



ST. JOSEPH'S DEGREE & PG COLLEGE

(Autonomous), Affiliated to Osmania University
Re-accredited by NAAC (3rd Cycle) with B++ Grade
King Koti Road, Hyderabad

Department of Physics & Electronics

Physics & Electronics

3rd Industry Academia Meet

16th February, 2024



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King Koti Road, Hyderabad

Agenda

Program: Physics and Electronics Industry-Academia meeting.
Date: 16th February, 2024.
Timings: 2:00 PM – 3:30 PM
Venue: Conference Hall, 5th floor.

1. Welcoming & introducing the members by R. Ashok Kumar, HoD Physics & Electronics.
2. Prayer by Dr. P. Johnson Babu, Dept. of Physics & Electronics.
3. Address by the Principal Rev. Fr. Anthony Sagayaraja, St. Joseph's Degree & PG College.
4. Minutes of the previous physics & electronics industry academia meet 2023-24.
5. Discussion on syllabus of Discipline Specific Elective (DSE) Electronics courses with focus on Outcome Based Education (OBE).
6. Discussion on syllabus of Skill Enhancement Courses (SEC) Electronics courses.
7. Discussion on curriculum of Generic Elective (GE) electronics courses to be offered to other departments.
8. Discussion on syllabus of Discipline Specific Elective (DSE) Physics courses with focus on Outcome Based Education (OBE).
9. Discussion on syllabus of Skill Enhancement Courses (SEC) physics courses.
10. Discussion on syllabus of Generic Elective (GE) physics courses to be offered to other departments.
11. Final remarks by the members.
12. Any other information with the permission of the chair.
13. Vote of thanks by Mrs. M. Sowjanya Lakshmi, Dept. of Physics & Electronics.

The 3rd Industry Academia meet for Electronics course was held on 16th February, 2024 from 2.00 pm to 5.00 pm at Conference Hall. The following members attended the meeting.

1. Rev. Fr. Anthony Sagayaraja
Principal, St. Joseph's Degree & PG College.
2. Mrs. Mary Vinaya Sheela
Dean Academics & Associate Professor, St. Joseph's Degree & PG College.
3. Mr. R. Ashok Kumar
HoD & Assistant Professor, St. Joseph's Degree & PG College.
4. Prof. P. Hima Bindu
Professor, Department of Physics, OU
Academic Representative – Physics
5. Dr. D. Srinivasu
Associate Professor, Department of Physics, OU
Academic Representative – Physics
6. Dr. Y. Purushotham
Scientist - E, C-MET
Ministry of Electronics & Information Technology (MeitY)
Industry Representative – Physics
7. Dr. Aparna Dode
Assistant Professor, Department of Physics, OU
Academic Representative – Electronics
8. Mr. Katta Venkat
Director, ATPOLE Technologies Pvt. Ltd.
Industry Representative – Electronics
9. Mr. P. Ravi Raja
Scientific Officer, B.M. Birla Planetarium and Science centre, Hyd
Student Alumni
10. Dr. P. Johnson Babu
Assistant Professor, St. Joseph's Degree & PG College.
11. Mrs. M. Sowjanya Lakshmi
Assistant Professor, St. Joseph's Degree & PG College.

Meeting started with the prayer by Dr. P. Johnson Babu sir, Assistant professor, Dept. of Physics and Electronics, Last IAM 2024 minutes were read out by Mrs. M. L. Sowjanya, Assistant professor, Dept. of Physics and Electronics and Mr. R. Ashok Kumar, Head, Dept. of Physics and Electronics introduced the members and given introductory talk on the importance of industry interaction for framing the syllabus. The following points are discussed.

