

COURSE TITLE: ENGR 111 Engineering Orientation I

CRN: 42890

CREDITS: 4

INSTRUCTOR: Brian Reed, Ph.D.

EMAIL: reedb@linnbenton.edu (best method of contact)

OFFICE: IA-204 (not used this term)

PHONE: 541-917-4622 (office line checked once weekly)

VIRTUAL OFFICE HOURS (TENTATIVE):

Tuesdays 10:00-11:00 AM Thursdays 11:00-12:00 PM Fridays 12:00-1:00 PM

*And by appointment though ZOOM (contact via email to schedule)

INSTRUCTOR WEBSITE:

Go to www.linnbenton.edu. Click QuickLinks, click Instructor Website, click [Reed, Brian](#).

Course Description:

The objective of this course is for the student to learn about engineering as a profession, how engineering has developed historically, ethics, curricula and careers. There will be an introduction to such concepts as design, problem analysis and solution, and general skills necessary for success in the engineering program. The focus will be on preparing students for engineering and describing what engineering is.

Prerequisite: None

Course Outcomes:

Upon successful completion of this course, students will be able to:

1. Identify and select tools and techniques that will assist the student to succeed in their engineering education.
2. Select an engineering major and develop a four-year academic plan.
3. Identify at least one company that hires engineers in their chosen engineering major and sub-discipline of interest.
4. Describe the engineering design process and how it must meet a desired need within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacture-ability and sustainability.
5. Define engineering as a profession and relate it to ethical responsibility.

Optional Text (NOT REQUIRED):

Stephan, Bowman, Park, Sill, and Ohland, Thinking Like an Engineer, (2nd or 3rd Edition), Pearson.

NOTE: Text used as a reference only, and is **not required** for the course. Copies of the text are on reserve in the library and can be checked out for two-hours at a time.

Course Topics:

1. Strategies for success, resources, and the internet
2. Types of Engineering, academic planning and targeting a job
3. Constraints on design, and engineering functions
4. Engineering design, intellectual property, and protecting your ideas
5. Professionalism and ethics in engineering

For a detailed schedule of the class see my instructor website or [click here](#).

Quizzes:

| | |
|--------------------------------|---|
| Friday, April 17 th | Subject coverage to be announced in class |
| Friday, May 1 st | Subject coverage to be announced in class |
| Friday, May 15 th | Subject coverage to be announced in class |
| Friday, May 29 th | Subject coverage to be announced in class |
| Friday, June 12 th | Subject coverage to be announced in class |

*There is no final exam for this class.

Homework:

Homework assignments are listed and linked to on the course schedule and will be submitted via email by the end of the day due as shown on the course schedule page. Late homework will not be accepted unless prior arrangements have been made with the instructor.

Projects:

Usually for this class there are several group projects worked on in class throughout the term. Not only are these a great way to introduce basic concepts of engineering design, but also provide an opportunity to learn to work effectively as a group. I am trying to develop some replacement activities that will offer some of the same experience while being realistic given the online format this term. As these activities are developed details will be provided on the course schedule page.

Grading:

| | | |
|----------|--------|----------|
| Quizzes | 5 x 20 | 100 pts. |
| Homework | 5 x 20 | 100 pts. |
| Projects | | 120 pts. |
| Total | | 320 pts. |

90-100% A, 80-89.9% B, 70-79.9% C, 60-69.9% D, < 59.9% F

Expectations:

I expect that my students will be involved in the class even though it is delivered remotely. This includes **dedicating time to class material regularly throughout the week** and staying current with the topics being covered.

Because this course is not actually an 'online' class, but rather a conventional course being delivered remotely because of extraordinary circumstances it will even more important than normal to be proactive when you have questions or get stuck with something. I will make every effort to answer emails promptly, so please contact me whenever you have questions.

How to be successful in this class:

- Even though this term classes are delivered remotely, make a school schedule and stick to it!
- Be prepared for class by reading the assigned materials promptly when asked. Class lectures will be richer for you when you have background information about the subject.
- Review the syllabus and learn policies and procedures for this class. Understand your rights and responsibilities as a student and as a class member.
- When confused, challenged, frustrated or having an "aha" moment, contact the instructor during their 'virtual' office hours or via email.
- Don't hesitate to ask questions, whether during 'virtual' office hours or through email. Your instructors are here to help you succeed, stay connected with them!
- Be engaged! You will get out of this class what you put into it. This will be a challenge with the online format adopted this term.

Course Evaluations:

Student feedback is important to improve this course and to help the instructor know how to adjust teaching methods. Your feedback is taken seriously and does influence future versions of the course. The Student Evaluations of Teaching (SETs) are anonymous, and links to the evaluations will be emailed to your student email account after the 5th week of the term. I encourage you take this opportunity to provide constructive feedback on the class. Thank you in advance for your input!

