studies/ Ethics	2
3	GEDU-104	Information and Communication Technologies in Education	3(2+1)
4	EDU-101	Foundations of Education	3
5	EDSC-102	Development of Science Education in Pakistan: Prospects and Challenges	3
6	EDSC-101	Introduction to Science Education	3
		TOTAL SEMESTER CREDIT HOURS	17

SEMESTER-II			
1	GEDU-151	Expository English (Writing)	3
2	GEDU-152	Pakistan Studies (Ideology and Constitution of Pakistan)	2
3	GEDU-153	Quantitative Reasoning I/(General Mathematics)	3
4	EDSC-151	Human Development & Learning	3
5	EDSC-152	School, Community and Teacher	3
6	EDSC-153	Curriculum Development in Science Education	3
		TOTAL SEMESTER CREDIT HOURS	17

SEMESTER-III			
1	GEDU-***	Social Sciences	2
2	GEDU-***	Natural Science	3(2+1)
3	GEDU-201	Quantitative Reasoning II/(Statistics in Education)	3
4	EDSC-201	General Methods of Science Teaching	3
5	EDU-252	Educational Management & Leadership	3
6	EDSC-202	Science Classroom Management	3
		TOTAL SEMESTER CREDIT HOURS	17

SEMESTER-IV			
1	GEDU-***	Humanities and Arts	2
2	GEDU-251	Entrepreneurship	2
3	GEDU-252	Civics and Community Engagement	2
4	EDSC-251	Assessment & Evaluation in Science education	3

5	EDU-254	Introduction to Guidance and Counselling	3
6	EDSC-252	Comparative Science Education	3
TOTAL SEMESTER CREDIT HOURS			15
SEMESTER-V			
1	EDSC-301	Critical Thinking through Science	3
2	EDSC-302	Laboratory Management, Organization, and Safety Measures	3
3	EDSC-303 EDSC-304	Teaching of Biology/ Teaching of Mathematics	3
4	EDU-495	Internship/Field Experience	3
Minor Courses			
Choose any ONE Allied Course according to the Subjects Studied at F. Sc. Level			
5		Biology-I Mathematics -1(Calculus-I) Physics-I (Elementary Mechanics) Chemistry-I (Physical Chemistry) Computer 1-Programming Fundamentals	3(2+1)
TOTAL SEMESTER CREDIT HOURS			15
Semester VI			
1	EDSC-351	Introduction to STEM Education	3
2	EDSC-352	Material Development for Science Class	3(2+1)
3	EDSC-353	Teaching of Chemistry	3
4	EDSC-354 EDSC-355	Choose Any One Teaching of Physics/ Teaching of Computer Science	3
Choose any ONE Allied Course according to the Subjects Studied at F. Sc. Level			
5		Biology II Mathematics II (Plane Curves & Analytic Geometry) Physics-II (Waves & Oscillation) Chemistry-II (Inorganic Chemistry) Computer 1I- Object Oriented Programming	3(2+1)
TOTAL SEMESTER CREDIT HOURS			15
Semester VII			
1	EDSC-401	Science Education for Sustainable Development	3(2+1)
2	EDSC-402	STEM Tools and Ideas for the Classroom	3
3	EDU-403	Research Methods in Education	3
4	EDSC-403	Diversity and Inclusion in Science Education	3
Choose any ONE Allied Course according to the Subjects Studied at F. Sc. Level			
5		Biology-III Mathematics III (Linear Algebra) Physics-III (Electricity & Magnetism) Chemistry-III (Organic Chemistry) Computer III-Data Structure & algorithm	3(3+0)

TOTAL SEMESTER CREDIT HOURS			15
Semester VIII			
1	EDSC-451	Seminar in Science Education	3
2	EDSC-452	Students Teaching & Observation (Professional)	6
3	EDSC-499	Capstone Project (Research Thesis/Project)	3
Choose any ONE Allied Course according to the Subjects Studied at F. Sc. Level			
4		Biology-IV Chemistry-IV (General Chemistry) Mathematics-IV (Ordinary Differential Equations) Physics IV(Modern Physics) Computer 1V-(Data Communication and Computer Network)	3(3+0)
TOTAL SEMESTER CREDIT HOURS			15
TOTAL PROGRAM CREDIT HOURS			126

Minor in Education (Science Education)

Note: Students may opt any four of the following courses (minimum 12credit hours) as per availability of resources

Sr. no.	Codes	Course Title	Credit Hours
1	EDU-101	Foundations of Education	3
2	EDSC-151	Human Development & Learning	3
3	EDSC-152	School, Community and Teacher	3
4	EDSC-201	General Methods of Science Teaching	3
5	EDSC-351	Introduction to STEM Education	4 (3+1)
6	EDSC-402	STEM Tools and Ideas for the Classroom	
7	EDSC-401	Science Education for Sustainable Development	3

List of Minors for student of B. Ed. (Science Education)

Students of B. Ed. (Science Education) may opt any one or two of the following minors as per availability of resources and offering of concerned department.

1. Minor in Chemistry
 - General Chemistry
2. Minor in Computer Science
 - Not available
3. Minor in Mathematics

Course No.	Course Title	Credit Hours
Min/Math-101	Differential and Integral Calculus	3(3+0)

Min/Math-102	Complex Numbers and Differential Equations.	3(3+0)
Min/Math-201	Analytical Geometry	3(3+0)
Min/Math-202	Linear Algebra and Infinite Series, 3(3+0)	3(3+0)

4. Minor in Botany

Course Code	Name of Subject	Credit Hours
BOT-101	Diversity of Plants	3
BOT-102	Plant Systematics, Anatomy and Development/ Embryology	3
BOT-151	Plant Physiology and Ecology	3
BOT-152	Biodiversity and Conservation	3

5. Minor in Physics

Course Code	Course Title	Credit Hours
Min/Phy-101	Fundamentals of Physics	3(3+0)
Min/Phy-103	Principles of Modern Physics	3(3+0)
Min/Phy-201	General Physics	3(3+0)
Min/Phy-202	Advanced Physics	3(3+0)

6. Minor in Zoology

Course No.	Course Title	Credit Hours
ZOO-253	Biological Techniques	3
ZOO-253P	Practicals of Biological Techniques	1
ZOO-202	Animal Form & Function-I	3
ZOO-202P	Practicals of Animal Form & Function-I	1
ZOO-251	Animal Form & Function-II	3
ZOO-251P	Practicals of Animal Form & Function-II	1