

VFSTR UNIVERSITY :: VADLAMUDI
DEPARTMENT OF MECHANICAL ENGINEERING

Minutes of Board of Studies Meeting

The following members were present for the Board of Studies meeting for B.Tech in Mechanical Engineering held on 09-04-2016 at Vignan's University, Vadlamudi.

1. Dr. Bangarubabu Popuri, Professor, Mechanical Engineering, National Institute of Technology, Warangal.
2. Dr.M.Ramji, Associate Professor, Dept. Mechanical Engg., Associate Professor, IIT, Hyderabad.
3. Dr. R V S Subrahmanyam, Director, ~~CNC~~ Center, NSTL, Vizag. *SC-6, Associate Head Tech Dlt (Mech Sys)*
4. Dr. Suroju Ramakrishna, Manager R&D, ISUZU Engineering Business Centre, Chennai. *S.P.K.*
5. Dr. Ramana Podugu, Lead Engineer, John F Welch Technology, Bangalore. *H.H.*
6. Sri. Suresh Bevara, Manager, CYIENT Infotech, Hyderabad. *P.S.*
7. Sri. R.Purnachandra Rao, Retd. Manager, Hindustan Motors, Chennai. *R. R. R.*
8. Prof. B.Ramamoorthy, Rector, VFSTR University
9. Dr.K.Phaneendra Kumar, Professor, Department of Mechanical Engg, VFSTR University. *Chow*
10. Dr.P.M.V.Rao, Professor, Department of Mechanical Engg, VFSTR University. *J. V.*
11. Dr.M.Ramakrishna, Professor & Head, Department of Mechanical Engg, VFSTR University. *M.M.*
12. Mr.P.B.G.S.N.Murthy, Assoc. Prof, Department of Mechanical Engg, VFSTR University. *M.M.*
13. Dr.B.Nageswara Rao, Assoc. Prof, Department of Mechanical Engg, VFSTR University. *B.S.*
14. Mr.D.Satyanarayana, Assoc. Prof, Department of Mechanical Engg, VFSTR University. *D.S.*
15. Mr.T.Anup Kumar, Assoc. Prof, Department of Mechanical Engg, VFSTR University. *T.A.*
16. Mr.G.Suresh, Asst. Prof, Department of Mechanical Engg, VFSTR University. *G.S.*
17. Mr.N.B.Prakash T, Asst. Prof, Department of Mechanical Engg, VFSTR University. *B.*

The following were discussed in the meeting:

1. Revision in Course structure and detailed syllabus of B.Tech. Mechanical Engineering R16 Curriculum
2. Major restructuring has taken place in the curriculum with theoretical courses amalgamated with laboratory sessions and skill components added to the courses. The percentage of curriculum revision is 43.5 for the program B.Tech Mechanical Engineering.
3. Chairman BoS highlighted the implementation of Choice Based Credit System (CBCS) in the curriculum.
4. All the Courses introduced in the Curriculum are designed to fall under either of the domains of employability or entrepreneurship or skill development (Appendix I).
5. Inclusion of new courses of curriculum is reviewed and is provided as Appendix II.
6. The feedback from various stakeholders is carefully collected, analyzed and their suggestions are implemented in the curriculum.

B.Tech R16-Mechanical Engineering Course Structure

I Year I Semester

Course Title	C
Engineering Mathematics-I	5
Engineering Physics	3
Technical English Communication	4
Basics of Computers and Internet	4
Computer Programming	5
Basics of Engineering Products	4
English Proficiency and Communication Skills	1
Engineering Physics Laboratory	2
Total	28

I Year II Semester

Course Title	C
Engineering Mathematics-II	5
Engineering Chemistry	3
Engineering Graphics	3
Basics of Electrical and Electronics Engineering	4
Engineering Chemistry Laboratory	2
Engineering Mechanics	4
Materials Science and Technology	4
Work shop Practice	2
Total	27

