

Online access to world-class professors at a premier public university



THE UMAINE ONLINE ADVANTAGE

- Education from expert faculty
- Engaged learning environment
- The same respected degree that on campus students receive
- Excellent preparation for employment
- Dedicated online student support services
- Flexibility of attending class on your schedule
- More than 500 online courses
- Competitive tuition rates
- Advisors to guide you from enrollment to graduation

UMaineOnline
122 Chadbourne Hall
University of Maine
Orono, ME 04469-5751
207.581.5858

umaineonline@maine.edu
umaine.edu/online



SCHOOL OF COMPUTING AND INFORMATION SCIENCE GRADUATE CERTIFICATE IN GEOGRAPHIC INFORMATION SYSTEMS

Geographic Information Systems have become a common information management and analysis tool used across many academic disciplines, government agencies and businesses. Students from diverse backgrounds may advance their career potential by building knowledge in this area. Practitioners in business, industry and government may be interested in acquiring base skills in this area to keep up with changing information technology in their work environment. The graduate certificate program is designed to provide a foundation in key aspects of geographic information systems. The demand for specialists with geographic information system (GIS) and related geospatial information technology backgrounds continues to expand.

The Graduate Certificate in Geographic Information Systems is available to those students who complete fifteen credits of required courses under the MS Spatial Informatics graduate degree program. All of the required courses should be available to the student through distance technologies at least once within any two-year period. If one of the courses has been waived due to previous course work or acquired skills, students are required to take an appropriate replacement course as specified by the graduate coordinator in consultation with the MSSSI graduate faculty.

Unless students know positively that they will not pursue a full master's degree online, students desiring to acquire the Graduate Certificate in Geographic Information Systems should apply for formal admission to the MS Spatial Informatics (MSSI) program. If a student is unable to complete the full MS within a reasonable period of time, the student may request of the graduate coordinator that they be awarded the Graduate Certificate in Geographic Information Systems upon completing the 5-course certificate requirement in lieu of completing the MSSI. Up to two graduate courses may be taken as a non-degree student prior to formal admission. Students desiring only the Graduate Certificate should complete that application instead.

For more information visit
online.umaine.edu/scis

PROGRAM REQUIREMENTS (15 credits)

The Graduate Certificate in Geographic Information Systems requires completion of a minimum of 15 credits of coursework. The fifteen credits of coursework must include the following three core courses:

- SIE 509: Introduction to Geographic Information Systems (3 cr.)
- SIE 557: Database System Applications (3 cr.)
- SIE 510: GIS Applications (3 cr.)

The remaining 6 credits may be selected from among the following set of courses:

- SIE 505: Formal Foundations for Information Systems (3 cr.)
- SIE 507: Information Systems Programming (3 cr.)
- SIE 512: Spatial Analysis (3 cr.)
- SIE 515: Human Computer Interaction (3 cr.)
- SIE 525: Information Systems Law (3 cr.)
- SIE 555: Spatial Database Systems (3 cr.)
- SIE 556: Information System Architecture (3 cr.)
- SIE 565: Reasoning w/Uncertainty in Spatial Information Systems (3 cr.)

Only courses in which the student obtained a grade of B or higher count towards the completion of the Geographic Information Systems Graduate Certificate.

WHAT CAN I DO WITH A GRADUATE CERTIFICATE IN GEOGRAPHIC INFORMATION SYSTEMS?

The Certificate in Geographic Information Systems may help jump start continuation in a master's program or advance your career in any field that makes daily use of digital mapping, location tracking technologies and GIS. Among such fields include:

Contact an advisor to get started today umaine.edu/online

ADVISING CENTER

NOT SURE WHERE TO BEGIN?

Contact our advising center to get started. Our Enrollment Advisors can help you decide which academic program is right for you, review transfer credits, walk you through the Admission process, discuss financial aid options, describe what it's like to learn online, and more. We are here for you!

Set up an appointment today.
207.581.5858
umaineonline@maine.edu
Belfast and Orono locations
umaine.edu/online



Tuition*

Maine Residents:
\$418/credit hour

Non-Residents:
\$1,361/credit hour

Fees*

- **Unified Fee**
less than 6 credit hours: \$125
6–11 credit hours: \$381
12–15 credit hours: \$934
16 or more credit hours: \$958
- **Online Fee**
\$25/credit hour

*Rates apply to the 2016-17 academic year. Unique course and/or program fees may apply.

Apply Now

Ready to get started?
Visit us online for information on how to apply: umaine.edu/online



- Cartography and Digital Mapping
- Urban and Regional Planning
- Transportation and Utilities
- Environmental Resource Planning and Management

GIS professionals find work in federal and state agencies though the vast majority of careers are found in engineering, planning consultancy, architectural, and technology firms.

FACULTY PROFILE



Dr. Kate Beard is a professor in the Department of Spatial Information Science Engineering at the University of Maine. She has been a research faculty with the National Center for Geographic

Information and Analysis (NCGIA) since its beginning in 1989. She holds a M.S. (1984) and Ph.D. (1988) from the Institute for Environmental Studies, Land Resources Program, where she specialized in geographic information systems.

Dr. Beard's current research interests include modeling, analysis and visualization of spatio-temporal phenomena. Among active research projects in which she serves as principle investigator include: an NSF grant working with oceanographers to develop an ontology of ocean related events, detect oceanographic events from multiple ocean observing sensors, and develop methods for exploration of event patterns; an NSF IGERT grant to develop a new PhD

ACADEMIC CALENDAR

Fall Semester 2016

Classes begin August 29
Registration for Spring 2017
October 24–November 18
Final Exams end December 18

Winter Session 2016-2017

Classes begin December 27
Classes end January 14

Spring Semester 2017

Classes begin January 17
Registration for Fall 2017 (tentative)
March 27–April 28
Final exams end May 12
Commencement Saturday, May 13

Summer University 2017

Registration begins February 6
Classes begin May 15
Classes end August 18

training program in Sensor Science, Engineering and Informatics; and an NSF grant to investigate the application of spatial concepts to genome mapping. Previously she has investigated several aspects of digital libraries from metadata support for information description and retrieval to visualization of metadata for efficient information browsing and quality evaluation. Current work on digital libraries addresses issues of metadata services, gazetteer development and the extension of the gazetteer concept to geographic knowledge base. Dr. Beard has authored or co-authored over 50 articles in journals, books and proceedings in geographic information science.