Spring 2016 Courses

ES 1061, 40 CRN: 25207
1 credit(s)
Engineering Problem Solving with Spreadsheets
Michael Heller
An introduction to engineering problem solving through the use of computer spreadsheets. Topics include functions, referencing, conditional statements, graphs, trend lines, and iterative solvers.
**Prerequisite:** MATH 1400 or MATH 1450 or ACT Math Score of 25 or Math Placement Exam score of 4
**Dates/Times:** Wed. 7:15-8:15 p.m., MDT; Jan. 27-Feb. 24 Jan. 25-Mar. 11
**Online**

LS 2410, 40 CRN: 26915
3 credit(s)
GIS in Surveying
Spencer Cherry
Covers the basic concepts of geographic information systems, the methods and software used to implement them, and their applications to surveying and analysis of other surveying problems.
**Prerequisites:** CE 2070 or LS 2010, and ES 1060 or ES 1061
**Dates/Times:** Jan. 25-May 13
**Online**

LS 2100, 80 CRN: 26907
4 credit(s)
GPS for Land Surveyors
Fermin Glasper
From fundamental theory to practical application and advanced technologies, this class covers all aspects of GPS needed to understand and use GPS as a land surveyor including the basics of GPS technology, common hardware, surveying methods, survey design, planning and observing, real-time kinematics and DGPS.
**Prerequisite:** LS 2400
**Dates/Times:** Thur. 7-8 p.m., MDT; Jan. 25-May 13
**Audio Teleconferencing**

LS 2110, 40 CRN: 26912
3 credit(s)
Real Property Law
Caroline Lukasik
Covers all major areas of real property law, including the nature of real property, types of ownership, real estate contracts, title and insurance, financing, landlord and tenant, land use, environmental law and regulation. An understanding of real property law is fundamental to understanding boundary law.
**Dates/Times:** Jan. 25-May 13
**Online**

LS 2410, 40 CRN: 26913
3 credit(s)
GIS in Surveying
Spencer Cherry
Covers the basic concepts of geographic information systems, the methods and software used to implement them, and their applications to surveying and analysis of other surveying problems.
**Prerequisites:** CE 2070 or LS 2010, and ES 1060 or ES 1061
**Dates/Times:** Jan. 25-May 13
**Online**

LS 3110, 80 CRN: 26193
2 credit(s)
Boundary Evidence
Dennis Mouland
A practical and working guide to understanding survey evidence and the laws of boundary location for efficient, accurate boundary determination. This material aids in the elimination of errors in location of land boundaries. The surveyor's liability and statutes of limitations are explored in depth. Also included are discussions of the surveyor's role in court.
**Prerequisite:** CE 2070 or LS 2010, and LS 2110
**Dates/Times:** Mon. 7:15-8:15 p.m., MDT; Jan. 25-May 13
**Audio Teleconferencing**
Spring 2016 Courses

LS 3130, 80 CRN: 26194
3 credit(s)
Public Land Surveys
Dennis Mouland
Basic fundamentals of the Public Land Survey System (PLSS), dependent and independent resurveys, survey plats, "bono fide rights", riparian boundaries, non-rectangular entities, corner evidence and the role of the modern day surveyor.
Prerequisite: CE 2070 or LS 2010, and LS 2110
Dates/Times: Mon. 8:30-9:30 p.m., MDT;
Jan. 25-May 13
Audio Teleconferencing

LS 3200, 80 CRN: 26909
3 credit(s)
Route Surveying
Mark Rehwaldt
Principles of route location and design. The theory of circular, parabolic and spiral curves; highway and railway geometric design; area and volumes of earthwork; and mass diagrams.
Prerequisite: CE 2070 or LS 2010, and ES 1060 or ES 1061
Dates/Times: Tue. 7:30-8:30 p.m., MDT;
Jan. 25-May 13
Audio Teleconferencing

LS 3230, 40 CRN: 26199
4 credit(s)
Applied Least Square Adjustments
Danny Swain
The use of applied statistics in land surveying, error propagation in polygon and link traverses, discussion of positional tolerances and an introduction to least squares adjustments using StarNet and VectorNT software.
Prerequisite: CE 3720 or LS 3210
Dates/Times: Tue. 6:15-7:15 p.m., MDT;
Jan. 25-May 13
Online

LS 3300, 40 CRN: 26195
1 credit(s)
Ethics for the Professional Surveyor
Dennis Mouland
Introduction to the common ethical and moral issues facing professional surveyors in modern practice.
Prerequisite: One of LS 3110, LS 3120, or LS 3130
Dates/Times: Jan. 25-May 13
Online

LS 3400, 80 CRN: 26911
3 credit(s)
Remote Sensing/Photogrammetry for Surveyor
John Adam
 Procedures and methods used for surveying metric information from photographs, analog processes for using aerial photographs in production of topographic maps, flight planning, and cost estimation in aerial mapping work. Introduction to photo coordinate measurement devices and their calibration.
Mathematics of modern photogrammetry.
Prerequisite: CE 2070 or LS 2010
Dates/Times: Tue. 7-8 p.m., MDT; Jan. 25-May 13
Audio Teleconferencing

LS 4120, 80 CRN: 26910
3 credit(s)
Inland Water Boundaries
Chuck Karayan
Introduces the physical and legal issues involved in locating property rights associated with lands that abut non-tidal, navigable and non-navigable rivers and lakes. The property rights which attach to, as well as the limitations placed on these riparian parcels will be examined and discussed with respect to statutory, administrative and case law.
Prerequisites: LS 4110
Dates/Times: Thur. 7:30-8:30 p.m., MDT;
Jan. 25-May 13
Audio Teleconferencing

MATH 1400, 98 CRN: 25667
3 credit(s) USP 2003: QA; USP 2015: Q
College Algebra
William Welch
Emphasizes aspects of algebra important in the study of calculus. Includes notation of algebra, exponents, factoring, theory of equations, inequalities, functions, graphing and logarithms. For students who plan to enroll in a calculus course (MATH 2200 or 2350). Students receiving credit for MATH 1450 may not receive credit for this course.
Prerequisite: Grade of C or better in MATH 0925 (132) or Level 3 on the Math Placement Exam or Math ACT of 23 or Math SAT of 600
*This course has controlled enrollment; contact Outreach Credit Programs for registration information.
Dates/Times: Jan. 25-May 13
Independent Learning: Semester Based
MATH 1405, CRN: 26898
3 credit(s) USP 2003: QA; USP 2015: Q
Trigonometry
Hayoung Choi
Emphasizes aspects of trigonometry important in the study of calculus. Interplay between trigonometric expressions and their graphs. Students are expected to use a graphing calculator in the course and on exams. See instructor for specifications. Topics include angle measurement, trigonometric functions, graphing, laws of sines and cosines, identities, equations, polar equations and graphs, vectors, complex numbers and DeMoivre's theorem. For students with little or no prior knowledge of trigonometry who plan to enroll in MATH 2200. Students receiving credit for MATH 1450 may not receive credit for this course.
Prerequisites: Grade of C or better in MATH 1400 or Level 4 on the Mathematics Placement Exam or Math ACT of 25 or Math SAT of 600
*This course has controlled enrollment; contact Outreach Credit Programs for registration information.
Dates/Times: Jan. 25-May 13
Independent Learning: Semester Based