

Ref. No. PU/SoE/MEC/BOS-09/2018-19/CIR01

Date: 22nd April, 2019

9th BOS MEETING NOTICE

The 9th Board of Studies (BOS) meeting of the Department of Mechanical Engineering is scheduled on Saturday, 4th May, 2019, at 10:00 AM in the University campus, Bengaluru. You are hereby requested to attend the meeting.

The agenda for the meeting is:

MEC 9.1 Approval of the minutes of the 8th Board of Studies meeting

MEC 9.2 Approval of the Action Taken Report, if any

MEC 9.3 Review and approval of the modifications in the B. Tech. Program Regulations and Curriculum for the 2018-2022, 2017-2021 and 2016-2020 batches

MEC 9.4 Introduction and approval of the B. Tech. Program Regulations and Curriculum for the 2019-2023 batch

MEC 9.5 Deliberation and approval of changes in the list of Discipline and Open Elective Courses

MEC 9.6 Introduction and approval of the Program Regulations and Curriculum for the New M. Tech. Program in 'Product Design and Development'

MEC 9.7 Approval of the list of MOOC Courses-NPTEL/SWAYAM that are offered as Discipline Elective and Open Elective Courses for the 2018-2022, 2017-2021 and 2016-2020 batches

MEC 9.8 Approval of the list of Examiners

MEC 9.9 Any other matter with the permission of the Chairperson

M. U. Raw
Chairperson 22/4/19

(Dr. Udaya Ravi M.)
BOS-MEC Committee

Copy to:

- Pro-Chancellor, PU
- Registrar, PU
- Dean-SoE, PU
- Members of the Board of Studies listed in the table below.
- Vice-Chancellor, PU
- Pro-Vice-Chancellor, PU
- Dean-Academics, PU

Minutes of the 9th Meeting of Board of Studies (Mechanical Engineering - BOS - MEC)

The 9th meeting of the Board of Studies (BOS) of the Department of Mechanical Engineering was held today, 4th May, 2019, at 10:00 AM in Room No. MG-10, Presidency University.

The following members were present.

| Sl. No. | Name | Designation with Affiliation | Status |
|---------|--------------------------|--|---------------------------|
| 1 | Dr. Udaya Ravi M. | Professor and HoD-MEC SoE, PU, Bengaluru | Chairperson Ex-Officio |
| 2 | Dr. C. Prabhakar Reddy | Dean and Professor SoE, PU, Bengaluru | Member |
| 3 | Dr. A. M. Surendra Kumar | CoE and Professor SoE, PU, Bengaluru | Member |
| 4 | Dr. C. S. Ramesh | Dean R & I and Professor SoE, PU, Bengaluru | Member |
| 5 | Dr. Joel Hemanth | Assoc. Dean and Prof. SoE, PU, Bengaluru | Member |
| 6 | Dr. B. V. Prabhu | Assoc. Dean and Prof. SoE, PU, Bengaluru | Member |
| 7 | Dr. D. Ramesh Rao | Professor SoE, PU, Bengaluru | Member |
| 8 | Dr. Bhaskar Pal | Professor SoE, PU, Bengaluru | Member |
| 9 | Dr. Akshay Nanjangud | Associate Professor SoE, PU, Bengaluru | Member |



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| Sl. No. | Name | Designation with Affiliation | Status |
|---------|-------------------------|--|---|
| 10 | Dr. Ramesh S. P. | Associate Professor SoE, PU, Bengaluru | Member |
| 11 | Dr. G. N. Lokesh | Associate Professor SoE, PU, Bengaluru | Member |
| 12 | Dr. Ramachandra C. G. | Associate Professor SoE, PU, Bengaluru | Member |
| 13 | Dr. Satish Babu Boppana | Associate Professor SoE, PU, Bengaluru | Member |
| 14 | Dr. Sadashiva Prabhu | Assistant Professor SoE, PU, Bengaluru | Internal Member (Nominated by the VC within the Department) |
| 15 | Dr. B. S. Praveen Kumar | Assistant Professor SoE, PU, Bengaluru | Internal Member (Nominated by the VC within the Department) |
| 16 | Mr. Santosh M. B. | Assistant Professor Civil Engineering SoE, PU, Bengaluru | Internal Member (Nominated by the VC from a Sister Department) |
| 17 | Dr. Deepjyoti Mech | Assistant Professor Petroleum Engineering SoE, PU, Bengaluru | Internal Member (Nominated by the VC from a Sister Department) |

