

## Transcribed Graduate Certificate Programs

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Applied Statistics Certificate program  
 Energy Sustainability Engineering Certificate Program  
 Graduate Certificate in Advanced International Affairs (Bush School of Government and Public Service)  
 Certificate in Africana Studies  
 Certificate in Agriculture eLearning Development  
 Certificate in Community Development  
 Certificate in Digital Humanities  
 Computational Sciences Certificate Program  
 Conservation Training Certificate  
 Dietetic Internship Certificate  
 Graduate Certificate in China Studies (Bush School of Government and Public Service)  
 Certificate in Entrepreneurship  
 Certificate in Environmental Hazard Management  
 Certificate in Facility Management  
 Certificate in Health Systems and Design  
 Graduate Certificate in Geographic Information Systems (GIS)  
 Certificate in Hispanic Bilingual Education  
 Certificate in Historic Preservation  
 Graduate Certificate in Homeland Security (Bush School of Government and Public Service)  
 Graduate Certificate in National Security Affairs (Bush School of Government and Public Service)  
 International Graduate Certificate Program (College of Education and Human Development)  
 The Graduate Certificate in International Agriculture and Resource Management (IARM)  
 The Professional Certificate in Human Resource Management  
 The Safety Engineering Certificate – Graduate Program  
 Certificate in International Business (Mays MBA Students Only)  
 Graduate Certificate in Business Management  
 Graduate Certificate in Education and Social Sciences Advanced Research Methods (ARM)  
 Graduate Certificate in Food Safety  
 Graduate Certificate in International Business (Mays MS Students Only)  
 Certificate in Leadership Education, Theory, and Practice  
 Graduate Certificate in Meat Science  
 Graduate Certificate in Nonprofit Management (Bush School of Government and Public Service)  
 Certificate in International Petroleum Management  
 Graduate Certificate in Remote Sensing (RS)  
 Certificate in Prevention Science  
 Certificate in Space Life Sciences  
 Certificate in Supply Chain Management (Mays MBA and MS Students Only)  
 Certificate in Sustainable Urbanism  
 Certificate in Transportation Planning

Certificate in Women's and Gender Studies  
Certificate Program in Tree Improvement  
Ocean Observing Systems Certificate Program

A graduate certification program represents an emphasis area within a particular field or it could be interdisciplinary and involve several fields. Other certificate programs may exist in the various colleges or schools. Inquiries should be addressed to these colleges.

**Applied Statistics Certificate Program** is offered through the Department of Statistics. This certificate is designed to meet the needs of students and the workforce. The student can choose from various areas of emphasis including, but not limited to, biostatistics, business analytics, statistical computations, and AP teacher training. To complete the certificate program the student must 1) be admitted to the university and 2) successfully complete at least 12 semester credit hours from the list of graduate courses. The specific courses will be chosen by the student, in consultation with the associate department head or the director of Online Learning, so as to best meet the student's career goals.

**Energy Sustainability Engineering Certificate.** The graduate level Energy Sustainability Engineering Certificate is offered through the Department of Petroleum Engineering. It is designed to provide an education for college graduates in how to apply three essential criteria—environmentally benign, economically competitive, and socially acceptable—to engineer the sustainability of energy resources and their use. The certificate requires taking 3 courses to be selected from the prescribed electives list, plus one other course addressing a specific energy topic to be approved on a case-by-case basis. The 5 prescribed elective courses provide an overview of energy and sustainability, sustainability metrics, sustainability engineering design, energy economics and policy, and innovation. The certificate is intended for graduate students and working professionals with a wide range of career interests and is not limited to engineering graduates. Courses emphasize team project experiences and are available to distance learning students.

**Certificate in Advanced International Affairs** packages critical graduate education experiences in a novel way. It involves a multidisciplinary series of graduate courses for people whose careers or personal interest cause them to seek a more complete understanding of world affairs, but who may not have the time or disposition for a longer, residential graduate degree. A student admitted to the certificate program completes 12 credit hours of study typically involving four graduate-level courses available in residence and/or online. Some residential courses may not be available because of enrollment ceilings. The set of courses from which a student selects include intelligence, national security, diplomatic history, international business and government, geography and world systems, international law, and certain skill courses.

