

Charotar University of Science & Technology  
C.S. Patel Institute of Technology  
Department of Mechanical Engineering

Academic Year: 2018-19

Date: 03/07/2019

Feedback Analysis Report of Stakeholders on Curriculum

Feedback of Students:

1. Project based learning should be implemented.
2. More software should be taught in subjects.
3. More industrial visit should be added.
4. Project & Dissertation credit should be increased.
5. More elective should be implemented in final year.
6. 3D printing should be included in syllabus.

Feedback of Employers:

1. Industrial visit should be organized regularly.
2. Skill based practical work should be included in syllabus.
3. Additive manufacturing should be planned for the master's programs at university level for various domains.
4. Communication skill and soft skills of the students should be enhanced.
5. More inclination should be towards the operating skills of the mechanical equipment is required.
6. Separate subject should be designed for Metal Casting.

Feedback of Alumni:

1. Add emission norms BS2, BS 3, BS 4, BS 5, BS 6 in the IC engine subject.
2. Advanced Industrial Management techniques to be added in the curriculum.
3. For research and development, software's used in industry should be included in engineering.

Feedback of Teachers:

1. Industrial exposure and internship should be included in syllabus.
2. More emphasis should be given to control & automation.

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**Charotar University of Science & Technology**  
**C.S. Patel Institute of Technology**  
**Department of Mechanical Engineering**

3. Addition of more case studies and practical based analysis can be helpful for real time application.
4. More experimental setup provides for lab session and numerical practice required Computational Methods to be incorporated.



Dr. Vijay Chaudhary,

Professor & Head, MED, CSPIT



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**Charotar University of Science & Technology**  
**C.S. Patel Institute of Technology**  
**Department of Mechanical Engineering**

**Year: 2018-19**

**Action taken report on feedback of Stakeholders on Curriculum**

1. Department have started offering number of electives throughout the B.Tech programme. (Annexure I)
2. Department have been developing laboratories with modern equipment's to enhance the practical knowledge or students.
3. Department have purchased the range of technical software to the nurture technical skills of the students in the field of Mechanical design.
4. Course content of Mechanisms & Machines and Dynamics of Machines are revised in B.Tech programme. (Annexure I)
5. Credits of Project Phase-II is increased.
6. New elective subjects have been introduced in Final year B.Tech programme. (Annexure I)
7. Certain topics like cooling load calculation, refrigeration system components, combined loading situations in machine parts amended in the curriculum based on the suggestions given by academic experts. (Annexure I)
8. Course content in Engineering Graphics was revised. (Annexure I)
9. Faculties are advised to conduct remedial classes for students who face difficulty in particular subject.



Dr. Vijay Chaudhary,

Professor & Head, MED, CSPIT

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# Annexure I

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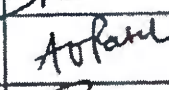
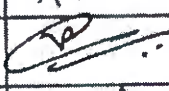
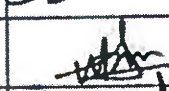


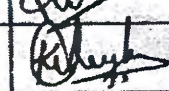
CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY  
CHARUSAT CAMPUS, CHANGA

**CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY (CHARUSAT)**  
**FACULTY OF TECHNOLOGY & ENGINEERING**  
**Department of Mechanical Engineering**

Aug. 31, 2019

The meeting of the Board of Studies, Mechanical Engineering, Faculty of Technology and Engineering, Charotar University of Science and Technology (CHARUSAT) was held at August 31, 2019.

Following members were present:

Sr. No	Members/Invitee		Signature
1.	Dr. P M George	Professor, Mechanical Engineering Department, BVM Engg. College, V. V. Nagar	
2.	Dr. Vikas J Lakhera	Professor, Mechanical Engineering Department, Nirma University, Ahemdabad	
3.	Dr. Piyush Gohil	Associate Professor, Mechanical Engineering Department, M S University - Baroda	
4.	Mr. Sambhaji D. Kudale	Sr. Manager, Corporate Internal Audit, JSW Steel Limited, Mumbai	
5.	Dr. A D Patel	Professor, Department of Mechanical Engineering, CSPIT	
6.	Dr. Vijay Chaudhary	Head, Department of Mechanical Engineering, CSPIT	
7.	Dr. Mayur Sutaria	Associate Professor, Department of Mechanical Engineering, CSPIT	
8.	Dr. Dattatraya Subhedar	Assistant Professor, Department of Mechanical Engineering, CSPIT	
9.	Dr. Gajanan Patange	Assistant Professor, Department of Mechanical Engineering, CSPIT	
10.	Dr. Kamlesh Chauhan	Assistant Professor, Department of Mechanical Engineering, CSPIT	

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 CHARUSAT CAMPUS, CHANGA

**Minutes – Meeting of Board of Studies**  
**CHAMOS Matrusanstha Department of Mechanical Engineering**

**Date : August 31, 2019, Saturday**

**Time : 10:00 am**

**Venue : Department of Mechanical Engineering, CSPIT, CHARUSAT Campus**

The meeting of the Board of Studies, Mechanical Engineering, Faculty of Technology and Engineering, Charotar University of Science and Technology (CHARUSAT) was held as per schedule.