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| Sl. No. | Name | Designation with Affiliation | Status |
|---------|----------------------|--|-------------------------------|
| 18 | Dr. Mahesha K. | Professor SoE, PU, Bengaluru | Special Invitee |
| 19 | Dr. Ramesh S. Sharma | Professor Mechanical Engineering R. V. College of Engineering Bengaluru rameshssharma@rvce.edu.in Phone: +91 9880702543 | External Member (Academic) |
| 20 | Dr. Ashitava Ghosal | Professor Mechanical Engineering IISc, Bengaluru asitava@mecheng.iisc.ernet.in Phone: +91 9740395571 | External Member (Academic) |
| 21 | Mr. R. M. Bhat | Sr. Executive – HR, L & T Construction Equipment Limited, Sy. No. 27 & 28, Thammshettihalli Village, Doddaballapur bhatrm_b@rediffmail.com Phone: +91 9986504029 | External Member (Industry) |
| 22 | Mr. Aravinda T. | Assistant Professor SoE, PU, Bengaluru | Member Secretary |

The following members were given leave of absence.

| Sl. No. | Name | Affiliation | Status |
|---------|---------------------------|---------------------------------|-----------------|
| 1 | Dr. Rajendrakumar Savanur | Professor SoE, PU, Bengaluru | Special Invitee |

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The Chairperson welcomed the members of the Board of Studies in Mechanical Engineering and two special invitees, Mr. Salman Ahmed, Vice President, Presidency University, and Ms. Nafeesa Ahmed, Director, Presidency Group of Institutions.

Agenda MEC 9.1: Approval of the Minutes of the 8th Board of Studies Meeting.

The minutes of the 8th meeting of the Board of Studies of the Department of Mechanical Engineering held on January 12, 2019, were placed before the members and the same were approved.

Agenda MEC 9.2: Approval of the Action Taken Report, If Any.

There were no items that needed actions from the 8th Board of Studies meeting. So there was no requirement for such a report. Hence, there is no Action Taken Report.

Agenda MEC 9.3: Review and Approval of the Modifications in the B. Tech. Program Regulations and Curriculum for the 2018-2022, 2017-2021 and 2016-2020 Batches.

The Chairperson presented the modifications in the Program Regulations and Curriculum (appended as Annexure 9.3) to the members. The modifications were the shifting of elective courses so that the final semester only has PIP 102 Professional Practice-II. This would give students an entire semester to undergo internships in industries or work on projects in the University. The members discussed and approved the modifications.

Resolution: The members resolved that the modifications to the Program Regulations and Curriculum for the three batches for the Academic Year 2019-2020 and thereafter be approved.

Agenda MEC 9.4: Introduction and Approval of the B. Tech. Program Regulations and Curriculum for the 2019-2023 Batch.

The Chairperson presented the Program Regulations and Curriculum for the 2019-2023 batch (appended as Annexure 9.4) to the members. The members discussed and approved the same.

Resolution: The members resolved that the Program Regulations and Curriculum for the 2019-2023 batch be approved for the Academic Year 2019-2020 and thereafter.

Agenda MEC 9.5: Deliberation and Approval of Changes in the List of Discipline and Open Elective Courses.

The Chairperson proposed the addition of three Discipline Elective Courses and two Open Elective Courses. The Discipline Elective Courses proposed were Advanced Metal Cutting, Additive Manufacturing and



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Advanced Technical Drawing. The Open Elective Courses proposed were Design of Automatic Control Systems and Hybrid Electric Vehicle Design. The Chairperson presented the syllabus and other details of the courses (appended in Annexure 9.5) to the members. The deliberations of the members are as follows.

