***SOE - COURSE SYLLABUS TEMPLATE***

***[Remove all RED information found in parentheses]***

**Course Code & Number (Credits) Full Course Title**

The School of Engineering acknowledges that the land on which we are situated is the unceded territory of the Syilx (Okanagan) People.

**Instructor Name:**

**Instructor Contact Information:**

**TA Contact Information:** *[If applicable]*

**Office Hours**

**Class Meeting Time, and Location**

**Academic Calendar Entry** *[The software system (CMS) will not allow for an Academic Calendar Entry course description to be over 500 characters (including spaces, but not including vectors or prerequisites). Therefore, it should be as brief as possible while still being informative (aim for 40 words or less). Full sentences are not required]*

**Course Code & Number (Credits) Full Course Title;**

**Academic Calendar Description, Vectors; Pre/Co-requisites; Equivalencies]**

*For example:*

*ENGR 303 (3) Engineering Project Management*

*Project management including initiating, planning, executing, controlling, and closing engineering projects. Managing the scope, costs, schedule, risks, and human resources in engineering projects. [3-0-0] Prerequisite: All of APSC 169, APSC 201.*

UBC Okanagan Academic Calendar: <http://www.calendar.ubc.ca/okanagan/>

**Course Format***[How is the course structured (e.g., method of presentation of course material - lecture, labs, tutorials, seminars, learning management system)?]*

* Ex: Three hours per week of lecture
* Two hours per alternating week of lab
* Assessment will consist of design project, presentation, midterm exam, and final exam.
* Course materials found on Canvas

**Course Overview, Content, and Objectives** *[purpose of the course; a lengthier course description to ‘unpack’ the Calendar Entry****;*** *What general objectives is the course designed to achieve? Teacher perspective on the course; What concepts or topics will be covered?]*

The course will examine….

The course will provide students with….

**Learning Outcomes** *[Student-centered view of the course. Outcomes are achieved results of what was learned, which implies they will be evaluated outcomes; they should reflect the Graduate Attributes covered in your course and be expressed as verbs progressing up Bloom’s Taxonomy, depending on year level. Avoid starting an Outcome with “Understand” – instead use “Demonstrate understanding”]*

After completing this course, students should be able to:

* Demonstrate….
* Design…
* Critically evaluate…
* Collaborate…

**Engineering Accreditation**

The Canadian Engineering Accreditation Board requires students to have achieved competency in twelve main areas by graduation. To ensure that our program provides sufficient instruction in these 12 graduate attributes, course learning outcomes have been mapped to the graduate attributes for each course. The relevant graduate attributes for this course are identified below.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Learning Outcomes** | **Graduate Attributes**  (as defined below) | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ex: Assess environmental impact of proposed designs |  |  |  |  |  |  |  |  | D |  |  |  |
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**I=Introduced D=Developed A=Applied**

**CEAB Graduate Attributes**

1. **A knowledge base for engineering:** Demonstrated competence in university level mathematics, natural sciences, engineering fundamentals, and specialized engineering knowledge appropriate to the program.
2. **Problem analysis:** An ability to use appropriate knowledge and skills to identify, formulate, analyze, and solve complex engineering problems in order to reach substantiated conclusions.
3. **Investigation:** An ability to conduct investigations of complex problems by methods that include appropriate experiments, analysis and interpretation of data, and synthesis of information in order to reach valid conclusions.
4. **Design:** An ability to design solutions for complex, open-ended engineering problems and to design systems, components or processes that meet specified needs with appropriate attention to health and safety risks, applicable standards, and economic, environmental, cultural and societal considerations.
5. **Use of engineering tools:** An ability to create, select, apply, adapt, and extend appropriate techniques, resources, and modern engineering tools to a range of engineering activities, from simple to complex, with an understanding of the associated limitations.
6. **Individual and team work:** An ability to work effectively as a member and leader in teams, preferably in a multi-disciplinary setting.
7. **Communication skills:** An ability to communicate complex engineering concepts within the profession and with society at large. Such ability includes reading, writing, speaking and listening, and the ability to comprehend and write effective reports and design documentation, and to give and effectively respond to clear instructions.
8. **Professionalism:** An understanding of the roles and responsibilities of the professional engineer in society, especially the primary role of protection of the public and the public interest.
9. **Impact of engineering on society and the environment:** An ability to analyze social and environmental aspects of engineering activities. Such ability includes an understanding of the interactions that engineering has with the economic, social, health, safety, legal, and cultural aspects of society, the uncertainties in the prediction of such interactions; and the concepts of sustainable design and development and environmental stewardship.
10. **Ethics and equity:** An ability to apply professional ethics, accountability, and equity.
11. **Economics and project management:** An ability to appropriately incorporate economics and business practices including project, risk, and change management into the practice of engineering and to understand their limitations.
12. **Life-long learning:** An ability to identify and to address their own educational needs in a changing world in ways sufficient to maintain their competence and to allow them to contribute to the advancement of knowledge.