II Year I Semester

Course Title	C
Manufacturing Technology	4
Material Science and Metallurgy	4
Mechanics of Solids	4
Thermodynamics	4
Computer Aided Machine Drawing	2
Management Science	3
Professional Ethics	2
Employability and Life Skills Elective	1-3
Total	24-26

II Year II Semester

Course Title	C
Fluid Mechanics and Hydraulic Machines	4
Kinematics of Machines	4
Metal Cutting and Machine Tools	4
Prime Movers	4
Soft Skills Laboratory	1
Department Elective	4
Department / Open Elective	3-4
Employability and Life Skills Elective	1-3
Total	25-28

III Year I Semester

Course Title	C
CAD / CAM	4
Design of Machine Elements	4
Dynamics of Machinery	4
Thermal Turbo Machinery	4
Professional Communication Lab	1
Department Elective	4
Department / Open Elective	3-4
Employability and Life Skills Elective*	1-3
Total	25-28

III Year II Semester

Course Title	C
Design of Transmission Elements	4
Finite Element Methods	4
Heat Transfer	4
Metrology and Instrumentation	4
Modular Course	1
Department Elective	4
Department / Open Elective	3-4
Employability and Life Skills Elective*	1-3
Total	25-28

IV Year I Semester

Course Title	C
Industrial Engineering and Production Management	4
Operations Research	4
Refrigeration and Air Conditioning	4
Environmental Science and Technology	2
Department Elective	4
Department / Open Elective	3-4
Employability and Life Skills Elective*	1-3
Total	22-25

IV Year II Semester

Course Title	C
Project work / Internship	15
Total	15

Department Electives

Design Stream

Course Title	C
Advanced Mechanics of Solids	4
Experimental Stress Analysis	4
Fracture Mechanics	4
Mechanical Vibrations	4
Theory of Elasticity	4
Tribology	4

Thermal Stream

Course Title	C
Advanced Fluid Mechanics	4
Advanced Heat Transfer	4
Advanced Thermodynamics	4
Automobile Engineering	4
Computational Fluid Dynamics	4
Non - Conventional Sources of Energy	4
Power Plant Engineering	4

Manufacturing Stream

Course Title	C
Additive Manufacturing	4
Advanced Manufacturing Process	4
Casting Process	4
Computer Integrated Manufacturing	4
Flexible Manufacturing System	4
Theory of Metal Cutting	4
Welding Technology	4

Materials Stream

Course Title	C
Ceramics and Polymers	4
Characterization of Materials	4
Composite Materials	4
Nanotechnology	4
Surface Engineering	4
Non - Destructive Testing For Mechanical Engineers	4

Open Electives offered by the department

Course Title	C
3D Printing Technology	4
Reverse Engineering	4
Safety Engineering	4
Product Life Cycle Management	4
Basics in Robotics	4
Advances in Robotics	4
Field and Service Robots	4
Artificial Intelligence for Robots	4

Courses offered related to Choice Based Credit System are highlighted in the structure

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List of Courses where Theory integrated with Lab

S.No	Year	Title of the Course
1	I	Engineering Mathematics
2	I	Technical English Communication
3	I	Basics of Computers and Internet
4	I	Computer Programming
5	I	Basics of Engineering Products
6	I	Engineering Mathematics-II
7	I	Basics of Electrical and Electronics Engineering
8	II	Manufacturing Technology
9	II	Material Science and Metallurgy
10	II	Mechanics of Solids
11	II	Fluid Mechanics and Hydraulic Machines
12	II	Kinematics of Machines
13	II	Metal Cutting and Machine Tools
14	II	Prime Movers
15	III	CAD / CAM
16	III	Dynamics of Machinery
17	III	Design of Transmission Elements
18	III	Finite Element Methods
19	III	Heat Transfer
20	III	Metrology and Instrumentation



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APPENDIX - I

List of courses that enable employability or entrepreneurship or Skill development in the R-16 B.Tech – Mechanical Engineering