The members made the following suggestions for the course Advanced Metal Cutting. Dr. Ashtitava Ghosal suggested the course include the challenges inherent in the cutting of very hard metals like titanium. He and Dr. Ramesh C. S. suggested the inclusion of the topic high speed machining.

Dr. Ashitava Ghosal and Dr. Ramesh C. S. opined that the course Advanced Technical Drawing is very similar to a first course on Computer Aided Machine Drawing. So the contents of the course need to be revisited before its inclusion as a Discipline Elective Course.

The members felt that the course Additive Manufacturing can be offered as an Open Elective Course with the following modifications. Dr. Ramesh C. S. and Dr. Bhaskar Pal suggested that it include topics on reverse engineering and scanning techniques using lasers.

Design of Automatic Control Systems was accepted as an Open Elective Course by the members without any changes.

The final course that was discussed is Hybrid Electric Vehicle Design. Dr. Ramesh C. S. suggested that the various materials used in the design and manufacturing of hybrid electric vehicles be included. Dr. C. Prabhakar Reddy opined that the Open Elective Course Automotive Vehicles be made a prerequisite for this course. All the members felt that the course include the study of drives and transmission systems used in hybrid electric vehicles.

Resolution: The members approved the inclusion of Design of Automatic Control Systems as an Open Elective Course for the 2019-2023, 2018-2022 and 2017-2021 batches. They felt that the other courses can be discussed further in the next Board of Studies meeting before inclusion.

Agenda MEC 9.6: Introduction and Approval of the Program Regulations and Curriculum for the New M. Tech. Program in 'Product Design and Development' for the 2019-2021 Batch.

The Chairperson presented the Program Regulations and Curriculum for the new M. Tech. Program in 'Product Design and Development' for the 2019-2021 batch (appended as Annexure 9.6) to the members. The members discussed the same. Dr. Ashitava Ghosal made three suggestions with the regard to the courses in the M. Tech. Program. The first of these was to replace the course Advanced Numerical Methods with a course on Linear Algebra because the latter is more relevant to an M. Tech. in Product Design and Development. The second suggestion was to include a Core Course on Computer Aided Design so that



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students learn how to use computational tools to design and develop a product. His third suggestion was to include a Core Course on the manufacturing techniques relevant to today's manufacturing industries. All the members agreed with Dr. Ghosal's suggestions.

Resolution: The members resolved that the Program Regulations and Curriculum for the new M. Tech. Program for the 2019-2021 batch for the Academic Year 2019-2020 and thereafter be approved with the changes suggested by Dr. Ghosal.

Agenda MEC 9.7: Approval of the List of MOOC Courses via SWAYAM-NPTEL Offered as Discipline and Open Elective Courses for the 2018-2022, 2017-2021 and 2016-2020 Batches.

The Chairperson presented the list of Discipline and Open Elective Courses proposed by the Department of Mechanical Engineering from SWAYAM-NPTEL (appended in Annexure 9.7) to the members. The committee discussed the list of courses.

Resolution: The members resolved that the list of courses be approved as Discipline and Open Elective Courses for the 2018-2022, 2017 2021 and 2016-2020 batches.

Agenda MEC 9.8: Approval of the List of Examiners.

The Chairperson presented the list of Examiners to the members of the Board of Studies.

Resolution: The members approved the list of Examiners.

Agenda MEC 9.9: Any Other Matter with the Permission of the Chairperson.

The members of the BOS made the following comments.

Dr. Ashitava Ghosal, Professor, Indian Institute of Science, congratulated the university on its progress and suggested that courses be designed in a way to encourage deep learning with the use of mathematical techniques and computational tools.

Mr. R. M. Bhat, the External Member from the Industry, and Dr. Ramesh S. Sharma, Professor, R. V. College of Engineering, complimented the university's progress and commitment to academics. Dr. Ramesh S. Sharma added that the BOS meetings have always been conducted in an "exemplary manner."