An applicant, once admitted, can enter the certificate program at any time and must have a bachelor's degree and meet certain other qualifications. Inquiries may be addressed to the Bush School.

An individual who successfully completes the certificate program will be awarded a certificate by the Bush School. Grades for courses taken as part of this program will appear on the official transcript, together with notation that the certificate has been achieved.

For more information, visit [bush.tamu.edu](http://bush.tamu.edu) or call (979) 862-7810.

**Dietetic Internship Certificate.** The combined graduate degree – Dietetic Internship is accredited with the Commission on Accreditation for Dietetics Education (CADE). The program integrates knowledge gained in coursework and laboratories with intensive training in professional settings. A student gains experience in community nutrition/outpatient, business/foodservice management, and clinical dietetics. Major affiliating institutions include Scott and White Memorial Hospital and Clinic and The Central Texas Veterans Health Care System. Upon completion of the program, a student is eligible to take the registration examination to become a Registered Dietitian.

**Graduate Certificate in China Studies.** The Certificate in China Studies is a collaborative effort of the George Bush School of Government and Public Service, the College of Liberal Arts, and the Institute for Pacific Asia (Confucius Institute). The certificate program is open to students from any graduate degree program at Texas A&M University. It provides students a menu of courses offered by various departments and colleges that in aggregate create a more robust curriculum of courses on China than is currently available in any single department. A student admitted to the certificate program completes 12 credit hours of study typically involving four graduate level courses available in residence. The set of courses from which a student selects includes economic development, foreign policy, history, population and society, strategic thought, and geography. Designed as an interdisciplinary learning experience, no more than two courses from any one department will count toward the certificate. Inquiries may be addressed to the Bush School. The certificate program is supervised by the Bush School and College of Liberal Arts. Grades for courses taken as part of this program will appear on the official transcript, together with notation that the certificate has been achieved.

For more information, visit [bush.tamu.edu](http://bush.tamu.edu) or call (979) 458-2276.

**Certificate in Africana Studies.** This interdisciplinary certificate is offered by the Program in Africana Studies in the College of Liberal Arts. It offers interested masters or doctoral students an opportunity to develop an interdisciplinary graduate concentration in Africana Studies, while at the same time earning a degree in a disciplinary major field. In addition to gaining knowledge of peoples and of issues with particular significance to the Africana world, students pursuing this certificate will also benefit from the interdisciplinary training that is the hallmark of Africana Studies. They will be exposed to the scholarship, methods, and theories of the multiple disciplines that contribute to the critical analysis and understanding of the Africana world. Awarding of the Africana Studies Certificate requires that the certificate candidate complete 12 hours of Africana Studies approved coursework and receive a grade of at least a B in each course completed. Those 12 hours should include: 3 hours of humanities credits, 3 hours of social science credits, 3 hours of approved free elective credits, and AFST 601, which is required for all students pursuing the graduate certificate. More detailed information on the Africana Studies program is available at [africana.tamu.edu](http://africana.tamu.edu).

**Certificate in Agriculture eLearning Development.** The Agriculture eLearning Development Certificate is an innovative program offered by the Department of Agricultural Leadership, Education, and Communications. This program prepares students across the College of Agriculture and Life Sciences with the unique knowledge and skills required to develop sophisticated eLearning courses and training programs for their Ag disciplines.

Students will gain a substantive foundation of learning theory, adult education, instructional design, and computer programming from an eLearning perspective. This emphasis area consists of 14 semester hours. Inquiries should be addressed to the Department of Agricultural Leadership, Education, and Communications. The URL about this program can be found at [cbi.tamu.edu/el](http://cbi.tamu.edu/el).

**Certificate in Community Development.** The Department of Recreation, Park and Tourism Sciences offers this transcribed certificate through its Program in Rural Sociology and Community Studies. This twelve-hour certificate program provides a student with an understanding of the principles and processes of community development. It addresses issues of decision making and leadership, human organization and communication, institutional capacity and enhancement, and resource mobilization and management. It also gives attention to special populations in development processes and outcomes. The program is available to students pursuing any graduate degree at Texas A&M University and who meet enrollment criteria. For more information contact the Graduate Coordinator in the Department of Recreation, Park and Tourism Sciences or the Leader of the Program in Rural Sociology and Community Studies.

