

THIS JUST IN AND HOT OFF THE PRESSES:

Feb. 2006 - A 2 year AAS degree in Surveying is now available using UW surveying classes applied to Sheridan College in Sheridan, Wyoming. ALL classes needed for the degree are available through Distance Learning mediums, and residency requirements to receive the degree have been waived! More details to come – but anticipated first graduation is December, 2006.

This email is in response to your inquiry to the University of Wyoming's Surveying Outreach program.

Below is information regarding our program including the schedule for summer semester. Also below you will find all of the classes that have been developed for Outreach presentation in the surveying area and their corresponding descriptions

At the present time, we have 31 semester hours of courses developed for off-campus study. Normally, 12-15 semester credit hours are offered in both the fall and spring semesters, and 6 - 8 semester credit hours in the summer semester. During fall or spring semesters we normally have enrollments of approximately 150 - 200 students located throughout the US.

It is recommended that a beginning student take the CE 2070 course because it is a pre-requisite for all other courses. Extensive experience in the surveying field may allow you to take the advanced classes without the CE 2070 prerequisite, but instructor permission is required. Please refer to course descriptions for complete prerequisite listings.

Registration is painless and easy; no need to apply through normal University admissions, just call the Outreach Office at 1-800- 448-7801, (1 and 1 again for menu options) and provide some basic information and method of payment and you're set. In the event you are unable to take a course when classes begin, you can receive a full refund upon request. Early registration is encouraged because many of our courses are only offered once a year and often close out early due to high enrollment. It is possible that UW will offer additional sections of a closed class if some advance notice of high enrollment indicates that it is necessary.

Classes are presented via video taped lectures that are viewed by students at their convenience and weekly teleconference (telephone conference) calls between instructor and all students enrolled in that section. UW absorbs all long distance phone costs of the teleconference calls. Internet access is required for all classes since much communication between instructor and students occurs through either email or forum pages in an internet companion component that supplements the courses.

The strength of any education program lies with the quality of its faculty. Dennis Mouland PLS teaches all of the legal content courses, and is not only a nationally known seminar speaker, but is a frequent contributor to both Professional Surveyor and POB trade magazines. Mr. Mouland also wrote the section of Writing Land Descriptions as found in the "Surveyor's Handbook". Dennis is presently the training coordinator for the BLM and oversees the programs and classes presented to all of BLM's surveyors.

SUMMER, 2006 SCHEDULE:

CE 2070 3 credit hours Engineering Surveying
Rod Skaggs

This course covers the principles of measurements of distances, elevations, and angles. It also includes basic error theory in measurement and calculations, traverse field techniques and office calculations, and basic principles of surveying and mapmaking. Internet access and e-mail are required. (SUR)

Prerequisites: Significant surveying experience or ES 1060

Dates/Times: Wed., 6:30 p.m. - 8 p.m. Mountain Time; 5/17, 31; 6/14, 28; 7/12, 26; 8/9, 23; plus two hours video viewing weekly

Sites: Nationwide

Audio teleconference lecture/discussion; recorded lectures

Lectures can be purchased on DVD from the University Bookstore or loaned through Outreach Credit Programs office on VHS.

CE 2080 1 credit hour Public Land Surveys I

Dennis Mouland

This course covers historical factors that lead to the Public Land Survey System (PLSS). Basic fundamentals are discussed, including line types, corner types, and the original survey process. Principles of government, dependent and independent resurveys, and the basic keys to reading General Land Office and BLM survey plats are also discussed. Internet access and e-mail are required. (SUR)

Prerequisites: CE 2070 or consent of instructor

Dates/Times: Mon., 7:30 p.m. - 9 p.m. Mountain Time; 6/12, 19, 26; plus two hours video viewing weekly

Sites: Nationwide

Audio teleconference lecture/discussion; recorded lectures

Lectures can be purchased on DVD from the University Bookstore or loaned through Outreach Credit Programs office on VHS.