Electronics

1. In Page -10, Electronics-5A Paper, Titled using Digital Electronics and Design using VHDL. The Board has suggested Decode counter has to be mentioned to add in the syllabus and CMOS and TTL families should be added instead of Difference between CMOS and TTL Families.
2. In Page-12, Electronics-5B Paper, Electronic Instrumentation - The Board Member Mr. K. Venkat has suggested adding Gas sensors , Bio Electrode topics and concept of Insulation resistance as part of Industry requirements.
3. In page-14,SEC paper, Internet of Things, Board member Mr. K. Venkat has suggested LORAWAN, R.F Communication , SCADA can be removed and Telemetry communication can be added as a part of Industry-Academia meet.
4. In page-15, SEC Paper, VLSI Designs, Board Member Mr. K. Venkat suggested adding silicon Carbide Electronics as a Part of industry Requirements.
5. In Page-16 ,General Elective Paper, Basics of Electronics, Prof. Hima Bindu, Dr. Aparna and Dr. Srinivasu has suggested changing the Title of the paper and also the topics it is for Non-Science students.
6. In Page-17, General Elective, Computer Hardware Electronics and Network, Board members Prof. Hima Bindu, Aparna and Srinivasu have suggested changing Unit-4 to Unit-1, Unit-1 has Unit-3 and Unit-III as Unit-4.
7. In Page -18, D.S.C,8051 Microcontroller, Board member Mr. K. Venkat has suggested adding the Microchip(PIC) as an introduction concept.
8. 10.In page-20,D.S.E,Digital Communication, Board members K. Venkat has suggested adding GSM instead of CDMA and Prof. Hima Bindu has suggested adding 3G, 4G,5 G communication to this paper.
9. In page-23,S.E.C, Fundamentals of Robotics, Board members K.Venkat, Prof. Hima Bindu has suggested adding the Robotic Process Automation and AI tools in Robotics as a Part of Industry.

Physics

1. In Page-25,D.S.E, Modern Physics, Board has suggested no changes.
2. In Page-27,D.S.E, Computational Physics, Board Members Prof. Hima Bindu, Mr. Ravi Raja suggested adding the Monte Carlo simulations and Applications, MATLAB was also suggested by them to add in this paper as a part of industry academia meet.
3. In Page-29,S.E.C,Basic instrumentation, Board members suggested moving it to Sem-6 as its basics are covered in the Sem-5.
4. In Page-31, Generic Elective, Physics in Everyday Life, Board has suggested adding simple applications of Physics as it is for Non-Science students.
5. In Page-32, General Elective, Renewable Energy Sources, Board members K.Venkat and Dr. Purushotham have suggested adding Recycling of Solar panels, Piezo electric applications as a part of Academic meets.
6. In Page-33,D.S.E, Basic Electronics, Board has not suggested any changes.
7. In Page-35,D.S.E,Applied Optics, Board members Prof. Hima Bindu, Dr. D. Srinivasu have suggested to change unit-4 as Unit-2,Unit-2 as Unit-3,Unit-3 as Unit-4 and suggested to add detectors, inter mode distortions in Unit-4
8. In Page-37,S.E.C,Energy Harvesting, Board Members Dr. Y. Purushotham Suggested adding of Solar Energy Grid
9. In Page-38,S.E.C, Nano Science, Board Members Prof. Hima Bindu, Dr. D. Srinivasu has suggested adding SEM analysis instead of SANS, adding CNT Types and Applications And to delete Nanomaterial Devices concepts.

Other Suggestions:

1. Board suggested Fabrication, Assembling of Solar Panels as a Part of Value added courses from department
2. Suggested Physics Projects on lift Irrigation, Solar PanelKit, LASER-Waveguide(Physitech)
3. Board suggested to send students for the summer based internships or projects.

Meeting concluded with the presentation of formal vote of thanks by Mrs. M. L. Sowjanya

INDUSTRY ACADEMIA MEETING

DATE: ¹³ 16-02-2024

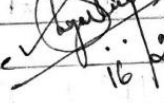
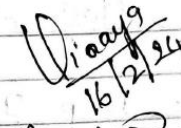
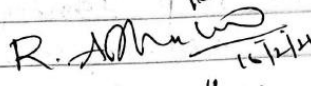
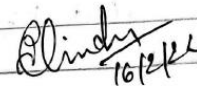

EVENT NAMES - 3rd INDUSTRY - ACADEMIA MEETING
FOR PHYSICS AND ELECTRONICS.

VENUES - CONFERENCE HALL, 4 FLOOR

TIMINGS - 2PM - 5P.M

The Dept. of physics and Electronics conducted the 3rd Industry Academia meet (IAM) for both physics and Electronics - 2024 on 16-02-2024 at 2:00P.M, Conference Hall, 4th floor. The following members have attended the meeting.

MEMBERS OF THE 3rd INDUSTRY - ACADEMIA MEETING - 2024

1. Rev. Fr. Anthony Sagayaraja
Principal, St. Joseph's Degree & P.G. college

16/2/24
2. Mrs. Mary Vinaya Sheela
Dean Academics & Associate professor,
St. Joseph's Degree & P.G. college.