**Certificate in Digital Humanities.** This transcribed certificate offers masters or doctoral students that intend to practice in an academic environment, museum, or other cultural institution the opportunity to acquire practical knowledge of digital tools and methodologies and to become competent in conducting digital practice activities. The Digital Humanities Certificate provides a basic introduction to the development and application of information technology in the context of research and practice in the humanities. The certificate provides students with the skills, applied and theoretical, that are necessary to apply computational techniques to complex research problems as well as practical tasks in the humanities. The certificate program is open to students from any graduate degree program at Texas A&M University and the plan of study comprises 12 hours of coursework, including 3 hours of independent study. At least one course must be outside the student's home department. For more information, see [dh.tamu.edu/certificate](http://dh.tamu.edu/certificate).

**Certificate in Entrepreneurship.** A certificate in entrepreneurship and technology commercialization provides a base understanding of new business planning; key issues encountered when developing commercial applications for new technical discoveries; the general legal aspects of intellectual property protection; fundamental business start-up and securities laws; and the management of creativity and innovation in organizational settings. To complete the certificate program, you need to complete 12 hours of coursework chosen from the following: MGMT 632, MGMT 637, MGMT 638, MGMT 640, MGMT 675 and FINC 644. This certificate is open to any graduate student at Texas A&M University.

**Certificate in Environmental Hazard Management.** This cross-disciplinary program is housed in the College of Architecture and is designed to provide a student with an understanding of the interrelationship between the built environment and extreme events in the natural environment. The program consists of a series of courses that are open to students from any graduate degree program at Texas A&M University.

**Certificate in Facility Management.** This certificate program, while housed in the College of Architecture, provides a student in any graduate degree program at Texas A&M University an opportunity to develop a body of knowledge in facility management that will further his/her career goals. The certificate assumes that facility management is a cross-disciplinary field. The program is designed to ensure that a student gains a sense of mutual respect for others in the field, and appropriate awareness, understanding, and ability within a specific body of knowledge.

**Certificate in Health Systems and Design.** This interdisciplinary certification program was created by the colleges of Architecture and Medicine to promote research, innovation, and communication focusing on health facility planning and design. The program is available to students pursuing any graduate degree at Texas A&M University. Though the program emphasizes a cross-disciplinary perspective, it also ensures that a student develops in-depth understanding and ability within the field of health systems design.

**Certification in Hispanic Bilingual Education.** The Department of Educational Psychology at Texas A&M University offers a Certification Program in Hispanic Bilingual Certification. This certification can be transcribed and meets the requirements of the Texas State Board of Educator Certification (SBEC). This certification is appropriate for Hispanic Bilingual classroom teachers. It requires the following coursework: Hispanic Bilingual Assessment and Monitoring; Dual Language Programs Methodologies; Content Area Instruction for Hispanic Bilingual Programs; Biliteracy for Hispanic Bilingual Students; and Bilingual and Dual Language Classroom for Hispanic Students.

**Certificate in Historic Preservation.** Based in the College of Architecture, the Certificate in Historic Preservation is open to students in a graduate degree program at Texas A&M University. This cross-disciplinary program draws on strong discipline-based academic programs that prepare graduates to further their career goals. The certificate assumes that historic preservation is a cross-disciplinary field, and the program is designed to ensure that students gain a sense of mutual respect for others in the field, and appropriate awareness, understanding, and ability within a specific body of knowledge.

**The Professional Certificate in Human Resource Management** is an innovative program offered by the Department of Management. The program prepares students with the unique knowledge and skills required to apply human resource management theories at any level in businesses or not-for-profit organizations. The certificate program consists of 14 semester hours of coursework. Grades for courses taken as part of this program will appear on the official transcript, together with a notation that the certificate has been achieved. Admission to the program is by permission of the Department of Management only. Inquiries should be addressed to the Department of Management, (979) 845-4861.

