

Report of The Curriculum and Articulation Committee

Presented to GBC Faculty Senate on April 29, 2015

The Curriculum and Articulation Committee met on April 11 and requests action on the following items:

Course	Description
CADD 421 and SUR 456	Additions to the Course Catalog

Additionally, the committee approved a new prerequisite for ART 260 & 261, designated Gen. Ed. Courses, of either ENG 100 or ENG 101. As an informational item, the committee also approved pre-requisite changes to EDEL 437 and 443.

INSTRUCTIONS:

- A. This form must be completed for additions of all undergraduate courses, as well as changes to existing course prefixes, numbers, titles, and/or credits. In addition, this form is to be used for transfer status reviews.
- B. The form requires sign-off by the institutional curriculum committee chair.
- C. The course syllabus or course outline and the course description for a new or revised course must be attached.
- D. **Course Deletions:** As of July 1, 2014, a separate form is provided for course deletions. This form is no longer applicable. Course deletions do not require review by other NSHE institutions.
- E. Additions or changes submitted with this form may not be reflected in class schedules or catalogs until this form has been completed, submitted to System Administration, and the institution has received notification that the form has been accepted.

SUBMITTING (ORIGINATING) INSTITUTION CONTACT INFORMATION (for institution requesting course approval)

Institution: Great Basin College

Date: 02/29/16

Curriculum Committee Chair: Signature indicates approval:

 Signature of Curriculum Committee Chair

Date: 02/29/16

Contact Person: Byron Calkins

(Name of individual submitting this form)

Phone #: 775-753-2344

Byron Calkins

Signature (type name if e-mailing)

E-mail address: byron.calkins@gbcnv.edu

1) **In the boxes below, enter the new or changed course information for the course under review:**

Prefix	Course #	Course Title	Credits
CADD	421	Advanced CAD for Land Surveyors	3

If this review proposes a change to an existing course, enter the information from the existing course:

Prefix	Course #	Course Title	Credits

2) **Does your institution want this course to be transferrable?**

Yes [x] No [] N/A []

3) **Check the appropriate box below for the addition of a new course or change to existing course prefix, number and/or title:**

- Discipline or prefix is found in the CCN master file, however **both** course # and title are not (if you check this box, skip to question 4)
- Discipline or prefix is NOT found in the CCN master file
 This discipline is unique to your institution or it has not been common course numbered previously.
 (if you check this box, skip to question 4)
- Discipline or prefix is found in the CCN master file; either course # or course title is also found in the CCN master file.
 Another institution already offers this course; course # and title must be identical with existing course.
 (if you check this box, skip to question 5)

4) **Is this a new course proposed by a community college that requires a transfer status review by the universities and state college?**

(Community colleges may utilize a B suffix for course numbers to alert students that the course may be non-transferable for a baccalaureate degree. [Title 4, Chapter 14, Section 16].)

Yes [x] No [] If Yes, this section must be completed by university and state college registrars:

Course Transfer Status

Board of Regents Policy, Title 4, Ch. 14, Section 16 provides that the “B” designator may be used for courses designated non-transferable from a community college to a university or state college. The universities or state college, as applicable, must provide written justification for all courses determined to be non-transferable.

A course approved for transfer at one university will automatically count as elective at the other university.

<p>UNLV Evaluation</p> <input type="checkbox"/> Non-transferable <input type="checkbox"/> Elective <input type="checkbox"/> Equivalent _____ <p style="text-align: right;">Course prefix & number</p> <hr/> <p>Approval (Print Name & Title)</p> <hr/> <p>Signature (type name if e-mailing)</p> <hr/> <p>Date</p>	<p>UNR Evaluation</p> <input type="checkbox"/> Non-transferable <input type="checkbox"/> Elective <input type="checkbox"/> Equivalent _____ <p style="text-align: right;">Course prefix & number</p> <hr/> <p>Approval (Print Name & Title)</p> <hr/> <p>Signature (type name if e-mailing)</p> <hr/> <p>Date</p>	<p>NSC Evaluation</p> <input type="checkbox"/> Non-transferable <input type="checkbox"/> Elective <input type="checkbox"/> Equivalent _____ <p style="text-align: right;">Course prefix & number</p> <hr/> <p>Approval (Print Name & Title)</p> <hr/> <p>Signature (type name if e-mailing)</p> <hr/> <p>Date</p>
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5) In order for a course to be assigned a common course number, all institutions that offer the discipline in which the proposed course resides must agree that at least 80% of the content of the proposed course is common based on a review of current and pending courses within the NSHE. **Every institution must be contacted.**

In the space provided below, record the contact name at each institution, date of contact and review status in the spaces provided. The point of contact noted below **must be the academic administrator over the discipline at each institution or the registrar or institutional designee if there is no academic administrator for the discipline.** Under the Agree column, a “yes” indicates that the respective contact person reviewed the course content and agrees that it is at least 80 percent common and may receive a common course number. A “No” indicates that at least 80 percent of the course content is not common at the reviewing institution. An “NA” indicates the discipline is not offered at the institution. Any form submitted with one or more “No’s” will be referred to the System-wide Discipline Committee for review.