CE 2082 1 credit hour Public Land Surveys II

Dennis Mouland

This class covers "bona fide rights" and riparian boundaries in the PLSS. The non-rectangular entities, the process for section subdivision-including normal, fractional, lotted closing corners, and sections lotted for irregularities found in a dependent survey, and the proper use of off-line closing corners are presented. Internet access and e-mail are required. (SUR)

Prerequisites: CE 2080 or consent of instructor

Dates/Times: Mon., 7:30 p.m. - 9 p.m. Mountain Time; 7/10, 17, 24; plus two hours video viewing weekly

Sites: Nationwide

Audio teleconference lecture/discussion; recorded lectures

Lectures can be purchased on DVD from the University Bookstore or loaned through Outreach Credit Programs office on VHS.

CE 2084 1 credit hour Public Land Surveys III

Dennis Mouland

The class covers the importance of and process for records research. Discussion leads into the analysis of corner evidence on the ground and restoring lost corners after years of deterioration and neglect. It also covers the role of the present day surveyor in the PLSS and the types of

complexities that will be faced. Internet access and e-mail are required. (SUR)
Prerequisites: CE 2080 or consent of instructor
Dates/Times: Mon., 7:30 p.m. - 9 p.m. Mountain Time 7/31; 8/7, 14; plus two hours video viewing weekly
Sites: Nationwide
Audio teleconference lecture/discussion; recorded lectures
Lectures can be purchased on DVD from the University Bookstore or loaned through Outreach Credit Programs office on VHS.

CE 3710 3 credit hours Route Surveying
Rod Skaggs

This course covers the principles of route location and design. The theories of circular, parabolic, and spiral curves, highway and railway geometric design, area and volumes of earthwork, and mass diagrams are all covered. Internet access and e-mail are required. (SUR)
Prerequisites: CE 2070 or equivalent
Dates/Times: Wed., 8 p.m. - 9:30 p.m. Mountain Time; 5/17, 31; 6/14, 28; 7/12, 26; 8/9, 23; plus two hours video viewing weekly
Sites: Nationwide
Audio teleconference lecture/discussion; videotaped lectures

CE 3740 2 credit hours Survey Boundary Controls and Legal Principles
Dennis Moulard

This course in boundary law addresses the fundamental principles of real property as applied to land surveying and related professions. Discussion and applications center on practical situations and concepts commonly encountered while conducting boundary surveys and the determination of the extent of ownership rights. Students explore the scope of the surveyors' judiciary role in real property ownership. Internet access and e-mail are required. (SUR)
Prerequisites: CE 2070 or equivalent
Dates/Times: Mon., 6 p.m. - 7:15 p.m. Mountain Time; 6/12, 19, 26; 7/10, 17, 24, 31; 8/7; plus two hours video viewing weekly
Sites: Nationwide
Audio teleconference lecture/discussion; videotaped lectures

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Course Descriptions - All Classes Developed For The Surveying Outreach Program

NOTE: INTERNET ACCESS REQUIRED FOR ALL COURSE OFFERINGS

CE 2070-Engineering Surveying (3 semester credit hours) Instructor: Rod Skaggs P.E.

Basic fundamentals in surveying concepts and computations. This course is a pre-requisite for all other surveying courses. Prerequisite for this course is basic understanding of right angle trigonometry and algebra. A two-hour tutorial tape on trigonometry used in all of the technical courses is available by request and upon enrollment of course. Offered Fall, Spring and Summer semesters.

CE 2074 - Ethics for the Professional Surveyor (1 semester credit hour) Instructor: Dennis Mouland PLS

Introduction to the common ethical and moral issues facing professional surveyors in modern practice. Prerequisites: CE 2070 or consent of instructor. (Primarily offered through Outreach Credit Courses)

CE 2080 - Public Land Surveys I (1 semester credit hour) Instructor: Dennis Mouland PLS

Covers historical factors that lead to the Public Land Survey System (PLSS). Basic fundamentals are discussed, including line types, corner types and the original survey process. Principles of government dependent and independent resurveys, and the basic keys to reading General Land Office and BLM survey plats are also discussed.