**The Safety Engineering Certificate – Graduate Program** requirements are achievable and relevant to all engineering disciplines. Graduate students in any engineering discipline can choose this option as part of their curriculum. Through this option, students are exposed to principles and case histories from a wide variety of engineering disciplines. The curriculum emphasizes the interdisciplinary nature of safety, health, and environmental engineering. It also emphasizes the knowledge and skills most likely to be needed by any engineer, as well as those who specialize in Safety Engineering.

The proposed Safety Engineering Certificate – Graduate Program, which will be administered by the Mary Kay O'Connor Process Safety Center, seeks to serve all engineering disciplines equally well. The certificate requires 12 hours of coursework. It is the intent that these hours are applicable to the hours necessary for graduation and not an additional load, but this will depend on the disciplines' specific course requirements. Receiving the certificate is not dependent on conferral of a degree. Of the total hours required for the Certificate, six hours are dedicated to Basic Topics and are required for everyone in the program. An additional six hours address more specific or advanced topics. The advanced topics are cross-listed with numerous departments.

**The Graduate Certificate in International Agriculture and Resource Management (IARM)** is available to persons majoring in one of the 17 graduate programs in the College of Agriculture and Life Sciences. This emphasis area consists of 13 semester hours. For more information and to coordinate content of and participation in the certificate program with the content of their own degree programs, graduate students in the College of Agriculture and Life Sciences should contact the departmental advisor or the IARM certificate coordinator in their department. Additionally, students should register their intent to complete the requirements for the IARM graduate certificate with The Borlaug Institute for International Agriculture.

**Certificate in International Business (Mays MBA Students Only).** The increasing globalization of contemporary business environment finds companies under pressure to change and adapt to new technologies and markets. Companies need MBA students that are sensitive to diverse cultures and understand global developments and ethics.

The Graduate Certificate in International Business provides you with the knowledge base and international exposure needed to meet the global business challenges faced by organizations today.

The Certificate in International Business will be awarded to Mays MBA students that meet the following academic requirements:

1. Successfully complete the "International Business" course offered in Term 4 of your MBA program.
2. Participate in a semester-long (summer, fall or spring) overseas study program identified by Mays Business School and take at least four courses (12 credit hours) of international business courses.

Mays MBA students have several options available to fulfill requirements for the overseas study and international business course requirements.

**Graduate Certificate in Business Management** prerequisites include successful completion of terms 1, 2, 3 and 4 of the Mays MBA Program. Requirements include completion of at least 4 graduate level courses (12 credit hours) offered by Mays Business School. These courses may NOT include ACCT 640, FINC 635, MKTG 621 and 675 or MGMT 655 and 680 as these are duplications of the core MBA courses. All courses taken towards the certificate must be taken for a grade. Courses taken S/U will not count toward the certificate. The student must maintain a minimum GPA of 3.0 in the courses for the certificate.

Prior to registering for the certificate courses the MBA student must inform the Mays MBA program office of their intentions to take the certificate and present the proposed courses for approval by the office.

**Graduate Certificate in Education and Social Sciences Advanced Research Methods (ARM).** Offered by the College of Education and Human Development (CEHD), a Graduate Certificate in Education and Social Sciences Advanced Research Methods allows students in the College of Education and Human Development to add to their degree's minimum requirements for training in research methodology. The Certificate testifies to a student's successful mastery of advanced competencies in education and social sciences research methods, with emphasis on quantitative or qualitative approaches. The Certificate requires 12 hours of advanced research methods courses, identified as such by the CEHD's Research Certificate Committee. Enrollment in these advanced courses will require the completion of established prerequisites (designated in the Graduate Catalog) and/or the approval of the course instructor and the student's dissertation committee chair/faculty advisory. As part of the certificate completion requirements, students will provide evidence of submission of a manuscript for publication as the main author, or as a co-author. As a first step in applying for the Certificate, graduate students should contact their dissertation or program Chair(s).

