MLRIT
Raising Engineers
MLR INSTITUTE OF TECHNOLOGY

MECHANICAL ENGINEER'S CLUB

MLR INSTITUTE OF TECHONOLOGY
SAEINDIA
Society of Automotive Engineers INDIA
COLLEGIATE CLUB

MECH TIMES

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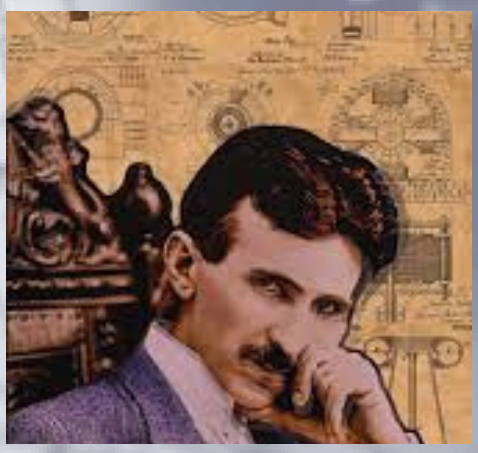

"You have to dream before your dreams can come true."

CHIEF EDITOR
Dr. K .LIMBADRI
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B.SAI NIVAS VARMA
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DEPARTMENT OF MECHANICAL ENGIEERING

MARRI LAXMAN REDDY - CHAIRMAN

Sri MarriLaxman Reddy, the founder Chairmanof MLR Institutions has been in the field of education for the last 22 years with the aim of spreading quality education among children at the school & college levels. MLR Institute of Technology is the culmination of his dreams. He is also founder chairman of Marri Laxman Reddy Institute of Technology & Management, MLR Institute of Pharmacy, St. Martin's Engineering College and St. Martins Schools at Balanagar, Chintal and Malkajgiri. He is a veteran athlete of international repute.

MARRI RAJASEKHAR REDDY – SECRETARY

Sri Marri Rajashekar Reddy, the Secretary of MLR Institutions has the distinction of establishing the Institute of Aeronautical Engineering, MLR Institute of Technology, MLR Institute of Pharmacy Vardhaman Engineering College, Vidyanjali Grammar School at L.B.Nagar and Institute of Aircraft Maintenance Engineering, approved by DGCA.

He is also Treasurer of Indo US Collaboration for Engineering Education of A.P. Chapter. Mr. M. Rajasekhar Reddy, a person with remarkable abilities and great acumen and a dynamic leader. He is known to be the dynamic mentor of MLR Institute of Technology who is always on the sprit to take the institute to newer levels in every aspect of an "Ideal Institution" and strives hard to make every dream a reality. He likes his father Mr. M. Laxman Reddy, who has a credit of establishing Institute of Aeronautical Engineering adding a new flavor to St. Martins group of Institutions and Vidyanjali Grammar School.

Dr. K. SRINIVAS RAO - PRINCIPAL

It is my privilege to welcome you to the big family of MLRIT which was established in 2005 and has been imparting higher education in the fields of Electronics Engineering(ECE), Communication Computer Science Engineering(CSE),Mechanical Engineering(ME), Aeronautical Engineering(AE), Information Technology(IT), Master of Business Administration (MBA), Aerospace Engineering, Embedded Systems, Digital Systems and Computer Electronics, Computer Science, Software Engineering, CAD/CAM and Thermal Engineering. In the 14 years of existence MLR has established itself as a premier Institution and I consider its my privilege to be associated with such a prestigious Institution.