**OPTIONAL: Additional Course Requirements** *[Are there any other requirements students should be made aware of at the start of the course (e.g., participation in a field trip)?]*

**Evaluation Criteria and Grading** *[Provide a grading rubric (i.e. type / name of evaluation, value / percentage, date of assessment; Link the learning outcomes to the assessments to show demonstrable skills. For further information and support, see the Centre for Teaching and Learning:* <http://ctl.ok.ubc.ca/>]

* What assignments, mid-terms, or exams will be required of students? Provide a one-to-two sentence description of each component.
* What will each component of the course evaluation be worth (mark breakdown)?
* Is the course graded on a numeric (percentage) or pass/fail basis?
* If pass is not 50%, then indicate what percentage constitutes a pass.
* Are the exams oral or written?
* Is the final exam cumulative?
* *If participation counts for over 5%, provide an explanation of how grade was arrived at*.]

**Required Textbooks/Readings and Videos** *[Only required readings and videos; to correspond with course schedule, readings can be numbered. Ensure the citation style used is consistent throughout the entire course syllabus and consistent with the citation style being requested from the students in their assignments.]*

**[Recommended Readings]** *[Recommended readings if any; an exhaustive bibliography not required for Senate approval.]*

**Course Schedule (Tentative)** *[Include a table detailing the week and lecture topic covered, any required readings, labs, due dates..modify as needed for your course]*

|  |  |  |
| --- | --- | --- |
| **Weeks** | **Topics** | **Required Reading(s)/Labs/Due Dates** |
| **1** |  | **1 & 2** |
|  |  |  |
|  |  |  |
|  |  |  |
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|  |  |  |

**Final Examinations**

Students are required to be available during the posted examination period to write the exam as scheduled. Except in the case of examination clashes and hardships (three or more formal examinations scheduled within a 24-hour period) or unforeseen events, students will be permitted to apply for out-of-time final examinations only if they are representing the University, the province, or the country in a competition or performance; serving in the Canadian military; observing a religious rite; working to support themselves or their family; or caring for a family member; or unforeseen events include (but may not be limited to) ill health or other personal challenges that arise during a term and changes in the requirements of an ongoing job. Further information on Academic Concession can be found under Policies and Regulation in the *Okanagan Academic Calendar* [Academic Concession - Campus-wide Policies and Regulations - Okanagan Academic Calendar 2021/22 - UBC Student Services](http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,48,0,0) - <http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,48,0,0>

**Academic Integrity at UBC and the School of Engineering**

Academic and professional integrity are of the upmost importance at the School of Engineering. Please read your syllabus carefully to understand the expectations surrounding academic integrity in this course. In addition, please familiarize yourself with the University of British Columbia’s academic calendar language surrounding academic integrity for students:

*“The academic enterprise is founded on honesty, civility, and integrity.  As members of this enterprise,* ***all students are expected to know, understand, and follow the codes of conduct regarding academic integrity****.  At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required.  This also means you should not cheat, copy, or mislead others about what is your work.  Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed.  For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President’s Advisory Committee on Student Discipline.  Careful records are kept in order to monitor and prevent recurrences.”*

