Department of Physics

KONGU ARTS AND SCIENCE COLLEGE
(Autonomous)

Affiliated to Bharathiar University, Coimbatore
Approved by UGC, AICTE, New Delhi & Re accredited by NAAC, DBT STAR College Scheme
(An ISO 9001: 2015 Certified Institution)
NANJANAPURAM, ERODE – 638 107

DEPARTMENT OF PHYSICS

BOARD OF STUDIES MEETING

AGENDA

DATE: 30.03.2019

1. To consider and approve the syllabi for the students admitted during the academic year 2017-2018, 2018-2019 and 2019-2020 and onwards.

2. To consider and approve the Extra Credits for the SWAYAM and NPTEL online courses for students who have been admitted during the academic year 2019-2020 and onwards.

3. To consider and approve the Panel of Examiners.

4. To consider and discuss any other subjects with the permission of the chair.

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The meeting of the Board of Studies in Physics

UG was conducted on 30.03.2019 at 10.15 a.m.in the College Campus.

The following members were present:

Chairman   : Ms. K. Maithilee

Members   :

1. Dr. R.T. Rajendrakumar   - University Nominee
   Associate Professor
   Bharathiar University
   Coimbatore

2. Dr. P. Meena   - Subject Expert
   Head & Associate Professor
   PSGR Krishnammal College for Women (Autonomous)
   Coimbatore

3. Mr. A. Kalaimani   - Industry Nominee
   Thilagavathi Institute of Electronics
   Erode

4. Ms. R. Chitra   - Member

5. Mr. T. Akashnarayana   - Member

6. Ms. S. Priya   - Member

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Subject related to CBCS, Outcome based Syllabus and Extra Credits were discussed and the following are the resolutions:

1. It is resolved to approve the Scheme of Examination and new Syllabi of I & II Semesters for the B. Sc Physics students admitted during the academic year 2019 – 2020 batch only. **(Annexure a & b)**

2. It is resolved to approve to change the syllabus for the students who have admitted during the academic year 2019-2020 batch only.

3. There is no change in the Syllabi of III and IV Semesters for the B. Sc Physics students admitted during the academic year 2018 – 2019 and onwards.

4. It is resolved to approve the Scheme of Examination and new Syllabi of V & VI Semesters for the B. Sc Physics students admitted during the academic year 2017 – 2018 and onwards. **(Annexure a & b)**

5. There is no change in the Allied Physics Syllabi of I and II Semesters for the B. Sc Mathematics students admitted during the academic year 2019 – 2020 and onwards.

6. It is resolved to approve the award of Extra Credits for SWAYAM and NPTEL online courses for students who have been admitted during the academic year 2019-2020 and onwards.

7. It is resolved to approve the syllabi and extra credits for the advanced learners for B. Sc Physics Students who have been admitted during the academic year 2017-2018 and onwards.

8. It is resolved to approve the additional name for Panel of Members for Question Paper Setting and Central Valuation. **(Annexure –I)**

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Details of modifications in the Courses offered under the Programme

B. Sc Physics

The following modifications are done in the Syllabi of V and VI Semesters for the B. Sc Physics students admitted during the academic year 2017 – 2018 and onwards based on the feedback obtained from Stakeholders and recommendations of the BOS Panel Members.

- The name of the Course Atomic Physics in the V semester is revised as Atomic Physics and Spectroscopy and the "Spectroscopy" content is added as 5th unit. **(Annexure b)**
- The new course Python for Physics is introduced as Elective course in the VI semester. **(Annexure b)**
- Python Programming for Physics is introduced in the Skill Based Course Practical (Office Automation & C Programming) instead of C Programming. Also, the course title is modified as Office Automation & Python Programming for Physics. **(Annexure b)**
- Modifications in the course Core Practical – I is carried out for the B.Sc., Physics students admitted during the academic year 2019-2020. **(Annexure b)**

The adopted modifications are given in **annexure b**

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Details of modifications with specific topics in the Syllabus with % of revision

