Graduate College

Dean

• Amanda H. Thein

Associate Dean

• Michelle L. Campo

Assistant Deans

• Heidi Arbisi-Kelm, Jennifer Teitle

Website: https://grad.uiowa.edu

The University of Iowa has been a leading center of advanced study for more than a century. Presently, the Graduate College accounts for nearly one-fifth of the university's total enrollment. This high ratio reflects the breadth of the university's graduate programs and resources, the strength of a graduate faculty with a long tradition of personal and professional concern for students, and the opportunities afforded graduate students for involvement, recognition, and support.

The Graduate College is responsible for the review and approval of proposals for new graduate programs and for the periodic survey and evaluation of existing programs. Through its administration of scholarship, fellowship, and research assistantship funds, the college encourages research and strengthening of departments. Additionally, the college works with the other colleges and departments of the university to formulate policies concerning the selection, supervision, and support of graduate students.

The faculty of the Graduate College is made up of all university tenure-track faculty members at the ranks of assistant professor, associate professor, and professor. The Graduate Council, elected from and by the graduate faculty, is the executive committee of the graduate faculty and is advisory to the dean of the Graduate College.

Manual of Rules and Regulations

The current edition of the Manual of Rules and Regulations is available on the college's website.

Academic Affairs Office

The Academic Affairs Office (AAO) is responsible for supporting graduate student academic progress and success. Have a question? AAO can help. AAO oversees graduate student degree progress and completion, assists with student academic concerns, and provides support for graduate students' completion of their thesis or dissertation. AAO works broadly across campus by coordinating with graduate programs and campus partners to manage and uphold the rules and standards of graduate education with a focus on academic excellence, student success, and evidence-based initiatives to shape and improve students' experiences.

Office of Graduate Diversity, Equity, and Inclusion

The Office of Graduate Diversity, Equity, and Inclusion is dedicated to providing academic assistance to graduate students from underrepresented populations across graduate programs, building a sustainable practice of inclusion that nourishes and attracts underrepresented graduate students campuswide, and fostering community-building through individual and group activities focused on successful academic progress.

Graduate Student Success

The Graduate College takes a holistic approach to graduate student and postdoctoral scholar preparation. Whether a student's goal is a career in academe, industry, government, or elsewhere, professional development can expand one's options and make a student more marketable to employers. The Graduate Student Success Office can help graduate students in the realms of:

• communication;
• research and publication;
• diversity;
• funding;
• teaching;
• leadership;
• careers; and
• wellness.

Research Resources

Many of the university's diverse research activities are centrally administered by the Office of the Vice President for Research, which has a cooperative relationship with the Graduate College.

Graduate Student Senate

The Graduate Student Senate is the university's graduate student body representative organization. Representatives are elected annually from each university department that has a graduate degree program. The senate's primary purpose is to serve the interests of the graduate student body in matters affecting its welfare. The senate advises the dean of the Graduate College on matters pertaining to the college.

Degrees Offered

The Graduate College confers the Master of Arts (MA), Master of Science (MS), Master of Accountancy (MAC), Master of Arts in Teaching (MAT), Master of Computer Science (MCS), Master of Fine Arts (MFA), Master of Health Administration (MHA), Master of Public Affairs (MPAaff), Master of Public Health (MPH), Specialist in Education (EdS), Master of Science in Nursing (MSN), Master of Social Work (MSW), Doctor of Philosophy (PhD), Doctor of Education (EdD), Doctor of Musical Arts (DMA), Doctor of Nursing Practice (DNP), Doctor of Physical Therapy (DPT), and Doctor of Audiology (AuD) degrees.

The college currently confers degrees in the following major fields.

Accounting: MAC
Actuarial Science: MS
African American World Studies: MA
American Studies: MA, PhD
Anatomy and Cell Biology: MS, PhD (see Biomedical Science)
Anthropology: MA, PhD
Applied Mathematical and Computational Sciences: PhD
Art: MA, MFA
Art History: MA, PhD
Asian Civilizations: MA
Astronomy: MS
Athletic Training: MS
Biochemistry and Molecular Biology: MS, PhD
Biology: MS, PhD (see Integrated Biology)
Biomedical Engineering: MS, PhD
Biomedical Science: MS, PhD
Biostatistics: MS, PhD
Book Arts: MFA
Business Administration: MA, PhD
Business Analytics: MS
Chemical and Biochemical Engineering: MS, PhD
Chemistry: MS, PhD
Civil and Environmental Engineering: MS¹, PhD
Classics: MA¹, PhD
Clinical Investigation: MS¹
Communication Studies: MA¹, PhD
Community and Behavioral Health: PhD
Computer Science: MS¹, MCS², PhD
Counselor Education, MA, PhD
Criminology: PhD
Dance: MFA
Data Science: MS
Dental Public Health: MS
Economics: MA¹, PhD
Education: MA¹, MAT², EdS², PhD
Educational Policy and Leadership Studies: MA¹, EdD², EdS², PhD
Electrical and Computer Engineering: MS¹, PhD
Elementary Education: MA, PhD
Engineering and Information Science, MS²
English: MA¹, MFA, PhD
Epidemiology: MS³, PhD
Film and Video Production: MA¹, MFA
Film Studies: MA¹, PhD
Finance: MS¹
Free Radical and Radiation Biology: MS³, PhD³ (see Biomedical Science)
French and Francophone World Studies: MA¹, PhD
Genetics: PhD
Geography: MA¹, PhD
Geoscience: MS¹, PhD
German: MA³
Greek: MA¹
Health and Human Physiology: MS¹, PhD
Health Management and Policy: MHA²
Health Services and Policy Research: MS²
Health Services and Policy: PhD
History: MA¹, PhD
Human Toxicology: MS, PhD
Immunology: PhD
Industrial Engineering: MS¹, PhD
Informatics: MS¹, PhD
Integrated Biology: MS¹, PhD
Integrative Physiology: PhD³ (see Health and Human Physiology)
Interdisciplinary Studies: MA¹, MFA, MS¹, PhD
Latin: MA¹
Library and Information Science: MA¹
Linguistics: MA¹, PhD
Literary Translation: MFA
Mass Communication: MA, PhD
Mathematics: MS¹, PhD
Mechanical Engineering: MS¹, PhD
Microbiology: MS, PhD
Molecular and Cellular Biology: PhD³ (see Biomedical Science)
Molecular Biology: PhD³ (see Biomedical Science)
Molecular Physiology and Biophysics: MS³, PhD³ (see Biomedical Science)
Music: MA¹, DMA, PhD
Neuroscience: PhD
Nursing: MSN¹, DNP, PhD
Occupational and Environmental Health: MS¹, PhD
Oral Science: MS, PhD
Orthodontics: MS
Pathology: MS
Pharmacology: MS³, PhD³ (see Biomedical Science)
Pharmacy: MS¹, PhD
Philosophy: MA¹, PhD
Physical Rehabilitation Science: MA¹, PhD
Physical Therapy: DPT
Physics: MS¹, PhD
Political Science: MA¹, PhD
Psychological and Quantitative Foundations: MA¹, EdS², PhD
Psychology: MA¹, PhD
Public Affairs: MPAff²
Public Health: MPH²
Religious Studies: MA¹, PhD
Science Education: MS¹, MAT², PhD
Second Language Acquisition: PhD³
Secondary Education: MA, MAT, PhD
Social Work: MSW¹, PhD
Sociology: MA¹, PhD
Spanish: MA¹, PhD
Spanish Creative Writing: MFA
Special Education: MA¹, PhD
Speech and Hearing Science: PhD
Speech Pathology and Audiology: MA¹, AuD
Sport and Recreation Management: MA
Statistics: MS¹, PhD
Stomatoloy: MS³
Strategic Communication: MA²
Sustainable Development: MS
Teaching and Learning: MA¹, MAT², PhD
Theatre Arts: MFA
Translational Biomedicine: MS²
Urban and Regional Planning: MS¹