Mr. Salman Ahmed, Vice President, Presidency University, congratulated the Department of Mechanical Engineering on its progress. He said that he found the students and faculty members of the Department of Mechanical Engineering to be the most interactive and "full of ideas." He made a special mention of the Head of the Department of Mechanical Engineering for leading the team efficiently.



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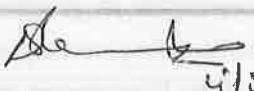
As BOS meetings of all the Departments are taking place simultaneously in different venues today, the Chairperson requested approval from the committee to incorporate modifications/alterations, if any, approved by the BOS committee of other Departments for the existing batches in Mechanical Engineering by other departments. The BOS Committee for Mechanical Engineering has approved the proposal unanimously.

The BOS Committee authorised the BOS Chairperson and the Sub-Committee consisting of the Internal Members of the Board of Studies of Mechanical Engineering to incorporate minor corrections/edits, if required.

The BOS Chairperson has conveyed that the decisions taken during the 9th meeting of BOS for Mechanical Engineering will be implemented for 2018-2022, 2017-2021 and 2016-2020 batches.

The meeting ended with Vote of Thanks by the Member Secretary.

BOS Committee:

| Sl. No. | Name | Status | Signature with Date |
|---------|--------------------------|---------------------------|---|
| 1 | Dr. Udaya Ravi M. | Chairperson Ex-Officio |  4/5/19 |
| 2 | Dr. C. Prabhakar Reddy | Member |  4/5/19 |
| 3 | Dr. A. M. Surendra Kumar | Member |  |
| 4 | Dr. C. S. Ramesh | Member |  4/5/2019 |
| 5 | Dr. Joel Hemanth | Member |  |
| 6 | Dr. B. V. Prabhu | Member |  |
| 7 | Dr. D. Ramesh Rao | Member |  4/5/19 |

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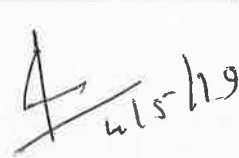

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| Sl. No. | Name | Status | Signature with Date |
|---------|-------------------------|---|---|
| 8 | Dr. Bhaskar Pal | Member |  4/5/19 |
| 9 | Dr. Akshay Nanjangud | Member |  04-05-19 |
| 10 | Dr. Ramesh S. P. | Member |  04-05-19 |
| 11 | Dr. G. N. Lokesh | Member |  4/5/19 |
| 12 | Dr. Ramachandra C. G. | Member |  4/5/19 |
| 13 | Dr. Satish Babu Boppana | Member |  4/5/19 |
| 14 | Dr. Sadashiva Prabhu | Internal Member (Nominated by the VC within the Department) |  4/5/19 |
| 15 | Dr. B. S. Praveen Kumar | Internal Member (Nominated by the VC within the Department) |  4/5/19 |
| 16 | Mr. Santosh M. B. | Internal Member (Nominated by the VC from a Sister Department) |  4/5/19 |
| 17 | Dr. Deepjyoti Mech | Internal Member (Nominated by the VC from a Sister Department) |  4/5/19 |

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| Sl. No. | Name | Status | Signature with Date |
|---------|---------------------------|-------------------------------|---------------------|
| 18 | Dr. Mahesha K. | Special Invitee | |
| 19 | Dr. Rajendrakumar Savanur | Special Invitee | ABSENT |
| 20 | Dr. Ramesh S. Sharma | External Member (Academic) | 04/05/19. |
| 21 | Dr. Ashitava Ghosal | External Member (Academic) | May 4, 2019 |
| 22 | Mr. R. M. Bhat | External Member (Industry) | 4/5/2019 |
| 23 | Mr. Aravinda T. | Member Secretary | |

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ANNEXURE MEC 9.4



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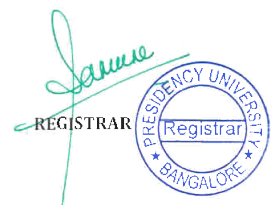
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Approved by AICTE, New Delhi

