Overview of Graduate Programs

Master’s Program
There are three options available, all of which include 1 credit hour of colloquium.

Thesis - 30 credit hours + colloquium
  • 24 credit hours coursework
  • 6 credit hours thesis research

Project - 33 credit hours + colloquium
  • 30 credit hours coursework
  • 3 credit hours project work

Courses-only - 33 credit hours + colloquium
  • 33 credit hours coursework

We also offer a fully-online MS degree.
For more information, see https://graduate.cs.odu.edu/ms/

PhD Program
Main Requirements
  • PhD qualifying process: coursework and either qualifying exam or research event.
  • 24 credit hours post-master’s coursework
  • Candidacy exam (dissertation proposal)
  • 24 credit hours dissertation work
  • 1 credit hour colloquium
  • Dissertation defense

For more information, see https://graduate.cs.odu.edu/phd/

Graduate Certificate Programs
Cybersecurity (online only)
  • 12 credit hours coursework
  • Cybersecurity Fundamentals, Cryptography for Cybersecurity, Networked Systems Security, Information Assurance

Modeling & Simulation (M&S)
  • 12 credit hours coursework
  • Intro to M&S (required), at most 2 Foundation Electives, at least 1 Advanced Elective

For more information, see https://www.cs.odu.edu/
Graduate Faculty
Research Interests

Dr. Vikas Ashok: Human Computer Interaction, Natural Language Processing, Accessible Computing, Machine Learning, Health Informatics.

Dr. Andrey Chernikov: Image Analysis in Medical and Bio-Material Modeling and Simulation, Parallel Computational Geometry with focus on quality mesh generation, High-Performance Scientific Computing

Dr. Nikos Chrisochoides: Medical Image Computing, Scientific Computing, Parallel, Distributed and Cloud Computing

Dr. Shuai Hao: Internet Infrastructure, Security and Privacy of Internet and Networked System, Network Protocols and Systems, Web Security and Privacy, Cybercrime

Dr. Jing He: Computational Biology, Protein Bioinformatics, Image Pattern Recognition

Dr. Shubham Jain: Mobile Sensing, Smart Cities, Cyber-Physical Systems, Scalable Video Analytics, Mobile Vision

Dr. Sampath Jayarathna: Data Science, Neuro-Information Retrieval, Eye Tracking, Human-Computer Interaction, Machine Learning, Digital Libraries

Dr. Yaohang Li: Computational Biology/Bioinformatics, Computational Science, Monte Carlo Methods, High Performance Computing, Big Data Analysis

Dr. Ravi Mukkamala: Cybersecurity, Data Mining, Privacy-Preserving Mining, Distributed Systems, Performance Analysis, Modeling & Simulation


Dr. Stephan Olariu: Mobile Computing, Wireless Networks, Parallel Algorithms and Architectures, Distributed Algorithms, Performance Evaluation

Dr. Desh Ranjan: Algorithms, Bioinformatics, Parallel Computing, Computational Complexity

Dr. Jiangwen Sun: Machine Learning, Computational Systems Medicine, Data Mining, Medical Informatics, Health Informatics

Dr. Cong Wang: Mobile Computing, Cybersecurity, Energy Efficiency, Machine Learning

Dr. Michele C. Weigle: Web Science, Digital Preservation, Social Media, Information Visualization

Dr. Jian Wu: Text Mining, Scholarly Big Data, Digital Libraries, Search Engines, Natural Language Processing, Applied Machine Learning, and Deep Learning

Dr. Steven Zeil: Software Testing, Software Development Environments

Dr. Danella Zhao: Multicore/Many-Core Computing and On-Chip Networking, Heterogeneous System Architecture, Hardware Security, Embedded and Cyber Physical Systems

Dr. Mohammad Zubair: High Performance Computing in the areas of Econometrics, Financial, Bioinformatics, and Scientific Computing

Research Areas

Bioinformatics: He, Li, Ranjan, Sun
Cybersecurity: Hao, Mukkamala, Wang, Zhao
Machine Intelligence and Data Analytics: Ashok, Jain, Jayarathna, Li, Mukkamala, Sun, Zeil, Zhao, Zubair
Medical and Scientific Computing: Chernikov, Chrisochoides, Ranjan, Zubair
Web Science and Digital Libraries: Jayarathna, Nelson, Weigle, Wu

Recent Course Offerings

MS Courses
- Algorithms and Data Structures
- App Development for Smart Devices
- Computational Geometry
- Computational Methods and Software
- Cryptography for Cybersecurity (online only)
- Cybersecurity Fundamentals (online only)
- Database Concepts
- Data Visualization
- Foundations of Computing
- Information Assurance (online only)
- Introduction to Artificial Intelligence
- Introduction to Data Science
- Introduction to Networks and Communication
- Introduction to Parallel Computing
- Networked Systems Security (online only)
- Systems Programming
- Web Programming
- Web Science
- Web Server Design

We also offer several MS/PhD courses focusing on research interests of individual faculty members.