

# VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)

(Sponsored by Vasavi Academy of Education)

(Affiliated to Osmania University & approved by AICTE)

9-5-81, Ibrahim Bagh, Hyderabad 500 031, India, www.vce.ac.in

☎ : 040-23146002 Fax : 040-23146090

## Department of Physics

05.08.2021

### MINUTES OF THE MEETING OF THE BOARD OF STUDIES IN PHYSICS HELD ONLINE ON 05.08.2021 AT 10.00 AM

The following members were present for the meeting Board of Studies (in Physics) held online on 05.08.21 at 10.00 AM through M S Teams Platform:

S.No	Name	Designation	Category
1.	Dr. A. S. Sai Prasad	Professor and HOD Department of Physics Vasavi College of Engineering Hyderabad	Chairman, BOS, Physics
2.	Dr. D. Karuna Sagar	Professor and Head Department of Physics Osmania University, Hyderabad	Osmania University nominee
3.	Dr. Anjan Kumar Giri	Professor, Department of Physics, Indian Institute of Hyderabad (IIT-H)	Member (Subject expert)
4.	Dr. S. Srinath	Professor, School of Physics University of Hyderabad	Member (Subject expert)
5	Dr. M. Srinivas	Professor and Chairman, BOS in Physics Department of Physics Osmania University, Hyderabad	Member (Subject expert)
6	Dr. Haranath	Associate Professor Department of Physics NIT- Warangal, Warangal	Member (Subject expert)
7.	Dr. S. V. Manorama	Principal Scientist, IICT, Hyderabad	Industry/ Research Institution Member (Subject expert)
8.	Dr P Venkateswara Rao	Assoc. Prof. Department of Physics, VCE, Hyderabad	Member
9	Dr. G. Ramadevudu	Sr. Asst. Prof. Department of Physics, VCE, Hyderabad	Member
10	Mr. R. Naga Raju	Asst. Prof. Department of Physics, VCE, Hyderabad	Member
11	Dr. Vanita Thakur	Asst. Prof. Department of Physics, VCE, Hyderabad	Member

Prof. A. S. Sai Prasad, Head and chairman, BOS in Physics welcomed the members to the online meeting. He informed the members that the Department of Physics has prepared a draft syllabi for B.E first year to be offered in I and II semesters and also open electives courses with effect from 2021-22 Academic Year.

He outlined the salient features of the proposed syllabi to the members. He further added that the proposed syllabi are prepared in consultation with the Heads of Engineering Departments of the college.

Later, the following agenda items were taken up for consideration:

## 1. Confirmation of minutes of the meeting of BoS held on 22.02.2020

The minutes of BOS meeting held on 22.02.2020 have been circulated to the members and are read. Prof S. Srinath informed to modify his affiliation as School of Physics instead of Department of Physics. All the members has approved the minutes of the Meeting.

## 2. Action Taken Report of the meeting of BoS held on 22.02.2020

Item No	Members Suggestions	Action Taken report
5	Retaining existence syllabi for one more year and then if necessary revisions can be taken up	The existence syllabi is retained for the academic year 2020-21 and implemented
8	Mapping of PO and COS	Mapping of PO and COS have done as suggested

## 3. Review on Department mission statement

Prof. Haranath suggested to reframe the Mission of the Department by making the necessary language corrections so that is will be a nice statement.

Prof S. Srinath and Prof. Anjan Kumar Giri also agreed with Prof. Haranath to make language correction in the mission statement of the department.

The present Department Mission statement is "To imbibe the spirit of scientific temper. To instill logic and analytical approach to budding engineers".

The revised draft statement is "***To imbibe spirit of scientific temperament and instill logical and analytical approach to budding engineers***".

## 4. Review on COs and CO-PO mapping

The course outcomes of each course are prepared and are given in the curriculum. The possible CO-PO mapping is also incorporated in the syllabi along with CO-PO mapping.

The Members are requested to give suggestions on the COs framing as well as proposed mapping of CO-PO and PSOs.

Prof. Haranath suggested that the Course Outcome statements can be refined further by revising the Blooms taxonomy verbs.

As per the suggestions course outcomes are refined with appropriate highest level of Bloom's taxonomy to each CO.

## 5. Note on the achievements of the Department

- The college has been accredited with A<sup>++</sup> by NAAC for a period of 5 years w.e.f. 2021
- The college has been granted autonomy by the University Grants Commission, New Delhi and Osmania University, Hyderabad for a period of six years with effect from 2014-15 and extend the autonomous status for a period of ten years from 2021-2022 to 2030-2031.
- The college has applied for NBA accreditation and awaiting NBA peer team visit.

Following are the Achievements of the faculty from 1 march 2020 to 31.07.2021

Publications	Conferences/ Seminars/ workshops/ Webinar	FDPs	MOOCs
13	12	19	11

The members suggested to improve further in publishing more research papers in the international journals of high repute.

## 6. Review on online pedagogical initiatives implemented to enhance the quality of teaching-learning process

Due to COVID-19 Pandemic the college is conducting online classes for theory and practical sessions using virtual labs from the last one year. Similarly CIE (Sessional examinations) like Quizzes, Assignments, lab internal and lab external examinations are also being conducted online using Moodle Platform. However SEE theory examination are being conducted in Physical mode.

The following pedagogical initiatives have been implemented to enhance the quality of teaching-learning process during the online teaching:

1. Sharing video content of the lectures
2. Student Presentations
3. Digital content for better understanding
4. Virtual labs using MHRD V- labs supported by IIT- Mumbai, IIT- Kanpur, Amritha V- labs, Tinker Cad etc.
5. Teaching live through video and also using PPTs.
6. Online quizzes using google forms, MS forms, Polly etc.

