



**JSPM's**  
**RAJARSHI SHAHU COLLEGE OF ENGINEERING**  
**TATHAWADE, PUNE-33**  
(An Autonomous Institute Affiliated to Savitribai Phule Pune  
University, Pune)



## **DEPARTMENT OF MECHANICAL ENGINEERING**

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**Department of Mechanical Engineering**  
**Final Year B. Tech. Structure**  
**(2019 Pattern)**

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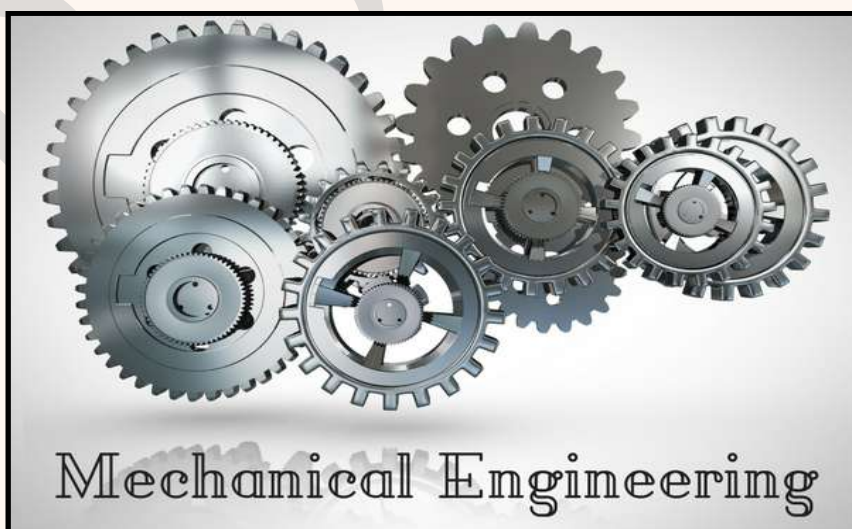
## DEPARTMENT OF MECHANICAL ENGINEERING

### Vision

To be regionally, nationally and internationally recognized **center of excellence** in all fields of Mechanical Engineering education where the best of teaching- learning, state-of-art **research** and **consultancy** synergize

### Mission

- To inculcate basic Mechanical Engineering knowledge to students through effective **teaching-learning practices**.
- To encourage students for **higher studies, research** and **entrepreneurship**.
- To cater the needs of **society** in context of Mechanical Engineering



Dr. R.R. Arakerimath  
BOS Chairman (Mechanical)

Dr. Ram Joshi  
Dean Academics



Dr. R. K. Jain  
Director RSCOE, Pune



### Unique Features of the Curriculum

**1. Curriculum centered at Outcome Based Education:**

The new Curriculum is based on student-centered instruction models that focus on measuring student performance through outcomes. The outcomes include subject knowledge, industry required skills and attitudes.

**2. Emphasize on Fundamentals:**

The nature of the new curriculum is rigorous and well prescribed so that the students can spend more time on preparation and self-study. The students have to learn core subjects, solve practical based assignments and must attempt periodical quizzes. This will benefit them to grasp and keep a strong hold on fundamentals of Engineering in the most effective way.

**3. Experiential Learning:**

The curriculum emphasizes on hands-on sessions along with theoretical information. The new curriculum considers Problem Based Learning (PBL) as a teaching pedagogy and includes different subjects that encourage the students for hands on learning through virtual labs, mini-projects, etc. Accordingly, the curriculum maintains good balance between theory and laboratory credits.

**4. Promote Creativity and Innovation:**

Along with experiential learning, the curriculum also motivates the students to inculcate creativity and innovation. Apart from conventional lab, the curriculum provides a freedom for students to perform industry assignments, pilot projects, innovative development, etc.

**5. Inculcating Ethics and Values:**

To improvise student's behaviour, the curriculum has included systematic courses on ethics and values. The moral principles can help students to make right decisions, lead their professional lives and become ethical citizen.

**6. Blend of Curricular and Extracurricular Activities**

The curriculum also gives importance of different activities like co-curricular, extra-curricular, sports, culture, etc. This will help to do all round development of students in all possible ways.

**7. Four Tracks in B-Tech:**

By offering various courses/electives, flexibility in choosing work in specified field as:

I. Industry Internship

II. Entrepreneur

III. Higher Studies and Research

IV. Capstone Project



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**S. Y. B. Tech (Mechanical Engineering)**  
**Semester -III**

Course Code	Course	Teaching Scheme			Semester Examination Scheme of Marks						Credits
		TH	TU	LAB	Theory			TW	LAB	TOTAL	TOTAL
					ISE (15)	MSE (25)	ESE (60)				
ME2101	Material Science & Engineering	3	0	2	15	25	60	-	25	125	4
EL2124	Electrical Technology	3	0	2	15	25	60	-	25	125	4
ES2102	Engineering Mathematics -III	3	1	0	15	25	60	25	-	125	4
ME2102	Strength of Materials	3	1	2	15	25	60	25	25	150	5
ME2103	Engineering Thermodynamics	3	0	2	15	25	60	-	25	125	4
ME2104 OR HS2101/ HS2102/ HS2103/ HS2109	Engineering Design & Innovation-I OR Language Proficiency-II : English/ German/ Japanese French	0	0	2	-	-	-		25	25	1
HS2104	Human Values and Ethics	0	0	2	-	-	-		25	25	1
	Audit Course- I										-
Total of Semester-III		15	02	12	75	125	300	50	150	700	23

Audit Course Code	Audit Course Title
EL2106C	Innovation Tools and Methods for Entrepreneurs
EC2107A	Intellectual Property Rights and Patents
CE2106B	Road Safety Management
ME2105D	Online Certification

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**S. Y. B. Tech (Mechanical Engineering)**  
**Semester -IV**

Course Code	Course	Teaching Scheme			Semester Examination Scheme of Marks						Credits
		TH	TU	LAB	Theory			TW	LAB	TOTAL	TOTAL
					ISE (15)	MSE (25)	ESE (60)				
ES2107	Engineering Mathematics-IV	4	1	0	15	25	60	25	-	125	5
ME2106	Manufacturing Process-I	3	0	4	15	25	60	-	50	150	5
ME2107	Fluid Mechanics	3	1	2	15	25	60	25	25	150	5
ME2108	Theory of Machines & Machinery	3	1	2	15	25	60	25	25	150	5
ME2109	Product Development & Modeling Lab	0	0	2	-	-	-	-	50	50	1
ME2104 OR HS2101/ HS2102/ HS2103/ HS2109	Engineering Design & Innovation-I OR Language Proficiency-II : English/ German/ Japanese French	0	0	2	-	-	-	-	25	25	1
ME2110	Interpersonal Skills (Soft Skills)	0	0	2	-	-	-	-	50	50	1
	Audit Course- II										-
Total of Semester-IV		13	03	14	60	100	240	75	225	700	23

Audit Course Code	Audit Course Title
HS2107	Engineering Economics
HS2108	Indian Traditional Knowledge
ME2111C	Innovations in Agriculture Engineering
ME2111D	Online Certification

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