School of Engineering



Bachelor of Technology Degree
Program Regulations and Curriculum 2019-2023
B. Tech. (Mechanical Engineering)

2019-2023





PROGRAM STRUCTURE

BTech Mechanical Engineering 2019-23

| I SEM - PHYSICS CYCLE (Aug-Dec)# | | | | | | | | | |
|--|-------------|------------------------------------|------------------|----------|--|-----------|---------------|------------------|---------------------|
| S. NO. | COURSE CODE | COURSE NAME | CREDIT STRUCTURE | | | | CONTACT HOURS | TYPE OF SKILL | COURSE ADDRESSES TO |
| | | | L | T | P | CREDITS | | | |
| 1 | MAT 105 | Calculus and Linear Algebra | 3 | 1 | 0 | 4 | 4 | F ¹ | - |
| 2 | PHY 101 | Engineering Physics | 4 | 0 | 0 | 4 | 4 | F | - |
| 3 | EEE 101 | Elements of Electrical Engineering | 3 | 0 | 0 | 3 | 3 | P ² | - |
| 4 | CIV 101 | Elements of Civil Engineering | 3 | 0 | 0 | 3 | 3 | P | Env ⁴ |
| 5 | MEC 152 | Engineering Graphics | 2 | 0 | 4 | 4 | 6 | P | - |
| 6 | ENG 1XX | Humanities-I | 2 | 1 | 0 | 3 | 3 | F/E ³ | - |
| 7 | PHY 151 | Engineering Physics Lab | 0 | 0 | 2 | 1 | 2 | F | - |
| 8 | MEC 151 | Workshop Practice | 0 | 0 | 2 | 1 | 2 | P | - |
| 9 | PPS 105 | Building Self Confidence | 0 | 0 | 2 | 1 | 2 | E | - |
| TOTAL | | | 17 | 2 | 10 | 24 | 29 | | |
| ¹ Foundation Course ² Professional Skills | | | | | ³ Employability Skills ⁴ Environmental Issues | | | | |

| I SEM - CHEMISTRY CYCLE (Aug-Dec)# | | | | | | | | | |
|--|-------------|---|------------------|----------|-----------|-----------|---------------|---------------|---------------------------------|
| S. NO. | COURSE CODE | COURSE NAME | CREDIT STRUCTURE | | | | CONTACT HOURS | TYPE OF SKILL | COURSE ADDRESSES TO |
| | | | L | T | P | CREDITS | | | |
| 1 | MAT 105 | Calculus and Linear Algebra | 3 | 1 | 0 | 4 | 4 | F | - |
| 2 | CHE 101 | Engineering Chemistry | 4 | 0 | 0 | 4 | 4 | F | - |
| 3 | ECE 101 | Elements of Electronics Engineering | 3 | 0 | 0 | 3 | 3 | P | - |
| 4 | MEC 101 | Elements of Mechanical Engineering | 3 | 0 | 0 | 3 | 3 | P | - |
| 5 | CIV 102 | Environmental Science and Disaster Management | 3 | 0 | 0 | 3 | 3 | F | Env |
| 6 | ENG 1XX | Humanities-I | 1 | 0 | 2 | 2 | 3 | E | - |
| 7 | CSE 151 | Computer Programming | 2 | 0 | 4 | 4 | 6 | E | - |
| 8 | CHE 151 | Engineering Chemistry Lab | 0 | 0 | 2 | 1 | 2 | F | - |
| 9 | PPS 105 | Building Self Confidence | 0 | 0 | 2 | 1 | 2 | F | PE ⁵ /S ⁶ |
| TOTAL | | | 19 | 1 | 10 | 25 | 30 | | |
| ⁵ Professional Ethics ⁶ Sustainability Issues | | | | | | | | | |