A more detailed description of academic integrity, including the University’s policies and procedures, may be found in the Academic Calendar at <http://okanagan.students.ubc.ca/calendar/index.cfm?tree=3,54,111,0>

In addition, all course material including lecture notes, assignments, and examination materials is the intellectual property of the instructor and as such must not be uploaded to third party, non-UBC sites for file sharing or for soliciting answers online. Doing so is considered academic misconduct under UBC’s policies (see http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,54,111,959) including the following:

*“use of or participation in unauthorized collaborative work; use or possession in an examination of any materials (including devices) other than those permitted by the examiner; use, possession, or facilitation of unauthorized means to complete an examination (e.g., receiving unauthorized assistance from another person, or providing that assistance); and dishonest practices that breach rules governing examinations or submissions for academic evaluation see Student Conduct during Examinations).”*

Violating this is considered academic misconduct by the university and will be treated as such. Be wary of sites that market themselves to be “study aids” as they may fall under the definition of contract cheating (<https://academicintegrity.ubc.ca/academic-integrity-in-teaching-and-learning/contract-cheating/>). In addition, there have been instances where these sites have blackmailed students even after graduation.

*Assignments*

This course assesses student understanding of course material based on completed assignments. It is important to note that according to the UBC Okanagan Academic Calendar cheating includes the following:

*“falsification of any material subject to academic evaluation, including research data;”*

For example in this course, this includes, but is not limited to, copying another student’s work or allowing another student to copy your assignment. Students are expected to submit original work for their assignments in this course.

*“use of or participation in unauthorized collaborative work;”*

While collaboration is encouraged in some circumstances, not all collaboration is authorized. For example in this course, unauthorized collaboration includes, but is not limited to, working in teams to complete projects that are intended as individual assessment.

*Exams*

This course assesses student understanding of course material based on midterm and final examinations. It is important to note that according to the UBC Okanagan Academic Calendar cheating includes the following:

*“use or possession in an examination of any materials (including devices) other than those permitted by the examiner;”*

This includes, but is not limited to, possession during an exam of a cell phone, programmable calculator, or watch that is capable of storing unauthorized materials, unless specifically allowed.

*“use, possession, or facilitation of unauthorized means to complete an examination (e.g., receiving unauthorized assistance from another person, or providing that assistance);”*

This includes, but is not limited to, looking at another student’s exam paper during the examination time and accessing third-party online resources during exams unless explicitly permitted by your instructor.

*Plagiarism*

This course assesses student understanding of course material based on written reports. It is important to note that the UBC Okanagan Academic Calendar includes the following comprehensive description of plagiarism:

*“Plagiarism, which is intellectual theft, occurs when an individual submits or presents the oral or written work of another person as his or her own. Scholarship quite properly rests upon examining and referring to the thoughts and writings of others. However, when another person's words (i.e., phrases, sentences, or paragraphs), ideas, or entire works are used, the author must be acknowledged in the text, in footnotes, in endnotes, or in another accepted form of academic citation. Where direct quotations are made, they must be clearly delineated (e.g., within quotation marks or separately indented). Failure to provide proper attribution is plagiarism because it represents someone else's work as one's own. Plagiarism should not occur in submitted drafts or final works. A student who seeks assistance from a tutor or other scholastic aids must ensure that the work submitted is the student's own. Students are responsible for ensuring that any work submitted does not constitute plagiarism. Students who are in any doubt as to what constitutes plagiarism should consult their instructor before handing in any assignments.”*

Students are responsible for ensuring all work is original and source use is properly documented.