MESSAGE BY HOD:

Itgives me great pleasure to meet all of you through this news letter. It is a wonderful media through which the department achievements can be brought to the notice of all of you. The department of mechanical engineering strives continuously for involving the students in the designing, studying, development and construction of all the physical devices and systems. The objective is to prepare the manpower that is globally best. To achieve this, the Department of Mechanical Engineering provides various platforms for the students and staff to excel. A news letter like this will help in a long way to highlight the achievements of both the students, staff and the department as a whole. I wish all the best for the team of members who are bringing this news letter to foray. With best wishes

Dr J KRISHNA RAJ Professor and HOD
Department of Mechanical Engineering

ABOUT MLRIT

MLR Institute ofTechnology was established in the year 2005 with the virtue of providing quality education to all sections of society. The college is run by KMR Educational Society under the chairmanship of Mr. Marri Laxman Reddy. The college is approved by All India Council for Technical Education (AICTE) besides being affiliated to Jawaharlal Nehru Technological University, Hyderabad and re-accreditated by NBA and is currently autonomous. The campus is spread over 35 acres of land with sophisticated infrastructure for curricular and co-curricular activities and for conducting UG and PG Programmes.

VISION OF THE INSTITUTE

Promote academicexcellence,research, Innovation, and entrepreneurial skills to produce graduates with human values and leadership qualities to serve the nation.

MISSION OF THE INSTITUTE

Providestudent-centric education andtraining on cutting-edge technologies to make the students globally competitive and socially responsible citizens. Create an environment to strengthen the research, innovation and entrepreneurship to solve societal problems.

ABOUT THE DEPARTMENT

The department of Mechanical Engineering was established in the year 2009 with an initial intake of 60 students and with a consequent rise in intake to 120 and 180 respectively in the years 2012 and 2013 and from 2022 decreased to 30 till date.

The department is also offering M.Tech programs in Thermal engineering with an annual intake of 6 students.

The department currently has 1 professors, 6 Asociate professors and 16 Assistant professors having research/ academic/ consultancy/ industrial experience. Faculty research experience covers a wide range of core and extended fields like alternate fuels and IC engines, Manufacturing& Welding Technology, Robotics and CAD/CAM.

VISION OF THE DEPARTMENT

The Mechanical Engineering Department endeavors to be recognized globally for outstanding education and research leading to well qualified engineers, who are innovative, entrepreneurial and successful in advanced fields of mechanical engineering to cater the ever changing industrial demands and social needs.

MISSION OF THE DEPARTMENT

Impart highest quality education to the students to build their capacity and enhancing their
skills to make them globally competitive mechanical engineers and successful entrepreneurs.

Provide the students with academic environment of excellence, state of the art research
facilities, leadership, ethical guidelines and lifelong learning needed for a long productive
career.

PROGRAMM EDUCATIONAL OBJECTIVE'S (PEO'S)

PEO 1 To prepare the students to excel in undergraduate and post graduate in Mechanical engineering to mould their careers for successful employment in industry, academic and entrepreneurial activities

PEO 2 Graduates of the Mechanical engineering program will analyze and synthesize data and apply technical concepts which lead to the design of new products, improve upon existing products and systems and develop technical problem-solving skills

PEO 3 Graduates will excel in a wide range of Mechanical engineering fields such as Design, Analysis, multi-disciplinary areas

PEO 4 Graduates will have excellent oral and written communication skills, cooperative learning skills, ethical attitude and an ability to relate engineering issues to broader social environment.

PEO 5 Toprovide a passionate academic environment for students that encourage learning of emerging technologies, acquire leadership qualities and guidelines needed for a successful career and engage in lifelong learning.





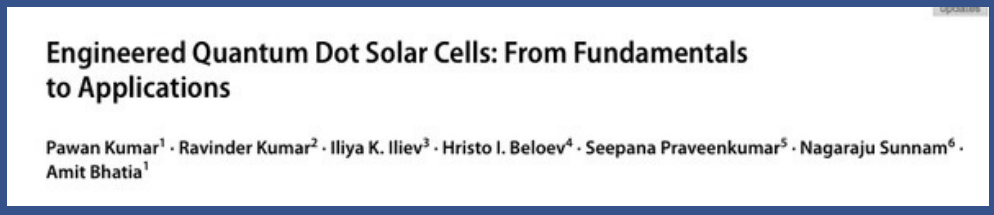





FACULTY ACHIEVEMENTS

Design and Analysis of Connecting Rod Using Aluminium Silicon Carbide

E.Tanmay Reddy1, Rathod Anil Kumar 2, K.Akhil 3 and Polisetti Tapasvi 4 and Dr. G. Ananda rao 5, Mr. M. Sundeep 6.

