INTERDISCIPLINARY INFORMATICS (SI2)

The mission of the School of Interdisciplinary Informatics (Si2) is to provide students and faculty the opportunity to pursue their passions, to use technology in all its facets, and to be transformative. We collaborate to deliver individualized education, world-class research, and immersive experiences to create and harmonize knowledge from multiple disciplines.

The School of Interdisciplinary Informatics reflects the role and mission of UNO's College of Information Science & Technology and the University of Nebraska at Omaha in a number of ways. It is a direct response to the opportunities and challenges presented by information technology as it relates to economic growth for the state and region in applied IT areas such as medical informatics, innovation, and cybersecurity. The School encourages the enhancement and fostering of new educational, research and creative activities by bringing together practitioners, researchers and students in interdisciplinary fields of importance to the state and the University. The School is unique in the country and leads to increased national visibility of the University of Nebraska in the area of interdisciplinary information technology applications.

The School of Interdisciplinary Informatics addresses the following needs and demands of our academic, business, and community stakeholders:

1. Growth of interdisciplinary areas;
2. Facilitation of innovative partnerships with external constituents, including leveraging the expertise of the local community;
3. Recruitment of personnel;
4. Reduction of barriers to collaboration;
5. Flexible and agile structure for quick response to opportunities;
6. Solidification of regional and national recognition as an important resource for the study and advancement of IT in the domain of healthcare, biosciences, and information security;
7. Visibility of the college and its interdisciplinary focus;
8. A magnet for collaborative external funding;
9. Development of the next generation workforce to address local, regional and national needs in exciting, new interdisciplinary domains.

Accreditation

As a requirement of standards set by the Higher Learning Commission (HLC), the accrediting body of the University of Nebraska at Omaha, each of our undergraduate degree programs performs a regular assessment of student learning outcomes. The process of program assessment and program reviews helps to ensure students are being provided with an academically rigorous curriculum that also reflects the demands of a rapidly changing job market.

Contact

For more information, contact the College of IS&T Academic Advising Office at 402.554.3819.

Website (http://www.unomaha.edu/college-of-information-science-and-technology/school-of-interdisciplinary-informatics/)

Degrees Offered

The three degrees offered by the School are:

- Applied Computing and Informatics, Bachelor of Science (http://catalog.unomaha.edu/undergraduate/college-information-science-technology/school-interdisciplinary-informatics-si2/information-technology-it-innovation-bs/)
- Cybersecurity, Bachelor of Science (http://catalog.unomaha.edu/undergraduate/college-information-science-technology/school-interdisciplinary-informatics-si2/cybersecurity-bs/)

The degrees offered in the School share an interdisciplinary spirit within their curriculum, which reflects the School's mission to provide our students a transformative, individualized education. Our graduates are trained by faculty with expertise in multiple domains so that they may rise to real-world challenges that require interdisciplinary solutions.

Minors Offered

- Applied Computing and Informatics Minor (http://catalog.unomaha.edu/undergraduate/college-information-science-technology/school-interdisciplinary-informatics-si2/itin-minor/)
- Bioinformatics Minor (http://catalog.unomaha.edu/undergraduate/college-information-science-technology/school-interdisciplinary-informatics-si2/bioinformatic-minor/)
- Cybersecurity Minor (http://catalog.unomaha.edu/undergraduate/college-information-science-technology/school-interdisciplinary-informatics-si2/cybersecurity-minor/)

Bachelor of Science in Applied Computing and Informatics

The Applied Computing and Informatics major is the interdisciplinary practice of conceptualizing, designing, prototyping and fielding an IT-based product or service. IT focuses both on the technological and entrepreneurial aspects of IT products. Applied Computing and Informatics brings together aspects of Computer Science and Management Information Systems with other disciplines that inform IT design and application, such as health care, business, psychology, art, or music.

Careers Options:

In addition to more general IT professions, students in the Applied Computing and Informatics program have found employment in the Applied Computing and Informatics field as:

- Applications Designer
- Digital Artist
- Founder
- Graphics/Web Designer
- Innovation Consultant
- Innovation Evangelist
- IT Applications Consultant
- New Product Designer/Developer
- New Ventures Specialist
- Product Innovation Specialist
- User Experience Designer
- Video Game Designer

Bachelor of Science in Bioinformatics

Graduates from UNO's Bioinformatics (BIOI) program in the College of IS&T will be able to use their preparation to apply and investigate technology to solve bioinformatics problems in a comprehensive, competitive and effective way. Students with an undergraduate degree in bioinformatics can expect to have a foundational knowledge in computer science, biology, statistics, and database administration.

The job outlook for Bioinformatics majors is excellent. Versatile and greatly in demand, our graduates have gone on to become programmers, data analysts, and senior-level scientists. Employment is available with private and public industries, research institutions, government institutions, non-profits, and universities around the globe. The Bioinformatics degree can also serve as a springboard to graduate work, opening the door to academic careers and other careers that require informatics skills coupled with biological background.

Careers Options:

- Bioinformatics Scientist/Analyst
- Scientific Curator
- Computational Biologist
- Database Programmer
- Database Administrator
- Software Developer
- Consultant
- Network Analyst
- Structural Analyst
- Biostatistician
- Software Engineer
- Research Scientist
- Data Scientist
- Biotech Entrepreneur

Bachelor of Science in Cybersecurity

Cybersecurity is a rapidly expanding field focused on keeping critical infrastructure, systems, and users safe. From phishing attacks on individuals to large-scale attacks on facilities like power plants, government systems, and industrial control systems, threaten the 21st century global economy. Adapting to these changing threat environments is a continual activity in which companies and governments must engage. These organizations rely on cybersecurity practitioners to identify threats, determine risk, and implement mitigating protections in their software, hardware, and online systems - such as those on mobile, web and Internet of Things (IoT) platforms. It is also important to build protections into new software and hardware during the design and development process, track and monitor developed systems for on-going risk, and assess them forensically when something goes wrong. The Bachelor of Science in Cybersecurity (CYBR) degree program at UNO focuses on technical curricula that prepare students for pathways into a range of careers that address these topics.

Careers Options:

- Entry Level
  - Cybersecurity Specialist/Technician
  - Cyber Crime Analyst/Investigator
  - Incident Analyst / Responder
  - IT Auditor
  - Secure Applications Developer
- Mid-Level
  - Cybersecurity Analyst
  - Cybersecurity Consultant
  - Penetration and Vulnerability Tester
  - Secure Systems Integrator
  - Cybersecurity Lead Programmer
- Advanced level
  - Cybersecurity Manager/Administrator
  - Cybersecurity Engineer
  - Cybersecurity Architect
  - Chief Information Security Officer