**Graduate Certificate in Food Safety.** The Department of Animal Science at Texas A&M University offers a Graduate Certificate in Food Safety. The certificate is designed for graduate students interested in food microbiology, HACCP, sanitation, regulatory affairs, and quality control or assurance. The Graduate Certificate in Food Safety requires 12-credit hours from any of the following courses:

- ANSC/FSTC 657, Hazard Analysis and Critical Control Point (HACCP) System
- DASC/FSTC 606, Microbiology of Foods
- ANSC 637, Food Safety: Policy, Regulations, and Issues
- ANSC/FSTC 697, Applied Microbiology for Foods of Animal Origin: Processing, Sanitation, and Sanitary Design
- VIBS 615, Food Hygiene
- VIBS 618, Food Toxicology

This program is available to graduate students pursuing any graduate degree at Texas A&M University. Upon completion, students will be prepared to meet the demands of careers in the area of food safety, and formal documentation of completing this program will be placed on the student's transcript. Please contact Kerri B. Harris at [kharris@tamu.edu](mailto:kharris@tamu.edu) or (979) 862-3643 for more information.

**Certificate in Homeland Security** consists of 15 credit hours of web-based, distance education instruction surveying the dimensions of homeland security and defense, from the traditional concepts of public safety to the emerging concepts of public security. The program is designed for individuals seeking careers with management or policy responsibilities at various levels of government, business or the military. After a required gateway seminar, students select from a menu of electives dealing with such topics as protection of critical infrastructure, recovering from WMD, terrorism, inter-government coordination, and business strategies for protection and recovery. The certificate is available only online—it is not offered in residence. Applicants must have an accredited bachelor's degree and meet other entry qualifications to be admitted to graduate study at Texas A&M University specifically for this certificate. Students who are currently enrolled in a graduate degree program at Texas A&M University may take individual courses. However, they must formally enroll in

the certificate program, and meet certificate completion requirements to gain the certificate. Grades for courses taken as part of this program will appear on the student's official Texas A&M University transcript. For more information, visit [bush.tamu.edu](http://bush.tamu.edu) or call (979) 862-7810.

**Certificate in Leadership Education, Theory, and Practice** is an innovative program offered by the Department of Agricultural Leadership, Education, and Communications. This program prepares students with the unique knowledge and skills required to apply leadership theory and put into practice these theories at any level in an organization. Students will gain a substantive foundation of leadership theory, with the instructional focus on leadership situations and how to apply leadership theories to all professional organizations, including professional and civic. This emphasis area consists of 14 semester hours. Inquiries should be addressed to the Department of Agricultural Leadership, Education and Communications.

**Certificate in National Security Affairs** is a 12 credit hour graduate certificate offered by the Bush School of Government and Public Service. It is intended to provide a comprehensive overview of the formation and operation of the United States national security policy for individuals with specific background and experience. Individuals may apply who hold a terminal or graduate degree from an accredited university and three years employment (or a bachelor's degree and five years employment) in a firm, laboratory, agency or non-governmental organization in which the individual's responsibilities involve the development or provision of systems, services or products for use in national or international security. Applicants must meet these requirements and those for admission for graduate study at Texas A&M University as a non-degree seeking students (G-6). Proficiency in reading, writing and comprehending spoken English at a level necessary for graduate instruction is required.

Graduate-level courses for the certificate include a mix of required courses and electives selected from a structured menu. Among those courses included are those dealing with deterrence, intelligence, terrorism, and national security policy. Typically, this certificate requires residency in the first term of the summer semester followed by courses taken via distance education to complete the program. An individual who successfully completes the program will be awarded the certificate by the Bush School. Grades for courses taken as part of this program will appear on the official university transcript, together with notation that the certificate has been achieved. Inquiries may be addressed to the Bush School. For more information, visit [bush.tamu.edu](http://bush.tamu.edu) or call (979) 458-2276.

