

# OGLALA LAKOTA COLLEGE

## Course Syllabus for Introduction to Engineering Engr - 101

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### **Course Description:**

Students are introduced to the concept of being a professional and the ethics required of a professional person through hands-on service learning projects to meet community needs, as well as reflection through journaling.

### **Prerequisites:**

Math 134

### **Course Overview:**

The Introduction to Engineering course is designed to be a primarily hands-on course to introduce engineering through service learning. We will meet formally during the scheduled class time, have short assignments using the Moodle content server, and on a few Fridays over the course of the semester to interview three community leaders and three Tribal Program directors.

### **Course Educational Objective:**

The objectives of this course is to provide the engineering student with an introduction to the concept of service learning and of stakeholder development in order to implement civil / geological engineering projects.

### **Course Learning Outcomes:**

Upon completion of this course the student should be able to:

1. Explain service learning,
2. Build and maintain community partnerships,
3. Reflect on a service learning project,
4. Discuss strategies for evaluating a service learning project,

### **Required Textbook:**

Cress, Christine M., Collier, Peter J., Reitenauer, Vicki L. (2005) Learning through Serving: A Student Guidebook for Service-Learning Across the Disciplines [Paperback], 1<sup>st</sup> Ed., Stylus Publishing, Sterling, VA.

### **Descriptive Reading Load:**

Grade 13 reading level. We will be covering approximately one chapter every other week.

**Types and Amounts of Writing Expected:** The nature of this course offering requires that short weekly writing assignment be completed as homework.

Homework is an opportunity to practice professionalism. All homework involving writing should be completed in paragraph form, which consists of: i) a topic sentence; ii) 3-5 body sentences; and iii) a conclusion or transition sentence. Professional ethics requires referencing the author of any text or pictures that are used in assignments. Plagiarism (i.e. passing off another author's work off as your own) will not be tolerated. Please refer to the Oglala Lakota College Student Handbook for the official policy on plagiarism. Please contact the Instructor if you have questions on plagiarism, or on how to site another person's work. Suspected cases of plagiarism or academic dishonesty will be referred to the OLC Administration.

**Lakota Perspective:**

This course stresses **Wolakotakiciapi** or “learning Lakota ways of life in the community”. Participants in this course are expected to practice respect for each other, the instructor, and for all living and natural things used during this course.

**Course Requirements:**

The homework will utilize the Moodle content server via the Internet. As this course is an introductory course, we will use class time to teach these skills over the course of the semester. All homework this semester will be submitted via the Moodle content server.

**Assignments:**

Short weekly homework assignments are based on weekly readings and are tied to weekly objectives. The purpose of these assignments is to apply and reinforce concepts from the weekly readings. Whenever possible, the results of weekly assignments will be directly applied to the semester project.

The instructor is available for additional help on homework via email or through a telephone interview (please email to set-up an interview time).

**Course Grading:**

| <b>Grade Component</b>           | <b>Final Grade</b> |
|----------------------------------|--------------------|
| Weekly discussion/reflection 50% | 90-100% A          |
| Group Project 50%                | 80-89% B           |
|                                  | 70-79% C           |
|                                  | 60-69% D           |
|                                  | 0-59% F            |

**Homework Policy:**

Late homework will have a penalty. Any homework submitted more than 1 week past the due date will receive no credit (grade = 0). No homework will be accepted after the last day of class.

**Special Accommodations:**

If you are a person with a disability and anticipate needing any type of accommodation in order to participate in this class, please inform me and we will make appropriate arrangements with the Office of Disability Services.

**Tardiness (From OLC Policy Handbook):**

In formulating this policy it is understood that unique problems exist for both students and faculty due to the decentralized nature of OLC. Since classes meet only once per week, it is important that they be held – even if they begin late.

Generally speaking, if an instructor is going to be late getting to a college center for a class, the center staff should always be notified. The following policy applies to cases where this has not been done:

A student shall be considered tardy for class, if he/she arrives late for class, but during the first hour of the class. A student arriving later than this, may be marked absent. This policy will not interfere with the instructor's prerogative to grade for class participation.

