ES1050 Foundations of Engineering Practice
Course Syllabus 2021-2022

1 Purpose of the course
At the end of the course students will be able to model professional engineering behaviour and work in teams to execute all parts of a systematic design process, including seeking and critically examining information identifying and addressing knowledge gaps and communicating effectively with clients and other stakeholders.

2 Calendar Description
Introduction to the principles and practices of professional engineering. Team-based design projects provide context for developing research, critical thinking, and problem-solving skills along with professional behaviour. Includes elements of need recognition, conceptualisation, prototyping, and engineering design to satisfy commercial specifications. Emphasis on creativity, teamwork, time management, communication, and engineering skills necessary to practice in any engineering discipline.

Prerequisites: None.
Co-requisites: None.
Anti-requisites: None.

Contact Hours:
Weekly: 2 hrs lecture/Workshop, 2 hrs laboratory/Studio, 2 hrs team/tutorial
Section scheduling details can be found at:
https://studentservices.uwo.ca/secure/timetables/mastertt/ttindex.cfm

CEAB Academic Units: Engineering Design 50%, Engineering Science 25%, Complementary studies (Teamwork and Oral & Written Communication) 25%

Course Site: https://owl.uwo.ca/portal/site/c97c44ab-b325-49a0-9e2e-89c245b0d45e

2.1 Text:
No required text. Lecture notes and supporting course information will be posted to Owl or shared through dedicated course MS Team sites. Students will be required to contribute monetarily towards the construction of prototypes for team projects, as necessary.