Institutional Contact List (tracking responses via e-mail is recommended)

UNLV	Registrar	Chacon	Alejandro	702-851-1861	alejandro.chacon@unlv.edu
UNR	Assistant Vice President for Enrollment Services	Choroszy	Melisa	775-784-7400	choroszy@unr.edu
NSC	Registrar	Sullivan	Adelfa	702-992-2115	Adelfa.Sullivan@nsc.edu
CSN	Registrar	Zozaya	Pat	702-651-5078	pat.zozaya@csn.edu
GBC	Director of Admissions and Registrar	King	Janice	775-753-2361	janice.king@gbcnv.edu
TMCC	Director of Admissions and Records	Hughes	Andy	775-673-7240	ahughes@tmcc.edu
WNC	Director of Admissions and Records	Hilliard	Dianne	775-445-3288	dianne.hilliard@wnc.edu

Note: If a response is not received from an institutional contact within 10 business days of submitting a request, please circle the name of the institution and response will be assumed to be “yes.” **[Not applicable May 15 – Aug. 15, Dec. 15 -Jan. 20]**

If you have any questions regarding common course numbering procedures or the completion of this form, contact Sally Jackson (sallyj@nevada.edu) at System Administration (Phone: 775-784-3443; Fax: 775-784-1127).

Completed forms may be mailed, emailed, or faxed to Sally Jackson at:
 Academic and Student Affairs
 2601 Enterprise Road

Reno, Nevada 89512

System Use Only:

Date Received: _____

All Criteria Met? Yes [] No [] Date Referred to System-wide Discipline Committee: _____

Date Campus Contacts Notified: _____

Date Master File Updated: _____

Reviewed by Vice Chancellor for Academic Affairs or Assistant Vice Chancellor for Academic Affairs:

Signature

Date

Notes: _____

Advanced CAD for Land Surveyors

CADD 421 - Spring 2017 - 3 credits

Instructor Contact Information

Byron Calkins

Great Basin College

Land Surveying/Geomatics Program

Computer Technology HTC, Room 133

1500 College Parkway Elko, NV 89801

Office Phone 775-753-2344

Email: byron.calkins@gbcnv.edu

Cell Phone/Text: 575-993-0521

Cranium Cafe Office Hours: Tuesdays 1:00 P.M. - 3:00 P.M.; Wednesdays 1:00 P.M. - 3:00 P.M.; Thursdays 1:00 P.M. - 3:00 P.M. and by appointment.

Catalog Description

The use of computer-aided drafting (CAD) software to create survey plats and topographic maps. Instruction will focus on learning COGO tools, the Command Prompt, traverse with Carlson SurvNet, use deed data to create a deed file, perform deed correlation with field data, create and edit lots and areas and generate lots and setbacks, setup Field to Finish codes and generate 2D and 3D geometry, and utilize various critical coordinate file utilities.

Course Overview

This course is designed to help facilitate and convey advanced concepts of Computer Aided Drafting (CAD) and its associated components in relation to land surveying. Students who have a CAD background will find the recommended textbook--- A Practical Guide to Carlson Survey 2016, authored by Rick Ellis, a useful resource to further enhance their fundamental knowledge base for performing CAD related tasks within Carlson 2016 Software.

Course Outcomes

The main focus within this course curriculum is to:

- Implement “elements of best practice’ in the creation of survey plats and maps
- Execute advanced AutoCad commands to create survey drawings
- Setup Field to Finish Codes

Course Objectives

By the end of this course, successful students should be able to:

- Utilize various COGO tools
- Enter Raw Survey Data at the Command Prompt
- Enter Raw Survey Data in the Carlson Raw Data Editor
- Adjust a Traverse with Compass and Angle Balance
- Adjust a Traverse with Carlson SurvNet
- Enter Deed Data to Create a Deed File
- Perform a Deed Correlation with Field Data
- Create and Edit Lots and Areas
- Utilize Carlson LotNet to Generate Lots and Setbacks
- Edit and Annotate LotNet Lots
- Setup Field to Finish Codes and Generate Geometry 2D and 3D Geometry
- Utilize Various Critical Coordinate File Utilities
- Utilize the Point History
- Use Special Linetypes for Map Creation

Required Reading

Ellis, Rick., Aaberg, Douglas L., and Gardner, Duke. A Practical Guide to Carlson Survey 2016. Cadapult Press Publication, 2016. (ISBN 978-1-934865-24-8).

Course Prerequisites

Prerequisite: There are no prerequisites for this course

Technology Skill Prerequisites

You must have access to and knowledge about using the following software and hardware:

[Microsoft Office \(Google Drive will work\) \(Links to an external site.\)](#), [Adobe Acrobat \(Links to an external site.\)](#) (Any Free PDF Creator will work: see MS Word), a webcam, microphone, and speakers.

Method of Instruction

This is a web-based course enhanced with a live classroom referred to as “LiveNet.” We will meet for one hour using the LiveNet Classroom (see course schedule). I will conduct the one-hour interactive course meeting to be held on Monday evenings from 5:00 - 6:00pm (Pacific Time) to answer questions generated by your study each week and to highlight important course materials. All LiveNet meetings are archived for your use.

Technology Support

Please call the Computing Helpdesk Phone line (775) 753-2167 or access computer support services [online \(Links to an external site.\)](#) to assist you with technical support for many common software and hardware issues, including network connection problems as well as WebCampus and LiveNet support. Email: helpdesk@gbcnv.edu

Student Support

The [Academic Success Center \(Links to an external site.\)](#) at Great Basin College provides Live tutoring and is free to all GBC students.

- Free placement testing
- Proctored testing
- Open computer labs
- Free Student Success Workshops (also [available online \(Links to an external site.\)](#))

The Academic Success Center is located at DCIT 114 [[map \(Links to an external site.\)](#)].
Telephone: (775) 753-2149

Student Services and Peer Mentoring

Great Basin College [Student Services \(Links to an external site.\)](#) can provide students with the tools needed to graduate with a degree or certificate, complete core credits for transfer to other higher-ed institutions, and improve skills for employment or personal growth.

Library Services

Great Basin College Library provides equitable and efficient access to library resources, facilities and services. Please visit [http://www.gbcnv.edu/library/ \(Links to an external site.\)](http://www.gbcnv.edu/library/) for more information concerning library help.

