VIGNAN'S
Foundation for Science, Technology & Research
UNIVERSITY
(Estd u/s 3 of UGC Act of 1956)

Department of Mechanical Engineering
Minutes of Board of Studies Meeting of R17 M.Tech Machine Design

The following members were present for the BoS for M.Tech Machine Design held on 26-06-2017 at AGF05 from 9.00 am to 12.30 am.

External Members (Given their suggestions online through mail)

1. Dr. Ramjee Repaka, Associate Professor, MED, IIT Ropar, Punjab
2. Dr. Anil kumar Emadabathuni, Associate Professor, MED, IIT Indore
3. Dr. R Narasimha Rao, Associate Professor, MED, NIT Warangal
4. Dr. Jonnalagadda Srinivas, Associate Professor, MED, NIT Rourkela
5. Dr. M. Sudhakar Rao, scientist-D, DRDO, Hyderabad
6. Dr. K V L Narayana Rao, Sr. Manager- A.R.D.C, HAL, Bangalore

Internal Members present

7. Dr. M.Ramakrishna, Professor, MED, VFSTR
8. Mr. G. Suresh, Assistant Professor, MED, VFSTR
9. Mr. Mihir Barman, Assistant Professor, MED, VFSTR
10. Mr. N.B Prakash T, Assistant Professor, MED, VFSTR

The following points were discussed in the meeting while updating the syllabus as per the instructions of Dean, Academics

1. PG Coordinator Mr. G. Suresh has given remarks on R17 framework which is of skill based similar to R16 B.Tech curriculum
2. The Internal panel members in accordance to suggestions received from external members finalized the curriculum
3. There are many types in the course description and objectives. The objectives section needs to be strengthened.
4. It is suggested to add the following book under design synthesis subject: R.L Norton, Design of Machinery', McGrew hill publishers, 2009

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5. The curriculum follows Choice based credit system

6. 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 38 for the program M.Tech in Machine Design.

7. The curriculum is encompassing the courses that enable employability or entrepreneurship or skill development (Appendix I)

8. Inclusion of new courses in the curriculum is reviewed and is provided as Appendix II.

9. Feedback from wide array of stakeholders are carefully collected, analyzed and their suggestions are taken into account while designing the curriculum.

PG Coordinator

HoD, Mechanical Engineering

M.Tech R17-Machine Design Curriculum Structure

I Year I Semester

Course Title	C
Advanced Mechanisms	4
Advanced Mechanics of Solids	5
Creep, Fatigue and Fracture Mechanics	4
Advanced Finite Element Analysis	5
Elective - I	3-5
Elective - II	3-5

I Year II Semester

Course Title	C
Research Methods	3
Employment Orientation Program (EOP)	2
Computer Aided Design	5
Mechanical Vibrations	5
Design Synthesis	4
Optimization Techniques	4
Elective - III	3-5
Elective - IV	3-5

II Year

Course Title	C
I Semester	
Project/ Internship Phase - I	15
II Semester	
Project/ Internship Phase - II	15

Department Electives

Course Title	C
Mechanics of Composite Materials	5
Pressure Vessel Design	4
Theory of Plasticity	4
Design and Metallurgy of Welded Joints	5
Reliability Engineering	5
Industrial Hydraulics and Pneumatics	5
Computational Fluid Dynamics	3
Industrial Tribology	4
Gear Engineering	4
Experimental Stress Analysis	4
Nano Technology	4
Condition Monitoring & Fault Diagnosis of Machines	4

Courses under Choice Based Credit System are highlighted in the structure

Signature of HoD

List of Courses where Theory integrated with Lab

S.No	Year	Title of the Course
1	I	Advanced Mechanics of Solids
2	I	Advanced Finite Element Analysis
3	I	Computer Aided Design
4	I	Mechanical Vibrations
5	I	Mechanics of Composite Materials
6	I	Design and Metallurgy of Welded Joints
7	I	Industrial Hydraulics and Pneumatics
8	I	Computational Fluid Dynamics

Chairman, BoS

List of courses that enable employability or entrepreneurship or Skill development in the R-17 M.Tech – Machine Design

S.No	Year	Semester	Course Name	Course Type
1	I	I	Advanced Mechanisms	Skill development
2	I	I	Advanced Mechanics of Solids	Skill development
3	I	I	Creep, Fatigue & Fracture Mechanics	Skill development
4	I	I	Advanced Finite Element Analysis	Skill development
5	I	II	Computer Aided Design	Employability
6	I	II	Mechanical Vibrations	Employability
7	I	II	Design Synthesis	Skill development
8	I	II	Optimization Techniques	Skill development
9	I	I/ II	Mechanics of Composite materials	Skill development
10	I	I/ II	Pressure Vessel Design	Skill development
11	I	I/ II	Theory of Plasticity	Skill development
12	I	I/ II	Reliability Engineering	Skill development
13	I	I/ II	Industrial Hydraulics & Pneumatics	Employability
14	I	I/ II	Computational Fluid Dynamics	Employability
15	I	I/ II	Industrial Tribology	Employability
16	I	I/ II	Gear Engineering	Employability
17	I	I/ II	Experimental Stress Analysis	Skill development
18	I	I/ II	Nano Technology	Skill development
19	I	I/ II	Condition Monitoring & Fault Diagnosis of Machines	Skill development
20	I	I/ II	Design and Metallurgy of Welded Joints	Employability
21	II	I	Project Phase – I	Employability
22	II	I	Internship Phase – I	Employability
23	II	II	Project Phase – II	Employability
24	II	II	Internship Phase - II	Employability

Signature of HoD

APPENDIX - II

List of new courses in the R-17

M.Tech – Machine Design Curriculum

S.No	Year	Semester	Course Name
1	I	I	Advanced Mechanisms
2	I	I	Advanced Mechanics of Solids
3	I	I	Creep, Fatigue & Fracture Mechanics
4	I	I	Advanced Finite Element Analysis
5	I	II	Computer Aided Design
6	I	II	Mechanical Vibrations
7	I	II	Design Synthesis
8	I	II	Optimization Techniques
9	I	I/ II	Mechanics of Composite materials
10	I	I/ II	Pressure Vessel Design
11	I	I/ II	Theory of Plasticity
12	I	I/ II	Reliability Engineering
13	I	I/ II	Industrial Hydraulics & Pneumatics
14	I	I/ II	Computational Fluid Dynamics
15	I	I/ II	Industrial Tribology
16	I	I/ II	Gear Engineering
17	I	I/ II	Experimental Stress Analysis
18	I	I/ II	Nano Technology
19	I	I/ II	Condition Monitoring & Fault Diagnosis of Machines
20	I	I/ II	Design and Metallurgy of Welded Joints
21	II	I	Project Phase – I
22	II	I	Internship Phase – I
23	II	II	Project Phase – II
24	II	II	Internship Phase - II

Signature of HoD