

ACTION TAKEN REPORT

[Meeting held on 13th Feb 2019]

1. S.Y.B.Sc. Curriculum:

- As per the suggestions made by Dr. Patil V. B. and Dr. S. B. Kulkarni, the 'curvilinear coordinates' from S.Y.B.Sc. to F.Y.B.Sc. in Paper – I, Unit – II (as it is continuation with Vector Calculus) of Sem – II is shifted and included.
- As per the suggestions made by Prof. Ajay Patwardhan, Michelson's Interferometer as an application of interference phenomena in Paper – II, Unit – III (Polarization) is included.
- The topic on 'Differential amplifier' in S.Y.B.Sc. curriculum is included alongwith 'Operational amplifiers', which is there at T.Y.B.Sc. Paper – II, Unit – II (differential amplifier). Discrete transistorized multivibrators and those based on IC 555 and study of 'Active filter circuits' are included as an application of operational amplifier and a separate paper on 'Analog Electronics' is included instead of Applied Physics – I.
- Similarly, a separate paper on 'Digital Electronics' is included instead of 'Applied Physics-II' and as per the suggestions made, microprocessor is deleted and multiplexer, demultiplexer, encoder, decoder is added before Flip-Flops in Unit – II of Paper – III (Sem-IV) and synchronous counters are added in Unit – III of Paper – III (Sem-IV).
- The syllabus on rest of the four regular papers (2 papers in each semester) is shuffled accordingly.
- As the pattern on practical courses in F.Y.B.Sc, Demonstration experiments in addition to regular and skill experiments are included in Sem-III and Skills experiments in addition to demonstration and regular experiments are added in Sem-IV.

2. M. Sc. – II Curriculum:

- As per the suggestions made by Prof. Ajay Patwardhan and all members, 'Advanced Electronics' paper is included in place of 'Statistical Mechanics'. In addition to this, the syllabus of following papers is reshuffled as follows:
- 'Fundamentals of Materials Science' paper (four units) syllabus is reshuffled appropriately into three units and the Fourth Unit is devoted to 'Recent Trends in Materials'. The paper title is also changed as 'Fundamentals of Materials and Recent Trends'.
- Similarly, 'Materials and Their Applications' paper syllabus is also reshuffled appropriately and unit-wise headings are also given and the title of paper is changed as 'Materials Processing', which is most suitable to the syllabus therein.
- By looking at our specialization (Materials Science) at M.Sc., and suggestions made by Dr. V. B. Patil, Dr. Mahanvar and Dr. S. B. Kulkarni we have to included the following papers:

- 'Properties of Materials' in place of 'Properties of Solids' which was a part of Solid State Physics specialization.
- 'Thin Film Physics and Devices' in place of 'Nanoscience and Nanotechnology' and the related practicals are also included in the curriculum.

3. MSc - I Curriculum:

- As per the suggestions made by Prof. Ajay Patwardhan and Dr. Mahanvar and other members, 'Advanced Electronics' paper is included in place of 'Solid State Physics' since 'advanced electronics' must be studied as a core paper rather than studying it as an elective paper and stated earlier that, it is as the central part of Physics, Computers, Instrumentation and process controls etc.
- Similarly, as per the suggestions made by Dr. V. B. Patil, Prof. Ajay Patwardhan, Dr. S. B. Kulkarni and other members, 'Experimental Physics' paper is included in place of 'Solid State Devices' since 'Experimental Physics' can be studied along with quantum mechanics and is instrumental, therefore, it has to be studied before studying the elective / specialization papers related to the applications, device and technology based papers in MSc-II. Therefore, Solid State Physics and Solid State Devices papers will be included in MSc. – II from the academic year (2020-2021).

4. Skill based courses (SYBSc & MSc - II):

- The syllabi of Applied Physics – I & II (S.Y.B.Sc.) is reshuffled appropriately and following two certificate (supplementary) courses are made, which will be compulsory in addition to their regular curriculum.
 1. Skill Based Course in 'Lasers, Fiber Optics, Instrumentation and Communication'.
 2. Interdisciplinary Course in "Geophysics, Biophysics and Radiation Physics'.
- Similarly, for MSc.-II, the following certificate (supplementary) courses are made, which will be compulsory in addition to their regular curriculum.
 1. Skill Based Course in 'Nanoscience and Nanotechnology'.
 2. Certificate Course in 'Advanced Materials'.

5. F.Y.B.Sc. Curriculum (**Revised**) and T.Y.B.Sc. [Physics & Applied Component - E. I]:

- As per the discussion, the syllabus of F.Y.B.Sc. Physics is undergone the revision in order to maintain the continuity in the syllabus right from FYBSc to TYBSc and it is as per the following:
 1. There is no change in both the papers of Sem – I.
 2. Paper – I, Unit – II: Curvilinear coordinate systems is included.
 3. Paper – II, Unit – I: AC bridges are included since there was no space for these in SYBSc.

4. Paper – II, Unit – III (Electronics): The syllabus of this unit is changed since it was quite basic and the study of passive filter circuits and transistor biasing circuits (from SYBSc) are introduced along with the Boolean Algebra and Karnaugh's maps etc.

- Experiments are arranged group-wise for the Practical Courses of both the semesters.
- Syllabi for courses of T.Y.B.Sc. [Physics & Applied Component – Electronic Instrumentation] were presented to the BOS. The syllabi are given by University of Mumbai and in order to maintain the continuity, they will be implemented this year (2019-20).
- There will be no change in Evaluation Pattern [Both Internal & Semester End Exam].

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Head

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