Learning Community Overview

Many of our class assignments and activities this semester will take place in an asynchronous (varied times) environment. Online lecture discussions will form on a bi-weekly basis; this is where we build and share ideas pertaining to the subject matter. Within this framework, I encourage students to informally develop their own academic road-map based on the topics and concepts from our readings and lecture material. One method to support and encourage self-directed learning within the online class structure is to develop and form small learning communities that foster the open exchange of ideas. Applying the rules of Netiquette (see below) and being an active participant in group discussions is how I envision the student's role in our online community.

Netiquette & Discussion Expectations

Linked below are "The Core Rules of Netiquette" written by Virginia Shea. Her book titled *Netiquette* discusses how individuals should behave in an online environment. I expect students to be familiar with the rules below and incorporate these guidelines into your class communications.

[Rule 1: Remember the Human \(Links to an external site.\)](#)

[Rule 2: Adhere to the same standards of behavior online that you follow in real life \(Links to an external site.\)](#)

[Rule 3: Know where you are in cyberspace \(Links to an external site.\)](#)

[Rule 4: Respect other people's time and bandwidth \(Links to an external site.\)](#)

[Rule 5: Make yourself look good online \(Links to an external site.\)](#)

[Rule 6: Share expert knowledge \(Links to an external site.\)](#)

[Rule 7: Help keep flame wars under control \(Links to an external site.\)](#)

[Rule 8: Respect other people's privacy \(Links to an external site.\)](#)

[Rule 9: Don't abuse your power \(Links to an external site.\)](#)

[Rule 10: Be forgiving of other people's mistakes \(Links to an external site.\)](#)

Assessment of Course Objectives

Your achievement of the course objectives will be assessed by your lab exercises, quizzes,

Letter grade per unit of credit	Grade points	Points	Percentage
A+	4.0	582 - above	97% - 100%
A	4.0	558 - 581	93% - 96%
A-	3.7	540 - 557	90% - 92%
B+	3.3	522 - 539	87% - 89%
B	3.0	498 - 521	83% - 86%
B-	2.7	480 - 497	80% - 82%
C+	2.3	462 - 479	77% - 79%
C	2.0	438 - 461	73% - 76%
C-	2.0	420 - 437	70% - 72%
D	1.0	360 - 419	60% - 69%
F	0	359 - below	59% - below

midterm, and final examination.

Letter grades assigned in relation to points earned is shown below. For a detailed look at individual assignments please see course assignments.

Assignments	#	Points	Percentage
Lab Exercises	30	300	40%
Quizzes	4	100	20%
Midterm	1	100	20%
Final	1	100	20%
Total	36	600	100%

Course Objectives (Activities & Assessments)

The chart below shows which activity or assessment aligns with a course objective. For a detailed breakdown of course and unit objectives please see each Unit Overview in Modules.

CADD 121 COURSE MATERIALS AND ASSESSMENTS THAT ALIGN WITH COURSE OBJECTIVES				
COURSE OBJECTIVES	Lab Exercises	Quizzes	Midterm	Final
Utilize various COGO tools	X	X	X	
Enter Raw Survey Data at the Command Prompt	X	X	X	
Enter Raw Survey Data in the Carlson Raw Data Editor	X	X	X	
Adjust a Traverse with Compass and Angle Balance	X	X	X	
Adjust a Traverse with Carlson SurvNet	X	X	X	
Enter Deed Data to Create a Deed File	X	X	X	
Perform a Deed Correlation with Field Data	X	X	X	
Create and Edit Lots and Areas	X	X		X
Utilize Carlson LotNet to Generate Lots and Setbacks	X	X		X
Edit and Annotate LotNet Lots	X	X		X
Setup Field to Finish Codes and Generate 2D and 3D Geometry	X	X		X
Utilize Various Critical Coordinate File Utilities	X	X		X
Utilize the Point History to Record all Edits to Coordinate Files	X	X		X
Use Special Linetypes for Map Creation Labels	X	X		X

Late Assignment Policy

All late assignments will be deducted 15%. Please contact me for any concerns, problems, or issues regarding due dates.

Class Protocol

Each school week begins on Monday at 12:00 am and ends on Sunday evening at 11:59 pm.

Attendance

Your participation in the course can be measured with your timely submission of assignments, your presence at the scheduled LiveNet sessions, individual instructor-student meetings, and your willingness to ask questions necessary to understand complex material. Your instructor will take your pattern of participation into account in setting the final grades for the course.

WebCampus

WebCampus (Canvas) is our learning management software. You will submit all course materials through WebCampus in the assigned drop boxes.

Examination and Quiz Due Dates

The due dates given for each Examination and Quiz are clearly indicated in each Unit Overview. Examinations and Quizzes cannot be late and I do not provide make-up exams for any reason. Here are the rules:

- If you do not submit the examination or quiz when due, you will receive a zero for that examination or quiz. It cannot be made up.
- You may be excused if you make prior and alternate arrangements with me. For example, you may have to go on a business trip where there is just no way you can complete the examination within the scheduled time frame.

Instructor Feedback

Grading, instructor feedback, and comments on all assignments will be posted within one week after the due date*. Please feel free to contact me via WebCampus, email, Cranium Cafe (when I'm online), text, or call for any concern related to this course. I will respond to any communication within 48 hours (Monday thru Friday) during the semester, unless otherwise stated.