For additional language specific to online education, please consult the Academic Integrity Working Group’s website at <https://provost.ok.ubc.ca/initiatives/online-transition/faculty-resources/faculty-resources-for-academic-integrity>

**SoE Academic Integrity Procedures**

The following steps will be followed in cases of suspected academic misconduct:

* The instructor will notify the student of the alleged misconduct and the assigned penalty and the student will be given an opportunity to respond.
* The instructor will report the incident to the School of Engineering Academic Misconduct Review Committee and will include the student’s response.
* The Academic Misconduct Review Committee will review the case and either issue a warning letter to the student or recommend further review by the Dean’s Designate.
* The Dean’s Designate will meet with the student and either issue a warning letter or refer the matter to the President’s Advisory Committee on Student Discipline (if applicable).
* The case will be heard by the President’s Advisory Committee on Student Discipline (if applicable).

**Academic Concessions**

The School of Engineering recognizes that over the course of the term, unanticipated events and circumstances may arise for a student that may hinder the student’s “participation or attendance at a class session or examination” or their ability “to otherwise fulfill the requirements of a course in a timely manner”. For a full overview of what constitutes grounds for academic concession, please refer to the Academic Calendar: <https://www.calendar.ubc.ca/Okanagan/index.cfm?tree=3,48,1127,0>.

**Types of Academic Concessions**

“Grounds for academic concession fall into one or more of the following categories”: Conflicting Responsibilities, Medical Circumstances, and Compassionate Grounds. If your situation meets the grounds for academic concession, one or more of the following concessions may be applied:

* **In-term Course Concessions**

*[An* ***instructor*** *“may provide one or more options to students who miss a marked assignment, test, or deadline. The options for each course should be identified in the course syllabus. Examples include provision of make-up tests, reweighting of missed marks to a later test or assignment, provision of an alternative means of fulfilling a participation or presentation requirement, or allowance for a maximum number of class discussions or quizzes to be missed.”]*

*[Please provide clear language on the in-term course concessions in your syllabus. The following language, in blue, is provided as an example. You may adopt/modify as needed.]*

Depending on your circumstances, you may receive an extension on your assignment deadline(s), be given the opportunity to make up missed work, or to move the weighting of an assignment or in-term quiz or examination to a subsequent one. In-term course concessions are generally reviewed and granted by the *instructor*.

* **Deferred Standing**

You may be eligible to apply for accommodations for your final exam, including deferring the exam. To apply for a standing deferred final examination, please speak to an academic advisor and submit a request form, <https://engineering.ok.ubc.ca/resources/forms/out-of-time-final-examination-request/>. Deferred standing may be granted by the Associate Director, Undergraduate Studies.

* **Late withdrawal**

If your circumstances are such that you are unable to complete the required course components, you may be eligible to submit a late withdrawal request for review by the Associate Director, Undergraduate Studies. To apply for a late withdrawal, please speak to an academic advisor and submit a late withdrawal request form. <https://engineering.ok.ubc.ca/resources/forms/late-withdrawal-request/>.

* Additional concessions, including **Aegrotat Standing**, **Adjudicated Pass**, and **Retroactive Course Drop**, may be considered depending on a student’s circumstances. These concessions would require additional reviews by the Director and/or the Associate Director, Undergraduate Studies.

**Requesting Academic Concession**

If you would like to request an academic concession, please make the request *as early as reasonably possible,* in writing to your instructor for in-term course concessions, or speak to an academic advisor for other concessions.

*“These requests should clearly state the grounds for the* academic concession *and the anticipated duration of the conflict and/or interference with academic work. In some situations, this self-declaration is sufficient, but the submission of supporting documentation may be required along with, or following, the self-declaration.”*

*“For students who are requesting an* academic concession *on the ground of sexualized violence, Sexual Violence Prevention and Response Office (SVPRO) can make the request directly to the* Dean *on behalf of the student. Full details of the incident and its impacts do not have to be disclosed.”* (Academic Calendar)

If you have questions about this process or what information you may be required to disclose, when, and to whom, please speak to an academic advisor: <https://soeadvising.ok.ubc.ca/academic-advising/>.