16/2/24
3. MR. R. Ashok Kumar
HOD & Assistant professor, St. Joseph's Degree & P.G. college

16/2/24
4. Prof. P. Himabindu
Dept. of Physics, O.U
Academic Representative - physics.

16/2/24
5. Dr. D. Srinivasu
Associate professor, Department of Physics, O.U
Academic Representative - physics.

16/2/24

6. Dr. Y. Puroshotham

Scientist, E, C-MET

Ministry of Electronics & Information Technology (MeitY)
Industry Representative - Physics.

Y. Puroshotham
16/02/2024

7. Dr. Aparna Dade.

Assistant Professor, Dept. of Physics, O.U.
Academic Representative - Electronics.

Aparna Dade
16/2/24

8. Mr. Katta Venkat

Director, AIPOLE Technologies Pvt Ltd.
Industry Representative - Electronics.

Katta Venkat

9. Mr. P. Ravi Raja.

Scientific Officer, R.M. Birla Planetarium and
Science Centre, Hyd.
Student Alumni

P. Ravi Raja
16/02/24

10. Ms. L. Swathi

ASIC Physical Design Engineer,
MOS chip Technologies, Pvt. Ltd. Hyd.

11. Dr. P. Johnson Babu

Asst. Professor, St. Joseph's Degree and P.G. College.

P. Johnson Babu
16/02/24

12. Mrs. M.L. Sanyal

Asst. Professor, St. Joseph's Degree and P.G. College.

Mrs. M.L. Sanyal
16/2/24



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THE DEPARTMENT OF PHYSICS & ELECTRONICS IS ORGANIZING

The 3rd INDUSTRY-ACADEMIA MEET

16th February, 2024 | Time: 2:00pm to 3:30pm

VENUE: CONFERENCE HALL, 5TH FLOOR.



Rev. Fr. Anthony Sagayaraja
PRINCIPAL



Rev. Fr. K. Marreddy
CORRESPONDENT

:: MEMBERS ::

:: INDUSTRY EXPERTS ::

Dr. Y. Purushotham
Scientist - E, C-MET
Ministry of Electronics & Information Technology (Meity)

Mr. Katta Venkat
Director, ATPOLE
Technologies Pvt. Ltd

:: ACADEMIC EXPERTS ::

Prof. P. Hima Bindu
Add. Controller of Examination & Professor
Department of Physics, OU

Dr. D. Srinivasu
Associate Professor
Department of Physics, OU

Dr. Aparna Dode
Assistant Professor
Department of Physics, OU

:: STUDENT ALUMNI ::

Mr. P. Ravi Raja
Scientific officer B.M.
Birla Planetarium and Science centre, Hyd

Ms. L. Swathi
ASIC, Physical Design Engineer,
MOS Chip Technologies Pvt. Ltd
Hyd.

Organizing Committee

Mrs. Mary Vinaya Sheela
Dean Academics

Mr. R. Ashok Kumar
HOD



Industry Academia Meet 2024 Summary (Electronics)

Department: Physics & Electronics

Date: 16th February 2024

Timing: 2:00 - 5:00PM

Venue: Conference Hall

S. No	Resource Person Academic	Resource Person Industry	Suggestions Given	Program	Sem	Course	Suggestions Implemented – (where & How)	Suggestions which are not Adopted reasons – (Why)
1	Prof. P. Hima Bindu Dr. Aparna Dode Dr. Srinivasu	Mr. K.Venkat	Decode counter has to be included and add in the syllabus, CMOS and TTL families should be added instead of Difference between CMOS and TTL families	B. Sc (MECs)	V	Digital Electronics and Design using VHDL	To be filled after BOS	---
2	--	Mr. K.Venkat	Include Gas sensors ,Bio Electrode topics and concept of Insulation resistance	B. Sc (MECs)	V	Electronic Instrumentation	To be filled after BOS	---
3	Prof. P. Hima Bindu Dr. Aparna Dode Dr. Srinivasu	Mr. K.Venkat	LORAWAN,R.F communication ,SCADA can be removed and Telemetry communication can be added	B. Sc (MECs)	V	SEC - Internet of Things	To be filled after BOS	---
4	Prof. P. Hima Bindu Dr. Aparna Dode Dr. Srinivasu	Mr. K.Venkat	Silicon Carbide Electronics	B. Sc (MECs)	V	SEC - VLSI Designs	To be filled after BOS	---
5	Prof. P. Hima Bindu	--	Change the Title of the paper and also the topics it is for	B. Sc (MECs)	V	General Elective Paper,	To be filled after BOS	---