If an instructor is late for a class, students must wait for one-half hour. After this time, the class will be considered cancelled for that week and must be made up.

In the event that no students appear for class at the scheduled starting time, the instructor should wait at least one-half hour before deciding to cancel the class.

All missed classes must be made up.

**Attendance (From Policy Handbook):**

Students are required to attend classes regularly. Instructors will submit attendance on-line weekly to the end of the semester.

If a student wishes to be excused from a class, it is the student's responsibility to clear the absence with the instructor. At that time the student must arrange for a make-up assignment. However, an excused absence is the same as an absence until the student has completed work equivalent to being in class. Once the make up assignment is completed, the instructor will then change the absent to present.

A student may be dropped from a course after three consecutive absences and will be dropped by the Registrar after five total absences.

There are NO reinstatements and No exceptions for students who are dropped for five absences.

**Course Philosophy:** You are not studying and learning for the instructor, but for yourself. Grades are important for your academic career; nevertheless, your professional life really begins after you graduate. Understanding waste management will help you not only in your professional career, but also to understand and appreciate your surroundings and life itself.

This is a foundational course in engineering. This is your chance to start build onto your existing knowledge and excel in it. But it is up to you. You have to invest your time. The instructor will work to provide time within the allotted class period and laboratory time outside of the class when students will have the opportunity to work on homework in a collaborative fashion.

### **Tips to Succeed in this Course:**

Read chapters **before** trying to do the homework or the quiz. Then it will be much easier for you to follow the online lecture and to use online forums to ask questions about material that you did not understand.

Do not just “read” your textbook. Keep good notes in a separate notebook that you can use to study for the final exam. Use your notebook to comprehend new concepts and define new terms **in your own words**. This notebook will be useful for studying for the final exam.

Homework, quizzes, and the final exam will include essay questions. Be sure that you can define (in full, comprehensible sentences) any new concepts and key terms when reading through a chapter so that you can use these terms in a meaningful way in your homework.

When you do your assignments, go back through the appropriate chapters and read them carefully a second time to find the answers.

Actively take part in the class activities. This will help you solve problems in your homework in a collaborative fashion.

**Note: The instructor reserves the right to make changes. Students will be informed of any such change.**

### **Suggested Course Outline**

| <b>Week #</b> | <b>Lecture Activity</b>                                    | <b>Reading Assignment</b> | <b>Specific Assignment</b>                             |
|---------------|--|---------------------------|--|
| Week 1        | Introduction   | Introduction / Chapter 1  | Exercise 1.3   |
| Week 2        | Chapter 1  | Chapter 2                 | Exercise 2.2 - modified                                |
| Week 3        | Chapter 2  | Pine Ridge Website        | Exercise 2.4   |
| Week 4        | Class Discussion   | Exercise 2.5              | Exercise 2.6 – pre PD                                  |
| Week 5        | Initial Meetings with Program Directors (PD)               | TBD                       | Field Notes  |
| Week 6        | Class Discussion   | Chapter 3                 | Exercise 2.6 – post PD                                 |
| Week 7        | Chapter 3  | Chapter 4                 | Exercise 3.1   |
| Week 8        | Chapter 4  | Exercise 2.6 – post PD    | Exercise 2.6 – pre CL                                  |
| Midterm       |  |                           |  |
| Week 9        | Initial Meetings with Community Members (CM)               | TBD                       | Field Notes  |
| Week 10       | Class Discussion   | Chapter 5                 | Exercise 2.6 – post CL                                 |
| Week 11       | Chapter 5  | TBD                       | Exercise 4.4   |
| Week 12       | Class Discussion   | Exercise 4.6              | Exercise 4.5   |
| Week 13       | Initial Report Creation                                    | Exercise 4.10             | Exercise 4.8   |
| Week 14       | Finalization of Report                                     | TBD                       | Exercise 4.9   |
| Week 15       | Class Discussion   | Final Project Report      | Final Project Report                                   |
| Final         | Final Meeting with Program Directors and Community Members |                           | Oral Report to Program Directors and Community Members |

