Certificates, Distance Education

College of Agriculture and Life Sciences

Graduate Certificate in Food Safety and Defense

via Web-based interaction or streaming media

The Food Safety & Defense Graduate Certificate Program is an inter-institutional certificate program offered in cooperation with Kansas State University Food Science Institute, University of Nebraska-Lincoln Food Science, and University of Missouri Food Science programs. These universities have established a multi-state agricultural consortium to develop and deliver high-priority collaborative distance education programs in the food and agricultural sciences. By providing a distance education Food Safety and Defense graduate certificate program, we serve the needs of the industry and agencies that must protect the human food supply from accidental or deliberate contamination with pathogenic microbes and/or toxicants. In an era of terrorism and global food systems, effective control of foodborne hazards requires advanced education. To find out more information about the online food safety and defense graduate certificate program, please visit http://www.agde.iastate.edu/programs/foodsafetycert.php .

For more information contact:

Suzanne Hendrich, University Professor
220 MacKay, Iowa State University, Ames, Iowa 50011
(515) 294-4272 or
e-mail: shendric@iastate.edu

College of Engineering

Graduate Certificate in Computer Networking

via streaming media

Computer Networking Certificate Program provides students with advanced knowledge and skills in computer networking that large information technology companies desire. The program covers areas including: high-performance networks, optical networks, network performance modeling, wireless networks, wireless sensor networks, and ad hoc networks. Students can receive the certificate in as little as 9 months by taking two courses a semester. Several of the courses offer hands-on learning experience where the students will be able to perform experiments and use software systems remotely through the Internet.

For more information contact:

Joseph Zambreno, Professor
(515) 294-3312 or
e-mail: zambreno@iastate.edu

Graduate Certificate in Computational Fluid Dynamics

via streaming media

This certificate will provide knowledge and education in the area of computational fluid dynamics. Completing this certificate will enable the student to move up to a position where he or she can develop and use CFD tools effectively in the design process. The program will be offered through Engineering Online Learning and consist of a 12-credit sequence of graduate courses. Six credits will be two 3-credit core courses with the remaining 6 credits selected from an approved list of electives. The courses will consist of recorded lectures delivered using streaming media technology as well as teacher-student interaction via chat room, e-mail, and phone conversations.

For more information contact:

Z.J. Wang, Professor
(515) 294-1614 or
e-mail: zjw@iastate.edu

Graduate Certificate in Construction Management

via streaming media

This program will consist of a 12-credit sequence of graduate courses. Nine of the required credits will be three 3-credit core courses with the remaining 3 credits selected from an approved list of electives. This program focuses on three components that represent the three functional areas of construction management:to prepare students for lifelong careers in the constantly changing technical and managerial environment of the construction industry; to provide knowledge in construction process designs, cost estimating, planning, scheduling, and risk assessment; and to provide advanced construction management education to students with and without an engineering undergraduate degree.

For more information contact:

Charles Jahren, Professor
(515) 294-3829 or
e-mail: cjahren@iastate.edu

Graduate Certificate in Embedded Systems

via streaming media

Many information technology companies today desire employees who have advanced embedded systems knowledge and design skills. Our graduate certificate program in Embedded Systems serves the continuing education role for professionals in the rapidly evolving area of embedded systems. Our certificate program is designed to provide students with sufficient knowledge and skills in embedded systems design, including in the areas of: embedded hardware, embedded software, real-time systems, real-time operating systems, design methodology, and hardware-software co-design.

The program aims to enhance your competitiveness, technical knowledge, and resulting working efficiency. It also serves as a stepping-stone into our professional coursework-only Master of Engineering programs. Students can receive the certificate in as little as 9 months by taking two courses a semester. Several of the courses offer hands-on learning experience where the students will be able to perform experiments and use software systems remotely through the Internet.