**Certificate in Petroleum Geoscience.** The Graduate Certificate in Petroleum Geoscience is an interdisciplinary program in the Department of Geology and Geophysics designed to enhance both critical thinking and the technical skills that serve as the scientific foundation for practicing petroleum geoscience. The program requires a minimum of 18 semester credit hours from Geology and Geophysics and optionally Petroleum Engineering as part of a regular graduate program. In addition, workshops, lectures and field trips enable students to learn about pressing scientific problems in petroleum exploration and production. Students are required to take a core of courses including reflection seismology and seismic interpretation, sequence stratigraphy and basin analysis, 3-D structure, rock properties and one seminar per year are required. In addition, students must choose at least one course from an approved list of supporting courses in both the Department of Geology and Geophysics and Petroleum Engineering. The Certificate is conferred upon successful completion of a



MSc or PhD degree program in Geology or Geophysics including the required courses. For detailed information please contact the graduate advisor, Department of Geology and Geophysics or send an e-mail to [petroboss@geoweb.tamu.edu](mailto:petroboss@geoweb.tamu.edu).

**Graduate Certificate in Nonprofit Management (Bush School of Government and Public Service).** Students who complete the certificate will gain an understanding of the nonprofit sector, nonprofit organizational structures (i.e., legal frameworks and governance issues) and management practices appropriate to the sector (i.e., strategy, volunteer behavior, and fund raising). With this preparation, students will be able to offer effective leadership in the management of nonprofit organizations. The certificate requires students to complete 12 credit hours of graduate level coursework. This includes two required courses: Foundations of the Nonprofit Sector and Management and Leadership of Nonprofit Organizations. Students can select from a variety of electives, such as fund raising and program evaluation, to satisfy the remaining six hours of required coursework. An applicant, once admitted, can enter the certificate program at any time and must have a bachelor's degree and meet certain other qualifications. Inquiries may be addressed to the Bush School. Individuals who successfully complete the program will be awarded a certificate and it will appear on their university transcript. For more information, visit [bush.tamu.edu](http://bush.tamu.edu) or call (979) 862-7810.

**Graduate Certificate in International Business (Mays MS Students Only)** is an innovative program, interdisciplinary and international in its orientation, offered by the Mays Business School. All graduate business students seeking a Master of Science degree are eligible to pursue the Certificate program, which requires a minimum of 12 semester credit hours of international business coursework abroad during a semester of overseas study (for U.S. students) that can be accommodated within the regular graduate business program. As a prerequisite, MS students must take IBUS 678 or IBUS 679 prior to their study abroad. For more information and to coordinate content of and participation in the certificate program, graduate business students should contact the departmental advisor of the MS program.

**Graduate Certificate in Geographic Information Systems (GIS)** is a joint program administered by the Departments of Ecosystem Science and Management and Geography. GIS technologies are applied to wide-ranging fields with interests in spatially distributed information such as transportation, environmental/resource management, marketing, facility management, healthcare delivery, homeland security, agriculture, and urban planning, among others.

This certificate program has been designed to meet the growing demand for qualified individuals in the field. The certificate requires four courses (12 hours), including an introductory, two advanced, and one elective course. For more detailed information please contact a graduate advisor in the Department of Ecosystem Science and Management or Geography, or visit the program website at [ssl.tamu.edu/education/academic-programs/graduate-certificate-program](http://ssl.tamu.edu/education/academic-programs/graduate-certificate-program).

**Graduate Certificate in Remote Sensing (RS)** is a joint program administered by the Departments of Ecosystem Science and Management and Geography. Remote Sensing (RS) technologies are applied to wide-ranging fields such as environmental/resource management, marketing, facility management, agriculture, urban planning, homeland security and intelligence, among others. In addition, the synergistic linkages between RS technologies and Geographic Information Systems (GIS) are rapidly increasing.

This certificate program has been designed to meet the growing demand for qualified individuals in this field. The certificate requires four courses (12 hours), including an introductory, two advanced, and one elective course. For more detailed information please contact a graduate advisor in the Department of Ecosystem Science and Management or Geography, or visit the program website at [ssl.tamu.edu/education/academic-programs/graduate-certificate-program](http://ssl.tamu.edu/education/academic-programs/graduate-certificate-program).

**Certificate in Prevention Science.** The certificate is to provide students from a variety of majors an interdisciplinary perspective on the science and practice related to the prevention of mental, emotional, and physical health problems and the promotion of well-being in these same domains.