The members appreciated the efforts put in and the adopted teaching methodologies by the faculty members in handle classes online in an affective manner. They advised to take care to involve the students in the online class as they face more distraction compared to physical mode of classes.

## 7. Review of theory courses Syllabi offered by the Department of Physics to B.E I and II semesters for the year 2021-22

The draft syllabi framed for CSE and IT, ECE and EEE, Civil and Mechanical Engineering have been placed before the members for the comments. The proposed syllabi of theory courses to be implemented w.e.f the academic year 2021-22 are given below.

S.No	Title of the Course	Year and Semester	Branch
1	Semiconductor Physics and Optoelectronic devices	I B.E I Semester	CSE and IT
2	Applied Physics	I B.E I Semester	Civil Engineering
3	Quantum Mechanics and Material Science	I B.E II Semester	ECE and EEE
4	Engineering Physics	I B.E II Semester	Mechanical Engineering

The members have gone through each of the syllabi of theory course drafted for various branches as state above and made the following suggestions:

### (a) Semiconductor Physics and Optoelectronic devices (CSE and IT):

- Unit-I is well drafted and there is no need to modify.
- Change the title of Unit -II as Introduction to Quantum Mechanics and Solid State Physics instead of fundamentals of Quantum mechanics.
- Unit-III is appropriately designed and it is inline with the previous syllabus.
- Unit-IV is fully loaded with many optoelectronic devices. However, members felt that these fundamentals are required to be taught to the students. Hence there is no need to reduce some of the topics from he proposed syllabus.
- Unit-V is designed well. Various losses offered optical fibers were also included.

The proposed changes have been carried out accordingly.

The members approved the proposed curriculum for CSE and IT branches to be offered by the Department of Physics with the title "**Semiconductor Physics and Optoelectronic devices**" with effect from the Academic Year 2021-22.

**(b) Applied Physics (CIVIL):**

Prof. Anjan Kumar Giri, Prof. Srinath and Dr. S.V. Manorama appreciated the introduction of **Sensors for Structural Health Management** as new unit-V. They observed that it very appropriate to introduce sensors used in buildings to civil engineering students.

The members have approved the syllabus of theory course **Applied Physics** drafted to Civil Engineering branch w.e.f. from the Academic Year 2021-22.

**(c) Quantum Mechanics and Material Science (ECE and EEE):**

After deliberations the members approved the proposed theory syllabus to ECE and EEE branches entitled "Quantum Mechanics and Material Science" w.e.f. from the Academic Year 2021-22.

**(d) Engineering Physics (Mechanical):**

After discussions on the proposed theory syllabus to Mechanical Engineering branch entitled "Engineering Physics w.e.f. from the Academic Year 2021-22.

**8. To discuss & review Syllabi of laboratory courses offered by the Department of Physics to B.E I and II semesters for the year 2021-22**

The members discussed the proposed list of experiments for laboratory courses of CSE and IT, ECE and EEE, Civil and Mechanical Engineering listed below.

S.No	Title of the Course	Year and Semester	Branch
1	Semiconductor Optoelectronics lab	I B.E I Semester	CSE and IT
2	Applied Physics lab	I B.E I Semester	Civil Engineering And Mechanical Engineering
3	Engineering Physics lab	I B.E II Semester	ECE and EEE

Members observed that the experiments are properly categorized suitable to concerned Branch of engineering.

The members have approved the syllabus of all the laboratory courses as mentioned above w.e.f. from the Academic Year 2021-22.

**9. To discuss & review Syllabi of Open elective papers offered by the Department of Physics to B.E for the year 2021-22**

The following open electives are proposed to be offered by the Department of Physics w.e.f 2021-22.

S.No	Title of the Course	Year and Semester	Credits
1	Smart Materials and Applications	II B.E III Semester	02
2	Thin Film Technology and Applications	III B.E V Semester	03

The members approved the syllabi of above two open elective courses w.e.f 2021-22, as there were no modifications in the curriculum discussed in detail in the earlier meeting.

#### **10. Discussion on various funding opportunities in the thrust areas of R & D and Consultancy.**

To strengthen the research activities further and to initiate consultancy the members have given the following suggestions:

- Collaborative research work with HCU, NIT-W and IICT using the TARE (Teacher Associateship for Research Excellence) of SERB. Faculty members has to write their proposals to respective institutes and if selected they have to work in that particular organization for 3 months on the proposed research topic.
- All the members informed that the institutions have increased charges for sample characterization techniques and even own institution researchers also need to pay. However they can help in getting sample characterization quickly.
- However, Prof. Haranath informed that NIT-Warangal charges nominal prices for sample characterization and hence their facilities can be used.
- Prof. Haranath, Prof. Srinath, Prof. Anjan Kumar Giri and Dr. S.V. Manorama advised to raise funds from the college to installed small instruments like XRD so that basic characterization on the samples can be done and more over other Engineering Departments faculty members also require XRD for material research.
- Members advised not to publish research papers in predatory paid journals. However, they informed that good open access Journals charge for publication fee of research papers. If these journals are good and indexed in SCOPUS, Web of Science, SCIE, then papers can be published in those journals.

#### **11. Any other item with the permission of the chair.**

The Head Department of Physics Prof. A.S. Sai Prasad informed the members that Physics Department is planning to organise an online International Conference on **Applied Physics and Materials Science** (APMS-2021) on the theme New materials and technologies for Science, Engineering, Health and Environment during 17-19th December 2021 jointly with Telangana Academy Of Sciences. He requested the members to contribute to the conference. The members assured that they definitely cooperative.

The meeting is ended with the vote of thanks proposed by the Head and Chairman of BoS, Prof. A.S. Sai Prasad



Prof. A.S. Sai Prasad  
Head and Chairman of BoS  
Department of Physics  
Vasavi College of Engineering (Autonomous)