Following members were present:

1.	Dr. Vijay Chaudhary	<b>Chairman;</b>	Associate Professor & Head, Department of Mechanical Engineering, CSPIT
2.	Dr A D Patel	<b>Member;</b>	Professor, Department of Mechanical Engineering, CSPIT
3.	Dr. Mayur Sutaria	<b>Member;</b>	Associate Professor, Department of Mechanical Engineering, CSPIT
4.	Dr. Gajanan Patange	<b>Member;</b>	Assistant Professor, Department of Mechanical Engineering, CSPIT
5.	Dr. Kamlesh Chauhan	<b>Member;</b>	Assistant Professor, Department of Mechanical Engineering, CSPIT
6.	Dr. P M George	<b>Member;</b>	Professor, Mechanical Engineering Department, BVM Engg. College, Vallabh Vidyanagar
7.	Dr. Piyush Gohil	<b>Member;</b>	Associate Professor, Mechanical Engineering Department, M S University - Vadodara
8.	Dr. Vikas J Lakhera	<b>Member;</b>	Professor, Mechanical Engineering Department, Nirma University - Ahemdabad
9.	Mr. Sambhaji D. Kudale	<b>Member;</b>	Sr. Manager, Corporate Internal Audit, JSW Steel Limited, Mumbai

**Initiation:**

Chairman welcomed all the members of Board of Studies. The minutes of the fourteenth Board of Studies meeting held on July 28, 2018 was summarized.

**Agenda, Proceeding & Resolutions:-**

**Item – 16.01: For Discussion;** To approve the teaching and examination scheme for all the semesters of B Tech program and detailed syllabus of 1<sup>st</sup> & 2<sup>nd</sup> year with CBCS scheme effective from 2019-20 batch.

### Proceedings – 16.01:

Teaching and examination scheme for all the semesters of B Tech program is discussed in detail. Total credits of B Tech Mechanical Engineering program is revised to 176.

Following revisions in B Tech program are proposed:

- In 1<sup>st</sup> year, teaching scheme and content of 'Engineering Graphics', 'Basics of Civil & Mechanical Engineering', 'Basics of Electronics & Electrical Engineering', 'Engineering Mathematics-II' and 'Elements of Engineering' courses are revised.
- In 2<sup>nd</sup> year, teaching scheme and content of 'Mechanisms & Machines' and 'Dynamics of Machines' courses are revised.
- In 2<sup>nd</sup> year, following two additional university elective courses are introduced for B Tech programs:
  - 1) PD261: Astrophysics, Space and Cosmos-1 (For UG Semester-3)
  - 2) PD262: Astrophysics, Space and Cosmos-2 (For UG Semester-4)
- In 3<sup>rd</sup> & 4<sup>th</sup> year, comprehensive and contemporary elective courses are introduced for providing more choices to the students.
- Courses on Entrepreneurship, Constitution of India, IPR, Waste Management, and Safety can be introduced as university elective.
- In 4<sup>th</sup> year, provision of full semester 'Project' is introduced to have better industry exposure.

### Resolution - 16.01:

The suggested changes are incorporated in the teaching scheme and syllabus for 1<sup>st</sup> & 2<sup>nd</sup> year B Tech CBCS courses effective from 2019-20 intake and attached as an Annexure-I.

**Item – 16.02: For Discussion;** To approve the teaching scheme and syllabus for third year of B Tech program with CBCS scheme effective from 2018-19 batch.

### Proceedings – 16.02:

Teaching scheme & syllabus for third year of B Tech program is discussed in detail. In 5<sup>th</sup> semester, practical hours for the elective course 'Instrumentation & Control' are incorporated.

### Resolution – 16.02:

The suggested changes are incorporated in the teaching scheme and syllabus for third year of B Tech program with CBCS scheme effective from 2018-19 batch and attached as an Annexure-II.

**Item – 16.03: For Discussion;** To approve the teaching scheme for all the semesters of M Tech (CBCS) programs effective from 2019-20 batch.

### Proceedings – 16.03:

Teaching and examination scheme for all the semesters of M Tech programs is discussed in detail. A total credit of M Tech Engineering programs is revised to 90.

