

**SWARNANDHRA**  
**COLLEGE OF ENGINEERING AND TECHNOLOGY**  
 (AUTONOMOUS)  
**DEPARTMENT OF ROBOTICS**

**MINUTES OF FOURTH BOARD OF STUDIES MEETING (UG-ROBOTICS)**

Date: 19-07-2024

**Topic:** Board of Studies Meeting

**Venue:** Mechanical Dept.

**Mode:** Online Zoho Platform

**Time:** July 18, 2024 11:00 AM

Fourth BOS Meeting Video Link

**Meeting link:** <https://meet.zoho.in/ujbLu9LzoF>

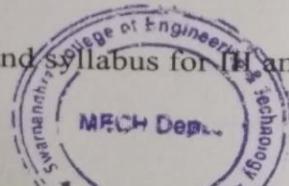
The Fourth Board of studies meeting of the Robotics department held on 18<sup>th</sup> July 2024 at 11.00 AM through online mode for the approval of R23 course structure and syllabus of III and IV semesters.

The following members were attended to the BOS meeting

S.No.	Name of BoS Member	Designation in BoS
1	Dr M Francis Luther King	Chairman
2	Dr. A. Gopala Krishna JNTUK, KAKINADA	Subject Expert, Nominated by V.C
3	Dr. P. Rajalakshmy, Karunya University,Tamilnadu	Subject Expert, Nominated by Institute
4	Dr. Shital S. Chiddarwar VNIT, Nagpur	Subject Expert, Nominated by Institute
5	Dr.G.Krishnaiah SVU, TIRUPATI	Subject Expert, Nominated by Institute
6	Mr. R. Satyanarayana Steel Plant, Visakhapatnam	Industrial Expert
7	Mr. G. V. Sai Teja Motherson Sui Systems Limited, Karnataka	Alumni Member
8	Dr. R Lalitha Narayana	Internal Member
9	Dr. R Sanjeev Kumar	Internal Member
10	Dr. D Bhanu Prakash	Internal Member
11	Mr. B Srinivas	Internal Member
12	Mr. B Mahesh Krishna	Internal Member
13	Mr Ch Harish Kumar	Internal Member
14	Mr Abdul Azeez	Internal Member

**Agenda:**

1. Review of previous BOS meeting minutes.
2. Finalization of B.Tech R23 Course Structure and syllabus for III and IV semester.
3. Any other matter with the permission of chair.



BOS meeting started at 11.00 AM online mode. The BOS chairman welcomed the University Nominee Subject Experts, Industrial Expert, Alumni Member and Faculty members.

**1. Review of previous BOS meeting minutes**

The chairman discussed the first BOS meeting minutes.

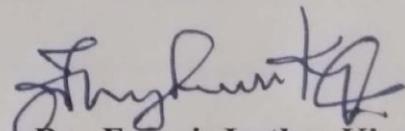
**2. Finalization on R23-syllabus of III Semester and IV Semesters for II B.Tech Robotics**

The chairman presented the R23 regulation Course structure and syllabus for the courses of III and IV Semesters. The BOS Committee discussed the Robotics Course structure and Syllabus of III & IV semesters R23 Regulations. BOS Committee has viewed and approved the same.

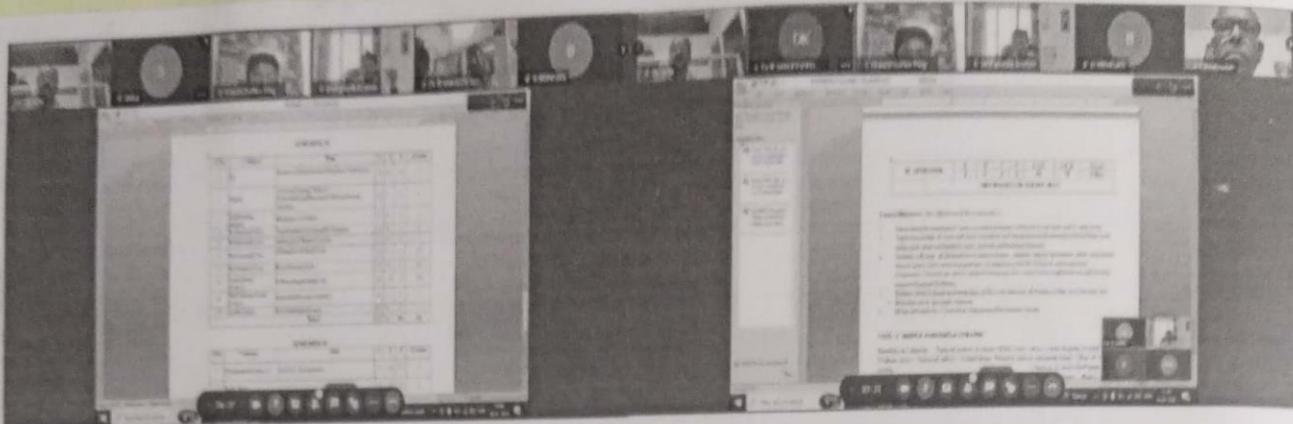
The following were the suggested resolutions by the BOS members.

