MODELING & SIMULATION
GRADUATE PROGRAM
UNIVERSITY OF CENTRAL FLORIDA

An interdisciplinary graduate program emphasizing collaboration

WHERE INDUSTRY AND RESEARCH MEET ACADEMICS

CENTRAL FLORIDA IS THE NATIONAL CENTER OF EXCELLENCE FOR THE MODELING, SIMULATION, AND TRAINING INDUSTRY IN THE U.S.

LEARN MORE >
MODELING & SIMULATION IS HIGHLY MULTIDISCIPLINARY AND ACTIVE ACROSS MANY RESEARCH AREAS AT UCF.

MODELING & SIMULATION RESEARCH

UCF is a focal point for simulation research and technology. UCF M&S-affiliated faculty are leading researchers in the field and continue to develop and make state-of-the-art breakthroughs in technology that not only fascinates but also informs, educates, and protects, thereby advancing modeling and simulation technology and increasing the understanding of simulation's role in training and education. Major laboratories, centers and institutes at UCF support research in:
- Emergency services and public safety
- Medical and healthcare delivery technologies
- Advanced 3D computer graphics and image rendering
- Virtual, mixed and augmented reality
- Manufacturing & advanced materials characterization
- Computer-controlled robotics
- High-performance distributed computing
- Interactive and immersive entertainment
- Pedagogical principles and instructional methods design and development
- Human factors psychology
- Cognitive and behavioral science

Furthermore, UCF operates one of the world’s leading internationally recognized research facilities dedicated to advancing the MS&T field - the Institute for Simulation & Training (IST). IST makes its home in the Central Florida Research Park adjacent to the University’s main campus in Orlando. The Institute provides an ideal environment for students, faculty and industry partners interested in enhancing human performance through human-in-the-loop simulation technology. IST employs over 100 full-time researchers and support personnel in computer modeling and virtual, augmented and mixed reality research for both defense and commercial applications. Since its creation in 1982, IST has broadened its research capabilities through cooperation with other University departments, institutes and centers, and the appointment of a growing number of joint UCF faculty researchers. IST research teams study simulation in many forms, from basic desktop interaction to full immersion in computer-generated environments. By designing and using various hardware and software testbeds, researchers evaluate simulation accuracy and effectiveness in skills transfer and physiological effect.

M&S ACADEMIC PROGRAMS

1. MODELING & SIMULATION PH.D.
2. MODELING & SIMULATION M.S.
3. M&S TECHNICAL SYSTEMS GRADUATE CERTIFICATE
4. M&S BEHAVIORAL CYBERSECURITY CERTIFICATE

The University of Central Florida is the premier academic institution in the U.S. to offer truly interdisciplinary graduate studies in M&S, one of the first of its kind in the world. The UCF Modeling & Simulation Graduate Program has a long history of academic excellence in the field of modeling, simulation and training. The Program boasts truly interdisciplinary and rigorous academic Master of Science and Doctoral curricula that combine a set of M&S core and elective coursework. Each is flexible and encourages students to shape their own education in the area of modeling and simulation research and education. By design, the UCF M&S degree curricula permit students to customize their depth and breadth of learning by selecting a course pathway through traditional and non-traditional M&S content areas based on their educational and career experience, interests and goals.

UCF M&S-affiliated faculty teach and conduct research in modeling and simulation, representing disciplines ranging from engineering and computer science to human factors psychology to education and instructional design to healthcare delivery. In addition, through its strong, long-standing partnerships with private industry, military commands, the Institute for Simulation & Training, and academic programs across multiple University disciplines, the UCF Modeling & Simulation Graduate Program offers students a wide range of opportunities directly applicable to the working world, ultimately preparing them to make immediate and significant contributions in the MS&T field.

GENERAL CONTENT AREAS OF FOCUS

Stop

Cybersecurity
Interactive Simulation & Intelligent Systems
Simulation Infrastructure
Simulation Management
Simulation Modeling & Analysis
Simulation in Healthcare
Human Systems in M&S
Computer Visualization in M&S

The M&S Graduate Program frequently brings together students and faculty from different academic disciplines and programs, including:
- Engineering
- Computer Science
- Mathematics
- Psychology
- Healthcare
- Education and Instructional Design
- Digital Arts
- Public Affairs and Administration
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The Central Florida region of the state of Florida is one of the nation’s fastest growing high tech regions and enjoys a global reputation of being the epicenter for modeling and simulation. Furthermore, the greater metro Orlando area is at the center of the modeling, simulation, and training (MS&T) industry, created in large part by researchers at the University of Central Florida (UCF) in Orlando, Florida. Through extensive collaboration with government and industry partners, UCF features some of the most progressive educational and research facilities and leading M&S researchers in the world dedicated to furthering the success of the modeling, simulation and training industry. In fact, Orlando has earned the region the distinction of being designated the National Center of Excellence in Simulation and Training. Through partnerships with the military and local industry, particularly Orlando’s burgeoning entertainment sector, UCF offers students a unique opportunity to be a part of it.

CONTACT US

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The UCF M&S Graduate Program is administered through the UCF College of Graduate Studies in partnership with the UCF Institute for Simulation & Training.