1 Degree offered with or without thesis
2 Nonthesis degree
3 Student entry suspended

Interdisciplinary Degree Programs

The Graduate College participates in a number of University of Iowa interdisciplinary degree programs. Detailed information about the following master's and doctoral degree programs is provided later in these Graduate College sections of the catalog: Applied Mathematical and Computational Sciences, Genetics, Human Toxicology, Immunology, Informatics, Molecular Medicine, Neuroscience, Sustainable Development, and Translational Biomedicine.

In addition to the degree programs listed above, the graduate faculty has authorized the awarding of interdisciplinary master's and doctoral degrees. Students seeking approval for interdisciplinary master's and doctoral programs must previously have been admitted to and enrolled in a departmental program in the Graduate College. See sections X.A. and XII.D. in the Manual of Rules and Regulations on the college’s website.

Combined Programs

Combined Programs Offered Through the Graduate College

Various combined programs have been developed whereby students work simultaneously toward two degrees. Consult the appropriate Catalog sections for more information. Established combined graduate programs include, but may not be limited to:

BA in Biology, Chemistry, Environmental Sciences, Geoscience, Physics/MAT (Science Education Subprogram)

The combined BA/MAT program with a science education subprogram is open to any major, but typically draws most frequently from students majoring in biology, chemistry, environmental sciences, geoscience, or physics, allowing them to begin work toward the MAT while completing the bachelor's degree. Students admitted to the program may count 19 s.h. of credit toward both the BA and MAT
degree requirements. Offered by the Graduate College, the College of Liberal Arts and Sciences, and the College of Education; see Biology, Chemistry, Environmental Sciences, Geoscience, or Physics and Astronomy and the Master of Arts in Teaching, MAT (science education subprogram) in the catalog.

BA in Biology/MPH (Epidemiology Subprogram) or MS in Epidemiology

The combined BA in biology/MPH with an epidemiology subprogram and the combined BA in biology/MS in epidemiology program enable Bachelor of Arts students majoring in biology to begin work toward the MPH or MS while completing the bachelor's degree. University of Iowa students admitted to the MPH program may count 17 s.h. of credit toward both the BA and the MPH degree requirements. University of Iowa students admitted to the MS program may count 15 s.h. of credit toward both the BA and the MS degree requirements. Students admitted to either program may also maximize their selection of upper-level classes for advanced training in epidemiology. Coe College, Cornell College, Grinnell College, and Luther College students admitted to the MPH program may enroll in University of Iowa graduate level courses to count toward the MPH degree while they are simultaneously completing the bachelor's degree. Offered by the Graduate College, the College of Liberal Arts and Sciences, and the College of Public Health; see the Master of Public Health, MPH (epidemiology subprogram) and the MS in epidemiology in the catalog.

BA in Elementary Education (Special Education Subprogram)/MA in Teaching and Learning (Special Education Subprogram)

The combined BA/MA program with a special education subprogram enables students to begin work toward the MS while completing the bachelor’s degree. Students admitted to the program may count 12 s.h. of credit toward both the BA and MA degree requirements. Offered by the Graduate College and the College of Education; see the MA in teaching and learning (special education subprogram) in the catalog.

BA in Geography (Geographic Information Science Track) or BS in Geography/MS in Informatics (Geoinformatics Subprogram)

The combined BA in geography with a geographic information science track or BS in geography/MS in informatics with a geoinformatics subprogram enables undergraduate students majoring in geography to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 12 s.h. toward both the BA or BS and MS degree requirements. Offered by the Graduate College and the College of Liberal Arts and Sciences; see Geographical and Sustainability Sciences and the MS in informatics (geoinformatics subprogram) in the catalog.

BA in German/MA in German

The combined BA/MA program in German enables undergraduate students majoring in German to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 12 s.h. of credit toward both the BA and MA degree requirements. They also have the opportunity for early entrance into advanced courses in German. Offered by the Graduate College and the College of Liberal Arts and Sciences; see German in the catalog.

BA in Linguistics/MA in Linguistics (TESL Subprogram)

The combined BA/MA program in linguistics with a TESL subprogram enables students majoring in linguistics to begin work toward the MA while completing the bachelor's degree. Students admitted to the program may count 12 s.h. of advanced coursework toward both the BA and MA degree requirements and may take selected graduate-level courses before they have been awarded the BA degree. They also may gain experience teaching English as a second language (ESL) at the college level early in their graduate careers. Offered by the Graduate College and the College of Liberal Arts and Sciences; see Linguistics in the catalog.

BA in Mathematics/MAT (Mathematics Education Subprogram)

The combined BA/MAT with a mathematics education subprogram enables Bachelor of Arts students majoring in mathematics to begin work toward the MAT while completing the bachelor's degree. Students admitted to the program may count 18 s.h. of credit toward both the BA and MAT degree requirements. Offered by the Graduate College, the College of Liberal Arts and Sciences, and the College of Education; see the Master of Arts in Teaching, MAT (mathematics education subprogram) in the catalog.