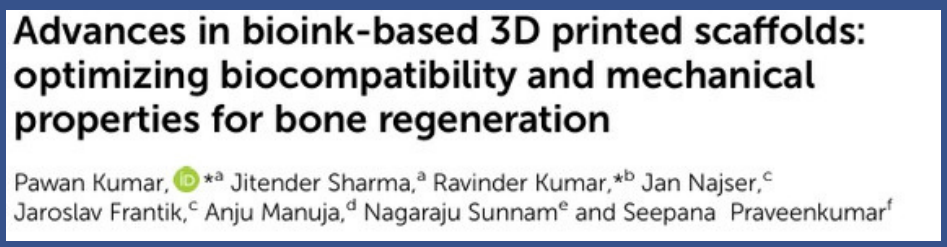


Engineered Quantum Dot Solar Cells: From Fundamentals to Applications

Pawan Kumar[1] · Ravinder Kumar[2] · Iliya K. Iliev[3] · Hristo I. Beloev[4] · Seepana Praveenkumar[5] · Nagaraju Sunnam[6] · Amit Bhatia[1]

Genetic and bioactive functionalization of bioinks for 3D bioprinting

Pawan Kumar[1] · Jitender Sharma[1] · Ravinder Kumar[2] · Jan Najser[3] · Jaroslav Frantik[3] · Nagaraju Sunnam[4] · Anil Sindhu[5] · Seepana Praveenkumar[6]



Advances in bioink-based 3D printed scaffolds: optimizing biocompatibility and mechanical properties for bone regeneration

Pawan Kumar,[*a] Jitender Sharma,[a] Ravinder Kumar,[*b] Jan Najser,[c] Jaroslav Frantik,[c] Anju Manuja,[d] Nagaraju Sunnam[e] and Seepana Praveenkumar[f]

S Nagaraju , M Sundeep, G Ananda Rao ,faculty of mechanical engineering department , MLR Institute Of Technology had successfully published their jounals in

1) Design and Analysis of Connecting Rod Using Aluminium Silicon Carbide(G ANANDA RAO , M SUNDEEP)

2)Engineered Quantum Dot Solar Cells: From Fundamentals to Applications(S NAGARAJU)

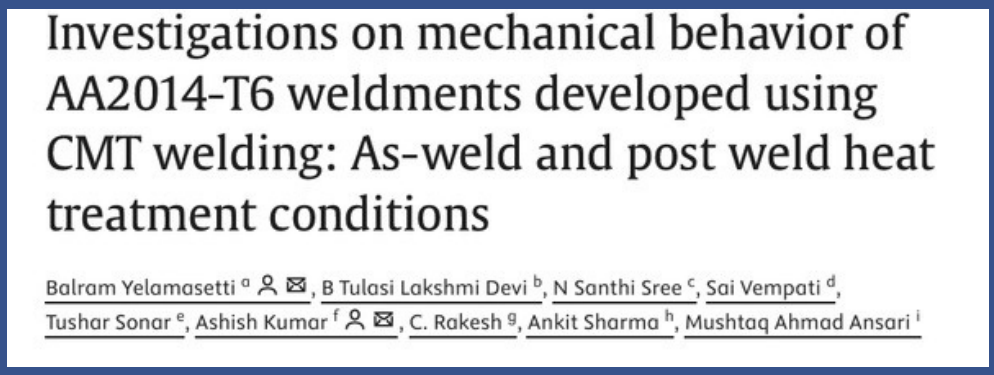
3)Genetic and bioactive functionalization of bioinks for 3D bioprinting (S NAGARAJU)