2.2 Reference Material:
Suggested readings may be posted to Owl.

2.3 Units:
Both SI and FPS unit systems may be used in lectures, tutorials, and all assessments.
## 3 Instructors

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Responsibility</th>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td><strong>Course Coordinator</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. John Dickinson, P.Eng.</td>
<td><a href="mailto:jdickin5@uwo.ca">jdickin5@uwo.ca</a></td>
<td>All</td>
<td></td>
</tr>
<tr>
<td><strong>Workshop Instructors</strong></td>
<td></td>
<td>Workshop</td>
<td></td>
</tr>
<tr>
<td>Kevin McGuire, P.Eng.</td>
<td><a href="mailto:kmcgui5@uwo.ca">kmcgui5@uwo.ca</a></td>
<td>001</td>
<td>Tue 8:30</td>
</tr>
<tr>
<td>Dr. John Dickinson, P.Eng.</td>
<td><a href="mailto:jdickin5@uwo.ca">jdickin5@uwo.ca</a></td>
<td>002</td>
<td>Tue 8:30</td>
</tr>
<tr>
<td>Chris Urbaniak, P.Eng.</td>
<td><a href="mailto:chris.urbaniak@uwo.ca">chris.urbaniak@uwo.ca</a></td>
<td>003</td>
<td>Tue 14:30</td>
</tr>
<tr>
<td>Dr. John Dickinson, P.Eng.</td>
<td><a href="mailto:jdickin5@uwo.ca">jdickin5@uwo.ca</a></td>
<td>004</td>
<td>Tue 14:30</td>
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<tr>
<td>Dr. Jacob Reeves, EIT</td>
<td><a href="mailto:jreeves5@uwo.ca">jreeves5@uwo.ca</a></td>
<td>005</td>
<td>Tue 17:30</td>
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<tr>
<td>Chris Urbaniak, P.Eng.</td>
<td><a href="mailto:chris.urbaniak@uwo.ca">chris.urbaniak@uwo.ca</a></td>
<td>006</td>
<td>Tue 17:30</td>
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<tr>
<td><strong>Studio Instructors</strong></td>
<td></td>
<td>Sections</td>
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</tr>
<tr>
<td>Dr. Safwat Ramadan, EIT</td>
<td><a href="mailto:sramada6@uwo.ca">sramada6@uwo.ca</a></td>
<td>011</td>
<td>Thurs 18:30</td>
</tr>
<tr>
<td>Dr. Dan Langhor, P.Eng.</td>
<td><a href="mailto:glangohr@uwo.ca">glangohr@uwo.ca</a></td>
<td>012</td>
<td>Tues 14:30</td>
</tr>
<tr>
<td>Dr. Duane Jacques, EIT</td>
<td><a href="mailto:djacque4@uwo.ca">djacque4@uwo.ca</a></td>
<td>013</td>
<td>Thurs 08:30</td>
</tr>
<tr>
<td>Dr. Duane Jacques, EIT</td>
<td><a href="mailto:djacque4@uwo.ca">djacque4@uwo.ca</a></td>
<td>014</td>
<td>Tues 10:30</td>
</tr>
<tr>
<td>Dr. Yue Zhou</td>
<td><a href="mailto:yzhou426@uwo.ca">yzhou426@uwo.ca</a></td>
<td>015</td>
<td>Tues 14:30</td>
</tr>
<tr>
<td>Ibrahim Ibrahim, EIT</td>
<td><a href="mailto:ibrah6@uwo.ca">ibrah6@uwo.ca</a></td>
<td>016</td>
<td>Tues 10:30</td>
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<tr>
<td>Chris Urbaniak, P. Eng.</td>
<td><a href="mailto:chris.urbaniak@uwo.ca">chris.urbaniak@uwo.ca</a></td>
<td>017</td>
<td>Wed 13:30</td>
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<tr>
<td>Dr. Jacob Reeves, EIT</td>
<td><a href="mailto:jreeves5@uwo.ca">jreeves5@uwo.ca</a></td>
<td>018</td>
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<tr>
<td>Dr. John Dickinson, P.Eng.</td>
<td><a href="mailto:jdickin5@uwo.ca">jdickin5@uwo.ca</a></td>
<td>019</td>
<td>Thurs 14:30</td>
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<tr>
<td>Dr. Jon Southen, P.Eng.</td>
<td><a href="mailto:jsouthen@uwo.ca">jsouthen@uwo.ca</a></td>
<td>020</td>
<td>Thurs 18:30</td>
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<tr>
<td>Dr. Gleb Meirson</td>
<td><a href="mailto:gmeirson@uwo.ca">gmeirson@uwo.ca</a></td>
<td>021</td>
<td>Wed 16:30</td>
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<tr>
<td>Joseph Santarelli, EIT</td>
<td><a href="mailto:jsantare@uwo.ca">jsantare@uwo.ca</a></td>
<td>022</td>
<td>Tues 17:30</td>
</tr>
<tr>
<td>Joseph Santarelli, EIT</td>
<td><a href="mailto:jsantare@uwo.ca">jsantare@uwo.ca</a></td>
<td>023</td>
<td>Tues 19:30</td>
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<tr>
<td>Dr. Jon Southen, P.Eng.</td>
<td><a href="mailto:jsouthen@uwo.ca">jsouthen@uwo.ca</a></td>
<td>024</td>
<td>Tues 19:30</td>
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<tr>
<td>Dr. John Dickinson, P.Eng.</td>
<td><a href="mailto:jdickin5@uwo.ca">jdickin5@uwo.ca</a></td>
<td>025</td>
<td>Thurs 10:30</td>
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<tr>
<td>Dr. Paul Charpentier, P.Eng.</td>
<td><a href="mailto:pcharpen@uwo.ca">pcharpen@uwo.ca</a></td>
<td>026</td>
<td>Thurs 10:30</td>
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<tr>
<td>Dr. Safwat Ramadan, EIT</td>
<td><a href="mailto:sramada6@uwo.ca">sramada6@uwo.ca</a></td>
<td>027</td>
<td>Wed 13:30</td>
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</tbody>
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Individual Studio Instructors will advise as to additional office hours.

## 4 Course Learning Outcomes

The purpose of ES1050 is to teach and develop in students the knowledge and skills necessary to:

- Work in a (multi-disciplinary) team,
- Communicate with all project stakeholders,
- Apply the engineering design process, and
- Creative thinking to resolve open-ended design problems.

