

DIGITAL SCIENCES



Excellence in Action

SCHOOL OF DIGITAL SCIENCES

The School of Digital Sciences is a cutting-edge new interdisciplinary school designed to train tomorrow's digital leaders. Integrating elements of computer science, computer information systems, computer technology, library information science, visual communication design, journalism, communication studies and instructional technology, the school fosters a broad exposure to digital technologies as used by a wide range of professions and organizations. The school offers Bachelor of Science and Bachelor of Arts degrees, a Master of Digital Sciences degree, an undergraduate minor and a graduate Enterprise Architecture certificate.

BACHELOR'S DEGREES

The **Bachelor of Science and Bachelor of Arts** degrees in digital sciences are designed to provide students with the ability to adapt and succeed in a rapidly changing digital world.

The program provides a broad overview of digital technologies, often from multiple points of view. For example, a student may study the content and visual layout of a Web page with a journalism professor and later study the programming aspects of a Web page with a business professor. A course with an architect adds more material on design, and a course with a computer scientist adds additional programming skills. This multidisciplinary skill set is exactly what is needed for many of today's careers.

Building on this overview of digital technologies, the program adds further study in information management, database systems and digital security. Finally, students gain the practical skills to work as part of a multidisciplinary team — studying requirements engineering, project management and team dynamics and culminating in a capstone course.

The **Bachelor of Science** degree program provides deeper knowledge in the digital sciences than the Bachelor of Arts degree and has six optional, focused concentrations.

The optional concentrations for the **Bachelor of Science** degree are:

- **Digital Systems Software Development** — focuses on the software system needs of an organization and the coordination of the design, maintenance and expansion of a software system to meet those needs.
- **Digital Systems Telecommunication Networks** — focuses on the communication needs of an organization and the design of a telecommunication and network infrastructure to meet those needs.
- **Digital Systems Analysis** — focuses on consulting with an organization's managers and users to understand the organization's computer system needs, and then designing a computer system to meet those needs.
- **Digital Systems Management and Consulting** — focuses on reviewing an organization's business priorities, identifying and solving complex problems and designing and re-engineering critical processes.
- **Digital Science Cognition and Communication** — focuses on the learning, teaching, communication and training needs of an organization and the hardware and software systems that must be designed to meet those needs.

- **Enterprise Architecture** — focuses on assisting organizations to review and improve their investments in technology, and to ensure that their digital information, applications and technology are fully aligned with business goals and objectives.

Students who do not choose one of these concentrations must instead take a programming course, a database course and additional advisor-approved electives.

The **Bachelor of Arts** degree program has fewer major program requirements than the Bachelor of Science degree, and as such is the ideal complement to an associate degree or an excellent candidate for a dual degree.

CAREER OPPORTUNITIES

According to the U.S. Bureau of Labor Statistics, computer-related occupations will grow twice as fast as the average for all occupations, and will account for more than 750,000 new jobs nationally between 2010-2020. Computing occupations are projected to be responsible for nearly 62 percent of all job growth in science and engineering between 2010 and 2020.

Many career paths can benefit from broad, multidisciplinary training that provides exposure to business processes, information management, software development, telecommunications infrastructure, design principles, project management and a host of other skills. Students studying digital sciences will gain familiarity across this broad spectrum of disciplines.

Students graduating from the digital sciences program will be prepared for entry-level careers in a variety of areas, such as computer systems analyst, information technology coordinator, instructional technologist, software project manager, telecommunication specialist or website developer.

DIGITAL SCIENCES



Excellence in Action

BACHELOR OF SCIENCE REQUIREMENTS

The Bachelor of Science degree program includes 30 credits of major program requirements coupled with 27-29 credits of focused coursework for each concentration.

The first set of courses provides a broad understanding of basic digital technology:

- DSCI 15310 Computational Thinking and Programming *
- DSCI 26010 Telecommunication Infrastructure *
- DSCI 34410 Digital Information Management and Processing
- MIS 24053 Introduction to Computer Applications

Another set of courses explores how digital technology is used by different societies, cultures, genders and types of organizations:

- DSCI 10010 Society, Culture and the Digital Sciences
- DSCI 10310 My Story on the Web *
- DSCI 10410 Information Ethics and Social Responsibility
- DSCI 13210 Design Processes and Principles
- DSCI 23410 Cognition in Technology *

Other courses provide practical skills using digital technology to the benefit of any business or organization:

- DSCI 31010 Enterprise Architecture *
- DSCI 33310 Human-Computer Interaction *
- DSCI 41610 Digital Systems Security
- MIS 24065 Web Programming
- MIS 44043 Database System Management

A final set of courses provides skills in project management and teamwork:

- TECH 36411 Requirements Engineering and Analysis
- DSCI 41510 Global Project Management and Team Dynamics
- DSCI 40910 Capstone in Digital Sciences

* = not required for all concentrations

These required courses are complemented by 9 credits of advisor-approved electives in digital sciences or a related area, allowing further customization of the degree to meet students' career goals.

No mathematics courses are required for the major (although there is a math requirement in the Kent Core), but some courses in Enterprise Architecture and Digital Systems Software Development concentrations do have math prerequisites. There is no foreign language requirement. Many of the major program requirements are available both in-person and online.

BACHELOR OF ARTS REQUIREMENTS

The Bachelor of Arts degree program has fewer major program requirements than the Bachelor of Science degree, and as such is the ideal complement to an associate degree or an excellent candidate for a dual degree.

The Bachelor of Arts degree program includes 36 credits of major program requirements.

That foundation is complemented by 6 credits of advisor-approved electives in digital science or a related area and 37-42 credits of general electives.

No mathematics courses are required for the major (although there is a math requirement in the Kent Core), and there is no foreign language requirement. Many of the major program requirements are available both in-person and online.

COMBINED BACHELOR'S / MASTER'S DEGREE

Students who are currently in a bachelor's program at Kent State University and have a very good undergraduate record may want to consider the university's Combined Bachelor's and Master's program. This program allows an undergraduate student to take up to 12 hours of graduate coursework and count those hours toward both degrees, typically as electives in the undergraduate program. The result is that the student essentially saves approximately an entire semester of tuition and time.

MINOR REQUIREMENTS

The digital sciences minor is designed to complement a wide range of majors. The minor includes two courses that focus on improving the content of a Web page, and on making a Web page or program easier to use.

Students then have a choice between two courses that explore societal or ethical issues involving technology, a choice from a set of courses that explore either design issues or programming, and a choice between two courses in enterprise architecture or information management — two emerging areas in digital sciences.

Finally, an advisor-approved elective in the digital sciences provides flexibility to tailor the minor to each student's specific interests and career goals, for a total of 18 credit hours.

School of Digital Sciences

236 Mathematics and
Computer Science Building
1300 University Esplanade
330-672-9105
digital-sciences@kent.edu
www.kent.edu/dsci

Admissions Office

Kent State University
P.O. Box 5190
Kent, OH 44242-0001
330-672-2444
1-800-988-KENT
www.kent.edu/admissions

For information on all of Kent State's degrees and majors, go online to www.kent.edu/gps.