4)Advances in bioink-based 3D printed scaffolds: optimizing biocompatibility and mechanical properties for bone regeneration (S NAGARAJU)

FACULTY ACHIEVEMENTS

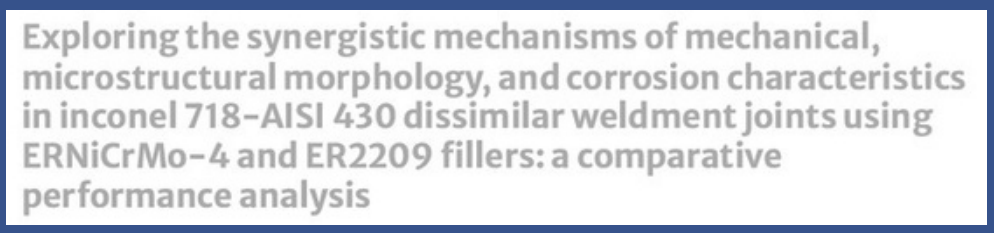
Study and Analysis of Corrosion Rate, Hot Tensile Properties, and Metallurgical Changes of SSDS 2507 and AISI 316 Dissimilar Weldments

Mamatha Vemulawada [1], Megersa Olumana Dinka [2], Abhishek Agarwal [3,*], Masengo Ilunga [4], Balram Yelamasetti [5,*], Srinivasa Vadayar K [6] and Naveen Kumar P [5]

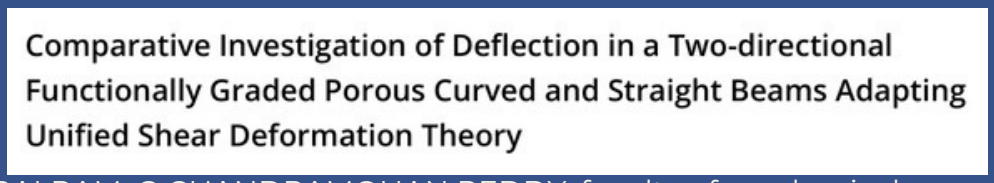


Investigations on mechanical behavior of AA2014-T6 weldments developed using CMT welding: As-weld and post weld heat treatment conditions

Balram Yelamasetti [a], B Tulasi Lakshmi Devi [b], N Santhi Sree [c], Sai Vempati [d], Tushar Sonar [e], Ashish Kumar [f], C. Rakesh [g], Ankit Sharma [h], Mushtaq Ahmad Ansari [i]



Exploring the synergistic mechanisms of mechanical, microstructural morphology, and corrosion characteristics in inconel 718–AISI 430 dissimilar weldment joints using ERNiCrMo–4 and ER2209 fillers: a comparative performance analysis



Comparative Investigation of Deflection in a Two-directional Functionally Graded Porous Curved and Straight Beams Adapting Unified Shear Deformation Theory

Y BALRAM, G CHANDRAMOHAN REDDY ,faculty of mechanical engineering department , MLR Institute Of Technology had successfully published their jounals in

1) Study and Analysis of Corrosion Rate, Hot Tensile Properties, and Metallurgical Changes of SSDS 2507 and AISI 316 Dissimilar Weldments (Y BALBARM)

2)Investigations on mechanical behavior of AA2014-T6 weldments developed using CMT welding: As-weld and post weld heat treatment conditions(Y BALRAM)

3)Exploring the synergistic mechanisms of mechanical, microstructural morphology, and corrosion characteristics in inconel 718-AISI 430 dissimilar weldment joints using ERNiCrMo-4 and ER2209 fillers: a comparative performance analysis(Y BALRAM)

4)Comparative Investigation of Deflection in a Two-directional Functionally Graded Porous Curved and Straight Beams Adapting Unified Shear Deformation Theory(G. Chandra Mohana Reddy)

FACULTY ACHIEVEMENTS

Dr. N PRABHU KISHORE and Dr. J KRISHNA RAJ, Associate professors, MLR Institute of Technology had stood runners in carroms and table tennis in TRISHNA 2k25 between JANUARY and JUNE 2025. All the mechanical engineering faculty appreciated them for their constant efforts.