BA in Psychology/MPH (Community and Behavioral Health Subprogram)

The combined BA in psychology/MPH with a community and behavioral health subprogram enables Bachelor of Arts students majoring in psychology to begin work toward the MPH while completing the bachelor's degree. University of Iowa students admitted to the program may count 15 s.h. of credit toward both the BA and MPH degree requirements. Coe College, Cornell College, Grinnell College, and Luther College students admitted to the MPH program may enroll in University of Iowa graduate level courses to count toward the MPH degree while they are simultaneously completing the bachelor's degree. Offered by the Graduate College, the College of Liberal Arts and Sciences, and the College of Public Health; see the Master of Public Health, MPH (community and behavioral health subprogram) in the catalog.

BA or BS in Computer Science/MCS

The combined BA or BS in computer science/MCS program enables undergraduate students majoring in computer science to begin work toward the MCS while completing the bachelor's degree. University of Iowa students admitted to the program may count 12 s.h. of coursework, typically advanced technical courses and electives, toward both the bachelor's and the MCS degree requirements. Grinnell College students admitted to the program may transfer Grinnell College coursework that articulates to 6 s.h. of graduate level credit toward University of Iowa MCS degree requirements. Grinnell College students admitted to the MCS program may enroll in University of Iowa graduate level courses to count toward the MCS degree while they are simultaneously completing the bachelor's degree. Offered by the Graduate College and the College of Liberal Arts and Sciences; see Computer Science in the catalog.

BA or BS in Environmental Policy and Planning/MS in Urban and Regional Planning

The combined BA or BS in environmental policy and planning/MS in urban and regional planning program enables undergraduate students majoring in environmental policy and planning to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 18 s.h. of credit toward both the BA or BS and MS degree requirements. Offered by the Graduate College and the College of Liberal Arts and Sciences; see Environmental Policy and Planning and the MS in urban and regional planning in the catalog.

BA or BS in Informatics/MS in Informatics

The combined BA or BS in informatics/MS in informatics program enables students majoring in informatics to begin work toward the
MS while completing the bachelor's degree. Offered by the Graduate College and the College of Liberal Arts and Sciences; see the MS in informatics in the catalog.

**BA or BS in Mathematics/MS in Data Science**

The combined BA or BS in mathematics/MS in data science program enables students majoring in mathematics to begin work toward the MS while completing the bachelor’s degree. Students admitted to the program may count 12 s.h. of credit toward both the BA or BS and MS degree requirements. Offered by the Graduate College and the Tippie College of Business; see the MS in data science in the catalog.

**BA or BS in Public Health/MPH (Policy Subprogram)**

The combined BA or BS in public health/MPH with a policy subprogram enables students majoring in public health to begin work toward the MPH while completing the bachelor’s degree. University of Iowa students admitted to the program may count 15 s.h. of credit toward both the BA or BS and MPH degree requirements. Coe College, Cornell College, Grinnell College, and Luther College students admitted to the MPH program may enroll in University of Iowa graduate level courses to count toward the MPH degree while they are simultaneously completing the bachelor's degree. Offered by the Graduate College and the College of Public Health; see the Master of Public Health, MPH (policy subprogram) in the catalog.

**BA or BS/MA in Library and Information Science**

The combined BA or BS/MA in library and information science program enables undergraduate students to begin work toward the MA while completing the bachelor’s degree. Students admitted to the program may count 12 s.h. of credit toward both the BA or BS and MA degree requirements. Offered by the Graduate College; see the MA in library and information science in the catalog.

**BA or BS/MPAff**

The combined BA or BS/MPAff program enables undergraduate students to begin work toward the MPAff while completing the bachelor’s degree. Students admitted to the program may count 15 s.h. of credit toward both the BA or BS and MPAff degree requirements. Offered by the Graduate College; see the Master of Public Affairs, MPAff in the catalog.

**BA or BS/MS in Business Analytics (Career Subprogram)**

The combined BA or BS/MS in business analytics with a career subprogram allows the following undergraduate students majoring in actuarial science (BS); applied physics (BS); biology (BA or BS); chemistry (BA or BS); computer science (BA or BS); criminology, law and justice (BA); data science (BS); economics (BA or BS); English (BA); English and creative writing (BA); enterprise leadership (BA); ethics and public policy (BA); history (BA); informatics (BA or BS); interdepartmental studies (BA); journalism and mass communication (BA); linguistics (BA); mathematics (BA or BS); political science (BA or BS); psychology (BA or BS); sociology (BA); and statistics (BS) to begin work toward the MS in business analytics while completing their undergraduate degree. Students admitted to the program may count 14 s.h. of credit toward both the BS and MS degree requirements. This provides students with the opportunity to complete both degrees in less time than it would take them to complete the degrees separately. Offered by the Graduate College, the College of Liberal Arts and Sciences, and the Tippie College of Business; see the MS in business analytics (career) in the catalog.

**BA or BS/MS in Finance**

The combined BA or BS/MS in finance program allows the following undergraduate students majoring in actuarial science (BS); applied physics (BS); biology (BA or BS); chemistry (BA or BS); computer science (BA or BS); criminology, law and justice (BA); data science (BS); English (BA); English and creative writing (BA); enterprise leadership (BA); ethics and public policy (BA); history (BA); informatics (BA or BS); interdepartmental studies (BA); journalism and mass communication (BA); linguistics (BA); mathematics (BA or BS); political science (BA or BS); psychology (BA or BS); sociology (BA); and statistics (BS) to begin work toward the MS in finance while completing their undergraduate degree. Students admitted to the program may count 16 s.h. of credit toward both the BA or BS and MS degree requirements. This provides students with the opportunity to complete both degrees in less time than it would take them to complete the degrees separately. Offered by the Graduate College, the College of Liberal Arts and Sciences, and the Tippie College of Business; see the MS in finance in the catalog.

**BBA/MS in Business Analytics (Career Subprogram)**

The combined BBA/MS in business analytics with a career subprogram enables undergraduate students majoring in accounting, business administration, economics, finance, management, business analytics and information systems, and marketing to begin work on the MS while completing the Bachelor of Business Administration degree. Students admitted to the program may count 14 s.h. of credit toward both the BBA and MS degree requirements. Students can complete both degrees in less time than it would take them to complete them separately. Offered by the Graduate College and the Tippie College of Business; see the MS in business analytics (career) in the catalog.

**BBA/MS in Finance**

The combined BBA/MS in finance program allows undergraduate students majoring in business administration to begin work toward the MS while completing the Bachelor of Business Administration degree. Students admitted to the program may count 16 s.h. of credit toward both the BBA and MS degree requirements. The program provides students with the opportunity to complete both degrees in five years instead of six. Offered by the Graduate College and the Tippie College of Business; see the MS in finance in the catalog.