*Certain instructor extensions may apply. (You will be notified via WebCampus regarding instructor extensions)

Plagiarism

Any student found guilty of academic misconduct shall be subject to disciplinary action. Academic misconduct includes, but is not limited to, the following actions:

1. Cheating or knowingly assisting another student in committing an act of cheating or other forms of academic dishonesty.
2. Plagiarism is using another person's work without acknowledgment, making it appear to be one's own. Any ideas, words, pictures, or other source must be acknowledged in a citation that gives credit to the source. This is true no matter where the material comes from, including the internet, other student's work, unpublished materials, or oral sources. Intentional and unintentional instances of plagiarism are considered instances of academic misconduct. It is the responsibility of the student submitting the work in question to know, understand, and comply with this policy. If no citation is given, then borrowing any of the following would be an example of plagiarism:

- An idea or opinion, even when put into one's own words (paraphrase)

- A few well-said words, if these are a unique insight
- Many words, even if one changes most of them
- Materials assembled by others, for instance quotes or a bibliography
- An argument
- A pattern or idea
- Graphs, pictures, or other illustrations
- Facts
- All or part of an existing paper or other resource

This [list \(Links to an external site.\)](#) from *New Mexico State University* is not meant to include all possible examples of plagiarism. See *Tips and tricks to avoid plagiarism from Penn State University (Links to an external site.)* on plagiarism for further examples.

Students who engage in disruptive activities in an academic setting (e.g., online classrooms, academic offices or academic buildings) are subject to disciplinary action in accordance with the [GBC Student Conduct Policy \(Links to an external site.\)](#).

ADA and Students with Disabilities

It is the policy and practice of Great Basin College to comply with the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and state and local requirements regarding students with disabilities. Under these laws, no qualified individual with a disability shall be denied access to or participation in services, programs and activities of Great Basin College. For more information on the Rehabilitation Act process contact:

Julie G. Byrnes,

Director of Disability Support Services.

Phone: 775.753.2271

Email: julie.byrnes@gbcnv.edu

Retrieved from: [Services for Students with Disabilities Brochure - Great Basin College \(Links to an external site.\)](#)

Discrimination Grievance Policy

It is the policy of Great Basin College to find fair and equitable solutions for problems of discrimination relating to race, age, religion, color, sex, sexual orientation, disability, national origin, veteran's status and sexual harassment. The grievance procedure outlined herein is available to all college employees and students. Any employee or student of Great Basin College who feels discriminated against on the basis of race, age, religion, color, sex, sexual orientation, disability, national origin, and/or veteran's status; or feels that they have been a victim of sexual harassment may obtain confidential advice, consultation, and assistance from the affirmative action officer at (775) 753-2282.

Retrieved from: [Affirmative Action/Equal Employment Opportunity \(Links to an external site.\)](#)

Campus Security

GBC is committed to the safety of our students and has a duty to promote awareness and prevention programs for violence on campus under the Jeanne Clery Act as well as the Campus SaVE (Sexual Violence Elimination Act) and VAWA (Violence Against Women Act), which are amendments to Clery. Acts of violence include, but are not limited to, sexual assault, domestic violence, dating violence, and stalking. Acts of violence can occur on the physical campus or centers of GBC in addition to field placement sites, clinical practice settings, and other places where college or class activities occur. As well, the online environment at GBC is considered a GBC site. If you experience any incidence where your safety has been threatened or violated, or if you feel threatened or harassed, immediately report this to me, any center director, faculty, or staff member, or directly to the Director of Environmental Health, Safety & Security (775.753.2115) or the Vice President for Student Services (775.753.2282).

Section 508 of the Rehabilitation Act

In 1998, Congress amended the Rehabilitation Act of 1973, to require Federal agencies to make their electronic and information technology (EIT) accessible to people with disabilities. Inaccessible technology interferes with an ability to obtain and use information quickly and easily. Section 508 was enacted to eliminate barriers in information technology, open new opportunities for people with disabilities, and encourage development of technologies that will help achieve these goals. The law applies to all Federal agencies when they develop, procure, maintain, or use electronic and information technology. Under Section 508 (29 U.S.C. '794 d), agencies must give disabled employees and members of the public access to information that is comparable to access available to others.

Retrieved from: [Section 508 of the Rehabilitation Act \(Links to an external site.\)](#).

Voluntary Product Accessibility Template

A Voluntary Product Accessibility Template, or VPAT, is a standardized form developed by the Information Technology Industry Council to show how a software product meets key regulations of Section 508 of the Rehabilitation Act.

Canvas-compatible Screen Readers: [VoiceOver \(Links to an external site.\)](#) (Mac), [JAWS \(Links to an external site.\)](#) (PC)

[Canvas: Section 508 VPAT](#)

[Adobe Products: Section 508 VPATs for \(Adobe Connect 9, Adobe Acrobat, and more\) \(Links to an external site.\)](#)

[Apple Products: Section 508 VPATs for \(Safari Web Browser, Mac OS X, and more\) \(Links to an external site.\)](#)

[Microsoft Products: \(Links to an external site.\)](#)Section 508 VPATs for (Internet Explorer, Office, Skype, and more)

[Google Products: Section 508 VPATs for \(Links to an external site.\)](#) (Google Earth, Chrome Web Browser, Google Docs, and more)

[Firefox Web Browser: Section 508 VPAT \(version 3.5 and up\) \(Links to an external site.\)](#)

Withdrawing From GBC

A student wishing to [withdraw from GBC \(Links to an external site.\)](#) should immediately follow this procedure:

1. Obtain an *Add/Drop* form from Admissions & Records.
2. If unable to submit the request in person, a letter should be written to the Admissions and Records Office requesting an “official” withdrawal.
3. The student who has withdrawn from classes may still be responsible for unpaid balances.
4. See the *GBC Schedule* for refund deadlines for full semester, summer, and short-term courses.
5. If the student receives financial aid, the student should contact the Office of Student Financial Services immediately.

