



UNIVERSITY OF CALICUT

Abstract

General and Academic - Faculty of Science - Modified Syllabus of BSc Physics Programme under CBCSS UG Regulations 2019 with effect from 2020 Admission onwards - Implemented- Orders Issued.

G & A - IV - J

U.O.No. 6321/2020/Admn

Dated, Calicut University.P.O, 07.07.2020

- Read:-*
1. U.O.No. 4368/2019/Admn dated 23.03.2019
 2. U.O.No. 18084/2019/Admn Dated 28.12.2019
 3. The item No.5 in the minutes of the meeting of the Board of Studies in Physics UG held on 05.03.2020
 4. Remarks of the Dean, Faculty of Science dtd 08.06.2020
 5. Order of the Vice Chancellor in the file even no. dtd 11.06.2020

ORDER

1. The Regulations for Choice Based Credit and Semester System for Under Graduate (UG) Curriculum-2019 (CBCSS UG Regulations 2019) for all UG Programmes under CBCSS-Regular and SDE/PrivateRegistration w.e.f. 2019 admission, has been implemented vide paper read first above and the same has been modified vide paper read second above.
2. The meeting of the Board of Studies in Physics (UG) held on 05/06/2020 has recommended the following modifications in the I and II semester of the Syllabus of B.Sc Physics Programme in tune with the new CBCSS UG - 2019 Regulations with effect from 2020 Admission, vide paper read third above.
 - Two units in semester I should be removed. The title of the course changed to Mechanics-I.
 - The syllabus of the unit, "Waves" in the syllabus of semester II is modified with another standard text book as book of study. The title of the course changed to Mechanics-II.
3. The Dean, Faculty of Science has approved the modified syllabus of BSc Physics programme in tune with the new CBCSS UG-2019 Regulations with effect from 2020 Admission onwards, vide paper read fourth above.
4. Considering the urgency of the matter, the Vice Chancellor has accorded sanction to implement the Scheme and Syllabus of B Sc Physics Programme in accordance with the new CBCSS UG Regulations 2019, in the University with effect from 2020 Admission onwards, subject to ratification by the Academic Council.
5. The Modified Scheme and Syllabus of B Sc Physics Programme in accordance with CBCSS UG Regulations 2019, is therefore implemented in the University with effect from 2020 Admission onwards.
6. Orders are issued accordingly. (Syllabus appended).

Arsad M

Assistant Registrar

To

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UNIVERSITY OF CALICUT

B.Sc. PHYSICS

(CORE AND COMPLEMENTARY PROGRAMMES)

SYLLABUS & MODEL QUESTION PAPERS

w.e.f 2020 admission onwards

CBCSSUG Regulations 2020

B.Sc. PHYSICS
CORE & COMPLEMENTARY PROGRAMMES
SYLLABUS

PROGRAMME: B.Sc. PHYSICS

Programme Specific Outcomes

PSO1: Understand the basic concepts of fundamentals of mechanics, properties of matter and electrodynamics

PSO2: Understand the theoretical basis of quantum mechanics, relativistic physics, nuclear physics, optics, spectroscopy, solid state physics, astrophysics, statistical physics, photonics and thermodynamics

PSO3: Understand and apply the concepts of electronics in the designing of different analog and digital circuits

PSO4: Understand the basics of computer programming and numerical analysis

PSO5: Apply and verify theoretical concepts through laboratory experiments

Abbreviations used:

CL – Cognitive level; **U** – understand; **Ap** – apply; **An** – analyze; **C** - create

KC – Knowledge category; **C** – conceptual; **F** – factual; **P** - procedural

B.Sc. DEGREE PROGRAMME (PHYSICS CORE)

COURSE STRUCTURE

Semester	Course Code	Course Title	Total hours	Hours/Week	Credits
1	A 01	Common Course I – English	72	4	4
	A 02	Common Course II – English	90	5	3
	A 07	Common Course III – Language other than English	72	4	4
	PHY1 B01	Core course I - Mechanics I	36	2	2
		Core Course V - Practical I	36	2	*
		1 st Complementary Course I - Mathematics	72	4	3
		2 nd Complementary Course I	36	2	2
		2 nd Complementary Course Practical I	36	2	*
	EO1	Environment Studies	-	-	4**
	Total	450	25	18	
2	A 03	Common Course IV – English	72	4	4
	A 04	Common Course V – English	90	5	3
	A 08	Common Course VI – Language other than English	72	4	4
	PHY2 B02	Core Course II - Mechanics II	36	2	2
		Core Course V - Practical I	36	2	*
		1 st Complementary Course II - Mathematics	72	4	3
		2 nd Complementary Course II	36	2	2
		2 nd Complementary Course Practical II	36	2	*
	EO2	Disaster Management			4**
	Total	450	25	18	
3	A 05	Common Course VI – English	90	5	4
	A 09	Common Course VIII - Language other than English	90	5	4
	PHY3 B03	Core Course III – Electrodynamics-I	54	3	3

		Core Course VI– Practical I	36	2	*
		1 st Complementary Course III – Mathematics	90	5	3
		2 nd Complementary Course III	54	3	2
		2 nd Complementary Course Practical III	36	2	*
E03		Human Rights or Intellectual Property Rights or Consumer protection			4**
		Total	450	25	16
4	A 06	Common Course IX – English	90	5	4
	A 10	Common Course X - Language other than English	90	5	4
	PHY4 B04	Core Course IV - Electrodynamics II	54	3	3
	PHY4 B05	Core Course Practical V – Practical I	36	2	5
		1 st Complementary Course IV– Mathematics	90	5	3
		2 nd Complementary Course IV	54	3	2
		2 nd Complementary Course Practical IV	36	2	4
	E04	Gender studies or Gerontology			4**
		Total	450	25	25
5	PHY5 B06	Core Course VI - Computational Physics	54	3	3
	PHY5 B07	Core Course VII - Quantum Mechanics	54	3	3
	PHY5 B08	Core Course VIII - Optics	54	3	3
	PHY5 B09	Core Course IX- Electronics (Analog and Digital)	54	3	3
		Open Course – (<i>course from other streams</i>)	54	3	3
		Core Course Practical XIV - Practical II	72	4	*
		Core Course Practical XV- Practical III	72	4	*
		Core Course XVII Project/Research methodology	36	2	*
		Total	450	25	15
6	PHY6 B10	Core Course X - Thermodynamics	54	3	3
	PHY6 B11	Core Course XI -Statistical Physics, Solid State Physics, Spectroscopy and Photonics	54	3	3
	PHY6 B12	Core Course XII - Nuclear Physics and Particle Physics	54	3	3

	PHY6 B13	Core Course XIII - Relativistic Mechanics and Astrophysics	54	3	3
	PHY6 B14	Core Course XIV (Elective:EL1 / EL2 / EL3)	54	3	3
	PHY6 B15	Core Course Practical XV – Practical II	72	4	5
	PHY6 B16	Core Course Practical XVI – Practical III	72	4	5
	PHY6 B17 (P/R)	Core Course XVII Project/Research methodology Tour report	36	2	2 1
		Total	450	25	28
Total Credits					120

Tour report shall be evaluated with Practical III

*Credit for practical / project to be awarded only at the end of Semester 4 and Semester 6.

**Mandatory audit courses for the program, but not counted for the calculation of SGPA or CGPA.

Student can attain only pass (Grade P) for these courses.