For more information contact:

Joseph Zambreno, Professor
(515) 294-3312 or
e-mail: zambreno@iastate.edu

Graduate Certificate in Environmental Engineering

via streaming media

Environmental engineering is a rapidly growing field. Graduate courses in the certificate program help practicing professionals update and acquire new skills. The technology-based studies prepare engineers for the challenges posed by an expanding industrial base and help ensure sustainable agricultural practices and quality municipal services.

The curriculum explores the theory of environmental chemistry and biotechnology, methodologies of environmental engineering, and applies conceptual and technical knowledge to real-world applications. The certificate is 12 credits including four courses and a seminar program. Seminar program can be substituted for an approved program of conference attendance and presenting a paper or seminar.

For more information contact:

Hans van Leeuwen, Professor
515-294-5251 or
email: leeuwen@iastate.edu

Graduate Certificate in Environmental Systems

via streaming media

Environmental professionals develop and implement regulations and policies to protect the environment, manage wastes, recover byproducts, and enhance human, animal, and plant health.This program represents an opportunity for the student to acquire essential knowledge to accomplish the following:

- understand the principles (theory) and methodologies of environmental and systems with emphasis on application,
- apply conceptual and technical knowledge to real-world problem solving by selecting courses related to each student's area of interest,

- understand the appropriate role of the professional and the ethical standards in environmental management practice,
- be exposed to recent research in environmental systems and to practitioners in the field through seminars and the student making a contribution by presenting a seminar.

Students may join the program at the beginning of any semester and may take most graduate courses in any order and take the number of classes per semester that meets their needs. Classes are delivered online by digital video streaming. Students may choose the day, time and location to observe the class lectures allowing for maximum flexibility.

For more information contact:

Hans van Leeuwen, Professor
515-294-5251 or
email: leeuwen@iastate.edu

Graduate Certificate in Information Assurance

via streaming media

The program will increase your knowledge about information infrastructure security, expand and develop your engineering abilities, nurture and instill the ethics involved in technology, and help you develop and understand strategy and policy issues. Students can receive the certificate in as little as 9 months by taking two courses a semester. Several of the courses offer hands-on learning experience where the students will be able to perform experiments and use software systems remotely through the Internet.

For more information contact:

Doug Jacobson, Professor
(515) 294-8307 or
e-mail: dougj@iastate.edu

Graduate Certificate in Nondestructive Evaluation

via streaming media

Through a series of courses totaling thirteen or more credit hours of graduate coursework, the certificate in Nondestructive Evaluation (NDE) teaches professionals from engineering or physical sciences backgrounds the *fundamentals* of three major NDE techniques; eddy-current, ultrasonic and penetrating radiation methods. The program aims to train professionals working in numerous industrial sectors that rely on NDE for safe and efficient operation and include, but are not limited to, manufacturing, transport and power engineering. The program does not offer certification in NDE inspection methods, but focuses on the physical principles upon which these three major NDE inspection techniques are founded. Courses are taught by faculty and adjunct faculty in the College of Engineering who conduct research programs at Iowa State University's Center for Nondestructive Evaluation .

For more information contact:

Nicola Bowler, Professor
(515) 294-3202 or
email: nbowler@iastate.edu

Graduate Certificate in Power Systems Engineering

via streaming media

Iowa State University has a long-standing international reputation for education and research in electric power engineering. The electrical and computer engineering department designed the 12-credit graduate certificate for power engineering specialists in government, private sector, and academia.

Upon completion of the program, power engineering specialists will be proficient in theory and modeling plus have the tools to perform engineering tasks related to planning and operating electric power generation, transmission, and distribution systems, plus knowledge of related public policy.

For more information contact:

James McCalley, Professor
515-294-4844 or jdm@iastate.edu

Graduate Certificate in Software Systems

via streaming media

The certificate program is designed to meet the demand of large private companies and other employers for highly skilled software engineers. Earning the certificate will enhance your competitiveness, technical knowledge, and resulting working efficiency. The certificate also serves as a stepping-stone into our professional coursework-only Master of Engineering programs. Students can receive the certificate in as little as 9 months by taking two courses a semester. Several of the courses offer hands-on learning experience where the students will be able to perform experiments and use software systems remotely through the Internet.