**Third Party Authorization**

If you are unable to make a request for academic concession on your own, you may request a trusted individual to do so on your behalf. However, the University will not be able to disclose any personal information about you to this individual –not even if you are a student here or not – unless that person has Third Party Authorization. To grant a trusted designate Third Party Authorization, please follow the steps outlined here <https://students.ok.ubc.ca/courses-money-enrolment/third-party-authorization/>.

**Resource Links**

UBC Okanagan Academic Calendar: <http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,54,111,959>

UBC Okanagan Senate Forms: <https://senate.ubc.ca/okanagan/forms/>

UBC Okanagan Provost Learning Services Faculty Resources for Academic Integrity <https://provost.ok.ubc.ca/initiatives/online-transition/faculty-resources/faculty-resources-for-academic-integrity/>

Academic Integrity at UBC <https://academicintegrity.ubc.ca/>

**Student Service Resources**

**UBC Okanagan Disability Resource Centre**

The Disability Resource Centre ensures educational equity for students with disabilities and chronic medical conditions. If you are disabled, have an injury or illness and require academic accommodations to meet the course objectives, please contact Jason Taylor, the Diversity Advisor for the School of Engineering in the Disability Resource Centre located in the University Centre building (UNC 214).

Email: [drc.questions@ubc.ca](mailto:drc.questions@ubc.ca)

Web: [www.students.ok.ubc.ca/drc](http://www.students.ok.ubc.ca/drc)

**UBC Okanagan Equity and Inclusion Office**

Through leadership, vision, and collaborative action, the Equity & Inclusion Office (EIO) develops action strategies in support of efforts to embed equity and inclusion in the daily operations across the campus. The EIO provides education and training from cultivating respectful, inclusive spaces and communities to understanding unconscious/implicit bias and its operation within in campus environments. UBC Policy 3 prohibits discrimination and harassment on the basis of BC’s Human Rights Code. If you require assistance related to an issue of equity, educational programs, discrimination or harassment please contact the EIO.

**UNC 216** (250.807.9291)

email: [equity.ubco@ubc.ca](mailto:equity.ubco@ubc.ca)

Web: [www.equity.ok.ubc.ca](http://www.equity.ok.ubc.ca)

**Health & Wellness**

At UBC Okanagan health services to students are provided by Health and Wellness. Nurses, physicians and counsellors provide health care and counselling related to physical health, emotional/mental health and sexual/reproductive health concerns. As well, health promotion, education and research activities are provided to the campus community. If you require assistance with your health, please contact Health and Wellness for more information or to book an appointment.

**UNC 337** (250.807.9270)

email: [healthwellness.okanagan@ubc.ca](mailto:healthwellness.okanagan@ubc.ca)

Web: [www.students.ok.ubc.ca/health-wellness](http://www.students.ok.ubc.ca/health-wellness)

**Resource Links**

UBC Okanagan Academic Calendar: <http://www.calendar.ubc.ca/okanagan/index.cfm?tree=3,54,111,959>

UBC Okanagan Senate Forms: <https://senate.ubc.ca/okanagan/curriculum/forms>

UBC Okanagan Provost Learning Services Faculty Resources for Academic Integrity - <https://provost.ok.ubc.ca/initiatives/online-transition/faculty-resources/faculty-resources-for-academic-integrity/>

**Safewalk**

*Don't want to walk alone at night?  Not too sure how to get somewhere on campus?*

*Call Safewalk at* ***250-807-9236***

*For more information, see:* [www.security.ok.ubc.ca](http://www.security.ok.ubc.ca)

**School of Engineering Calculator Policy for Exams**

The School of Engineering has a calculator policy whereby only the two models shown below are permitted in midterm and final exams.

**Two Permitted Makes / Models**

|  |  |
| --- | --- |
| Texas Instruments TI-36X Pro | CASIO  fx-991ES PLUS C\*    \*2nd edition (right) released 2021 |

Both calculators will be available through the bookstore. Both calculators have the following functionalities:

• solar + battery powered

• “natural” 4-line display

• standard scientific operations

(trig, hyp, exp, log, etc.)