Prerequisite: CE 2070 or consent of instructor. (Primarily offered through Outreach Credit Courses)

CE 2082 - Public Land Surveys II (1 semester credit hour) Instructor: Dennis Mouland PLS

Discusses "bono fide rights" and riparian boundaries in the PLSS. Presents the non-rectangular entities, the process for section subdivision, including normal, fractional, lotted closing corners, and sections lotted for irregularities found in a dependent resurvey, and the proper use of off-line closing corners.

Prerequisite: CE 2080 or consent of instructor. (Primarily offered through Outreach Credit Courses)

CE 2084 - Public Land Surveys III (1 semester credit hour) Instructor: Dennis Mouland PLS

Covers the importance of and process for records research. Discussion leads into the analysis of corner evidence on the ground, and restoring lost corners after years of deterioration and neglect. Also discusses the role of the present day surveyor in the PLSS and what types of complexities that will be faced.

Prerequisite: CE 2082 or consent of instructor. (Primarily offered through Outreach Credit Courses)

CE 2086 - Advanced Public Land Surveys (3 semester credit hours) Instructor: Dennis Mouland PLS

Advanced topics in situations and problems in the Public Land Survey system, with discussion of major court cases involving everyday applications to surveyors. 1975 BLM casebook and other sources of survey reference.

Prerequisite: CE 2084 or consent of instructor. (Primarily offered through Outreach Credit Courses)

CE 2088 - Writing Land Descriptions (2 semester credit hours) Instructor: Dennis Mouland PLS

Historical and current issues for land description writing and usage for the practicing surveyor. Relationship between written descriptions and field survey data, interpreting old descriptions and the structure principles of descriptions.

.Prerequisite: CE 2070 or consent of instructor. (Primarily offered through Outreach Credit Courses)

CE 2090 - GPS for Surveyors (4 semester credit hours) Instructor: Carl Sumpter PLS

Practical applications point of view regarding the use of GPS technology for land survey projects utilizing actual GPS survey data from U.S. government Cadastral Surveys in a wide variety of conditions and applications. Topics include fundamentals of GPS, geodesy, project planning, survey techniques, field procedures, data processing and evaluation, network adjustment, and an overview of Realtime Kinematic survey techniques for Cadastral Surveys.

Prerequisite: CE 2070 or consent of instructor. (Primarily offered through Outreach Credit Courses; course is presently being re-developed and will be offered Spring, 2004 semester)

CE 3710- Route Surveying (3 semester credit hours) Instructor: Rod Skaggs P.E.

Concepts and calculations of surveying of route systems, including circular, parabolic (vertical), spiral curves, with area and volume determination.

Prerequisite: CE 2070 or consent of instructor

CE 3720 - Advanced Surveying (4 semester credit hours) Instructor: Rod Skaggs P.E.

Advanced topics in surveying computations and procedure, including traverse error analysis, topographic surveying, mapping, astronomic observations, coordinate geometry applications, introduction to geodesy, and state plane coordinates.

Prerequisite: CE 2070 or consent of instructor.

CE 3740 -Boundary Control and Legal Principles (2 semester credit hours) Instructor: Dennis Mouland PLS

This course in boundary law will address the fundamental principles of real property as applies to land surveying and related professions. Discussion and applications will center on practical situations and concepts commonly encountered while conducting boundary surveys and the determination of the extent of ownership rights.

Prerequisite: CE 2070 or consent of instructor.

CE 3750 - Surveying Evidence and Procedures for Boundary Location (2 credit hours)

Instructor: Dennis Mouland PLS

A practical and working guide to understanding survey evidence and the laws of boundary location for efficient, accurate boundary determination. This material will aid in the elimination of errors in location of land boundaries. The surveyor's liability and statutes of limitations will be explored in depth. Also included will be discussions of the surveyor's role in court.

Prerequisite: CE 2070 or consent of instructor

CE 4920 (3 semester credit hours) Coastal Water Boundaries Instructor: Chuck Karayan PLS

Water boundaries are perhaps the most complicated and complex problem faced in Cadastral Surveying. The subject has been separated into "Coastal" and "Inland" portions so that the material can be examined in detail. The courses should be taken in that order.