**Graduate Certificate in Meat Science.** The Department of Animal Science at Texas A&M University offers a Graduate Certificate in Meat Science for students who complete this four-course, 12-hour program:

ANSC 607, Physiology and Biochemistry of Muscle as a Food

ANSC 627, Carcass Composition and Quality

ANSC 647, Technology of Meat Processing and Distribution

ANSC 667, Industrial Processed Meat Operations

This program is available to graduate students pursuing any graduate degree at Texas A&M University. Upon completion, students will have a broad-based and in-depth overview of meat science and technology, and formal documentation of completing this program will be placed on the student's transcript.

Please contact Jeff Savell at [j-savell@tamu.edu](mailto:j-savell@tamu.edu) or (979) 845-3935 for more information.

**Certificate in International Petroleum Management.** As part of this graduate program in the Department of Petroleum Engineering, the Mays Business School will award the degree candidate a Certificate in International Petroleum Management. To qualify for this certificate the student must complete at least 18 semester hours of coursework in the Mays Business School. A required course sequence list can be found at [www.pe.tamu.edu/academics/IPM\\_req.doc](http://www.pe.tamu.edu/academics/IPM_req.doc). Any variation in the course sequence must be approved by the IPM Program Coordinator in the Mays Business School and the Graduate Advisor in the Petroleum Engineering Department.

**Certificate in Space Life Sciences.** This cross-disciplinary certificate program is housed in the College of Agriculture and Life Sciences. It is designed to provide students pursuing a Ph.D. in Genetics, Kinesiology, Nuclear Engineering or Nutrition and those pursuing a Ph.D. or Ph.D./M.D. in Medical Sciences an understanding of critical areas of space life sciences and the countermeasures to these problems. Students gain a respect for the interdisciplinary nature of space life sciences research through participation in GENE, KINE, NUEN and NUTR courses, a space life sciences seminar course, a research program focusing on issues of space life sciences, and experiences at NASA/JSC, Brookhaven National Laboratory and the NASA bed-rest facility.

**Certificate in Supply Chain Management (Mays MBA and MS Students Only).** Supply Chain Management (SCM) is, by its very nature, multidisciplinary. It draws heavily upon an expertise in operations management, business logistics, physical distribution, purchasing, channel management, information technology, and decision sciences. The Certificate in SCM leverages Mays faculty expertise in these areas to create an innovative and state-of-the-art program.

Such a focus parallels recent trends in industry, and provides significant differentiation and competitive advantages for Mays MBA and MS students. The certificate requirement is completion of four graduate level courses (12 hours) in supply chain management, including the introductory supply chain management course.

**Certificate in Sustainable Urbanism.** Sustainable Urbanism is an interdisciplinary program based in the Center for Housing and Urban Development (CHUD) in the College of Architecture. The certificate has been designed to provide students with an understanding of the interrelationship between the sustainability, cities, and the environmental design professions. The Sustainable Urbanism Program consists of a series of courses that are open to students from any graduate degree program at Texas A&M University.

**Certificate in Transportation Planning.** The certificate in Transportation Planning program provides students with a substantive base of knowledge needed to be broadly successful in the transportation profession, as well as with specialized instruction tailored to building student skills and capabilities in three critical areas: Transportation Systems Planning, Transportation and Urban Design, and Transportation Policy. Students enrolled in the certificate program will further take a comprehensive capstone course. The Certificate is one of the few educational programs that address the field of transportation in a truly comprehensive, interdisciplinary manner. It is a partnership among the Department of Landscape Architecture and Urban Planning (LAUP) in the College of Architecture, the Texas Transportation Institute (TTI), the Department of Civil Engineering, and the Bush School of Government and Public Service. The Certificate is housed in the Hazard Reduction and Recovery Center in the College of Architecture. This program will be open to any graduate student at Texas A&M University with an interest in transportation. Certificate Coordinator: Dr. Eric Dumbaugh.