	Dr. Aparna Dode Dr. Srinivasu		Non-Science students.			Basics of Electronics		
6	Prof. P. Hima Bindu Dr. Aparna Dode Dr. Srinivasu	Mr. K.Venkat	Change Unit-4 to Unit-1, Unit-1 has Unit-3 and Unit-III as Unit-4.	B. Sc (MECs)	V	General Elective, Computer Hardware Electronics and Network	Will be changed in BOS	---
7	--	Mr. K.Venkat	To Include Microchip (PIC) as an introduction concept.	B. Sc (MECs)	VI	DSC: 8051 Microcontroller	Will be Included after BOS	---
8	Prof. P. Hima Bindu	Mr. K.Venkat	Instead of GSM and CDMA suggested to include present 3G,4G,5G communication	B. Sc (MECs)	VI	D.S.E: Digital Communication	To be filled after BOS	---
9	Prof. P. Hima Bindu	Mr. K.Venkat	Include Robotic Process Automation and AI tools in Robotics to meet industry requirement	B. Sc (MECs)	VI	S.E.C: Fundamentals of Robotics	To be filled after BOS	---

Industry Academia Meet 2024 Summary (Physics)

Department: Physics & Electronics

Date: 16th February 2024

Timing: 2:00 - 5:00PM

Venue: Conference Hall

S. No	Resource Person Academic	Resource Person Industry	Suggestions Given	Program	Sem	Course	Suggestions Implemented – (where & How)	Suggestions which are not Adopted reasons – (Why)
1	Prof. P. Hima Bindu Dr. Aparna Dode Dr. Srinivasu	Dr. Purushotham Mr.K.Venkat	No Suggestion	B. Sc (MPCs)	V	D.S.E ,Modern Physics	—	---
2	Prof. P. Hima Bind Dr. Aparna Dode Dr. Srinivasu	--	Include the Monte Carlo simulations and Applications, MATLAB	B. Sc (MPCs)	V	D.S.E: Computational Physics	To be filled after BOS	---
3	Prof. P. Hima Bind Dr. Aparna Dode Dr. Srinivasu	Dr. Purushotham Mr.K.Venkat	Include the Paper in Sem – 6 as the basic are covered in Sem - 5	B. Sc (MPCs)	V	SEC - Basic instrumentation	To be filled after BOS	---
4	Prof. P. Hima Bind Dr. Aparna Dode Dr. Srinivasu	Dr. Purushotham Mr.K.Venkat	Given suggestion to include simple applications of Physics as it is for Non-Science students.	B. Sc (MPCs)	VI	General Elective: Renewable Energy Sources	To be filled after BOS	---
5	Prof. P. Hima Bind Dr. Aparna Dode	Dr. Purushotham Mr.K.Venkat	No Suggestion	B. Sc (MPCs)	VI	DSE: Basic Electronics	—	---

	Dr. Srinivasu							
6	Prof. P. Hima Bind Dr. Aparna Dode Dr. Srinivasu	Dr. Purushotham Mr.K.Venkat	change unit-4 as Unit-2,Unit-2 as Unit-3,Unit-3 as Unit-4 and suggested to add detectors ,inter mode	B. Sc (MPCs)	V	D.S.E: Applied Optics	Will be changed in BOS	---
7	Hima Bind Dr. Aparna Dode Dr. Srinivasu	Dr. Purushotham	To Add Solar Energy Grid	B. Sc (MPCs)	VI	S.E.C: Energy Harvesting	Will be Included after BOS	---
8	Prof. P. Hima Bindu	Mr.K.Venkat	1. Include SEM analysis instead of SANS, adding CNT Types and Applications 2. To Delete Nano material Devices concepts.	B. Sc (MPCs)	VI	S.E.C: Nano Science	To be filled after BOS	---

Outcome: The suggestions provided by the industry-academia experts found very useful for designing the curriculum.

R. Ashok Kumar

R. Ashok Kumar

HoD



Rev. Fr. Anthony Sagayaraja
21/3/24

Rev. Fr. Anthony Sagayaraja

Principal

Principal
ST. JOSEPH'S DEGREE & P.G. COLLEGE
King Koti Road, HYDERABAD-29