**BS in Biochemistry/PhD in Biochemistry**

The combined BS in biochemistry/PhD in biochemistry program enables Bachelor of Science students majoring in biochemistry to begin work toward the PhD while completing the bachelor's degree. Students admitted to the program may count 12 s.h. of credit toward both the BS and PhD degree requirements. Offered by the Graduate College, the College of Liberal Arts and Sciences, and the Carver College of Medicine; see the Department of Biochemistry and Molecular Biology in the catalog.

**BS in Exercise Science/MS in Athletic Training**

The combined BS in exercise science/MS in athletic training program enables students majoring in exercise science to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 21 s.h. of credit toward both the BS and MS degree requirements. Offered by the Graduate College, the College of Liberal Arts and Sciences, and the Carver College of Medicine; see the MS in athletic training in the catalog.
BS in Statistics/MPH (Biostatistics Subprogram) or MS in Biostatistics

The combined BS in statistics/MPH with a biostatistics subprogram and the combined BS in statistics/MS in biostatistics program enable Bachelor of Science students majoring in statistics to begin work toward the MPH or MS while completing the bachelor's degree. University of Iowa students admitted to the MPH program may count 15 s.h. of credit toward both the BS and the MPH degree requirements. University of Iowa students admitted to the MS program may count 15 s.h. of credit toward both the BS and the MS degree requirements. Coe College, Cornell College, Grinnell College, and Luther College students admitted to the MPH program may enroll in University of Iowa graduate level courses to count toward the MPH degree while they are simultaneously completing the bachelor's degree. Offered by the Graduate College, the College of Liberal Arts and Sciences, and the College of Public Health; see the BS in statistics, Master of Public Health, MPH (biostatistics subprogram), and MS in biostatistics in the catalog.

BS in Statistics/MS in Statistics

The combined BS/MS in statistics program enables undergraduate students majoring in statistics to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 12 s.h. of credit toward both the BS and MS degree requirements. Offered by the Graduate College and the College of Liberal Arts and Sciences; see Statistics and Actuarial Science in the catalog.

BS in Therapeutic Recreation/MS in Health and Human Physiology (Child Life Subprogram)

The combined BS in therapeutic recreation/MS in health and human physiology with a child life subprogram enables undergraduate students majoring in therapeutic recreation to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 12 s.h. of credit toward both the BS and MS degree requirements. Offered by the Graduate College and the College of Liberal Arts and Sciences; see Health and Human Physiology in the catalog.

BSE in Biomedical Engineering/MPH (Occupational and Environmental Health Subprogram) or MS in Occupational and Environmental Health (Industrial Hygiene Subprogram)

The combined BSE in biomedical engineering/MS in occupational and environmental health with an industrial hygiene subprogram enables undergraduate students majoring in biomedical engineering to begin work toward the MPH or MS in occupational and environmental health while completing the bachelor's degree. University of Iowa students admitted to the MPH program may count 15 s.h. of credit toward both the BSE and the MPH degree requirements. University of Iowa students admitted to the MS program may count 15 s.h. of credit toward both the BSE and the MS degree requirements. Coe College, Cornell College, Grinnell College, and Luther College students admitted to the MPH program may enroll in University of Iowa graduate level courses to count toward the MPH degree while they are simultaneously completing the bachelor's degree. Offered by the Graduate College, the College of Engineering, and the College of Public Health; see the BSE in biomedical engineering, Master of Public Health, MPH (occupational and environmental health subprogram), and the MS in occupational and environmental health (industrial hygiene subprogram) in the catalog.

BSE in Biomedical Engineering/MS in Biomedical Engineering

The combined BSE/MS in biomedical engineering program enables undergraduate students majoring in biomedical engineering to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 12 s.h. of credit toward both the BSE and MS degree requirements. They also may attend and participate in the departmental graduate seminar and work on a master's thesis or research project before they have been awarded the BSE degree. Offered by the Graduate College and the College of Engineering; see the Roy J. Carver Department of Biomedical Engineering in the catalog.

BSE in Chemical Engineering/MS in Chemical and Biochemical Engineering

The combined BSE in chemical engineering/MS in chemical and biochemical engineering program enables undergraduate students majoring in chemical engineering to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 12 s.h. of coursework, typically advanced chemistry sequences and electives, toward both the BSE and MS degree requirements. Offered by the Graduate College and the College of Engineering; see Chemical and Biochemical Engineering in the catalog.

BSE in Chemical Engineering/MS in Civil and Environmental Engineering

The combined BSE in chemical engineering/MS in civil and environmental engineering program enables undergraduate students majoring in chemical engineering to begin work toward the MS in civil and environmental engineering while completing the bachelor's degree. Students admitted to the program may count 9 s.h. of coursework toward both the BSE and MS degree requirements. They also may count an additional 3 s.h. toward the MS degree requirements before they have been awarded the BSE degree. Offered by the Graduate College and the College of Engineering; see Chemical and Biochemical Engineering in the catalog.

BSE in Civil Engineering/MS in Civil and Environmental Engineering

The combined BSE in civil engineering/MS in civil and environmental engineering program enables undergraduate students majoring in civil engineering to begin work toward the MS in civil and environmental engineering while completing the bachelor's degree. Students admitted to the program may count 9 s.h. of coursework toward both the BSE and MS degree requirements. They also may count an additional 3 s.h. toward the MS degree requirements before they have been awarded the BSE degree. They may attend and participate in the departmental graduate seminar and work on a master's thesis or research project before they have been awarded the BSE degree. Offered by the Graduate College and the College of Engineering; see Civil and Environmental Engineering in the catalog.

BSE in Civil Engineering/MS in Sustainable Development

The combined BSE in civil engineering/MS in sustainable development program enables undergraduate students majoring in civil engineering to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 12 s.h. of credit toward both the BSE and MS degree requirements. Offered by the Graduate College and the College of Engineering; see the BSE
in civil and environmental engineering and the MS in sustainable development in the catalog.

**BSE in Civil Engineering/MS in Urban and Regional Planning**

The combined BSE in civil engineering/MS in urban and regional planning program enables undergraduate students majoring in civil engineering to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 18 s.h. of credit toward both the BSE and MS degree requirements. They also may attend and participate in the departmental graduate seminar and work on a master's thesis or research project before they have been awarded the BSE degree. Offered by the Graduate College and the College of Engineering; see the BSE in civil engineering and the MS in urban and regional planning in the catalog.