Note: April 3, 2017 is the Official Course Drop Deadline*

*Students who do not withdraw by this date will receive an "F" rather than a "W."

Medical Withdrawal

Under [extenuating circumstances \(Links to an external site.\)](#), including illness, accident, or similar medical emergency or hardship cases, students have the options of requesting an incomplete in one or more classes, or requesting an official withdrawal from the college.

Not a Contract

This document does not in any way represent a contract. It is only a summary of how the instructor expects the course to proceed. Any conflicts found between this syllabus and the Unit Overview will be resolved in favor of the Unit Overview.

Document Changes

I reserve the right to change syllabus, course content, and instruction to meet the needs of the learners. Thus, this document is subject to change.

Updated by Byron Calkins, Instructor for the Department of Land Surveying and Geomatics Program

© 2017 Board of Regents of Nevada System of Higher Education, Great Basin College

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SUBMITTING (ORIGINATING) INSTITUTION CONTACT INFORMATION (for institution requesting course approval)

Institution: Great Basin College

Date: 03/02/16

Curriculum Committee Chair: Signature indicates approval:

 Signature of Curriculum Committee Chair

Date: 03/02/16

Contact Person: Byron Calkins

(Name of individual submitting this form)

Phone #: 775-753-2344

Byron Calkins

Signature (type name if e-mailing)

E-mail address: byron.calkins@gbcnv.edu

1) **In the boxes below, enter the new or changed course information for the course under review:**

Prefix	Course #	Course Title	Credits
SUR	456	Advanced Mine Surveying	1

If this review proposes a change to an existing course, enter the information from the existing course:

Prefix	Course #	Course Title	Credits

2) **Does your institution want this course to be transferrable?**

Yes [x] No [] N/A []

3) **Check the appropriate box below for the addition of a new course or change to existing course prefix, number and/or title:**

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UNR	Assistant Vice President for Enrollment Services	Choroszy	Melisa	775-784-7400	choroszy@unr.edu
NSC	Registrar	Sullivan	Adelfa	702-992-2115	Adelfa.Sullivan@nsc.edu
CSN	Registrar	Zozaya	Pat	702-651-5078	pat.zozaya@csn.edu
GBC	Director of Admissions and Registrar	King	Janice	775-753-2361	janice.king@gbcnv.edu
TMCC	Director of Admissions and Records	Hughes	Andy	775-673-7240	ahughes@tmcc.edu
WNC	Director of Admissions and Records	Hilliard	Dianne	775-445-3288	dianne.hilliard@wnc.edu

Note: If a response is not received from an institutional contact within 10 business days of submitting a request, please circle the name of the institution and response will be assumed to be “yes.” **[Not applicable May 15 – Aug. 15, Dec. 15 -Jan. 20]**

If you have any questions regarding common course numbering procedures or the completion of this form, contact Sally Jackson (sallyj@nevada.edu) at System Administration (Phone: 775-784-3443; Fax: 775-784-1127).

Completed forms may be mailed, emailed, or faxed to Sally Jackson at:
 Academic and Student Affairs
 2601 Enterprise Road

Reno, Nevada 89512

System Use Only:

Date Received: _____

All Criteria Met? Yes [] No [] Date Referred to System-wide Discipline Committee: _____

Date Campus Contacts Notified: _____

Date Master File Updated: _____

Reviewed by Vice Chancellor for Academic Affairs or Assistant Vice Chancellor for Academic Affairs:

Signature

Date

Notes: _____

Advanced Mine Surveying

SUR 456 - Spring 2017 - 1 credit

Instructor Contact Information

Byron Calkins

Great Basin College

Land Surveying/Geomatics Program

Computer Technology HTC, Room 133

1500 College Parkway Elko, NV 89801

Office Phone 775-753-2344

Email: byron.calkins@gbcnv.edu

Cell Phone/Text: 575-993-0521

Cranium Cafe Office Hours: Tuesdays 1:00 P.M. - 3:00 P.M.; Wednesdays 1:00 P.M. - 3:00 P.M.; Thursdays 1:00 P.M. - 3:00 P.M. and by appointment.

Catalog Description

This course is an independent study of advanced survey concepts underlying surface, underground mining, and geomatics projects, including their representations, interpretations, relationships with quality assurance/quality control measures, and their use in geomatics projects. Computations necessary to develop fundamental mine surveying principles, subsurface location principles, and geomatics projects will be expected from the student.

Course Outcomes

The main focus within this course curriculum is to:

- Calculate common volumes found in mine surveying
- Reduce horizontal distances to a specified reference surface
- Explain how the underground environment contributes to survey measurement errors
- Review several case studies and real world examples

Course Objectives

By the end of this course, successful students should be able to:

- Explain the concept of a reference surface and list the common reference surfaces available to mine surveyors
- Define the concept of a horizontal distance
- Explain the difference in surveying on the ground versus on a grid
- Explain the principles underlying the use of GPS for positioning
- Compute the size of photo panels based on flying height and photo scale
- Compute a resection
- Explain the 'best practices' found in running traverse underground
- Describe the 'best practices' found in laser scanning on the mine site
- Describe structural and ground deformation monitoring analysis, advanced techniques in mining and tunneling surveys, and high precision alignment of engineering structures
- Discuss the standards and specifications available for geomatics projects, including their representations, interpretations, relationships with quality assurance/quality control measures, and their use in geomatics projects
- Describes network design and simulation, including error analysis and budgeting
- Explain the main properties of high-precision surveys with regard to basic survey procedures and different traditional measurement techniques
- Analyze survey observables such as angle, distance, elevation difference and coordinate difference measurements, and the relevant equipment, including the testing and utilization of the equipment

Required Reading

Ogundare, John O. Precision Surveying: The Principles and Geomatics Practice. First Edition. Wiley, 2015, (ISBN 978-1119102519).

