MAKE WAVES WITH A

# MASTER OF SCIENCE IN ENGINEERING

## STARTING FALL 2023

TEXAS A&M UNIVERSITY CORPUS CHRISTI

### Higher Education the Islander Way

Starting in Fall of 2023, the Department of Engineering at Texas A&M University-Corpus Christi will offer a Master of Science in Engineering degree. Students will choose one **concentration: civil, electrical, industrial, or mechanical engineering**. The degree will have a **thesis** option or **non-thesis** option. Competitive teaching assistantships and some scholarships will be available.

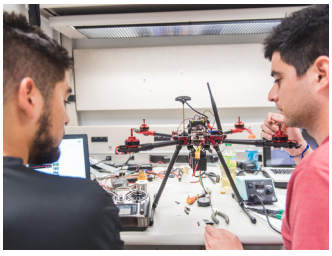
**THESIS OPTION (33 credit hours):**
- 10 hours core classes
- 2 hours seminar classes
- 9 hours prescribed concentration electives
- 6 hours free electives
- 6 hours thesis research & thesis

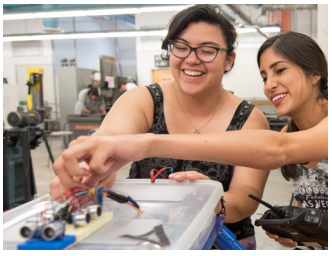
**NON-THESIS OPTION (36 credit hours):**
- 10 hours core classes
- 2 hours seminar classes
- 9 hours prescribed concentration electives
- 12 hours free electives
- 3 hours capstone project course

**Admission Requirements:**

A bachelor's degree in an engineering or closely-related field

An undergraduate GPA of at least 2.8 (either overall undergraduate degree or in the last 60 hours of the degree)





## HOW TO APPLY

Application available at www.goapplytexas.org

**APPLY**
Apply on Go Apply Texas by mid-July

**SEND**
Transcripts & Test Scores

**SUBMIT**
Letters of Recommendation, Personal Statement, & Resume

# MEET THE FACULTY

Our goals are to prepare well-educated, highly skilled, and socially and professionally responsible engineers from a diverse population of students so that they can have productive and rewarding careers at local, state and national levels. Explore the research interests of our engineering faculty to ensure we align with your own research interests.


**JOSE BACA, PH.D.**
Development of modular robots & modular mechatronic systems across unmanned autonomous systems, space, geospatial technologies, industry, healthcare informatics, and training/rehabilitation
*jose.baca@tamucc.edu*


**NING LUO, PH.D.**
Promote sustainable and resilient engineering solutions by explicitly addressing the risk and uncertainties in geotechnical engineering from a probabilistic perspective with a focus on risk and resilience assessment
*ning.luo@tamucc.edu*


**JIAN SHENG, PH.D.**
Active particle transport near surfaces/interfaces with micro-/nano-scale textures - biofilm formation over solid substrate and oil-water interface, experimental fluid mechanics, & physical/biological oceanography
*jian.sheng@tamucc.edu*


**DAVID BRIDGES, PH.D.**
Research in aircraft performance and experimental aerodynamics, including bluff-body wake and vortex flows, and theoretical investigations of vortex flows and boundary layer stability
*david.bridges@tamucc.edu*


**RUBY MEHRUBEOGLU, PH.D.**
Hyperspectral imaging for material characterization through spectral signatures and spatial distributions; thermal imaging and visible-range digital image classification; image segmentation using AI
*ruby.mehrubeoglu@tamucc.edu*


**PETRU A. SIMIONESCU, PH.D.**
Research in kinematics, dynamics, design and optimization of mechanism and robotic systems, information visualization, manufacturing processes and sustainability projects
*pa.simionescu@tamucc.edu*


**LD CHEN, PH.D.**
Current research activities and interest in thermo-chemical-hydrodynamic modeling of virus-laden droplets, electrochemical energy harvesting and storage, and combustion and propulsion
*ld.chen@tamucc.edu*


**MIGUEL CID MONTOYA, PH.D.**
Research in wind engineering, bridge aeroelasticity, and structural optimization. Develops multidisciplinary design frameworks for the aero-structural optimization of wind-sensitive structures
*miguel.cidmontoya@tamucc.edu*


**NANCY SOLIMAN, PH.D.**
Research in materials engineering & multiscale experimental mechanics focusing on sustainable development of bulk construction materials & multifunctional bulk composite materials for energy efficiency & resilient infrastructure
*nancy.soliman@tamucc.edu*


**HONGWEI HSIAO, PH.D.**
Data in protective gear sizing & diverse workforce designs, first responder tech, informatics for workplace safety/health, & emerging technology (robot, wearable device, VR) for human wellbeing
*hongwei.hsiao@tamucc.edu*


**THANG NGUYEN, PH.D.**
Research in control theory, robotics, optimization, cyber-physical systems, control of network systems, Transverse Dynamic Force Microscopy, applications of control theory to complex dynamic systems
*thang.nguyen@tamucc.edu*


**DUGAN UM, PH.D.**
Work in robotics/automation, micro sensor/actuator & sensor based robotic motion planning, 3D micro infrared imaging/visualization, machine learning & smart agriculture
*dugan.um@tamucc.edu*


**ISAAC KIM, PH.D.**
Optical diagnostics in near-surface phenomena (evaporation, condensation, wetting), surface plasmon resonance for sensing, functional nanostructure development, Tilt-rotor UAV by edge computing
*ikim@tamucc.edu*


**JANGWOON PARK, PH.D.**
Data in human factors/ergonomics, biomechanics engineering, anthropometry, automobile ergonomics, digital human modeling & simulation, usability testing, clothing sizing & pattern design, & Kansei engineering
*jangwoon.park@tamucc.edu*


**HUA ZHANG, PH.D.**
Leads the Water and Environmental Systems Analysis Lab (WESA) to explore hydrology, water resources, infrastructure resilience, environmental sustainability, disaster mitigation, & environmental justice
*hua.zhang@tamucc.edu*


**ZHAORUI LI, PH.D.**
Analysis of computational fluid dynamics (CFD) & turbulence with a focus on modeling & high-fidelity computations of various turbulent flows with/without multiphase transport & chemical reaction
*zhaorui.li@tamucc.edu*


**PABLO RANGEL, PH.D.**
Test & evaluation of autonomous systems, unmanned aircraft systems, cyber physical systems, robotics/mechatronics, control theory, fuzzy logic, biomed engineering, wireless comm, cybersecurity, & multiagents
*pablo.rangel@tamucc.edu*

**For more information about the MS in Engineering program please contact:**

**Ruby Mehrubeoglu, Ph.D.**
Program Coordinator
*361.825.3378*
*Ruby.Mehrubeoglu@tamucc.edu*
*www.tamucc.edu/engineering*