**BSE in Electrical Engineering/MS in Electrical and Computer Engineering**

The combined BSE in electrical engineering/MS in electrical and computer engineering program enables undergraduate students majoring in electrical engineering to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 12 s.h. of coursework toward both the BSE and MS degree requirements. They also may count an additional 3 s.h. toward the MS degree requirements and engage in thesis-level research before they have been awarded the BSE degree. Offered by the Graduate College and the College of Engineering; see Electrical and Computer Engineering in the catalog.

**BSE in Industrial Engineering/MS in Industrial Engineering**

The combined BSE/MS in industrial engineering program enables undergraduate students majoring in industrial engineering to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 9 s.h. toward both the BSE and MS degree requirements. They also may attend one of the department's graduate seminars and work on master's thesis research before they have been awarded the BSE degree. Offered by the Graduate College and the College of Engineering; see Industrial and Systems Engineering in the catalog.

**BSE in Mechanical Engineering/MS in Civil and Environmental Engineering**

The combined BSE in mechanical engineering/MS in civil and environmental engineering program enables undergraduate students majoring in mechanical engineering to begin work toward the MS in civil and environmental engineering while completing the bachelor's degree. Students admitted to the program may count 9 s.h. of coursework toward both the BSE and MS degree requirements. They also may count an additional 3 s.h. toward the MS degree requirements before they have been awarded the BSE degree. Offered by the Graduate College and the College of Engineering; see the BSE in mechanical engineering and the MS in civil and environmental engineering in the catalog.

**BSE in Mechanical Engineering/MS in Mechanical Engineering**

The combined BSE/MS in mechanical engineering program enables undergraduates majoring in mechanical engineering to begin work toward the MS while completing the bachelor's degree. Students admitted to the program may count 12 s.h. toward both the BSE and MS degree requirements. They also may attend a graduate seminar and participate in master's thesis research before they have been awarded the BSE. Offered by the Graduate College and the College of Engineering; see Mechanical Engineering in the catalog.

**BSN in Nursing (RN Subprogram)/DNP in Nursing**

The combined BSN in nursing (RN subprogram)/DNP in nursing program enables students to begin work toward the DNP while completing the bachelor’s degree. Students admitted to the program may count 9 s.h. of credit toward both the BSN and DNP degree requirements. Offered by the Graduate College and the College of Nursing, see the Bachelor of Science in Nursing, BSN (nursing-RN subprogram) and the Doctor of Nursing Practice, DNP in the catalog.

**AuD/PhD in Speech and Hearing Science**

The combined AuD/PhD in speech and hearing science program is designed for students who would like to practice audiology and hold a faculty position at a university. Students admitted to the program work concurrently toward the Doctor of Audiology and the Doctor of Philosophy; they may count 30 s.h. toward the requirements of both degrees. Offered by the Graduate College and the College of Liberal Arts and Sciences; see Communication Sciences and Disorders in the catalog.

**Graduate Degrees/Certificates in Business Fundamentals, Finance, Leadership, Marketing**

Students can pursue a professional Certificate in Business Fundamentals, Finance, Leadership, or Marketing concurrently with their graduate degree. With graduate program approval, students may count up to 9 s.h. from a professional certificate toward their graduate degree. With approval from the professional certificate program, students may count up to 3 s.h. from any graduate degree program toward their certificate. Offered by the Graduate College and Graduate Management Programs (Tippie College of Business), see the professional Certificates in Business Fundamentals, Finance, Leadership, or Marketing in the catalog.

**JD/Graduate Degrees**

The College of Law and several Graduate College programs and schools have developed combined programs in which students pursue the Juris Doctor (JD) degree and a graduate degree concurrently. Offered by the Graduate College and the College of Law; see the Manual of Rules and Regulations on the Graduate College website and the Juris Doctor, JD in the catalog.

**MA in French and Francophone World Studies/MFA in Literary Translation**

The Department of French and Italian and the Literary Translation Program collaborate to offer a combined Master of Arts in French and Francophone World Studies and a Master of Fine Arts in Literary Translation. Students interested in writing in its different forms—creative, academic, and translation—will find the University of Iowa to be the ideal place to develop their talents and an attractive option for more diversified career preparation. A separate application and admission to each degree program is required. For more information, review the admissions requirements for French and Francophone World Studies and Literary Translation. Students in the combined program earn both degrees by completing a minimum of 60 s.h. of coursework, fewer semester hours than if each degree was completed separately. Qualified students may be eligible for up to three years of full funding for a teaching assistant (TA) position.
MA in Library and Information Science/ Certificate in Book Studies/Book Arts and Technologies

The combined MA in library and information science and Certificate in Book Studies/Book Arts and Technologies prepares students for careers in special collections librarianship. Students admitted to the program receive training in the management of varied types of special collections, such as rare books, manuscripts, archives, graphics, music, and ephemera. Offered by the Graduate College; see the MA in library and information science and the Certificate in Book Studies/Book Arts and Technologies in the catalog.

MA in Library and Information Science/MFA in Book Arts

The combined MA in library and information science/MFA in book arts program allows graduate students with strong interests in the physical book to acquire training in the book arts, book history, and material book studies. The earned expertise in the production and legacy of the book as a physical artifact combined with expertise in library and information science can be an asset for those focused on careers in special collections libraries and archives. Students in the combined program earn both degrees by completing fewer semester hours than if each degree was completed separately. Offered by the Graduate College; see the MA in library and information science and the MFA in book arts in the catalog.

MD/PhD (Medical Scientist Training Program)

The combined Doctor of Medicine/Doctor of Philosophy program prepares students for careers in academic medicine, with emphasis on basic and clinical research. Offered by the Graduate College and the Carver College of Medicine; see Medical Scientist Training Program in the catalog.

Certificates

The Graduate College also participates with other University of Iowa colleges in offering the following graduate certificates.

Adult Gerontology Acute Care Nurse Practitioner

The Certificate in Adult Gerontology Acute Care Nurse Practitioner is a program for post-master's Advanced Practice Registered Nurse degree students who would like to pursue a second specialty. See the Certificate in Adult Gerontology Acute Care Nurse Practitioner in the catalog.

Adult Gerontology Primary Care Nurse Practitioner

The Certificate in Adult Gerontology Primary Care Nurse Practitioner is a program for post-master's Advanced Practice Registered Nurse degree students who would like to pursue a second specialty. See the Certificate in Adult Gerontology Primary Care Nurse Practitioner in the catalog.