Following revisions in M Tech programs (CAD/CAM, Advanced Manufacturing Technology & Thermal Engineering) are proposed:

- In 4<sup>th</sup> semester, credit of course 'Project Phase - II' is revised to 18 for all M Tech programs.
- In 1<sup>st</sup> year, following two additional university elective courses are introduced for M Tech programs:
  - 1) PD261: Astrophysics, Space and Cosmos-1 (For PG Semester-1)

- 2) PD262: Astrophysics, Space and Cosmos-2 (For PG Semester-2)
- In 1<sup>st</sup> semester, a program elective course on 'Industry 4.0 & Industrial IoT' is introduced in M Tech CAD/CAM and M Tech Advanced Manufacturing Technology.

**Resolution – 16.03:**

The suggested changes are incorporated in the teaching and examination scheme of M Tech programs effective from 2019-20 batch and attached as an Annexure-III.

**Item – 16.04: For Discussion;** To approve the PhD synopsis of research scholars.

**Proceedings – 16.04:**

Department of Mechanical Engineering, Faculty of Technology & Engineering has received following synopsis of research scholar during 2018-19.

Sr. No	Research Scholar	Research Topic
1	Jagdish S Talpada (12DRME015)	Experimental & numerical analysis of solar powered absorption refrigeration system using nano-refrigerant and organic liquid.
2	Patel Dipal M (14DRME010)	Mechanical design, fabrication and characterization of Magnetorheological fluid based damper
3	Ayar Vivek S (16DRME001)	Investigation on AlSi5Cu3/TiB2 composites: process parameters and heat treatment
4	Patel Jaksankumar D (14DRME002)	Optimization of wire cut EDM process parameter using multi criteria decision method.
5	Sagar R Choksi (13DRME005)	Mechanical characterization & modelling of unidirectional fiber reinforced polymeric composites.

Synopsis & panel of referees of research scholars are placed before the BoS members.

**Resolution – 16.04:**

Board of Studies members approved the synopsis & panel of referees of Research Scholar(s) for further process.

**Item – 16.05: For Discussion;** Additional item(s) – Review of University Exam Question Papers, Placement Records, Result Analysis, Preparation related to NBA & NAAC, and Innovation in Pedagogy.

**Proceedings & Resolution – 16.05:**

**Review of University Exam Question Papers:**

Quality Assessment of University Exam Question Papers is carried out by following measures.

- Mapping of questions with course outcomes.
- Bloom's Taxonomy while drawing the question papers.
- Attainment of course outcomes are analyzed after each examination.
- Evaluation of the question paper also involves parameters like clarity of question paper, grammar with language, syllabus coverage, and overall quality.

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Members discussed about deviation in marks observed from predefined marks as per weightage of the units/topics in the university exam question papers. Question papers analysis report is attached herewith as an Annexure IV.

Members agrees that in the university exam question paper, around 10% deviation in marks as compared to predefined marks as per weightage of the units/topics in the course syllabus is allowed to account for uncertainty and to facilitate flexibility.

#### **Placement Records:**

Placement statistics & packages offered for 2018-19 batch were presented (Annexure V). To enhance the training and placement activities, aptitude test and mock practice of campus drive are being conducted for students. In addition, 'Summer Internship' for the student is made mandatory at the end of the 4<sup>th</sup> & 6<sup>th</sup> semester; during semester break. It will include report writing and presentation on industrial training underwent by the student.

Institute-industry interaction needs to be improved for enhancing training and placement activities and each faculty member is being involved in the institute-industry interaction.

#### **Result Analysis:**

Results of academic year 2018-19 was presented (Annexure VI). The members deliberated on the courses having more than 10% failure. Following suggestions were given to improve the results in future.

Members suggested that assignments/tutorials containing numerical and analytical questions should be provided to the students. Continuous Evaluation of the students can be done by taking quiz's, unit tests, seminars, group activities etc. to evaluate their conceptual understanding and analytical skills. Analysis and feedback of make-up and remedial classes to improve the performance of students can be carried out to strengthen the same. A bridge course for Diploma to Degree students can be introduced to improve the performance of students.

#### **Preparation related to NBA & NAAC Status:**

Department has submitted NBA Self Assessment Report (SAR) for Tier - II for re-accreditation in October 2018. Being a state university we have to apply for NBA in Tier - I, hence its preparation is ongoing. The department conducted self-evaluation for NAAC criteria and areas of improvements are identified.

#### **Pedagogy:**

Classroom & Laboratory presentations, Mini projects, Group discussion, Online test, Quiz etc. was introduced as a part of continuous evaluation system. Faculties are enrolled as a mentor for many SWAYAM/NPTEL online courses to help the students. In addition, use of ICT and Google Classrooms for learning is integrated in regular classes.

*The meeting ended with a vote of thanks by the Chairman.*

  
Dr. Vijay Chaudhary  
Chairman

Date: 31/08/2019

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Minutes BoS Meeting