



Faculty feedback for the Academic year 2022-23

In Mechatronics Department, course Feedback for the courses have been collected from the respective faculty members for the academic year 2021-22
The feedback points are as follows.

1. Course contents that can be added.

- Precision Engineering related to Mechanical can be included.
- Mechatronics System Design & Hydraulics, Pneumatics could be moved to II year.
- Dynamical system related paper is missing from the curriculum, could be included in III year.
- Introduction to sensors, valves, drives, actuators can be added as Mechatronics Project I in II year.
- Mechanism Design with advance kinematics, dynamics, robotic control system at the end of III year
- AI and Intelligent Systems can be added in IV year.
- Engineering process-related courses can be introduced.
- Engineering Graphics can be replaced by Computer Aided design.
- Free hand sketching skill, product drawing related experiments in Engineering Graphics
- Electronics related process can be included in Manufacturing Process
- More focus to be given to be given to Industry 5.0

2. Any other Suggestions for improvement in Content Delivery/course content/assessment

- Sensors related to automobiles and automotive electronics can be added.
- PLC with Industry 5.0 can be added.
- Thermal related topics on electronics colling can be added.



Faculty feedback for the Academic year 2021-22

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The feedback points are as follows.

1. Innovative Teaching and learning methods used by MECT Members.

- Collaborative learning is used as the design project for 18MT710 – Mechatronics system Design,
- Tinker CAD and EASYEDA are used for 21MT380 - DIGITAL ELECTRONICS LAB

2. Course contents that can be added.

- 21MT440 - SENSOR AND MEASUREMENTS – convert to Theory cum practical.
- Thinking Related Audit courses that can be reduced by one per Academic year.
- Introductory course to mechatronics system design course can be added in 1st year.
- Python Programming can be added in the first semester.
- More emphasis on Electric vehicle technology can be given.
- Updated Engineering graphics with more emphasis to computer aided design can be provided.

3. Any other Suggestions for improvement in Content Delivery/course content/assessment

- Unmanned Aerial Vehicles one credit course can be offered specifically on Drone technology.
- Control related lab experiments can be introduced in parallel.



THIAGARAJAR COLLEGE OF ENGINEERING, MADURAI - 625 015

(A Govt. Aided Autonomous Institution Affiliated to Anna University)

Department of Mechatronics Engineering

Report on Course Feedback by Faculty

In Mechatronics Department, course Feedback for the courses have been collected from the respective faculty members for the academic year 2018- 2019,2019-2020,2020-2021. The feedback points are as follows

1. Proficiency level of Student in prerequisites
 - 18MTPB0 – Micro electromechanical Systems
2. Contribution of course content to design thinking and critical analysis:
 - 18MT340 – Thermal Fluid Engineering
3. Innovative Teaching and learning methods used by MECT faculty Members
 - Collaborative learning is used as the design project is done in team.
 - Tinker CAD for simulation.
 - Vlab.co.in used for virtual experiments.
 - ICT Tools Usage (Pear deck, Google classroom, Slide).
 - Moodle platform used for course management.
 - Collaborative learning for assignment.
 - Case study and worksheet used for assessment.
 - Active Learning.
 - Peer Coaching.
 - Used Moodle for content sharing and assessment
4. Innovative assessment methods followed to measure Course outcomes at higher levels
 - Design Portfolio Presentation.
 - Flipped classroom for assignment.
 - programming for industrial problems.
 - Assignment using Mat lab tool for modelling of motors, Assignment on practical uses of motors. (CNC, ROBOTS, EV vehicle)
 - Report submission for each experiment.
 - Student presentation and report submission on System Hierarchy.
 - Requirement Management Tool and System Modelling Language.
 - Mini Project on implementing simple IoT application related to Industrial Application.
 - Mini Project in CAD modelling of MEMS components and suggestion of appropriate fabrication.
 - Activity submission on apply level questions, Mini project on designing Analog circuits for specific applications using Tinkercad process.
5. Modern teaching Tools used
Tools usage like: FESTO FLUIDSIM, AUTOMATION STUDIO 6.2, INDRAWORKS PLC, PICOSOFT, TINKERCAD

6. Course Contents that can be added


- 18MT440 - SENSOR AND MEASUREMENTS - To add More topics on signal conditioning
- 18ES290- LATERAL THINKING - UNO SDG goals - for mapping the case studies with SDG goals
- 18MT280 - WORKSHOP - (Analog Circuit Design can be added)
- 14MT770 - System integration, Theory cum practical course need to be converted into theory and practical course
- 18MT220 - Synchronous Reluctance motor can be added
- 18MT680 - ROS (Robot Operating System)

7. Course Contents that can be removed

- 18MT340- Thermal and Fluid Engineering - Entropy Topic can be removed
- 14MT720 - Unmanned Aerial Vehicles -The Mathematical part in the subject can be reduced to make it more interesting
- 18MT510 - Control systems -Implementation of case studies using control systems
- 18MT620 - CNC Technology - Three phase induction motor - Construction, Characteristics, Speed control methods, VFD, Axis Drive - AC Servo motor, Construction, Characteristics, Closed loop position control. Feedback devices - Rotary encoder, linear scale encoder, proximity sensor, synchronous resolver. (These contents are already covered in Electrical Machines, Sensors and Power Electronics and Drives)

8. Any other Suggestions for improvement in Content Delivery/course content/assessment

- 14MT720 - Unmanned Aerial Vehicles - The subject is felt difficult for all the students. An expertise in avionics and aeronautical engineering can be used for teaching the students.
- 18MT510- Exposure to control lab can be introduced in parallel


HDMCT