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| II SEM - CHEMISTRY CYCLE (Jan-May)* | | | | | | | | | |
|-------------------------------------|-------------|--|------------------|----------|-----------|-----------|---------------|---------------|---------------------|
| S. NO. | COURSE CODE | COURSE NAME | CREDIT STRUCTURE | | | | CONTACT HOURS | TYPE OF SKILL | COURSE ADDRESSES TO |
| | | | L | T | P | CREDITS | | | |
| 1 | MAT 106 | Calculus, Differential Equations and Complex Variables | 3 | 1 | 0 | 4 | 4 | F | - |
| 2 | CHE 101 | Engineering Chemistry | 4 | 0 | 0 | 4 | 4 | F | - |
| 3 | ECE 101 | Elements of Electronics Engineering | 3 | 0 | 0 | 3 | 3 | P | - |
| 4 | MEC 101 | Elements of Mechanical Engineering | 3 | 0 | 0 | 3 | 3 | P | - |
| 5 | CIV 102 | Environmental Science and Disaster Management | 3 | 0 | 0 | 3 | 3 | F | Env |
| 6 | ENG 1XX | Humanities-II | 1 | 0 | 2 | 2 | 3 | E | - |
| 7 | CSE 151 | Computer Programming | 2 | 0 | 4 | 4 | 6 | E | - |
| 8 | CHE 151 | Engineering Chemistry Lab | 0 | 0 | 2 | 1 | 2 | F | - |
| 9 | PPS 106 | Effective Communication | 0 | 0 | 2 | 1 | 2 | F | PE/S |
| TOTAL | | | 19 | 1 | 10 | 25 | 30 | | |

| II SEM - PHYSICS CYCLE (Jan-May)# | | | | | | | | | |
|-----------------------------------|-------------|--|------------------|----------|-----------|-----------|---------------|---------------|---------------------|
| S. NO. | COURSE CODE | COURSE NAME | CREDIT STRUCTURE | | | | CONTACT HOURS | TYPE OF SKILL | COURSE ADDRESSES TO |
| | | | L | T | P | CREDITS | | | |
| 1 | MAT 106 | Calculus, Differential Equations and Complex Variables | 3 | 1 | 0 | 4 | 4 | F | - |
| 2 | PHY 101 | Engineering Physics | 4 | 0 | 0 | 4 | 4 | F | - |
| 3 | EEE 101 | Elements of Electrical Engineering | 3 | 0 | 0 | 3 | 3 | P | - |
| 4 | CIV 101 | Elements of Civil Engineering | 3 | 0 | 0 | 3 | 3 | P | Env |
| 5 | MEC 152 | Engineering Graphics | 2 | 0 | 4 | 4 | 6 | P | - |
| 6 | ENG 1XX | Humanities-II | 2 | 1 | 0 | 3 | 3 | F/E | - |
| 7 | PHY 151 | Engineering Physics Lab | 0 | 0 | 2 | 1 | 2 | F | - |
| 8 | MEC 151 | Workshop Practice | 0 | 0 | 2 | 1 | 2 | P | - |
| 9 | PPS 106 | Effective Communication | 0 | 0 | 2 | 1 | 2 | E | - |
| TOTAL | | | 17 | 2 | 10 | 24 | 29 | | |

Note: At the end of the 1st year (Common to all B. Tech. Programs) the total credits offered is 49.
The 1st year B.Tech Program structure is executed in two cycles.

* The students undergoing the “Physics” cycle shall take the Courses as indicated.

The students undergoing “Chemistry” cycle shall take the Courses as indicated.