African American Studies

The Certificate in African American Studies is a program that increases intellectual knowledge and understanding of African American culture and experience. See the Certificate in African American Studies in the catalog.

Aging and Longevity Studies

The Aging and Longevity Studies Program is a multidisciplinary certificate program administered by the College of Liberal Arts and Sciences in cooperation with other University of Iowa colleges. The program is designed to complement graduate degree programs or to serve as a stand-alone nondegree program for students with academic, professional, research, or service career interests in aging. See the Certificate in Aging and Longevity Studies in the catalog.

Agricultural Safety and Health

The Certificate in Agricultural Safety and Health is a postbaccalaureate program for practicing health care professionals serving rural areas and for health professions students who intend to practice in rural areas. The program is designed to help rural health professionals address safety and health issues in farm settings. See the Certificate in Agricultural Safety and Health in the catalog.

Applied Behavior Analysis

The Certificate in Applied Behavior Analysis develops skills in behavioral intervention and intensive instruction. The course sequence contributes to eligibility for certification as a board-certified behavior analyst (BCBA). See the Certificate in Applied Behavior Analysis in the catalog.

Artificial Intelligence, Modeling and Simulation in Engineering

The Certificate in Artificial Intelligence, Modeling and Simulation (AIMS) in Engineering offers graduate students enrolled in the College of Engineering an opportunity to specialize in artificial intelligence, machine learning, deep learning, modeling and simulation, and uncertainty quantification. UI graduate students from other disciplines also may apply. See the Certificate in Artificial Intelligence, Modeling and Simulation in Engineering in the catalog.

Biostatistics

The Certificate in Biostatistics is open to students in University of Iowa graduate degree programs outside biostatistics and to individuals admitted to the Graduate College as nondegree students. The certificate program enables students to add a formal biostatistics emphasis to their degree programs. Students who complete the certificate in conjunction with a graduate degree may count a maximum of 6 s.h. of certificate credit toward their graduate degree. See the Certificate in Biostatistics in the catalog.

Book Studies/Book Arts and Technologies

The Certificate in Book Studies/Book Arts and Technologies is designed to be completed in one year. The program is open to students who are enrolled in a graduate degree program at the University of Iowa as well as to students enrolled in the Graduate College with nondegree status. See the Certificate in Book Studies/Book Arts and Technologies in the catalog.

Business Analytics

The Certificate in Business Analytics is open to students in University of Iowa graduate degree programs and to individuals admitted to the Graduate College as nondegree students. The certificate program is designed for working professionals and addresses a growing need to manage and analyze the rapidly increasing amount of data that is available to support business decision-making. See the Certificate in Business Analytics in the catalog.
Cognitive Science of Language

The Certificate in Cognitive Science of Language is designed to complement doctoral study. The certificate program is open to University of Iowa PhD students in linguistics, neuroscience, psychology, and speech and hearing science. PhD students in other disciplines may petition to be permitted to earn the certificate. Students must complete a formal application to enter the certificate program; they should contact the program’s coordinator before they apply. See the Certificate in Cognitive Science of Language in the catalog.

College Teaching

The Certificate in College Teaching complements discipline-oriented graduate programs and prepares students for careers in postsecondary education. The program is open to graduate students working toward a PhD or other terminal graduate degree. See the Certificate in College Teaching in the catalog.

Emerging Infectious Disease Epidemiology

The Certificate in Emerging Infectious Disease Epidemiology is a postbaccalaureate program designed to meet the training needs in emerging infectious disease of international public health professionals as well as University of Iowa graduate students. Applicants to the program must hold a bachelor’s degree. See the Certificate in Emerging Infectious Disease Epidemiology in the catalog.

Family Nurse Practitioner

The Certificate in Family Nurse Practitioner is a program for post-master’s Advance Practice Registered Nurse degree students who would like to pursue a second specialty. See the Certificate in Family Nurse Practitioner in the catalog.

Gender, Women's, and Sexuality Studies

The Certificate in Gender, Women’s, and Sexuality Studies is open to students enrolled in graduate degree programs. See the Certificate in Gender, Women’s, and Sexuality Studies in the catalog.

Global Health Studies

The Certificate in Global Health Studies is open to graduate and professional students, except for those in the College of Pharmacy who have earned the PharmD degree—they are awarded the undergraduate certificate. Students must maintain a grade-point average of at least 3.00 in work for the certificate. See the Certificate in Global Health Studies in the catalog.

Health Systems

The Certificate in Health Systems is built on the foundational courses from the Doctor of Nursing Practice (DNP) with a health systems subprogram. The certificate is available to post-master’s degree students seeking additional preparation in the area of health systems/administration. See the Certificate in Health Systems in the catalog.

Healthcare Management

The Certificate in Healthcare Management provides foundational business and leadership skills to physicians, nurses, and other clinicians, and managers. See the Certificate in Healthcare Management in the catalog.

Informatics

The Certificate in Informatics requires a variable amount of graduate credit, depending on the student’s choice of subprogram. The certificate program is designed for students enrolled in University of Iowa graduate degree programs who wish to study informatics as a complement to their degree program and for nondegree students who are interested in increasing their knowledge of informatics. See the Certificate in Informatics in the catalog.

Institutional Research and Effectiveness

The Certificate in Institutional Research and Effectiveness (IRE) is offered with hybrid and conventional courses. The certificate program prepares professionals to use data for institutional decision-making, reporting, and accountability in higher education and K–12 contexts. This certificate amends and complements students’ competence in other areas (business affairs, information technology, student affairs, development, among other areas) to prepare them with the skills and capabilities to use data for educational improvement, accountability, quality, and equity. See the Certificate in Institutional Research and Effectiveness in the catalog.

K–12 Equity and Inclusion

The Certificate in K–12 Equity and Inclusion is offered with hybrid and conventional courses. The certificate program offers educational professionals or nondegree-seeking students currently working in K–12 schools, districts, and area education agencies expertise in equity and inclusion to better support the needs and interests of a diversifying K–12 student population. See the Certificate in K–12 Equity and Inclusion in the catalog.

Literary Translation

The Certificate in Literary Translation includes coursework in translation practice and techniques. Translation workshops and coursework in translation theory also are central to the certificate program as they are essential to the training of literary translators. See the Certificate in Literary Translation in the catalog.

Native American and Indigenous Studies

The Native American and Indigenous Studies Program offers an interdisciplinary certificate program focusing on the histories, cultures, languages, arts, religious traditions, political and social organizations, economies, geographies, literatures, and contemporary legal and political concerns of Native Americans of the United States as well as other Indigenous peoples of the Western Hemisphere. See the Certificate in Native American and Indigenous Studies in the catalog.