FACULTY ACHIEVEMENTS

Elite

NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

Skill India

This certificate is awarded to

DR RAVIKIRAN CHINTALAPUDI

for successfully completing the course

Designing Learner-Centric MOOCs

with a consolidated score of 60 %

Online Assignments	21.56/25	Proctored Exam	38.25/75

Total number of candidates certified in this course: 119

Jan-Mar 2025

(8 week course)

Prof. Sridhar Iyer

Head CDEEP & NPTEL Coordinator

IIT Bombay

Indian Institute of Technology Bombay

swayam

Roll No: NPTEL25GE08S347000942 To verify the certificate No. of credits recommended: 2 or 3

Elite

NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

Skill India

This certificate is awarded to

MOYYA SUNDEEP

for successfully completing the course

Designing Learner-Centric MOOCs

with a consolidated score of 64 %

Online Assignments	22.73/25	Proctored Exam	41.25/75

Total number of candidates certified in this course: 119

Jan-Mar 2025

(8 week course)

Prof. Sridhar Iyer

Head CDEEP & NPTEL Coordinator

IIT Bombay

Indian Institute of Technology Bombay

swayam

Roll No: NPTEL25GE08S347005801 To verify the certificate No. of credits recommended: 2 or 3

Elite

NPTEL ONLINE CERTIFICATION

(Funded by the MoE, Govt. of India)

Skill India

This certificate is awarded to

K LIMBADRI

for successfully completing the course

Designing Learner-Centric MOOCs

with a consolidated score of 78 %

Online Assignments	20.69/25	Proctored Exam	57/75

Total number of candidates certified in this course: 119

Jan-Mar 2025

(8 week course)

Prof. Sridhar Iyer

Head CDEEP & NPTEL Coordinator

IIT Bombay

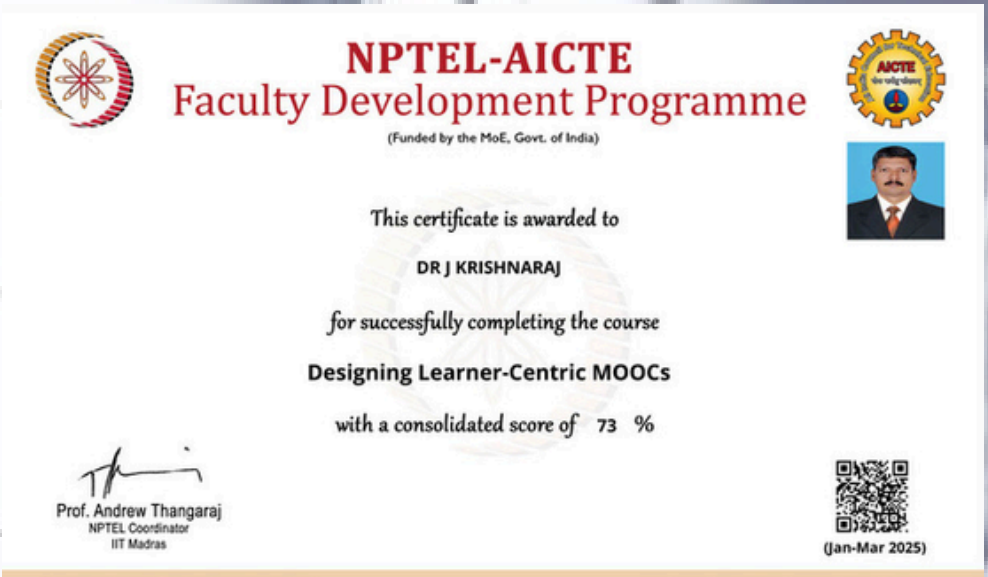
Indian Institute of Technology Bombay

swayam

Roll No: NPTEL25GE08S347005202 To verify the certificate No. of credits recommended: 2 or 3