Course Prerequisites

Prerequisite: SUR 255 and SUR 440

Technology Skill Prerequisites

You must have access to and knowledge about using the following software and hardware:

[Microsoft Office \(Google Drive will work\) \(Links to an external site.\)](#), [Adobe Acrobat \(Links to an external site.\)](#) (Any Free PDF Creator will work: see MS Word), a webcam, microphone, and speakers.

Method of Instruction

This is a web-based course enhanced with a live classroom referred to as “LiveNet.” We will meet for one hour using the LiveNet Classroom (see course schedule). I will conduct the one-hour interactive course meeting to be held on Monday evenings from 6:30 - 7:30pm (Pacific Time) to answer questions generated by your study each week and to highlight important course materials. All LiveNet meetings are archived for your use.

Technology Support

Please call the Computing Helpdesk Phone line (775) 753-2167 or access computer support services [online \(Links to an external site.\)](#) to assist you with technical support for many common software and hardware issues, including network connection problems as well as WebCampus and LiveNet support. Email: helpdesk@gbcnv.edu

Student Support

The [Academic Success Center \(Links to an external site.\)](#) at Great Basin College provides Live tutoring and is free to all GBC students.

- Free placement testing
- Proctored testing
- Open computer labs
- Free Student Success Workshops (also [available online \(Links to an external site.\)](#))

The Academic Success Center is located at DCIT 114 [[map \(Links to an external site.\)](#)].
Telephone: (775) 753-2149

Student Services and Peer Mentoring

Great Basin College [Student Services \(Links to an external site.\)](#) can provide students with the tools needed to graduate with a degree or certificate, complete core credits for transfer to other higher-ed institutions, and improve skills for employment or personal growth.

Library Services

Great Basin College Library provides equitable and efficient access to library resources, facilities and services. Please visit [http://www.gbcnv.edu/library/ \(Links to an external site.\)](http://www.gbcnv.edu/library/) for more information concerning library help.

Learning Community Overview

Many of our class assignments and activities this semester will take place in an asynchronous (varied times) environment. Online lecture discussions will form on a bi-weekly basis; this is where we build and share ideas pertaining to the subject matter. Within this framework, I

encourage students to informally develop their own academic road-map based on the topics and concepts from our readings and lecture material. One method to support and encourage self-directed learning within the online class structure is to develop and form small learning communities that foster the open exchange of ideas. Applying the rules of Netiquette (see below) and being an active participant in group discussions is how I envision the student's role in our online community.

Netiquette & Discussion Expectations

Linked below are "The Core Rules of Netiquette" written by Virginia Shea. Her book titled *Netiquette* discusses how individuals should behave in an online environment. I expect students to be familiar with the rules below and incorporate these guidelines into your class communications.

[Rule 1: Remember the Human \(Links to an external site.\)](#)

[Rule 2: Adhere to the same standards of behavior online that you follow in real life \(Links to an external site.\)](#)

[Rule 3: Know where you are in cyberspace \(Links to an external site.\)](#)

[Rule 4: Respect other people's time and bandwidth \(Links to an external site.\)](#)

[Rule 5: Make yourself look good online \(Links to an external site.\)](#)

[Rule 6: Share expert knowledge \(Links to an external site.\)](#)

[Rule 7: Help keep flame wars under control \(Links to an external site.\)](#)

[Rule 8: Respect other people's privacy \(Links to an external site.\)](#)

[Rule 9: Don't abuse your power \(Links to an external site.\)](#)

[Rule 10: Be forgiving of other people's mistakes \(Links to an external site.\)](#)

Assessment of Course Objectives

Your achievement of the course objectives will be assessed by your lab exercises, quizzes, midterm, and final project.

Assignments	#	Points	Percentage
Lab Exercises	6	300	40%
Quizzes	4	100	15%
Midterm	1	100	15%
<u>Final Project</u>	<u>1</u>	<u>100</u>	<u>30%</u>
Total	12	600	100%

Letter grades assigned in relation to points earned is shown below. For a detailed look at individual assignments please see course assignments.

Letter grade per unit of credit	Grade points	Points	Percentage
A+	4.0	582 - above	97% - 100%
A	4.0	558 - 581	93% - 96%
A-	3.7	540 - 557	90% - 92%
B+	3.3	522 - 539	87% - 89%
B	3.0	498 - 521	83% - 86%
B-	2.7	480 - 497	80% - 82%
C+	2.3	462 - 479	77% - 79%
C	2.0	438 - 461	73% - 76%
C-	2.0	420 - 437	70% - 72%
D	1.0	360 - 419	60% - 69%
F	0	359 - below	59% - below

Course Objectives (Activities & Assessments)

The chart below shows which activity or assessment aligns with a course objective. For a detailed breakdown of course and unit objectives please see each Unit Overview in Modules.

COURSE MATERIALS AND ASSESSMENTS THAT ALIGN WITH COURSE OBJECTIVES				
SUR 456				
COURSE OBJECTIVES	Lab Exercises	Quizzes	Midterm	Final Project
Explain the concept of a reference surface and list the common reference surfaces available to mine surveyors	X	X	X	
Define the concept of a horizontal distance		X	X	
Explain the difference in surveying on the ground versus on a grid		X	X	
Explain the principles underling the use of GPS for positioning		X	X	
Compute a resection	X	X	X	
Explain the 'best practices' found in running traverse underground		X	X	
Describe the 'best practices' found in laser scanning on the mine site	X	X	X	
Describe structural and ground deformation monitoring analysis, advanced techniques in mining and tunneling surveys, and high precision alignment of engineering structures	X	X		X
Discuss the standards and specifications available for geomatics projects, including their representations, interpretations, relationships with quality assurance/quality control measures, and their use in geomatics projects		X		X
Describes network design and simulation, including error analysis and budgeting		X		X
Explain the main properties of high-precision surveys with regard to basic survey procedures and different traditional measurement techniques	X	X		X
Analyze survey observables such as angle, distance, elevation difference and coordinate difference measurements, and the relevant equipment, including the testing and utilization of the equipment	X	X		X

Late Assignment Policy

All late assignments will be deducted 15%. Please contact me for any concerns, problems, or issues regarding due dates.