For more information contact:

Tien Nguyen, Professor
(515) 294-8529 or
e-mail: tien@iastate.edu

Graduate Certificate in Systems Engineering

via streaming media

The systems engineering certificate program develops the management capabilities needed in today's work environment. Engineers, regardless of undergraduate discipline, develop the analytical abilities needed to design, evaluate, and build complex systems involving many components and demanding specifications. The certificate is 13 credits consisting of two basic courses in systems engineering, a course in requirements development, a course in project management and a one-credit capstone project.

For more information contact:

Doug Gemmill, Professor
(515) 294-8731 or
e-mail: n2ddg@iastate.edu

College of Human Sciences

Graduate Certificate in Family Financial Planning

online

The Family Financial Planning Graduate Certificate is an 18-credit subset of the degree program offered online.

Completing the certificate program meets the educational requirements for the Certified Financial Planner^{TM} examination.

The program is inter-institutional; after being admitted to one of the participating universities, students take online courses from all the universities.

For more information, send an e-mail to hsde@iastate.edu or call (877) 891-5349.

Graduate Certificate in Gerontology

online

The Gerontology Graduate Certificate is a 21-credit subset of the degree program offered online.

The program is inter-institutional; after being admitted to one of the participating universities, students take online courses from all the universities.

For more information, send an e-mail to hsde@iastate.edu or call (877) 891-5349.

College of Liberal Arts and Sciences

Graduate Certificate of Public Management

online

The Certificate of Public Management (CPM) program is designed to enhance the performance level of mid-career public managers and administrators.

The certificate requires 15 graduate credits. These credits may be applied to the MPA program at any time.

For more information, send and email to mpa@iastate.edu or call (515) 294-3764.

Graduate Certificate of Teaching English as a Second or Foreign Language (TESL/TEFL)

online

This four-course certificate prepares students to teach English to speakers of other languages in private language schools or overseas. Students are introduced to classroom methods for teaching learners of English, the principles of materials design, approaches to assessment, and current applications of technology to language learning. Credits from these classes may subsequently be applied to our graduate programs: the MA in TESL/Applied Linguistics or the PhD in Applied Linguistics & Technology.

For more information contact:

Dr. David Oakey, Assistant Professor
(515) 294-7521 or
e-mail: djoakey@iastate.edu

Interdisciplinary - Multiple Colleges

Graduate Certificate in Biorenewable Resources and Technology

via streaming media

Through a series of twelve credit hours of graduate coursework, the Biorenewable Resources and Technology certificate will offer students from a wide variety of science and engineering backgrounds an exposure to advanced study in the use of plant- and crop-based resources for the production of biobased products, including fuels, chemicals, materials, and energy. The program aims to train professionals to serve the emerging bieconomy, and in so doing to serve state, national, and global needs in moving toward a more sustainable industrial economy.

For more information contact:

Jacqulyn Baughman, DOGE/DOCS

http://www.elo.iastate.edu/graduate-certificates/biorenewable-resources-and-technology-graduate-certificate-online/

(515) 294-9451 or
e-mail: jacqulyn@iastate.edu

Graduate Certificate in Human Computer Interaction

via streaming media

The accelerating integration of technology into every aspect of society will demand professionals trained with information technology skills that are augmented by an understanding of the human user. These skills will be necessary for any individual to remain competitive in the future information technology work force. Only those individuals with a unique interdisciplinary perspective will be able to successfully understand, utilize, and apply new technological solutions to solve human-centered problems. Students may take up to 9 credits as non-degree seeking student, so it is possible to begin your studies before formal admittance into the programs.

For more information contact:

Pam Shill at 515-294-2089 or pshill@iastate.edu