- Suggested to modify fundamentals of Industrial robotics as Fundamentals of Robotics accordingly modify the syllabus also in III Semester regular course.
- Suggested to replace Engineering science category “Mechanics of Solids lab” in the place of Python Programming Lab in III Semester.
- Suggested to replace skill enhancement course category with “Python Programming lab ” in the place of Embedded Systems and IoT lab in III Semester.
- Suggested to include fundamentals in Sensors and Instrumentation course in IV semester.
- Approved the CO, PO & PSO mapping and web references for every course in R23.
- Approved the Course structure for III and IV semesters R23.

The BOS meeting was concluded by the Chairman with a letter of gratitude to all BOS members by 12.10 PM.



**Dr. Francis Luther King M**  
Chairman BOS  
Department of Robotics



**smarandhra College of Engineering & Tech.**

Participants Chat Notes

R SATYANARAYANA Joined 1 minute ago

Giridharnath Joined 1 minute ago

Sai Teja Joined 1 minute ago

prof gopala krishna Joined 1 minute ago

Hrushik Kumar Joined 1 minute ago

Francis Luther King... Joined 1 minute ago

RUSKINVAS Joined 1 minute ago

MAHESH KRISHNAB Joined 1 minute ago

DORN Joined 1 minute ago

Dr R SANJEEV KUMAR Joined 10 minutes ago

**4 Dr R SANJEEV KUMAR**

UNIT-I SIMPLE STRESSES & STRAINS:

Elasticity and plasticity – Types of stress & stress-Strain-Basler's law – Stress – stress diagram for mild steel – Working stress – Factor of safety – Linear strain, Poisson's ratio & volumetric strain – Rule of varying stresses – composite bars – Temperature stresses. Composite Stresses – Stress in an inclined plane under different material and lateral stress conditions – Principal planes and principal stresses – Mohr's circle – Relation between static, constant, Stress range – Resilience – Uniaxial, biaxial, uniaxial and shock loadings.

**UNIT-II SHEAR FORCE AND BENDING MOMENT:**

Definition of beam – Types of beams – Concept of shear force and bending moment – S.F and B.M diagrams for cantilever, simply supported and overhanging beams subjected to point loads, u.d.l, uniformly varying loads and combination of these loads – Point of contra flexure - Relation between S.F., B.M and rate of change of a section of beam.

**UNIT-III FLEXURAL STRESSES:** Theory of simple bending, Derivation of bending equation, Determination of bending stresses – section modulus of rectangular, circular, I and T sections – Design of simple beam sections.

**SHEAR STRESSES:** Derivation of formula – Shear stress distribution across various beam sections like rectangular, circular, triangle, I and T sections.

**UNIT-IV DEFLECTION OF BEAMS:** Defining deflection – slope deflection and radius of curvature – Differential equation for the elastic line of a beam – Double integration and Macaulay methods – Determination of slope and deflection for cantilever and simply supported beams subject to point loads. UDL and UVL. Mohr's theorem and Moment area method – application to simple cases.

**4 Dr R SANJEEV KUMAR**

**UNIT-III**

**JFET & MOSFET:** types, construction, operation, characteristics, parameters. MOSFET construction, characteristics and comparative study of Enhancement and Depletion MOSFET/P-channel & n-channel. Comparison between JFET and MOSFET. E&T & MOSFET Biasing. Introduction, Feedback Bias configuration, Self Bias Configuration, Voltage Dividers Biasing and stabilization. Relevant problems.

**UNIT IV**

**COMBINATIONAL LOGIC CIRCUITS:** Encoders, Decoders, Pseudo n-minterm, Multiplexers, Demultiplexers. Evaluation of Boolean functions using decoders and multiplexers. Memory devices Random Access Memory, Read only Memory, Programmable Read only Memory, Programmable Logic Devices, Reconfigurable Logic Arrays, Programmable Array Logic.

**UNIT V**

**SEQUENTIAL LOGIC CIRCUITS:** Latches, Flip-Flops, RS, D, JK, T and Master-Slave JK, Edge triggered and Edge-triggered series, Flip-Flop conversion, Synchronous and Asynchronous sequences, Up-Down counter, Ring counter and Johnson counter. Shift Registers, SISO, MISO, PISO, PIPO.

**TEXTBOOKS**

1.1. Ali-Mohamed U. Bakker, Electronic Devices & Circuits, Tata McGraw-Hill Education