Coastal Water Boundaries looks at the physical and legal concepts governing the ownership and use of tidal waters as well as the lands which are submerged by and about them. This valuable resource has been the subject of numerous disputes and the course will examine many of those leading cases. The goal is for the student to become aware of the fundamental legal and scientific principles that form the basis of boundary determination and to be able to apply them properly in most of the less complex situations commonly encountered in professional practice. The student should also be able to recognize their own limitations and seek assistance of other professionals when appropriate. Internet access/computer required. (SUR)

Prerequisites: CE 3740 and 3750; recommended but not required: CE 2080, 2082 and 2084

CE 4920 (3 semester credit hours) Inland Water Boundaries Instructor: Chuck Karayan, PLS

Water Boundaries are perhaps the most complicated and complex problem faced in Cadastral Surveying. The subject has been separated into "Coastal" and "Inland" portions so that the material can be examined in detail, and should taken in that order.

Inland Water Boundaries looks at islands and uplands that border on non-tidal waters (rivers and lakes) as well as wetlands and floodplains. The property rights that attach to these riparian parcels, as well as the limitations placed on them will be examined through the prism of case law. The goal is for the student to become aware of the fundamental legal and scientific principles that form the basis of boundary determination and to be able to apply them properly in most of the less-complex situations commonly encountered in professional practice. The student should also be able to recognize their own limitations and therefore when the assistance of other professionals would be appropriate. Internet access and use of a computer is required.

Prerequisite.: CE 4920 - Coastal Water Boundaries

Other Courses Under Consideration For Future Offerings:

Geographic Information Systems (2 - 3 hours)

Error Analysis for Survey Measurements (2 - 3 hours)

Advanced Topics in GPS Applications and Data Processing (2 - 4 hours)

Geodesy (2 - 3 hours)

General Program Information

These courses offered through the Department of Civil and Architectural Engineering and Outreach School at UW. The Civil and Architectural Engineering programs are approved by the Accreditation Board for Engineering Technology (ABET) with 6 year accreditation, the longest obtainable from ABET. Since UW does not have a full degree program in surveying, these courses can not have ABET accreditation status for a surveying degree. These courses are developed for the home bound student that may benefit from the knowledge gained from course content, as well as possibly satisfying state board requirements for surveying education in either the licensing process or continuing education for maintaining an existing license. Contact the board of registration in your state for acceptability of these courses for your particular needs. To summarize: these classes are NOT ABET accredited for a surveying degree, but are contained as part of an accredited engineering degree. It is highly encouraged that you contact your particular state board of registration regarding their acceptance of the programs offerings.

Successful completion of 24 credit hours at the University of Wyoming earns a certificate of study. This certificate has no degree status such as an Associate of Science or Bachelor of Science. The certificate is a fully awarded achievement of completion by the University, and record of successful completion is placed on the students permanent transcripts in the registrar's office. A formal certificate of completion is provided to qualifying students that is suitable for mounting and displaying.

Credits towards the certificate program must be taken at the University of Wyoming. No transfer courses are presently accepted without the process of full University admission and petitions for transfer course acceptance through committees. If an applicant wishes to attempt transfer of prior coursework from another institution, he/she needs to apply to the University, pay the application fee, and submit official transcripts from the originating institution. Those courses DIRECTLY transferable will be allowed into the certificate program, while those not DIRECTLY transferable will not be accepted without the student's petition and physical presentation to the Academic Committee of the Department of Civil and Architectural Engineering whereby it is the student's responsibility to demonstrate that the petitioned course is similar in content and rigor of another course that is presently offered by the Department. Such demonstration requires a detailed syllabus and notebook with notes, homework and exams from the previously taken class. DIRECT transferability requires courses similar in title, content and a minimum hours credit earned that is comparable to a presently offered course by the Department of Civil and Architectural Engineering at UW.

Since surveying is a field intensive area of study, it is assumed that the student enrolling in these courses has some practical field knowledge and experience in surveying. The student lacking these skills will be required to obtain them in some manner, usually through employment, before the certificate will be issued, or before Engineering Surveying, Route Surveying or Advanced Surveying credits will be accepted as transfer credits towards a program of study. The remaining courses do not have a lab component associated with them, so they should be considered stand-alone full credit courses without field experience.