DR RAVIKIRAN CHINTHALAPUDI, MOYYA SUNDEEP , K LIMBADRI senior associate professor, Mechanical Engineering, MLR Institute of technology, has been awarded certificate of course completion NPTEL-AICTE funded by the MoE, Govt. of India. The course that he has completed is on 'DESIGNING LEARNER-CENTRIC MOOCs' and it is a 8 week course between JAN and MARCH 2025. DR RAVIKIRAN got 60% marks and M SUNDEEP got 64% and LIMBADRI got 78%. The total number of candidates certified in this course 141. The faculty of mechanical department, MLRIT, appreciated his achievement.

FACULTY DEVELOPMENT PROGRAMME



NPTEL-AICTE
Faculty Development Programme
(Funded by the MoE, Govt. of India)

This certificate is awarded to

DR J KRISHNARAJ

for successfully completing the course

Designing Learner-Centric MOOCs

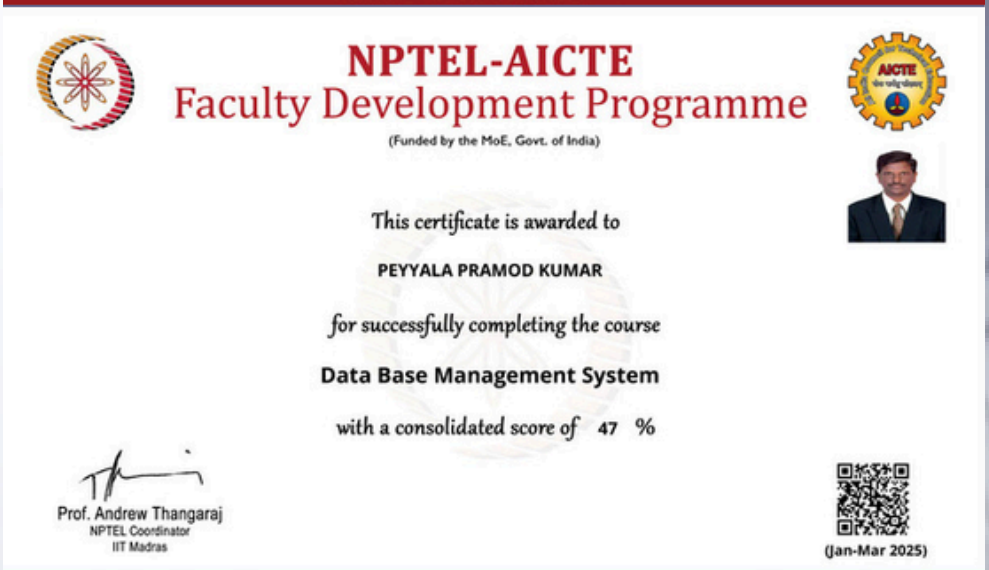
with a consolidated score of 73 %

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

(Jan-Mar 2025)

Roll No: NPTEL25GE08S447004814 Duration of NPTEL course : 8 Weeks

The candidate has studied the above course through MOOCs mode, has submitted online assignments and passed proctored exams.
This certificate is therefore acceptable for promotions under CAS as per AICTE notifications dated 16th Nov, 2023, similar to other refresher / orientation courses.
F.No. AICTE / RIFD / FDP through MOOCs / 2023



NPTEL-AICTE
Faculty Development Programme
(Funded by the MoE, Govt. of India)

This certificate is awarded to

PEYYALA PRAMOD KUMAR

for successfully completing the course

Data Base Management System

with a consolidated score of 47 %

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

(Jan-Mar 2025)

Roll No: NPTEL25CS18S547001491 Duration of NPTEL course : 8 Weeks

The candidate has studied the above course through MOOCs mode, has submitted online assignments and passed proctored exams.
This certificate is therefore acceptable for promotions under CAS as per AICTE notifications dated 16th Nov, 2023, similar to other refresher / orientation courses.
F.No. AICTE / RIFD / FDP through MOOCs / 2023

