TEXAS A&M UNIVERSITY KINGSVILLE

Frank H. Dotterweich College of Engineering

MASTER OF SCIENCE IN INDUSTRIAL ENGINEERING

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Department Overview
The Department of Mechanical and Industrial Engineering offers both a regular on-campus Industrial Engineering Master of Science program and a 100% online Industrial Engineering Master of Science program. They are designed to instill fundamental concepts as well as practical knowledge of modern engineering, and to prepare students for immediate challenges as well as a lifetime of professional advancement. Students who already have a degree in engineering, business, or math are encouraged to apply for this program. The U.S. News and World Report rank the online program as one of the Best Graduate Online Engineering Programs in the United States.

Our Degree Plans:
- M.S. Degree Plan I: Thesis (30 SCH)
  24 credit hours of courses and six credit hours of thesis research
- M.S. Degree Plan II: Research Project (36 SCH)
  33 credit hours of courses & three credit hours of research project
- MS Degree Plan III: 36 credits of courses only, plus pass a comprehensive exam over all core courses.

Three transcripted graduate certificate programs are also available:
1) Engineering Project Management Professional Certificate
2) Manufacturing Standards and Standardization Certificate
3) Supply Chain Standards Certification (offered with College of Business Administration)

Research laboratories are available for work in renewable energy, data science, simulation and optimization, risk management, robotics and automation, intelligent systems and controls, and disaster management. Excellent computer facilities are available.

Admission Requirements:
- Undergraduate degree in engineering or closely related major.
- Undergraduate GPA no lower than 2.6/4.00
- English Proficiency Requirements
- Deadlines and admission information: www.tamuk.edu/grad/

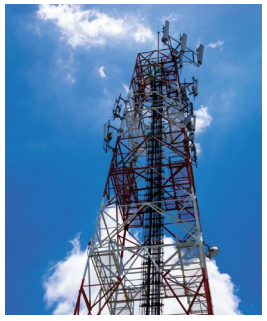
Core Courses (6 credits):
- Computer Application of Statistical Methods
- Principles of Optimization

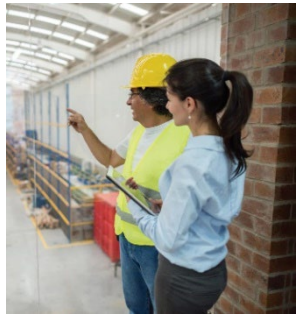
Elective Courses:
- Activity Scheduling
- Advanced Engineering Economic Analysis
- Advanced Engineering Project Management
- Computer Integrated Manufacturing Systems
- Computer Simulation of Industrial Systems
- Data Analytics
- Economic Decision Theory
- Fundamentals of Sustainable Engineering
- Game Theory
- Inventory Systems
- Lean Manufacturing
- Manufacturing Systems Design
- Reliability Theory
- Risk Management
- Six Sigma and ISO Standards
- Standards of Product Design and Manufacturing
- Supply Chain Management
- System Safety

Scholarships and Assistantships:
In-state and other scholarships and graduate assistantships are available to qualified students having strong academic preparation and other evidence of superior achievement and leadership. Apply at http://www.tamuk.edu/grad/admissions/scholarships.html

Internships and Co-Op Opportunities:
Various companies in manufacturing, logistics, healthcare, and service industries offer internships opportunities for our graduate students.

Employment:
Many of our graduates are now working for companies such as Amazon, Apple, Cummins, Intel, Microsoft, Tesla, P&G, Ford, Port of New Orleans, Oracle, Parsons Corporation, Becht, Seadrill, etc.





Department of Mechanical and Industrial Engineering		
Researcher Name	**Contact Information**	**Research Interests**
Dr. Shah Alam, ME	361-593-2459 shah.alam@tamuk.edu	Composite structures and mechanical system design and analysis; Fatigue and fracture mechanics; Finite element analysis; Renewable energy; Structural integrity of aerospace, offshore and subsea structures
Dr. Yousri Elkassabgi, ME	361-593-2293 yousri.elkassabgi@tamuk.edu	Heat transfer analysis; Thermal fluid issues; Thermal hydraulics of nuclear reactors; Energy conservation for industrial buildings; Combustion systems
Dr. Fei He, IE	361-593-3484 fei.he@tamuk.edu	Disaster mitigation, preparedness, relief and recovery, Anti-terrorism; Operations research, Game theory, Optimization
Dr. Mohammad M. Hossain, ME	361-593-3341 mohammad.hossain@tamuk.edu	Structure-property relationship in polymers, films, adhesives, and composites; Tribology, scratch, and wear, contact mechanics; Fracture mechanics; Failure analysis; Finite element analysis
Dr. Mahesh Hosur, ME	362-593-4519 mahesh.hosur@tamuk.edu	Nanocomposites; Sandwich Composites; Polymer Synthesis; Biocomposites; Thermomechanical, rheological, static and dynamic characterization of composites properties of polymers and composites, ultrasonic and thermography NDE.
Dr. Kai Jin, IE	361-593-2135 kai.jin@tamuk.edu	Green product and sustainable manufacturing; Life cycle assessment; Hybrid sustainable energy system; Wind energy; Multi-objective decision-making support systems; Risk management; Economic impact analysis
Dr. Sangsoo Lee, ME	361-593-2093 sangsoo.lee@tamuk.edu	Heat transfer in the phase-change process (Boiling, Condensation)
Dr. Hua Li, IE	361-593-4057 hua.li@tamuk.edu	Renewable energy (wind, wave, solar); Big data visualization and analysis; Simulation and optimization; Active disassembly using smart materials; Engineering education
Dr. Joon Yeoul Oh, IE	361-593-3941 joon-yeoul.oh@tamuk.edu	Risk analysis & management; Network optimization; Non-linear programming; Heuristic, Queueing theory; Algorithm development
Dr. Ovais Khan, ME	361-593-4360 Ovais.khan@tamuk.edu	Flight dynamics and control; Aerospace dynamical systems and control; Volterra nonlinear aerospace dynamic approximation; Design of experiment (DoE)
Dr. Selahattin Ozcelik, ME	361-593-2003 selahattin.ozcelik@tamuk.edu	Robotics and mobile robots; Unmanned aerial vehicles; Control systems; Robust and intelligent control; Active vibration control; System dynamics
Dr. Bin Wei, ME	361-593-4438 bin.wei@tamuk.edu	Robotics; Control Theory; Dynamical Systems; Dynamic balancing for robotic mechanisms; Robust adaptive control of robotic manipulators
Dr. Larry Peel, ME	361-593-2003 larry.peel@tamuk.edu	Design, simulation, and manufacturing of traditional and flexible composites structures including soft actuators; Polymer-based composites and multi-material additive manufacturing; Bio-inspired origami-based systems; Composite armor
Dr. Jose F. Espiritu, IE	361-593-3344 Jose.Espiritu@tamuk.edu	Reliability and Risk Assessment, Data Analytics, Systems Optimization and Sustainability Engineering
Dr. Hong Zhou, ME	361-593-4314 hong.zhou@tamuk.edu	Mechanical and structural design; Wind turbines and solar panels; Digital materials and material systems; CAD/CAM/CAE; Kinematics, Dynamics; Robotics