Class Protocol

Each school week begins on Monday at 12:00 am and ends on Sunday evening at 11:59 pm.

Attendance

Your participation in the course can be measured with your timely submission of assignments, your presence at the scheduled LiveNet sessions, individual instructor-student meetings, and your willingness to ask questions necessary to understand complex material. Your instructor will take your pattern of participation into account in setting the final grades for the course.

WebCampus

WebCampus (Canvas) is our learning management software. You will submit all course materials through WebCampus in the assigned drop boxes.

Examination and Quiz Due Dates

The due dates given for each Examination and Quiz are clearly indicated in each Unit Overview. Examinations and Quizzes cannot be late and I do not provide make-up exams for any reason. Here are the rules:

- If you do not submit the examination or quiz when due, you will receive a zero for that examination or quiz. It cannot be made up.
- You may be excused if you make prior and alternate arrangements with me. For example, you may have to go on a business trip where there is just no way you can complete the examination within the scheduled time frame.

Instructor Feedback

Grading, instructor feedback, and comments on all assignments will be posted within one week after the due date*. Please feel free to contact me via WebCampus, email, Cranium Cafe (when I'm online), text, or call for any concern related to this course. I will respond to any communication within 48 hours (Monday thru Friday) during the semester, unless otherwise stated.

*Certain instructor extensions may apply. (You will be notified via WebCampus regarding instructor extensions)

Plagiarism

Any student found guilty of academic misconduct shall be subject to disciplinary action. Academic misconduct includes, but is not limited to, the following actions:

1. Cheating or knowingly assisting another student in committing an act of cheating or other forms of academic dishonesty.
2. Plagiarism is using another person's work without acknowledgment, making it appear to be one's own. Any ideas, words, pictures, or other source must be acknowledged in a citation that

gives credit to the source. This is true no matter where the material comes from, including the internet, other student's work, unpublished materials, or oral sources. Intentional and unintentional instances of plagiarism are considered instances of academic misconduct. It is the responsibility of the student submitting the work in question to know, understand, and comply with this policy. If no citation is given, then borrowing any of the following would be an example of plagiarism:

- An idea or opinion, even when put into one's own words (paraphrase)
- A few well-said words, if these are a unique insight
- Many words, even if one changes most of them
- Materials assembled by others, for instance quotes or a bibliography
- An argument
- A pattern or idea
- Graphs, pictures, or other illustrations
- Facts
- All or part of an existing paper or other resource

This [list \(Links to an external site.\)](#) from *New Mexico State University* is not meant to include all possible examples of plagiarism. See *Tips and tricks to avoid plagiarism from Penn State University (Links to an external site.)* on plagiarism for further examples.

Students who engage in disruptive activities in an academic setting (e.g., online classrooms, academic offices or academic buildings) are subject to disciplinary action in accordance with the [GBC Student Conduct Policy \(Links to an external site.\)](#).

ADA and Students with Disabilities

It is the policy and practice of Great Basin College to comply with the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and state and local requirements regarding students with disabilities. Under these laws, no qualified individual with a disability shall be denied access to or participation in services, programs and activities of Great Basin College. For more information on the Rehabilitation Act process contact:

Julie G. Byrnes,

Director of Disability Support Services.

Phone: 775.753.2271

Email: julie.byrnes@gbcnv.edu

Retrieved from: [Services for Students with Disabilities Brochure - Great Basin College \(Links to an external site.\)](#)

Discrimination Grievance Policy

It is the policy of Great Basin College to find fair and equitable solutions for problems of discrimination relating to race, age, religion, color, sex, sexual orientation, disability, national origin, veteran's status and sexual harassment. The grievance procedure outlined herein is available to all college employees and students. Any employee or student of Great Basin College who feels discriminated against on the basis of race, age, religion, color, sex, sexual orientation, disability, national origin, and/or veteran's status; or feels that they have been a victim of sexual harassment may obtain confidential advice, consultation, and assistance from the affirmative action officer at (775) 753-2282.

Retrieved from: [Affirmative Action/Equal Employment Opportunity \(Links to an external site.\)](#)

Campus Security

GBC is committed to the safety of our students and has a duty to promote awareness and prevention programs for violence on campus under the Jeanne Clery Act as well as the Campus SaVE (Sexual Violence Elimination Act) and VAWA (Violence Against Women Act), which are amendments to Clery. Acts of violence include, but are not limited to, sexual assault, domestic violence, dating violence, and stalking. Acts of violence can occur on the physical campus or centers of GBC in addition to field placement sites, clinical practice settings, and other places where college or class activities occur. As well, the online environment at GBC is considered a GBC site. If you experience any incidence where your safety has been threatened or violated, or if you feel threatened or harassed, immediately report this to me, any center director, faculty, or staff member, or directly to the Director of Environmental Health, Safety & Security (775.753.2115) or the Vice President for Student Services (775.753.2282).