J KRISHNA RAJ, PEYYALA PRAMOD KUMAR , senior associate professor, Mechanical Engineering, MLR Institute of technology, has been awarded certificate of course completion NPTEL-AICTE funded by the MoE, Govt. of India. The course that he has completed is on 'DESIGNING LEARNER-CENTRIC MOOCs' 'Data Base Management System' and it is a 8 week course between JAN and MARCH 2025. J KRISHNA RAJ got 73% marks and PEYYALA PRAMOD KUMAR got 47% . The total number of candidates certified in this course 141. The faculty of mechanical department, MLRIT, appreciated his achievement.

ANNUAL DAY

As of every year MLRIT has celebrated Annual day on 26th April 2025. On that day the winners and runners of internal departmental competitions wiil be announced on their academic performance and competitions of sports , Tecchnical and cultural held from past one month and Mechanical Engineering department had secured secured position from all the departments.

PROGRAM OUTCOMES -PROGRAM OUTCOMES ARE NARROWER STATEMENTS THAT DESCRIBE WHAT STUDENTS ARE EXPECTED TO KNOW AND BE ABLE TO DO BY THE TIME OF GRADUATION. THESE RELATE TO THE SKILLS, KNOWLEDGE, AND BEHAVIORS THAT STUDENTS ACQUIRE IN ENGINEERING EDUCATION.

PO1. Engineering Knowledge: Apply knowledge of mathematics, natural science, computing, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to develop to the solution of complex engineering problems.

PO2. Problem Analysis: Identify, formulate, review research literature and analyze complex engineering problems reaching substantiated conclusions with consideration for sustainable development. (WK1 to WK4)

PO3. Design/Development of Solutions: Design creative solutions for complex engineering problems and design/develop systems/components/processes to meet identified needs with consideration for the public health and safety, whole-life cost, net zero carbon, culture, society and environment as required. (WK5)

PO4. Conduct Investigations of Complex Problems: Conduct investigations of complex engineering problems using research-based knowledge including design of experiments, modelling, analysis & interpretation of data to provide valid conclusions. (WK8).

PO5. Engineering Tool Usage: Create, select and apply appropriate techniques, resources and modern engineering & IT tools, including prediction and modelling recognizing their limitations
to solve complex engineering problems. (WK2 and WK6)

PO6. The Engineer and The World: Analyze and evaluate societal and environmental aspects while solving complex engineering problems for its impact on sustainability with reference to economy, health, safety, legal framework, culture and environment. (WK1, WK5, and WK7).

PO7. Ethics: Apply ethical principles and commit to professional ethics, human values, diversity and inclusion; adhere to national & international laws. (WK9)

PO8. Individual and Collaborative Team work: Function effectively as an individual, and as a member or leader in diverse/multi-disciplinary teams.

PO9. Communication: Communicate effectively and inclusively within the engineering community and society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations considering cultural, language, and learning differences.

PO10. Project Management and Finance: Apply knowledge and understanding of engineering management principles and economic decision-making and apply these to one’s own work, as a member and leader in a team, and to manage projects and in multidisciplinary environments.

PO11. Life-Long Learning: Recognize the need for, and have the preparation and ability for i) independent and life-long learning ii) adaptability to new and emerging technologies and iii) critical thinking in the broadest context of technological change. (WK8)

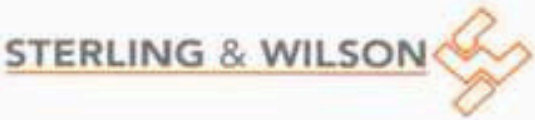
PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: To solve complex mechanical engineering problems which enables students employable in reputed industries or self-entrepreneurs.

PSO2: To develop the new products/systems in collaboration with research & development centers and to continue higher education.

SUCCESS CONTINUES...

Recruiters at MLRIT



and 80 more success companies