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| III SEMESTER | | | | | | | | | |
|--------------|-------------|--|------------------|----------|-----------|--------------|---------------|---------------|---------------------|
| S. NO. | COURSE CODE | COURSE NAME | CREDIT STRUCTURE | | | | CONTACT HOURS | TYPE OF SKILL | COURSE ADDRESSES TO |
| | | | L | T | P | CREDITS | | | |
| 1 | MAT 107 | Transform Techniques, Partial Differential Equations and Probability | 3 | 1 | 0 | 4 | 4 | F | - |
| 2 | MEC 201 | Basic Thermodynamics | 3 | 1 | 0 | 4 | 4 | F | - |
| 3 | MEC 206 | Mechanics of Solids | 3 | 1 | 0 | 4 | 4 | F | - |
| 4 | MEC 203 | Fluid Mechanics and Machines | 3 | 1 | 0 | 4 | 4 | F | - |
| 5 | MEC 205 | Material Science and Metallurgy | 3 | 0 | 0 | 3 | 3 | F | - |
| 6 | MEC 253 | Computer Aided Machine Drawing | 0 | 0 | 4 | 2 | 4 | F | - |
| 7 | MEC 251 | Fluid Mechanics and Machines Lab | 0 | 0 | 4 | 2 | 4 | E | - |
| 8 | PPS 107 | Design Thinking and Team Building | 0 | 0 | 2 | 1 | 2 | E | - |
| 9 | SIC 501 | Social Immersion Course* | - | - | - | 1 | - | P | G7/Env/S |
| | | TOTAL | 15 | 4 | 10 | 24/25 | 29 | | |

⁷ Gender Issues

* Students have to register for the Social Immersion Course in any of the third, fourth or sixth semesters to earn the mandatory credits.

| IV SEMESTER | | | | | | | | | |
|-------------|-------------|--|------------------|----------|----------|--------------|---------------|---------------|---------------------|
| S. NO. | COURSE CODE | COURSE NAME | CREDIT STRUCTURE | | | | CONTACT HOURS | TYPE OF SKILL | COURSE ADDRESSES TO |
| | | | L | T | P | CREDITS | | | |
| 1 | MAT 108 | Numerical Methods, Probability Distributions and Sampling Techniques | 3 | 1 | 0 | 4 | 4 | F | - |
| 2 | MEC 204 | Production Techniques - I | 3 | 0 | 0 | 3 | 3 | F/E | - |
| 3 | MEC 202 | Kinematics of Machines | 3 | 1 | 0 | 4 | 4 | F | - |
| 4 | MEC 211 | Metrology and Mechanical Measurements | 3 | 0 | 0 | 3 | 3 | F/E | - |
| 5 | MEC 208 | Applied Thermodynamics | 3 | 1 | 0 | 4 | 4 | F | - |
| 6 | MEC 254 | Metallography and Materials Testing Lab | 0 | 0 | 2 | 1 | 2 | E | - |
| 7 | MEC 252 | Machine Shop Practice | 0 | 0 | 2 | 1 | 2 | E | - |
| 8 | MEC 255 | Metrology and Mechanical Measurements Lab | 0 | 0 | 2 | 1 | 2 | E | - |
| 9 | PPS 108 | Being Corporate Ready | 0 | 0 | 2 | 1 | 2 | E | P |
| 10 | SIC 501 | Social Immersion Course | - | - | - | 1 | - | P | G/Env/S |
| | | TOTAL | 15 | 4 | 8 | 22/23 | 26 | | |


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| V SEMESTER | | | | | | | | | |
|------------|-------------|-----------------------------------|------------------|----------|----------|-----------|---------------|---------------|---------------------|
| S. NO. | COURSE CODE | COURSE NAME | CREDIT STRUCTURE | | | | CONTACT HOURS | TYPE OF SKILL | COURSE ADDRESSES TO |
| | | | L | T | P | CREDITS | | | |
| 1 | MEC 214 | Dynamics of Machines | 3 | 1 | 0 | 4 | 4 | F | - |
| 2 | MEC 210 | Design of Machine Elements-I | 3 | 1 | 0 | 4 | 4 | F | - |
| 3 | MEC 207 | Production Techniques-II | 3 | 0 | 0 | 3 | 3 | E | - |
| 4 | MGT 1XX | Management Sciences-I | 3 | 0 | 0 | 3 | 3 | E | P |
| 5 | MEC 220 | Finite Element Analysis | 3 | 0 | 0 | 3 | 3 | E | - |
| 6 | MEC 3XX | Discipline Elective-I | 3 | 0 | 0 | 3 | 3 | - | - |
| 7 | MEC 3XX | Discipline Elective-II | 3 | 0 | 0 | 3 | 3 | - | - |
| 8 | MEC 257 | Foundry, Forging and Welding Lab | 0 | 0 | 2 | 1 | 2 | E | - |
| 9 | MEC 258 | Energy Conversion Engineering Lab | 0 | 0 | 2 | 1 | 2 | E | - |
| 10 | MEC 501 | Professional Practice-I** | - | - | - | 5 | - | E | - |
| | | TOTAL | 18 | 2 | 4 | 30 | 27 | | |

