

CURRICULUM FOR INTEGRATED TEACHER EDUCATION PROGRAMME LEADING TO B. Sc. B.Ed. DEGREE

Name of Degree	Name of Specialization	Total Intake (Full-time)	Year of Starting	Duration	Eligibility for Admission
B.Sc. B.Ed. (Secondary)	Science and Education	50	2023	4 years (8 semesters)	The ITEP shall be of four academic years comprising eight semesters including internship (field-based experiences and practice teaching). Candidates with minimum fifty percent marks in Senior Secondary or plus two examination or its equivalent (under 5+3+3+4 pattern) from a recognized board are eligible for admission through the National Common Entrance Test (NCET), conducted by the National Testing Agency (NTA)

COURSE CATEGORIES AND CREDIT REQUIREMENTS:

The structure of B.Sc.B.Ed. programmes shall have the following Course Categories:

Sl. No	Course Category	No. of Courses	No. of credits
1.	Foundations of Education (FE)	10	30
2.	Disciplinary Major and Minor (MM)	19	64
3.	Stage Specific Content cum Pedagogy (CP)	4	16
4.	Ability Enhancement and Value added Courses (AE)	12	28
5.	School Experience (SE)	6	20
6.	Community Engagement and Service (CE)	1	2

Total Credits required: 160

PROGRAMME STRUCTURE

Major Disciplinary Subject: CHEMISTRY

Minor: One discipline to be chosen from amongst Mathematics, Physics, Botany, Zoology and Economics.

The effort to be put in by the student is indicated in the tables below as follows:

L: Lecture (One unit is of 50-minute duration)

T: Tutorial (One unit is of 50-minute duration)

P: Practical (One unit is of one-hour duration)

O: Outside the class effort / self-study (One unit is of one-hour duration)

Semester 1

Sl. No	Course Code	Title	L	T	P	O	C	Category
1	ED1001E	Evolution of Indian Education	4	0	0	8	4	FE
2	ED1002E	Language-I *	3	1	0	8	4	AE
3	ED1003E	Art Education	1	0	2	3	2	AE
4	ED1004E	Understanding India	2	0	0	4	2	AE
5	ED1101E	Structure, Bonding and Fundamentals of Spectroscopy	4	0	0	8	4	MM
6		Minor-1(PHY/ MAT/BOT/ZOO/ECO)	4	0	0	8	4	MM
7	ED1102E	Inorganic Chemistry Laboratory	0	0	2	1	1	MM
		Total					21	

* English

Semester 2

Sl. No	Course Code	Title	L	T	P	O	C	Category
1	ED1011E	Language-II @	3	1	0	8	4	AE
2	ED1012E	Understanding India	2	0	0	4	2	AE
3	ED1013E	Teacher and Society	2	0	0	4	2	AE
4	ED1111E	Basic Concepts in Organic Chemistry and Stereochemistry	4	0	0	8	4	MM
5	ED1112E	States of Matter and Chemical Thermodynamics	4	0	0	8	4	MM
6		Minor-2 (PHY/ MAT/BOT/ZOO/ECO)	4	0	0	8	4	MM
7	ED1113E	Physical Chemistry Laboratory	0	0	2	1	1	MM
		Total					21	

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Semester 3

Sl.No	Course Code	Title	L	T	P	O	C	Category
1	ED2001E	Child Development and Educational Psychology	4	0	0	8	4	FE
2	ED2002E	Pedagogy-I (General)	3	1	0	8	4	CP
3	ED2101E	Coordination Chemistry and its Applications	4	0	0	8	4	MM
4	ED2102E	Thermodynamics, Kinetics and Equilibria	4	0	0	8	4	MM
5		Minor-3 (PHY/ MAT/BOT/ZOO/ECO)	4	0	0	8	4	MM
6	ED2103E	Organic Chemistry Laboratory	0	0	2	1	1	MM
Total							21	

Semester 4

Sl. No	Course Code	Title	L	T	P	O	C	Category
1	ED2011E	Philosophical and Sociological Perspectives of Education-I	4	0	0	8	4	FE
2	ED2012E	Pedagogy-II (Minor subject)	3	1	0	8	4	CP
3	ED2111E	Basic analytical chemistry and Introductory Electrochemistry	4	0	0	8	4	MM
4	ED2112E	Synthetic Methodologies in Organic Chemistry	4	0	0	8	4	MM
5		Minor-4 (PHY/ MAT/BOT/ZOO/ECO)	4	0	0	8	4	MM
6	ED2113E	Instrumental methods in Chemical analysis	0	0	2	1	1	MM
Total							21	

Semester 5

Sl. No	Course Code	Title	L	T	P	O	C	Category
1	ED3001E	ICT in Education	1	0	2	3	2	AE
2	ED3002E	Pedagogy-III (Major subject)	3	1	0	8	4	CP
3	ED3003E	Pre-internship Practice	0	0	3	3	2	SE
4	ED3101E	Chemistry of Main Group Elements and Organometallic Chemistry	4	0	0	8	4	MM
5	ED3102E	Natural Products, Heterocycles and Spectroscopic Methods of Characterization	4	0	0	8	4	MM
6	ED3103E	Major Project	0	0	0	12	4	MM
Total							20	