S.No	Year	Course Name	Course Nature
1	I	Engineering Graphics	Skill development
2	I	Engineering Mechanics	Skill development
3	I	Workshop Practice	Skill development
4	II	Manufacturing Technology	Skill development
5	II	Material Science & Metallurgy	Skill development
6	II	Mechanics of Solids	Skill development
7	II	Thermodynamics	Skill development
8	II	CAMD	Employability
9	II	FMHM	Skill development
10	II	KOM	Skill development
11	II	MCMT	Skill development
12	II	Prime Movers	Skill development
13	II	Advanced Mechanics of solids	Skill development
14	II	Advanced Thermodynamics	Skill development
15	II	Casting process	Skill development
16	II	Ceramics and polymers	Skill development
17	II	3D Printing Technology	Skill development
18	II	Basics in Robotics	Skill development
19	III	CAD/CAM	Employability
20	III	DME	Employability
21	III	DOM	Skill development
22	III	Thermal Turbo Machinery	Skill development
23	III	DTE	Employability
24	III	FEM	Employability
25	III	HT	Skill development
26	III	M&I	Skill development
27	III	Additive Manufacturing	Skill development
28	III	Characterization of Materials	Skill development
29	III	CFD	Skill development
30	III	Experimental Stress analysis	Skill development
31	III	NCSE	Skill development
32	III	Theory of Metal Cutting	Skill development
33	III	Tribology	Skill development
34	III	Welding Technology	Skill development
35	III	Automobile Engineering	Skill development
36	III	CIM	Skill development
37	III	Mechanical Vibrations	Skill development

38	III	Nanotechnology	Skill development
39	III	PPE	Skill development
40	III	Surface Engineering	Skill development
41	III	Theory of Elasticity	Skill development
42	III	Reverse Engineering	Skill development
43	III	Safety Engineering	Skill development
44	III	Advances in Robotics	Employability
45	III	Field and service Robots	Skill development
46	IV	IE&PM	Skill development
47	IV	OR	Skill development
48	IV	R&AC	Skill development
49	IV	Advanced Fluid Mechanics	Skill development
50	IV	Advanced Heat Transfer	Skill development
51	IV	FMS	Skill development
52	IV	Fracture Mechanics	Skill development
53	IV	NDT for ME	Skill development
54	IV	Advanced Manufacturing Process	Skill development
55	IV	Product Life Cycle Management	Skill development
56	IV	Artificial Intelligence for Robotics	Skill development
57	IV	Project Work	Employability
58	IV	Internship	Employability
59	IV	Modular course	Employability



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APPENDIX - II

List of new courses in the R-16 B.Tech – Mechanical Engineering Curriculum including open electives offered to other programs

S.No	Course Name
1	Engineering Graphics
2	Engineering Mechanics
3	Workshop Practice
4	Manufacturing Technology
5	Material Science & Metallurgy
6	Mechanics of Solids
7	Thermodynamics
8	CAMD
9	FMHM
10	KOM
11	MCMT
12	Prime Movers
13	Advanced Mechanics of solids
14	Advanced Thermodynamics
15	Casting process
16	Ceramics and polymers
17	3D Printing Technology
18	Basics in Robotics
19	CAD/CAM
20	DME
21	DOM
22	Thermal Turbo Machinery
23	DTE
24	FEM
25	HT
26	M&I
27	Additive Manufacturing
28	Characterization of Materials
29	CFD
30	Experimental Stress analysis
31	NCSE
32	Theory of Metal Cutting
33	Tribology
34	Welding Technology
35	Automobile Engineering
36	CIM

37	Mechanical Vibrations
38	Nanotechnology
39	PPE
40	Surface Engineering
41	Theory of Elasticity
42	Reverse Engineering
43	Safety Engineering
44	Advances in Robotics
45	Field and service Robots
46	IE&PM
47	OR
48	R&AC
49	Advanced Fluid Mechanics
50	Advanced Heat Transfer
51	FMS
52	Fracture Mechanics
53	NDT for ME
54	Advanced Manufacturing Process
55	Product Life Cycle Management
56	Artificial Intelligence for Robotics
57	Project Work
58	Internship
59	Modular course

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