Online Teaching

The Certificate in Online Teaching is designed to prepare students for the realities of online teaching and to help them expand their career options. The certificate is open to students in University of Iowa graduate degree programs and to individuals admitted to the Graduate College as nondegree students. See the Certificate in Online Teaching in the catalog.

Pediatric Nurse Practitioner—Acute Care

The Certificate in Pediatric Nurse Practitioner—Acute Care is available for post-master’s Advanced Practice Registered Nurse (APRN) degree students who would like to pursue a second specialty.
See the Certificate in Pediatric Nurse Practitioner—Acute Care in the catalog.

**Pediatric Nurse Practitioner—Primary Care**
The Certificate in Pediatric Nurse Practitioner—Primary Care is available for post-master’s Advanced Practice Registered Nurse (APRN) degree students who would like to pursue a second specialty. See the Certificate in Pediatric Nurse Practitioner—Primary Care in the catalog.

**Psychiatric/Mental Health Nurse Practitioner**
The Certificate in Psychiatric/Mental Health Nurse Practitioner is available for post-master’s Advanced Practice Registered Nurse (APRN) degree students who would like to pursue a second specialty. See the Certificate in Psychiatric/Mental Health Nurse Practitioner in the catalog.

**Public Digital Humanities**
The Certificate in Public Digital Humanities is open to all University of Iowa graduate students in good academic standing. Students take a theory and practice course, and select elective coursework to suit their disciplinary or technical needs. See the Certificate in Public Digital Humanities in the catalog.

**Public Health**
The Certificate in Public Health is designed to improve public health practice and public health workforce capacity in Iowa and the upper Midwest. It is intended primarily for individuals in public health practice, those in the workforce, and those interested in strengthening their knowledge and skills in basic public health competencies. See the Certificate in Public Health in the catalog.

**Special Collections Librarianship**
The Certificate in Special Collections Librarianship includes coursework that introduces students to the core theories supporting the collection and management of rare books, archival records, and manuscript collections. See the Certificate in Special Collections Librarianship in the catalog.

**Sustainable Water Development**
The Certificate in Sustainable Water Development trains science, technology, engineering, and mathematics (STEM) graduate students to address future challenges of water scarcity and variability while also meeting the food and energy demands of Earth's growing population. See the Certificate in Sustainable Water Development in the catalog.

**Talent Development**
The Certificate in Talent Development requires 14 s.h. of graduate credit. The certificate is open to students in University of Iowa graduate degree programs and to individuals admitted to the Graduate College as nondegree students. The purpose of the certificate is to increase understanding of talented individuals, the process of talent development and the creative process, and prepare advocates for talented individuals. In addition to coursework, students design a culminating original project aligned with a career objective or personal interest. Students may use the coursework embedded in the certificate to apply to the State of Iowa Gifted and Talented teaching endorsement. To learn more or apply, see the Certificate in Talent Development in the catalog.

**Translational and Clinical Investigation**
The Certificate in Translational and Clinical Investigation is designed for clinicians who seek advanced training in clinical methodology and applied patient-oriented research skills. Students in the certificate program must be practicing academic clinicians who have completed doctoral training. See the Certificate in Translational and Clinical Investigation in the catalog.

**Transportation Planning**
The Certificate in Transportation Planning includes a choice of coursework in traffic engineering, transportation and land use planning, design of transportation systems, transportation demand analysis, transportation policy and planning, as well as other transportation areas. Students may earn the certificate in conjunction with an MS or PhD in civil and environmental engineering or with an MS in urban and regional planning.

Individuals working toward degrees in other transportation-related disciplines are encouraged to apply to the Transportation Planning Program. Depending on a student’s background, additional coursework in statistics, computer programming, simulation, mathematics, and operations research may be required for the certificate. Credit earned in these courses may not be applicable to the student’s degree program. See the Certificate in Transportation Planning in the catalog.

**Financial Support**
Approximately half of the university’s graduate students receive some form of university-administered financial assistance. For eligibility requirements and application procedures, see “Section VII. Graduate Appointments” in the Manual of Rules and Regulations on the college’s website. The following are the primary sources of assistance. For a more complete description of funding available to graduate students, see the Graduate College website.

**Teaching and Research Assistantships**
Teaching and research assistantships are available in most departments, but they prioritize doctoral students. Assistantship stipends are awarded for quarter-time, one-third-time, and half-time academic-year appointments and quarter-time, one-third-time, and half-time fiscal-year appointments; assistantships of 25% or higher also are eligible for tuition scholarships. Assistants (one-quarter-time or more) pay resident tuition rates for fee purposes. See the Graduate College website for a more complete description of graduate assistantship benefits.

**Iowa Arts Fellowships**
Iowa Arts Fellowships are for University of Iowa graduate students entering MFA programs. Typical stipends are for the academic year, with all tuition and a percentage of mandatory fees paid, plus a health insurance allowance. For one academic year (the remaining years of support must be provided by the appointing program). There are no departmental service obligations while holding the first-year fellowship.

**Iowa Performance Fellowships**
Iowa Performance Fellowships are for first-year DMA candidates in a performance area of music. Recipients are nominated by the School of Music. Awards include academic-year fellowships, summer fellowships, and tuition and a percentage of mandatory fees paid (fellow is responsible for the remainder of fees). The School of Music provides a one-quarter-time research assistantship in years two and three.
Graduate College Iowa Recruitment Fellowships

Iowa Recruitment Fellowships program enhances departmental recruitment packages by offering the most accomplished new doctoral students a stipend supplement for up to five years and stipend support for up to four summer sessions (academic year graduate assistants) or a stipend supplement for the entire fiscal year (fiscal year graduate assistants). Tuition scholarships are to be paid during the academic years (fall, spring) by the appointing unit, while the Graduate College provides up to 1 s.h. of tuition and benefits for the summer sessions. Recipients are nominated by their department.

Graduate College Summer Fellowships

Graduate College Summer Fellowships are for advanced doctoral students who have completed their comprehensive exams, are working to complete their dissertations, and do not otherwise have funding for the summer session. Awards provide a summer stipend and up to 1 s.h. of tuition. Awardees must enroll in a summer session.

T. Anne Cleary International Research Fellowships

The T. Anne Cleary International Research Fellowships are for doctoral students who have completed all pre-dissertation requirements, including the comprehensive examination, and who will use the fellowship for international dissertation research. The monetary amounts may vary and are meant to supplement other research funds. PhD students in any discipline may apply.