Semester 6

Sl. No	Course Code	Title	L	T	P	O	C	Category
1	ED3011E	Assessment and Evaluation	2	0	0	4	2	FE
2	ED3012E	Pedagogy-IV (Major subject)	3	1	0	8	4	CP
3	ED3013E	Inclusive Education	2	0	0	4	2	FE
4	ED3014E	Mathematical and Quantitative Reasoning	1	1	0	4	2	AE
5	ED3015E	School Observation	0	0	0	6	2	SE
6		Elective-I (Disciplinary Major)	3	1	0	8	4	MM
Total							16	

Semester 7

Sl. No	Course Code	Title	L	T	P	O	C	Category
1	ED4001E	Perspectives on School Leadership and Management	2	0	0	4	2	FE
2	ED4002E	Curriculum Planning and Development	1	1	0	4	2	FE
3	ED4003E	Art Education	1	0	2	3	2	AE
4	ED4004E	Sports, Nutrition and Fitness	1	0	2	3	2	AE
5	ED4005E	School based Research Project	0	0	0	6	2	SE
6	ED4006E	Internship in Teaching	0	0	0	30	10	SE
Total							20	

Semester 8

Sl. No	Course Code	Title	L	T	P	O	C	Category
1	ED4011E	Philosophical and Sociological Perspectives of Education-II	4	0	0	8	4	FE
2	ED4012E	Education Policy Analysis	2	0	0	4	2	FE
3		Education Elective	4	0	0	8	4	FE
4	ED4013E	Yoga and Understanding Self	2	0	0	4	2	AE
5	ED4014E	Citizenship Education, Sustainability and Environment Education	2	0	0	4	2	AE
6	ED4015E	Post-Internship (Review and Analysis)	0	0	3	3	2	SE
7	ED4016E	Teaching Learning Material/Work Experience	0	0	3	3	2	SE
8	ED4017E	Community Engagement and Service	0	0	3	3	2	CE
Total							20	

Semester-wise distribution of credits:

Semester	1	2	3	4	5	6	7	8
Credit	21	21	21	21	20	16	20	20

List of Electives Chemistry Major:

Sl. No	Course code	Course type	Course title	L	T	P	O	C	Category
1	ED3111E	Elective Major	Solid State Chemistry	3	1	0	8	4	MM
2	ED3112E	Elective Major	Fundamentals of Biochemistry	3	1	0	8	4	MM
3	ED3113E	Elective Major	Surface Chemistry	3	1	0	8	4	MM
4	ED3114E	Elective Major	Basic Analytical Chemistry and Instrumental methods	3	1	0	8	4	MM
5	ED3115E	Elective Major	Chemistry of Multiple Bonds	3	1	0	8	4	MM
6	ED3116E	Elective Major	Nuclear Chemistry	3	1	0	8	4	MM
7	ED3117E	Elective Major	Physical Methods in Inorganic Chemistry	3	1	0	8	4	MM
8	ED3118E	Elective Major	Bioinorganic Chemistry	3	1	0	8	4	MM

List of Education Electives:

1	ED4018E	Emerging Technologies in Education	4	0	0	8	4	FE
2	ED4019E	Guidance and counselling	4	0	0	8	4	FE

Physics disciplinary minor courses:

Sl. No	Course code	Course type	Course title	L	T	P	O	C	Category
1	ED1303E	Minor 1	Mechanics, Waves and Oscillations	3	1	0	8	4	MM
2	ED1314E	Minor 2	Thermal Physics	3	1	0	8	4	MM
3	ED2304E	Minor 3	Electromagnetism and Relativity	3	1	0	8	4	MM
4	ED2314E	Minor 4	Basic Electronics	3	1	0	8	4	MM

Mathematics disciplinary minor courses:

Sl. No	Course code	Course type	Course title	L	T	P	O	C	Category
1	ED1203E	Minor 1	Mathematics I : Calculus	3	1	0	8	4	MM
2	ED1213E	Minor 2	Mathematics II: Algebra and Differential Equations	3	1	0	8	4	MM
3	ED2203E	Minor 3	Mathematics III : Probability and Statistics	3	1	0	8	4	MM
4	ED2213E	Minor 4	Mathematics IV : Mathematical Analysis	3	1	0	8	4	MM

Botany disciplinary minor courses:

Sl. No	Course code	Course type	Course title	L	T	P	O	C	Category
1	ED1401E	Minor 1	Cell Biology and Biochemistry	3	1	0	8	4	MM
2	ED1411E	Minor 2	Biotechnology, Molecular Biology & Bioinformatics	3	1	0	8	4	MM
3	ED2401E	Minor 3	Ecology and Environmental Science	3	1	0	8	4	MM
4	ED2411E	Minor 4	Structural Biology	3	1	0	8	4	MM

Zoology disciplinary minor courses:

Sl. No	Course code	Course type	Course title	L	T	P	O	C	Category
1	ED1501E	Minor 1	Cell Biology	3	1	0	8	4	MM
2	ED1511E	Minor 2	Animal Biotechnology	3	1	0	8	4	MM
3	ED2501E	Minor 3	Environmental Conservation and Sustainable Development	3	1	0	8	4	MM
4	ED2511E	Minor 4	Bioinformatics	3	1	0	8	4	MM

Economics disciplinary minor courses:

Sl. No	Course code	Course type	Course title	L	T	P	O	C	Category
1	ED1601E	Minor 1	Basic Economics	3	1	0	8	4	MM
2	ED1611E	Minor 2	Microeconomics	3	1	0	8	4	MM
3	ED2601E	Minor 3	Indian Economy: Trends and Policies	3	1	0	8	4	MM
4	ED2611E	Minor 4	Money and Personal Finance	3	1	0	8	4	MM