Section 508 of the Rehabilitation Act

In 1998, Congress amended the Rehabilitation Act of 1973, to require Federal agencies to make their electronic and information technology (EIT) accessible to people with disabilities. Inaccessible technology interferes with an ability to obtain and use information quickly and easily. Section 508 was enacted to eliminate barriers in information technology, open new opportunities for people with disabilities, and encourage development of technologies that will help achieve these goals. The law applies to all Federal agencies when they develop, procure, maintain, or use electronic and information technology. Under Section 508 (29 U.S.C. '794 d), agencies must give disabled employees and members of the public access to information that is comparable to access available to others.

Retrieved from: [Section 508 of the Rehabilitation Act \(Links to an external site.\)](#).

Voluntary Product Accessibility Template

A Voluntary Product Accessibility Template, or VPAT, is a standardized form developed by the Information Technology Industry Council to show how a software product meets key regulations of Section 508 of the Rehabilitation Act.

Canvas-compatible Screen Readers: [VoiceOver \(Links to an external site.\)](#) (Mac), [JAWS \(Links to an external site.\)](#) (PC)

[Canvas: Section 508 VPAT](#)

[Adobe Products: Section 508 VPATs for \(Adobe Connect 9, Adobe Acrobat, and more\) \(Links to an external site.\)](#)

[Apple Products: Section 508 VPATs for \(Safari Web Browser, Mac OS X, and more\) \(Links to an external site.\)](#)

[Microsoft Products: \(Links to an external site.\)](#)Section 508 VPATs for (Internet Explorer, Office, Skype, and more)

[Google Products: Section 508 VPATs for \(Links to an external site.\)](#) (Google Earth, Chrome Web Browser, Google Docs, and more)

[Firefox Web Browser: Section 508 VPAT \(version 3.5 and up\) \(Links to an external site.\)](#)

Withdrawing From GBC

A student wishing to [withdraw from GBC \(Links to an external site.\)](#) should immediately follow this procedure:

1. Obtain an *Add/Drop* form from Admissions & Records.
2. If unable to submit the request in person, a letter should be written to the Admissions and Records Office requesting an “official” withdrawal.
3. The student who has withdrawn from classes may still be responsible for unpaid balances.
4. See the *GBC Schedule* for refund deadlines for full semester, summer, and short-term courses.
5. If the student receives financial aid, the student should contact the Office of Student Financial Services immediately.

Note: April 3, 2017 is the Official Course Drop Deadline*

*Students who do not withdraw by this date will receive an "F" rather than a "W."

Medical Withdrawal

Under [extenuating circumstances \(Links to an external site.\)](#), including illness, accident, or similar medical emergency or hardship cases, students have the options of requesting an incomplete in one or more classes, or requesting an official withdrawal from the college.

Not a Contract

This document does not in any way represent a contract. It is only a summary of how the instructor expects the course to proceed. Any conflicts found between this syllabus and the Unit Overview will be resolved in favor of the Unit Overview.

Document Changes

I reserve the right to change syllabus, course content, and instruction to meet the needs of the learners. Thus, this document is subject to change.

Updated by Byron Calkins, Instructor for the Department of Land Surveying and Geomatics Program

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Course Articulation Form

Submitter Name:	Byron Calkins	Phone:	775-753-2344
Form Purpose:	Add a course		
Course:	SUR 456	Hours:	1 lecture / 0 lab
Departments Notified:	None		
Credits:	1	Grading Basis:	A-F
Repeatable:	0 additional time[s]		
Transferable:	Transferable for an NSHE baccalaureate degree		
Title:	Advanced Mine Surveying		
Catalog Description:	This course is an independent study of advanced survey concepts underlying surface, underground mining, and geomatics projects, including their representations, interpretations, relationships with quality assurance/quality control measures, and their use in geomatics projects. Computations necessary to develop fundamental mine surveying principles, subsurface location principles, and geomatics projects will be expected from the student.		
Prerequisites:	SUR 255 and SUR 440		
Corequisites:	None		
Program Integration:	Program requirement.		
Comments:	SUR 450, SUR 455, or SUR 255 and SUR 456		

Approval Signatures and Dates

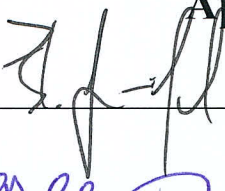

	3-8-16
Byron Calkins	Date
	3-8-2016
Department Chair	Date
	Date
PeopleSoft/Catalog Administrator	Date
	Date
Faculty Senate Committee Chair	Date
	Date
Articulation Officer	Date
	Date
Vice President For Academic Affairs	Date
	Date
President	Date



Course Articulation Form

Submitter Name:	Byron Calkins	Phone:	775-753-2344
Form Purpose:	Add a course		
Course:	CADD 421	Hours:	3 lecture / 0 lab
Departments Notified:	None		
Credits:	3	Grading Basis:	A-F
Repeatable:	0 additional time[s]		
Transferable:	Transferable for an NSHE baccalaureate degree		
Title:	Advanced CAD for Land Surveyors		
Catalog Description:	The use of computer-aided drafting (CAD) software to create survey plats and topographic maps. Instruction will focus on learning COGO tools, the Command Prompt, traverse with Carlson SurvNet, use deed data to create a deed file, perform deed correlation with field data, create and edit lots and areas and generate lots and setbacks, setup Field to Finish codes and generate 2D and 3D geometry, and utilize various critical coordinate file utilities.		
Prerequisites:	Instructor Permission		
Corequisites:	None		
Program Integration:	Not a program requirement.		
Comments:	Catalog Description now matches the syllabus		

Approval Signatures and Dates

	3-8-16
Byron Calkins	Date
	3-8-2016
Department Chair	Date
_____ PeopleSoft/Catalog Administrator	Date
_____ Faculty Senate Committee Chair	Date
_____ Articulation Officer	Date
_____ Vice President For Academic Affairs	Date
_____ President	Date