The format of presentation of courses is in standard VHS video taped sessions viewable in a VCR at the student's convenience, and a weekly teleconference phone call with the instructor and other students in the course. The University calls the students, therefore we pay the long distance phone charges. Teleconference sessions are in the evenings on an assigned weekday. An internet forum page is set up for each class for students to post questions to the instructor and other students at other times besides the usual teleconference call. Normal UW semester

schedules are maintained, with weekly assignments that are mailed to the instructor, graded and returned. These courses are not correspondence courses and can NOT be worked on at the pace of the student. Students are expected to maintain a schedule with the class. At the beginning of the course, all materials, (video tape sessions, handouts and books) are sent to the student so that it is possible to work ahead. Students must return the video tapes prior to their grade and credit being posted with the university registrar. The Public Lands I, II and III classes, which are 1 credit hour courses, are offered in a condensed, concurrent schedule so that the student may take all 3 Public Lands courses in one semester. Course offerings vary from semester to semester, with generally 6-10 hours available in fall and spring semester, and a rotation schedule is considered so that a student may be able to take all classes during one particular semester, such as Spring semester, when the surveying profession is normally slower than the other times of the year.

Tuition rates are \$192/credit hour for both residents and non-residents of Wyoming. The University of Wyoming retains the right to increase tuition rates in accordance with UW Board of Trustees approval. Book expenses vary between courses, but \$100 per course is a good idea of these costs. Many classes use the same book, so there is some savings by not needing a new text. Credit cards, personal checks and company vouchers are accepted as payment for tuition and books. Information of required textbooks and purchase are available online through the UW bookstore at <http://www.uwyobookstore.com/>. In most cases there is also an accompanying guidebook of the professor's notes and handouts which is also available from the UW bookstore.

Financial aid may be available in various forms through the Financial Aid office at UW. You may contact them at <http://siswww.uwyo.edu/sfa/homepage.htm> or 307-766-2166. Since this is a complex issue regarding the financial status of the student, neither the Program Director or Outreach School is involved with the procurement of financial aid. Veterans should contact their VA office for details on assistance.

There is no formal admission application to UW to enroll in Outreach courses. Enrollment may be made by calling the UW Outreach Credit Courses at 1-800-448-7801. Enrollment for Summer and Fall courses normally occurs during April and August, and Spring semester during mid-November through early Jan.

It is **STRONGLY** encouraged that new students attempt to locate another person in their area to "buddy-up" with in taking these classes because it has been shown by past student performances that learning is enhanced by "bouncing-off" concepts with other students. It's just easier to learn with a buddy when you can compare homework procedures and ideas.

Many prospective students wonder how long it would take to complete the program. The amount of coursework you are willing to take on would determine this. Students should plan on 3 hours a week minimum commitment for every semester credit hour taken for video viewing and homework assignments. All courses are normally offered at some time during the calendar year without scheduling conflicts, so it is possible to complete the program in a year if you have the time to devote to the classes.

All classes are offered in the evenings, and if you happen to be away from your normal telephone number for the teleconference on occasions, we can call you at another number if you give the bridge operator some advance notice informing us of the new number. This is particularly beneficial for students that work out of town on surveying projects, for you can still participate in the teleconference calls and keep up with the discussions.

If a prospective student is intending to use these classes as transfer credit into another institution, it is highly recommended that the accepting school (school that transfer will be applied to) be contacted for determination regarding transfer applicability prior to registering for classes from UW. Each individual college or university has varying standards regarding transfer credits, and it should be clear that UW can not be held responsible for non-transferability into other programs because UW does not have any authority to dictate how other institutions will be able to fit these courses into their curriculum with similar content and credit. It is solely the responsibility of the student to obtain the agreement(s) from other institutions for transferability.

For information on specific course offerings, tuition fee and payments, course materials, admissions or other information involving the logistics of course delivery, please contact the Outreach office at 1-800-448-7801. For information about specific course topics, prerequisites, or additional information regarding the surveying program, please email Rod Skaggs - Skaggsr@uwyo.edu. For your convenience, addresses are also provided below.

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