B. Sc Physics

S.No	Course Name	Course Code	Topics introduced	Topics removed	% of Revision
1	Core Practical – I	19UAOCP202	Spectrometer – Narrow Angled Prism Ultrasonic Interferometer – Compressibility of a liquid	-	10%
2	Chemistry Theory - II	19UAOAT203	Laboratory Principles Chapter	NIL	10%
3	Mathematical Physics	17UAOCT501	**Unit IV:** Atwood's machine and compound pendulum **Unit V:** Lagrangian Formulation of Conservation Theorems: Generalised momentum and cyclic coordinates – Generalised momentum – Energy – Linear momentum – Angular momentum	-	12%
4	Quantum Mechanics and Relativity	17UAOCT502	**Unit III:** Hermitian operator – Properties of Hermitian operators. Total Angular Momentum: Commutation relation between Square of the Total Angular Momentum and its Components – Commutation rule for the Components of Generalised Angular Momentum Operator – Ladder Operators $J+$ & $J-$ - Eigen Values of $J2$ and Jz	-	10%
5	Atomic Physics and Spectroscopy (Course Name revised as Atomic Physics and Spectroscopy from previous name Atomic Physics")	17UAOCT503	**Unit V:** Molecular Spectroscopy: Raman effect – Experimental study of Raman effect – Quantum theory of Raman effect - Applications of Raman effect –Zeeman effect – Normal Zeeman effect – Lorentz theory of normal Zeeman effect – Anomalous Zeeman effect –Paschen-Back effect – Stark effect.	-	20%
6	Basic Electronics	17UAOCT504	**Unit II:** UJT relaxation oscillator	**Unit I :** Tunnel Diode - Schottky Diode	1%

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7	Solid State Physics	17UAOCT601	Unit IV: Dielectrics: Introduction – Different types of electric polarisation – Lorentz method for finding the internal field for a cubic structure - Clausius –Mosotti relation – Dielectric Loss – Determination of dielectric constant of a dielectric material – Dielectric breakdown – Properties and applications of different types of insulating materials	-	20%
8	Nuclear Physics	17UAOCT602	Unit III: Detection of Neutrino - K-electron capture	-	1%
9	Fundamentals of Digital Electronics	17UAOCT603	Unit V: Semiconductor Memories: Memory unit – Concept of memory using registers – Read only memories: ROM, PROM, EPROM and EEPROM – RAM: Bipolar RAM, MOS RAM cells, Static MOS RAM cell and Dynamic MOS RAM	-	20%
10	Core Practical III: General Practical	17UAOCP604	1. Young's Modulus – Koenig's Method - Uniform bending 2. Young's Modulus – Koenig's Method - Non-uniform bending 3. Semiconductor Diode - Bandgap Determination 4. Study of Solar cell	1) Spectrometer – Dispersive Power of Grating 2) Carey Foster's Bridge – Specific Resistance of a Wire 3) Ballistic Galvanometer – High Resistance by Leakage	10%
11	Core Practical IV: Electronics Practical	17UAOCP605	1. Characteristics of UJT 2. Astable multivibrator 3. Bistable multivibrator	1. Characteristics of a Transistor – CB configuration 2. Characteristics of FET 3. Microprocessor – 8085 – Multiplication and Division	10%
12	Elective III: Python for Physics	17UAOET609	All the 5 units are introduced		100%
13	Skill Based Course – Practical Office Automation & Python Programming for Physics	17UAOSP612	Python Programming Write a Python Program for the following: Conversion of Fahrenheit to Celsius and Celsius to Fahrenheit Rigidity modulus of the given material by static torsion method Refractive index of the given prism Plotting frequency response graph – LCR series and parallel resonant circuits Generating truth tables for basic logic gates	C Programming Write a C Program for the following: Conversion of Fahrenheit to Celsius Average of a set of Numbers Finding Factorial using recursion Find the largest element in an array Sorting a set of numbers in ascending order To find whether a person is eligible to vote or not Matrix Addition Matrix Subtraction	50%

- In overall, there had been a 7% of revision in the syllabus of the B. Sc., Physics programme.

All the above resolutions are approved.

1. _(signature)_ 30/3/19
2. _(signature)_
3. _(signature)_
4. _(signature)_
5. _(signature)_ 30/03/19
6.

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