**Certificate in Women's and Gender Studies.** This transcribed certificate offers the master's or doctoral student the benefits of gaining an interdisciplinary concentration in gender, while at the same time earning a degree in a disciplinary major field. The Women's and Gender Studies Certificate aims to enhance critical thinking and methodological skills while facilitating analysis of gender's role in culture, society and the arts and encouraging the development of innovative research that combines recent scholarship in gender studies with the student's major area of study. The certificate program is open to students from any graduate degree program at Texas A&M University and consists of 12 hours of coursework approved for this purpose by the Director of Women's and Gender Studies, including at least 3 hours of humanities and 3 hours of social science credits. For more detailed information, please consult [wgst.tamu.edu](http://wgst.tamu.edu).

**Certificate Program in Tree Improvement** is offered through the Department of Ecosystem Science and Management and targets practicing tree improvement professionals who want to make a more significant contribution to the scientific management of tree breeding programs. It is also available to graduate students enrolled in a degree program. The certificate is structured around four courses and a field practicum and consists of 13 semester hours. The courses will emphasize applied tree improvement techniques, the principles of forest genetics, tree structure and physiology, and developments in biotechnology applied to tree improvement. These four courses are offered with a web-based distance-learning format and have a short field practicum as a capstone. The certificate is designed to be completed in two years. For detailed information please contact a graduate advisor in the Department of Ecosystem Science and Management.

**Computational Sciences Certificate Program** was developed to meet the increased need for computational techniques to help solve complex science and engineering programs. This program is targeted to science and engineering students enrolled in graduate studies. The goal of this certificate program is to provide formal documentation upon a student's transcript that they have taken additional courses focused on the computational aspects that supplement a given degree in science and engineering. To fulfill the certification requirements, a student must complete four courses, as described by the program outline, and a capstone project in their home department.

This certification will provide a graduate student with a broad-based multidisciplinary enhancement to his/her degree program as well as prepare him/her with the intellectual infrastructure to be a new leader in computational science, engineering, and technology. By joining this certification program, a graduate will receive an official certified transcript that will add value and marketability to his/her advanced degree. For more information, visit [isc.tamu.edu/cscp](http://isc.tamu.edu/cscp) or send an email message to [cspc@isc.tamu.edu](mailto:cspc@isc.tamu.edu).

**Conservation Training Certificate Program** provides a student with a thorough knowledge of the latest artifact conservation methods and their application. Artifacts recovered from underwater sites are unstable when recovered and immediate conservation is necessary to ensure that the artifact does not deteriorate once out of the water. The certificate consists of formal courses in artifact conservation and practical application of that knowledge. Traditional approaches to artifact conservation are covered in detail as well as methods recently developed. The certificate requires students to take three courses (ANTH 605, 606 and 617) and a one credit hour Directed Studies course (ANTH 685) which involves the application of conservation methods under the supervision of trained conservators at the Conservation Research Laboratory. The certificate is available to degree seeking and non-degree seeking graduate students.

**International Graduate Certificate Program (College of Education and Human Development).** The College of Education and Human Development International Education and Graduate Certificate Program consist of coursework and field experiences that will give graduate students an international perspective on educational issues. The certificate program will give students an interdisciplinary basis from which to interpret and analyze global socioeconomic and cultural influences that shape educational systems. To meet the needs of an increasingly demographically-diverse society, U.S. educators and administrators must increase their knowledge about the various cultures that are part of our country. In addition, educators and administrators who work and live abroad need exposure to international theories and experiences in order to prepare them for leadership positions abroad.

**Ocean Observing Systems Certificate Program** is offered through the Department of Oceanography. Ocean Observing is an important new direction in oceanographic research that requires specially trained individuals in ocean data collection, data management, and production and distribution of needed products and services. The program provides training for *in situ* ocean observations, remote sensing technologies, data analysis and display, including geographic information systems (GIS), analytical techniques and modeling. The certificate targets non-thesis graduate students who would like to add an Ocean Observing credential to their portfolio as a means of enhancing their professional prospects.

The certificate program requires a minimum of 24 hours of study from a selected curriculum and enrollment in a graduate program. For detailed information, please contact a graduate advisor in the Department of Oceanography.