** NOTE: Students will undergo Professional Practice-I during the summer break between the fourth and fifth semesters and the credits earned will be accounted for in the fifth semester.

| VI SEMESTER | | | | | | | | | |
|-------------|-------------|-------------------------------------|------------------|----------|----------|--------------|---------------|---------------|---------------------|
| S. NO. | COURSE CODE | COURSE NAME | CREDIT STRUCTURE | | | | CONTACT HOURS | TYPE OF SKILL | COURSE ADDRESSES TO |
| | | | L | T | P | CREDITS | | | |
| 1 | MEC 209 | Heat and Mass Transfer | 3 | 1 | 0 | 4 | 4 | F | - |
| 2 | MEC 212 | Mechanical Vibrations | 3 | 1 | 0 | 4 | 4 | F | - |
| 3 | MEC 219 | Design of Machine Elements-II | 3 | 1 | 0 | 4 | 4 | F | - |
| 4 | MGT 1XX | Management Sciences-II | 3 | 0 | 0 | 3 | 3 | E | - |
| 5 | MEC 3XX | Discipline Elective-III | 3 | 0 | 0 | 3 | 3 | - | - |
| 6 | XXX XXX | Open Elective-I | 3 | 0 | 0 | 3 | 3 | - | - |
| 7 | MEC 259 | Mechanisms, Machines and Design Lab | 0 | 0 | 2 | 1 | 2 | F | - |
| 8 | MEC 260 | Heat and Mass Transfer Lab | 0 | 0 | 2 | 1 | 2 | F | - |
| 9 | SIC 501 | Social Immersion Course | - | - | - | 1 | - | P | G/Env/S |
| | | TOTAL | 15 | 3 | 6 | 23/24 | 25 | | |


 REGISTRAR


| VII SEMESTER | | | | | | | | | |
|--------------|-------------|---------------------------------------|------------------|----------|----------|-----------|---------------|---------------|---------------------|
| S. NO. | COURSE CODE | COURSE NAME | CREDIT STRUCTURE | | | | CONTACT HOURS | TYPE OF SKILL | COURSE ADDRESSES TO |
| | | | L | T | P | CREDITS | | | |
| 1 | MEC 213 | I. C. Engine and Fuels | 3 | 1 | 0 | 4 | 4 | E | - |
| 2 | MEC 218 | Mechatronics | 3 | 1 | 0 | 4 | 4 | E | - |
| 3 | MEC 3XX | Discipline Elective-IV | 3 | 0 | 0 | 3 | 3 | - | - |
| 4 | XXX XXX | Open Elective-II | 3 | 0 | 0 | 3 | 3 | - | - |
| 5 | MEC 256 | Mechatronics Lab | 0 | 0 | 2 | 1 | 2 | E | - |
| 6 | MEC 261 | Modeling, Simulation and Analysis Lab | 0 | 0 | 2 | 1 | 2 | E | - |
| TOTAL | | | 12 | 2 | 2 | 16 | 18 | | |

| VIII SEMESTER | | | | | | | | | |
|---------------|-------------|----------------------------|------------------|----------|----------|-----------|---------------|---------------|----------------------|
| S.No . | COURSE CODE | COURSE NAME | CREDIT STRUCTURE | | | | CONTACT HOURS | TYPE OF SKILL | COURSE ADDRESS ES TO |
| | | | L | T | P | C | | | |
| 1. | PIP 102 | Professional Practice - II | 0 | 0 | 0 | 15 | | P/E | PE |
| TOTAL | | | 0 | 0 | 0 | 15 | 0 | | |


 REGISTRAR
