BENEFITS OF THE PROGRAM

- Deepened knowledge and training in the fields of cybersecurity, modeling, and simulation;

- Improved technical competency for specialists;

- Bridging of M&S theory and application for better insight into behavioral aspects of cybersecurity through experiential learning opportunities;

- Increased marketability, employment stability and career mobility; and

- Cost-effective educational solution for individuals, small businesses to large corporations, government agencies, educational institutions, and the military.

APPLICATION REQUIREMENTS

- Official transcripts showing completed bachelor's degree from a regionally accredited institution.

- Résumé or Curriculum Vitae (C.V.)

- Applicants must apply online
    (https://www.students.graduate.ucf.edu/gradonlineapp/)

- Application deadline is **July 15** (Fall semester admission only)

CONTACT US

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407-882-1407 ● modsim@ucf.edu

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Modeling and Simulation of Behavioral Cybersecurity

Graduate Certificate

University of Central Florida

APPLY NOW!

CYBER SECURITY

ABOUT THE PROGRAM

The Graduate Certificate in Modeling and Simulation of Behavioral Cybersecurity is offered by the Modeling and Simulation Graduate Program at the University of Central Florida (UCF). It is a 13-credit hour certificate program that provides students with specialized training and knowledge in modeling and simulation (M&S) fundamentals, techniques, and applications towards the behavioral aspects of cybersecurity, with special emphasis on proactive planning as well as reactive strategies to minimize damage.

More specifically, this Certificate is designed to prepare students from a variety of disciplinary backgrounds in the interdisciplinary field of M&S as it provides a unique opportunity to explore the interface and interdependence of M&S and cybersecurity to apply this learning.

UCF offers one of the most respected graduate degree programs in modeling and simulation in the country and has long been a leader in preparing individuals to design, develop, implement, and manage integrated modeling, simulation and training systems. This Certificate offers professional opportunities to acquire critical knowledge and training without committing to a full Master's degree program and is designed for part-time enrollment in order to accommodate students and professionals working full-time. This certificate also meets the needs of those who work in the fields of cybersecurity, modeling, simulation, and training without academic degrees in those disciplines.

COURSE DESCRIPTIONS

(Listed in order of course progression)

IDC 5602 Cybersecurity: A Multidisciplinary Approach (Fall—3 credit hours)

Modeling and simulation fundamentals as applied to cybersecurity including operating system installation and administration for hardware, network architectures, layers, protocols, and configurations. Serves as an introduction to the next two courses in the certificate with topics such as business continuity planning and security management, attack, defense, and cyber weakness at a high level.

CNT 5410L Cyber Operations Lab (Spring—3 credit hours)

Hands-on approach to learning programming, software, and hardware components for the cybersecurity operations as related to topics such as system administration, firewalls, cyber attack, cyber defense, physical security, operations security, and establishing secure architectures at the network and computer level.

IDC 6601 Behavioral Aspects of Cybersecurity (Summer—3 credit hours)

Focus on human, social, and behavioral issues related to cybersecurity including organizational management techniques, motives for cyber crimes, risk and threat analysis, and ethics and legal issues. Top modeling and simulation techniques and some relevant psychological issues including human systems integration and human computer interaction will be applied as they relate to securing data, computers, and the networks on which these reside.

IDC 6600 Emerging Cyber Issues (Summer—1 credit hour)

Discuss emerging topics in cybersecurity by examining current events and coordinating guest speakers from expert leaders in industry. Identify a topic and required resources to complete a multi-disciplinary Modeling & Simulation capstone project. Develop annotated topical outline for Modeling & Simulation capstone report.

IDS 6916 Simulation Research Methods and Practicum (Fall—3 credit hours)

Interdisciplinary teams of students conduct fundamental and applied research on contemporary issues in modeling, simulation, and training. Cybersecurity certificate students will be required to produce projects relating to cybersecurity and behavioral aspects of cybersecurity.