

AEROSPACE ENGINEERING

Enrollment Fall 2009

Undergraduate Students
Average SAT Score

650
1262

Graduate Students
Ph.D.
Master's

142
62
80

Quality Indicators

Total Faculty 36
Professors 17
Associate Professors 7
Assistant Professors 6
Non-tenured/Non-tenure Track 6

U.S. News & World Report Rankings
Rankings Among Public Institutions
8 Undergraduate
8 Graduate

Endowed Chair Holders 5
Endowed Professorship Holders 4
National Academy of Engineering Members 3

Centers and Laboratories

Academic Center for Aging Aircraft
AggieSat Lab Student Satellite Program
Center for Autonomous Robotic and UAV Systems
Center for Mechanics and Control
Center for Mechanics of Composites
Consortium for Autonomous Space Systems
Damping Laboratory
Electroactive Materials Robotics Laboratory
Electromechanical Characterization Laboratory
Flight Mechanics Laboratory

Flight Research Laboratory
Flight Simulation Laboratory
General Materials Laboratory
Klebanoff/Saric Unsteady/Quiet Wind Tunnel
Laser Diagnostics for Combustion and Propulsion
Materials and Testing Laboratory
NASA URETI Texas Institute for Intelligent Bio-Nano Materials and Structures (TiMS)
Oran W. Nicks Low-Speed Wind Tunnel (TEES)

Propulsion Laboratory
Texas A&M National Aerothermochemistry Laboratory
• Actively Controlled Expansion Hypersonic Tunnel
• Ames Supersonic Tunnel
• Mach 7 Shock Tunnel
• NASA Langley Mach 6 Quiet Tunnel
• Supersonic Pilot Tunnel
Wave Propagation Laboratory

Research Areas

Aerodynamics and Fluid Mechanics

Active Flow Control
Aerodynamics
Aerothermochemistry
Combustion
Compressible, Hypersonic and Plasma Turbulence Theory, Modeling and Experiments
Flight Measurements of Air Quality
Gas Dynamics
High-Speed Aerodynamics and Heat Transfer
Kinetic Theory-Based CFD
Laser Diagnostics
Micro and Nanosatellite Design
Novel Flow Diagnostics Instrumentation Development
Propulsion
Responsive Space Missions
Roughness
Turbomachinery
Turbulent Flames
UAV and RPV Development and Flight Test

Wind-Flight Experiments and CFD in Boundary Layer Stability and Transition, Laminar Flow Control and Low-Reynolds-Number Aerodynamics

Dynamics and Controls

Aeroelasticity
Analytical Dynamics
Autonomous Intelligent Control
Autonomous Systems
Cooperative Methods for Urban Search and Rescue (USAR)
Design of In-Space Imaging Systems
Fault Tolerant Adaptive Control
Formation Flying
Intelligent Cockpit Systems and Displays
Mission Analysis
Morphing Air and Space Vehicle
Navigation Sensors
Networked Control Systems
Nonlinear Dynamics
Orbit and Attitude Estimation

Realtime/Anytime Path Planning Systems with Delay
Trajectory Optimization
Vision-based Navigation Systems

Materials and Structures

Active Materials
Composite Materials and Structures
Computational Materials Science
Computational Mechanics and Simulation
Damage Mechanics
Damping
Discrete Dislocation Plasticity
Dynamic Fracture
Electric and Dielectric Polymers and Polymer Nanocomposites
Ferroelectric Materials
Fracture Mechanics
MEMS and NEMS
Multifunctional Materials