Academic Integrity:

It is understandable that you will discuss your homework and other assignments with your classmates and that is fine, but you are expected to write up your own results, whether it is on paper or using a spreadsheet or other program, **even if you are in the same lab group**. I assume that you are ethical and honest. However, if there is an incident of academic dishonesty (cheating), which includes sharing computer files, you will receive a score of zero for that assignment/test and the incident will be reported to the college administration for possible further disciplinary action. If there is a second offense, you will receive a grade of F for the course and the incident will be reported to the college administration with a recommendation for disciplinary action.

Drop/Withdraw Policy: If you are withdrawing from the class you must file a Schedule Change Form with Registration or use WebRunner. If you formally drop the class **before Monday of the second week of the term**, you will receive a tuition refund. If you withdraw after the Monday of the second week of instruction through the seventh week a **'W'** will show up on your transcript. No withdrawals are allowed after the end of the seventh week. An instructor may not assign a "W" grade.

If you received financial aid or veteran's benefits, PLEASE talk with associates at the appropriate office to determine what effects on eligibility dropping a course will have. Don't jeopardize your eligibility!! You can contact the Financial Aid Office by calling (541) 917-4850 or by visiting the Financial Aid Office in Takena Hall.

If you stop attending the course without formally withdrawing you will continue to accumulate grades (zeroes for all assignments not turned in) and will receive the grade assigned by the instructor. You will also be held accountable for all charges on your account

Basic Needs: Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Roadrunner Resource Center for support (resources@linnbenton.edu , or visit us on the web www.linnbenton.edu/RRC under Student Support for Current Students). Our office can help students get connected to resources to help. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources that they may possess.

Nondiscrimination and Non-Harassment: Linn-Benton Community College is committed to providing an atmosphere that encourages individuals to realize their potential. We embrace diversity and inclusion of all persons. LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, gender, gender identity, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws. For further information see Board Policy P1015 in our Board Policies and Administrative Rules. Title II, IX, & Section 504: Scott Rolen, CC-108, 541-917-4425; Lynne Cox, T-107B, 541-917-4806, LBCC, Albany, Oregon.

To report: linnbenton-advocate.symplicity.com/public_report. In addition, the college complies with related federal, state, and local laws (Civil Rights, Disability & Rehabilitation Acts, Veterans Acts).

LBCC is committed to providing equal opportunity in all of its programs, policies, procedures, and practices, and the college shall promote equal opportunity and treatment through application of this policy and other college efforts designed for that purpose. For further information see Administrative Rule No. 1015-01 at <http://po.linnbenton.edu/BPsandARs/>

Center for Accessibility Resources:

You should meet with your instructor during the first week of class if:

1. You have a documented disability and need accommodations.
2. Your instructor needs to know medical information about you.
3. You need special arrangements in the event of an emergency.

If you have documented your disability, remember that you must make your request for accommodations through the Center for Accessibility Resources Online Services web page every term in order to receive accommodations. If you believe you may need accommodations but are not yet registered with CFAR, please visit the CFAR website at <http://www.linnbenton.edu/cfar> for steps on how to apply for services or call 541-917-4789.

Veterans and active duty military personnel with special circumstances are welcome and encouraged to communicate these, in advance if possible, to the instructor.

Students Rights, Responsibilities, and Conduct Policy:

LBCC students have rights: the right to free speech, the right to assemble, the right of a free press, etc. LBCC students also have responsibilities to their community: the responsibility to participate and engage in class, the responsibility to advocate for their needs (ask for help), the responsibility to support a respectful teaching and learning environment, the responsibility to treat all persons with respect, the responsibility to be truthful and honest in all work and communications, and the responsibility to follow staff directions, local, state, and federal laws. Rights and responsibilities balance together to create the best learning environment. For example, while you have free speech in the café or courtyard, in class the instructor decides whose turn it is to talk and what the topics for conversation will be. Students are free to believe what they believe, but instructors may require students to learn and recite concepts, principles, or theories for a class even if the student does not believe those concepts. You play a role in creating a positive community at LBCC. Please review your rights and responsibilities at this link: www.linnbenton.edu/go/studentrights.

If you believe a student is violating your rights, ask to be treated with respect. If that does not resolve the situation, report to Associate Dean Dr. Lynne Cox, Takena 107. If you believe a faculty member or LBCC employee is violating your rights, please report to Human Resources, Scott Rolen, CC-108.

In cases of immediate danger, report to Public Safety, Red Cedar Hall (RCH-119), 541-926-6855. (We encourage all students to enter this Public Safety phone number into their cell phone.)

Personal Empowerment Through Self-Awareness:

LBCC is launching a new training called “Personal Empowerment Through Self-Awareness.” This training is an online video series on dating, sexual consent, and on preventing sexual violence or partner violence. Every student has a right and healthy learning climate. Every new student is required by federal law to complete this training to learn how to safeguard yourself and others from sexual assault. We ask students to watch for email notification and to ensure that they complete this new training. (For example, do you know the number one date rape drug? It’s not what you think! Check out the training.) This online series reviews federal and Oregon law and is designed for your safety. The training will also direct you how to report dating, sexual, or partner violence to LBCC officials. Note: The instructor reserves the right to make changes to the course syllabus and schedule.