

## OSMANIA UNIVERSITY, HYDERABAD

### B.A/B.Sc. Mathematics Course Structure

(Common Core Syllabus for All Universities of Telangana State for the Students Admitted from the Academic Year 2019-20 Batch onwards)

Paper	Semester	Subject	Hours/ per week	Hours/per week		Max. Marks	Credits
				Theory	*Tutorials		
DSC - I	I	Differential & Integral Calculus	6	5	1	100	5
DSC - II	II	Differential Equations	6	5	1	100	5
DSC - III	III	Real Analysis	6	5	1	100	5
DSC - IV	IV	Algebra	6	5	1	100	5
DSC - V	V	Linear Algebra	6	5	1	100	5
DSE - VI(A)	VI	(A) Numerical Analysis	6	5	1	100	5
DSE - VI(B)	VI	(B) Integral Transforms	6	5	1	100	5
DSE - VI(C)	VI	(C) Analytical Solid Geometry	6	5	1	100	5
SEC-I	III	Theory of Equations	2	2	-	50	2
SEC-II	III	Logic & Sets	2	2	-	50	2
SEC-III	IV	Number Theory	2	2	-	50	2
SEC-IV	IV	Vector Calculus	2	2	-	50	2
Generic Elective	V-A	Basic Mathematics	4	4	-	100	4
	V-B	Mathematics for Economics & Finance					
Project/ Optional	VI**	Mathematical Modelling	4	4	-	100	4

\*Tutorials: Problems solving session for each 20 student's one batch.

\*\*The students are required to opt either the optional paper **Mathematical Modelling** or **Project**.

**B.Sc. PHYSICS SYLLABUS UNDER CBCS SCHEME**  
**SCHEME OF INSTRUCTION**  
 (Revised and effective from academic year 2019-2020)

Semester	Paper [ Theory and Practical ]	Instructions Hrs/week	Marks	Credits
I	Paper – I : Mechanics & Oscillations	4	100	4
	Practicals – I : Mechanics & Oscillations	3	50	1
II	Paper – II: Thermal Physics	4	100	4
	Practicals – II : Thermal Physics	3	50	1
III	Paper – III : Electromagnetic Theory	4	100	4
	Practicals – III : Electromagnetic Theory	3	50	1
IV	Paper – IV : Waves & Optics	4	100	4
	Practicals – IV :Waves & Optics	3	50	1
V	Paper –V : A. Modern Physics B. Computational Physics	4	100	4
	Practicals – V: A. Modern Physics B. Computational Physics	3	50	1
VI	Paper – VI : A. Electronics B. Applied Optics	4	100	4
	Practicals VI: A. Electronics B. Applied Optics	3	50	1

Total credits: 30


**Skill Enhancement Courses**

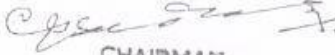
1. Experimental methods and Errors analysis
2. Electrical circuits and Networking
3. Basic Instrumentation
4. Biomedical Instrumentation
5. Digital Electronics

**Generic Elective:**

1. Renewable Energy & Energy Harvesting

**Project work /Optional (Nano science)**

  
 HEAD  
 Department of Physics  
 University College of Science  
 Osmania University, Hyd.

  
 CHAIRMAN  
 Board of Studies in Physics  
 Osmania University, Hyd.

Telangana State Council of Higher Education, Govt. of Telangana B.Sc., CBCS Com  
Core Syllabi for all Universities in Telangana  
**PROPOSED SCHEME FOR CHOICE BASED CREDIT SYSTEM IN**  
B.Sc., Chemistry from 2019-2020

**FIRST YEAR- SEMESTER I**

CODE	COURSE TITLE	COURSE TYPE	HPW	CREDI
BS 101	Ability Enhancement Compulsory Course AECC-1	ES	2	2
BS 102	English	CC-1A	4	4
BS 103	Second language	CC-2A	4	4
BS 104	Optional I	DSC-1A	4T+3P=7	4+1=
BS 105	Optional II	DSC-2A	4T+3P=7	4+1=
BS 106	<b>Optional III- Chemistry - I</b>	DSC-3A	4T } 3P } = 7	4 } 1 }
	Laboratory Course - I (Qualitative Analysis - Semi Micro Analysis of Mixtures)			
<b>Total Credits</b>			31	25

**FIRST YEAR- SEMSTER II**

BS 201	Ability Enhancement Compulsory Course AECC-2	BCS	2	2
BS 202	English	CC-1B	4	4
BS 203	Second language	CC-2B	4	4
BS 204	Optional I	DSC-1B	4T+3P=7	4+1=
BS 205	Optional II	DSC-2B	4T+3P=7	4+1=
BS 206	<b>Optional III- Chemistry - II</b>	DSC-3B	4T } 3P } = 7	4 } 1 }
	Laboratory Course - II (Quantitative Analysis - Titrations)			
<b>Total Credits</b>			31	25

**SECOND YEAR- SEMSTER III**

BS 301	i) Safety Rules in Chemistry Laboratory and Lab Reagents	SEC-1	2	2
	ii) Remedial methods for pollution, drinking water and Soil fertility	SEC-2	2	2
BS 302	English	CC-1C	3	3
BS 303	Second language	CC-2C	3	3
BS 304	Optional I	DSC-1C	4T+3P=7	4+1=
BS 305	Optional II	DSC-2C	4T+3P=7	4+1=
BS 306	<b>Optional III- Chemistry - III</b>	DSC-3C	4T } 3P } = 7	4 } 1 }
	Laboratory Course - III (Synthesis of Organic compounds)			
<b>Total Credits</b>			31	25

**SECOND YEAR- SEMSTER IV**

BS 401	i) Materials and their Applications	SEC-3	2	2
	ii) Chemistry of Cosmetics and Food Processing	SEC-4*	2	2
BS 402	English	CC-1D	3	3
BS 403	Second language	CC-2D	3	3
BS 404	Optional I	DSC-1D	4T+3P=7	4+1=
BS 405	Optional II	DSC-2D	4T+3P=7	4+1=
BS 406	<b>Optional III- Chemistry - IV</b>	DSC-3D	4T } 3P } = 7	4 } 1 }
	Laboratory Course - IV (Qualitative Analysis of Organic Compounds)			
<b>Total Credits</b>			31	25

\* AECC: Ability Enhancement Compulsory Course, SEC: Skill Enhancement Course, DSC: Discipline Specific Course, GE: Generic Elective, ES: Environmental Science, BCS: Basic computer skills.