



**PERIYAR  
MANIAMMAI**  
INSTITUTE OF SCIENCE & TECHNOLOGY  
(Deemed to be University)  
Established Under Sec. 3 of UGC Act, 1956 • NAAC Accredited  
think • innovate • transform

## Criterion 1 – Curricular Aspects

<b>Key Indicator</b>	1.2	<b>Academic Flexibility</b>
<b>Metric</b>	1.2.2	Percentage of Programmes in which Choice Based Credit System (CBCS)/elective course system has been implemented (Data for the latest completed academic year)

**DEPARTMENT OF EDUCATION  
STRUCTURE OF THE PROGRAMME CLEARLY  
INDICATING COURSES, CREDITS/ELECTIVES**

### Programmes

1. B.Sc. B.Ed

# 1. Curriculum of B.Sc., B.Ed

## SEMESTER I

Sub. Code	Name of the Course
XBE101	Tamil -I
XBE102	English - I
XBE103H	Holistic Education
XBE104	Introduction to Computers
XBE105	Understanding Education and its perspective
XBE106	Differential Calculus and Trigonometry
XBE107	Properties of Matter and Sound
XBEC108	General Chemistry - I
XBES108	Programming in C
XBE109	Physics Practical - I
XBEC110	Volumetric Analysis Lab – I
XBES110	Programming in C Lab

## SEMESTER II

Sub. Code	Name of the Course
XBE201	Tamil - II
XBE202	English - II
XBE203E	Environmental Education
XBE204	Software Packages - Lab
XBE205	Educational Psychology – Understanding the Learner
XBE206	Algebra and Numerical Analysis
XBE207	Mechanics and Relativity
XBES208	Data Structures and Algorithms
XBEC208	General Chemistry - II
XBE209	Physics Practical - II
XBEC210	Volumetric Analysis Lab – II
XBES210	Data Structures using C Lab

## SEMESTER III

Sub. Code	Name of the Course
XBE301	Tamil - III
XBE302	English - III
XBE303	Theatre, Art and Heritage Craft Traditions
XBEC304	Programming in C (for MPC group Students)
XBES304	Visual Programming (For CsMP group Students)
XBE305	Educational Psychology – Understanding the Learning Process
XBE306	Analytical Geometry (3D) and Integral Calculus
XBE307	Heat and Thermo Dynamics
XBEC308	General Chemistry - III
XBES308	Object Oriented Programming with C++ and Java
XBE309	Physics Practical - III
XBEC310	Semimicro Inorganic Qualitative Analysis (ANIONS) Lab
XBES310	Programming in C++ and Java Lab
XBES311	Practicum and School Internship - I

#### SEMESTER IV

Sub. Code	Name of the Course
XBE401	Tamil - IV
XBE402	English - IV
XBE403	Social Engineering
XBE404	Introduction to MATLAB
XBE405	Assessment of Learning
XBE406	Vector Calculus and Fourier Series.
XBE407	Optics and Spectroscopy
XBEC408	General Chemistry - IV
XBES408	Computer Graphics
XBE409	Physics Practical - IV
XBEC410	Semimicro Inorganic Qualitative Analysis (CATIONS) Lab
XBES410	Computer Graphics Lab
XBE411	Practicum and School Internship-II

#### SEMESTER V

Sub. Code	Name of the Course
XBE501	Soft Skill Development and Peace Education
XBE502	Basics of e – Learning Education
XBE503	Teaching Approaches and Strategies
XBE504A	Pedagogy of Mathematics - I
XBE504B	Pedagogy of Physics- I
XBEC504C	Pedagogy of Chemistry - I
XBES504C	Pedagogy of Computer Science - I
XBE505	Sequences and Series
XBE506	Electricity and Magnetism
XBEC507	Inorganic Chemistry - I
XBES507	Database Management Systems
XBE508	Physics Practical - V
XBEC509	Gravimetric Analysis Lab
XBES509	RDBMS Lab
XBE510	Practicum and School Internship-III

#### SEMESTER VI

Sub. Code	Name of the Course
XBE601	Indian Constitutions and Human Rights
XBE602	Introduction to LATEX
XBE603	Secondary Education in India – Status, Challenges and Strategies
XBE604A	Pedagogy of Mathematics – II
XBE604B	Pedagogy of Physics- II
XBEC604C	Pedagogy of Chemistry - II
XBES604C	Pedagogy of Computer Science - II
XBE605	Differential Equations and Laplace Transforms
XBE606	Atomic and Solid State Physics
XBEC607	Organic Chemistry - I
XBES607	Operating Systems
XBE608	Physics Practical - VI
XBEC609	Organic Qualitative Analysis and Organic Preparation Lab
XBES609	Operating Systems Lab
XBE610	Practicum and School Internship - IV

#### SEMESTER VII

Sub. Code	Name of the Course
XBE701	Educational Innovation and Management
XBE702	Algebra
XBE703	Real Analysis
XBE704	Basic Electronics
XBE705	Wave Mechanics and Nuclear Physics
XBEC706	Physical Chemistry - I
XBES706	Computer Networks
XBEC707	Organic Chemistry - II
XBES707	Web Technology
XBE708	Physics Practical - VII
XBEC709	Physical Chemistry Lab - I
XBES709	Web Technology Lab
XBE710	Practicum and School Internship - V

### SEMESTER VIII

Sub. Code	Name of the Course
XBE801	Statistics and Operations Research
XBE802	Complex Analysis
XBE803	Digital Electronics
XBE804	Microprocessor and Microcontroller
XBEC805	Physical Chemistry - II
XBES805	Software Engineering
XBEC806	Analytical Chemistry
XBES806	Data mining
XBE807	Physics Practical - VIII
XBEC808	Physical Chemistry Lab - II
XBES808	Software Development Lab (Mini Project)

### LIST OF PROFESSIONAL ELECTIVES

#### PROFESSIONAL ELECTIVES GROUP – I

Sub. Code	Name of the Course
XBE809A	Curriculum and School
XBE809B	Inclusive Education
XBE809C	Guidance and Counseling in School

#### PROFESSIONAL ELECTIVES GROUP – II

Sub. Code	Name of the Course
XBE810A	Discrete Mathematics
XBE810B	Electrical Appliances and Renewable Energy Sources
XBE810C	Polymer Chemistry
XBE810D	Food Chemistry
XBE810E	Material Chemistry and Nano - Technology
XBE810F	C # and . Net Framework
XBE810G	Understanding PHP