• complex numbers

• numerical solver

• roots of quadratic and cubic polynomials

• simultaneous linear equations

(up to 3 unknowns)

• vector and matrix operations

(real valued, up to 3x3)

• numerical integrals and derivatives

• statistics, regressions, and distributions

• base 2, 8, 10, 16

• stored variables and operations

• constants and conversions

• NOT programmable

• NOT graphing capable

• NO wireless functions

• NO file storage

**Academic Honesty and Integrity Pledge**

**School of Engineering | Faculty of Applied Science**

**UBC Okanagan**

Academic honesty and integrity are essential principles of the University of British Columbia and engineering as a profession. All UBC students are expected to behave as honest and responsible members of an academic community. Engineering students have an even greater responsibility to maintain the highest level of academic honesty and integrity as they prepare to enter a profession with those principles as a cornerstone.

Cheating on exams or projects, plagiarizing or any other form of academic dishonesty are clear violations of these principles

As a student of the School of Engineering at UBC Okanagan, I solemnly pledge to follow the policies, principles, rules, and guidelines of the University with respect to academic honesty. In particular, I commit to upholding the academic integrity and the professionalism as an engineering student.

By signing this pledge, I promise to adhere to exam requirements and maintain the highest level of ethical principles during the exam period.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature Name

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student Number Date

**Why are we doing the integrity pledge?**

Dr. Laura Patterson

On behalf of the School of Engineering Ethics and Academic Integrity Committee

*An engineering student asked me why the School of Engineering requires students to sign the Integrity Pledge, and what is so wrong with collaborating on an exam when everyone else is doing it. Those questions are important and this was the email that was sent in return.*

The integrity pledge is a form of an honour code to ensure students acknowledge that the exam is intended to be a solo exercise testing your individual skills and not a group effort. In an exam situation, consulting with colleagues for answers on an exam intended to test individual abilities is not "collaborating," it is cheating and academic misconduct under UBC policies. Even though we are in a situation in which faculty may not be able to enforce this or enact consequences all the time, if a student chooses to continue this behaviour when expressly asked not to, they need to be aware that they are making a clear choice to act unethically, which is not entirely without consequences. These consequences are to one's identity.  
  
There are many situations where no one is watching, or there are no immediate consequences, where professionals must choose to do either the ethical thing or the unethical thing. We do what we practice, and we become what we do. Research into ethics in engineering education found that those students who operate unethically during their education have a higher likelihood of operating unethically in their professional careers, because they have not exercised the skill of operating ethically in the easier and lower stakes setting of education. When these bad habits catch up with us, they can lead to lawsuits, public disgrace, and death. Examples of such cases in the media include the SNC Lavalin fraud case, cases of individual engineering university professors caught plagiarizing out of Waterloo and Regina, or the Hyatt Regency walkway collapse that killed 114 and injured 216. Few people wake up and decide to be unethical or think themselves to be, but the daily habit of cutting corners in the short term and rationalizing that behavior builds to larger exceptions that become harder to resist.  
  
The "if everyone is doing it, I should too" argument is a common logical fallacy known as the bandwagon argument used to rationalize behaviour because it is popular. The common retort is "if everyone jumped off of a bridge, should you too?" A better quotation to respond to this argument would be "The only thing necessary for the triumph of evil is for good men to do nothing." It is true that it will seem that others are getting away with it; however, choosing to participate in it, not only makes the situation worse, it also comes at a significant cost to one's perceptions of oneself.  
  
This integrity pledge then becomes a question of "Who do you want to be?" Choosing to do the ethical thing, even when the other option seems easier, is a long-term choice to build the habits of ethical behaviour and the skill set of handling the hard things necessary to be an ethical professional. It can also influence other students to act with integrity and help shift the culture if more students expected their colleagues to act ethically. So, when you choose what you are going to do in these difficult situations, you are choosing your identity and influencing the culture of your educational program.