Ballard and Seashore Dissertation Fellowships

Ballard and Seashore Dissertation Fellowships are one semester fellowships for PhD candidates who have completed all doctoral degree requirements except their dissertation. Recipients are nominated by their departments. Fellowships provide monetary amounts for the semester plus tuition and a percentage of mandatory fees paid for up to 2 s.h. and a health insurance allowance.

Post-Comprehensive Research Fellowships

The post-comprehensive research awards program provides an opportunity for advanced PhD students to benefit from protected and supported time to pursue their scholarly research activities. The one semester award is intended to recognize students with distinguished academic achievement during their early graduate training. These achievements should be evident from a combination of outstanding academic performance in coursework, as well as early scholarly research activities. Students who have held teaching assistantships in the previous two semesters or do not have other sources of assistantship/fellowship funds will have priority. Awardees will receive a stipend. The Graduate College also supports up to 2 s.h. of tuition, a percentage of the mandatory fees, and a health insurance allowance. Recipients are nominated by their department.

Scholarships

Scholarships typically provide partial tuition.

Graduate Student Travel Awards

Graduate student travel awards provide reimbursement for travel by students who present research and scholarship results to professional conferences. Awards are competitive across disciplines and vary.

Funds are administered by the Graduate Student Senate and the Graduate College.

Other Sources

For other sources of financial support, contact the Office of Student Financial Aid.

Many departments offer additional support through traineeships, part-time employment in research, or part-time teaching appointments. The Office of the Vice President for Research maintains a library of information on public and private agencies that provide funds for research and graduate study. Much material has been collected concerning awards for overseas study.

Courses

Most Graduate College courses are offered by the college’s programs and schools. They are listed and described in the corresponding Catalog sections.

The college also offers the following nondepartmental courses.

Graduate College Courses

GRAD:0006 SROP Scholars Program 0 s.h.
GRAD:5225 Communicating Data Through Stories 3 s.h.
How to communicate science effectively and responsibly with multiple audiences from peers and professors to potential employers, policymakers, and the lay public; focus on speaking about science clearly and vividly in ways that can engage varied audiences, especially those outside the student's own field; connecting and finding common ground with an audience; defining goals, identifying main points, speaking without jargon, explaining meaning and context, using storytelling techniques and multimedia elements. Same as CEE:5225, SDG:5225.
GRAD:5800 Writing for National Fellowships arr.
Process of writing applications for nationally competitive fellowship opportunities; completion of a fellowship application portfolio for a specific fellowship opportunity.
GRAD:6000 PhD Postcomprehensive Registration 1 s.h.
GRAD:6001 Master's Final Registration 1 s.h.
Requirements: master's degree candidate.
GRAD:6002 Doctoral Continuous Registration 1 s.h.
Requirements: doctoral degree candidate who has passed comprehensive examinations.
GRAD:6003 Doctoral Final Registration 1 s.h.
Requirements: doctoral degree candidate in final session of enrollment.
GRAD:6217 Seminar in College Teaching 1-3 s.h.
Preparation for college teaching; for graduate students planning to teach. Same as PSQF:6217.
GRAD:6300 Writing for Learned Journals 1-4 s.h.
Seminar that supports graduate students in bringing written work to publishable form; analysis of target journals' audiences, interests, and citation politics; submission and the publication process; response to reader reports and criticism; best writing and research practices; discussion of knowledge cultures and discourses in disciplines and the contemporary academy. Same as AMST:6300, GWSS:6300, RHET:6330.
GRAD:6313 Studio Summer Fellowship 1 s.h.
Investigation of and reflection on digital scholarly collaboration, production, and promotion. Same as ULIB:6313.
GRAD:6500 Digital Humanities Independent Study arr. Independent study for students working toward their public digital humanities certificate.

GRAD:6510 Introduction to Programming 1 s.h. How computer programming has quickly become a valuable skill across a diverse range of professions and academic disciplines; programming impacts on an increasingly large segment of professional activity—from analyzing text, visualizing data, creating maps, or developing web applications; knowledge of how to read and write code as a valuable literacy in modern mediated life; introduction to computer programming; students write simple programs of their own design (e.g., automate repetitive tasks, perform calculations on data, accept and process user input).

GRAD:6515 Basic Data Handling in Microsoft Excel 1 s.h. Introduction to managing and examining spreadsheet data for humanities and social sciences; basic data types, organizing data records, creating summary reports and simple charts, tips and tricks for letting Microsoft Excel do the tedious parts; prior experience working with data or Microsoft Excel not required.

GRAD:6520 Data Visualization Basics 1 s.h. Hands-on introduction to basics of data visualization—working with data, analyzing and designing clear and functional visualizations, and developing simple data visualizations in Excel and Python or R; basic static plots (e.g., scatterplots, histograms, line graphs); brief introduction to geographic maps and network graphs.

GRAD:6521 Scholarly Communication and Journal Publishing 1 s.h. Process of publishing a scholarly journal; several scholarly journals are published locally through Iowa Research Online (IRO); for graduate students interested in academic journal publishing as well as scholarly communication more broadly.

GRAD:6522 Digital Exhibits: Effective Design and Development 1 s.h. Practical technical skills for building digital exhibits; theoretical concepts; how digital exhibits are distinct from physical exhibits; values included in digital storytelling; management of digital exhibit life cycle; main concepts and topics of effective digital exhibit development including storytelling, structuring materials, digitization, metadata application, copyright, and fair use; students gain experience using digital exhibit software, Omeka, for importing and managing content and creating collections and exhibits.

GRAD:6530 Open Source Web Mapping for Beginners 1 s.h. Maps are high-impact visual representations that can make complex ideas more comprehensible and enhance persuasive power of academic arguments; wide range of open source data and scripting libraries that are increasingly available to scholars who wish to present their data in interactive online maps; introduction to basic workflows and scripting for open web mapping with JavaScript, HTML, and CSS.

GRAD:6540 Careers Beyond Academia 1 s.h. Preparation to search for and apply to a variety of careers outside of academia that allow students to use their digital scholarship and digital skills training; opportunities and challenges faced when transitioning to careers adjacent to and beyond academic environments in which students have become familiar with in their graduate training.

GRAD:6550 Design Fundamentals in Digital Scholarship 1 s.h. Exploration of the role of design in communication while empowering students to grow more comfortable verbalizing the visual; students more accurately describe design elements, produce basic promotional assets, and assess legibility, navigability, and accessibility.