*Essentially, the Foundations of Engineering Practice.*

Reframed in terms of attributes recognised by the Canadian Engineering Accreditation Board, ES1050 teaches and develops the following skills and knowledge (in rough order of emphasis):
1. **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.
   a. Demonstrate ability to frame a complex, open-ended design problem in engineering terms
   b. Demonstrate ability to generate a diverse set of candidate engineering design solutions
   c. Demonstrate ability to select candidate engineering design solutions for further development
   d. Demonstrate ability to advance an engineering design to a defined end state - completion

2. **Individual and Teamwork:** An ability to work effectively as a member and leader in teams preferably in a multidisciplinary setting
   a. Demonstrates ability to perform responsibly.
   b. Demonstrate ability to contribute to team goals
   c. Demonstrate ability to evaluate peer and self-performance based on team effectiveness.

3. **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.
   a. Demonstrate ability to follow instructions (listening and reading for comprehension).
   b. Demonstrate ability to articulate ideas in writing using appropriate technical language, and effective graphical tools.
   c. Demonstrate the ability to communicate orally using appropriate materials, language, non-verbal communication and effective graphical tools.

Other skills and knowledge will be taught at an introductory level to ensure students are suitably equipped to face the challenges project work entails:

1. **Project management:** Introduction to Gantt Charts and their application in managing project timelines and deliverables.
2. **Engineering Tools:** Build foundational capabilities to use:
   a. Excel to organise, process, predict and present data and analysis supporting conclusions or decisions
   b. Onshape to represent, assemble and describe solids or custom objects and assemblies for design review or production
3. **Professionalism:** An introduction to the professional nature of engineering and its adherence to a code of ethics, accountability, and equity, including responsibility to the society, the environment, and clients.
4. **Life-long learning:** The ability to recognise a limitation in knowledge or skills and to seek out learning or resources to overcome those limitations.

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2021-09-06
I – The instructor will introduce the topic at the level required. It is not necessary for the student to have seen the material before. D – There may be a reminder or review, but the student is expected to have seen and been tested on the material before taking the course. A – It is expected that the student can apply the knowledge without prompting (e.g. no review)

5 Course Delivery, Workload Expectations and Contact Hours
ES1050 will be delivered in a weekly cycle as a combination of; a 2-hour blended-learning interactive Workshop to learn specific, mostly individual, skills and a 2-hour design Studio where student teams work on design projects. Students will be assigned to a) one Interactive Workshop Lecture section, b) one Design Studio Lab section and c) one Tutorial Session.

<table>
<thead>
<tr>
<th>Sections</th>
<th>Description</th>
<th>Expected Time</th>
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<tr>
<td>001-006</td>
<td>Interactive Workshop Lecture – activity-based / experiential learning – Often requires reviewing material in advance – live quizzes or alternate will be used</td>
<td>Prep: 15-30 min Live: 2 hrs</td>
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<tr>
<td>011-027</td>
<td>Design Studio Lab – team-based learning – students will be placed in teams of 5-6 for each term to complete an open-ended design challenge</td>
<td>Prep: ~30+ min Live: 2 hrs</td>
</tr>
<tr>
<td>031-036</td>
<td>Tutorial Sessions – Fridays 16:30-18:30 – used to hold course related tutorials, timed assessments or by teams to work on their projects.</td>
<td>Live: 2 hrs as required</td>
</tr>
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</table>

Students will be assigned to a) one Interactive Workshop Lecture section, b) one Design Studio Lab section and c) one Tutorial Session.

5.1 Interactive Workshops (2-hours, Tuesdays, Sections 001-006)
Coded as lectures in timetables, Workshops introduce and develop specific skills required for engineering practice as listed in the Learning Outcomes section above. Skills learned in Workshops are expected to be applied in completing team-based design projects (dominantly worked on in the design Studios).

Workshops are delivered in flipped or blended formats. This means students are frequently expected to review online material and complete comprehension assessments or preparatory work before the sessions where lesson material is applied or practiced. 25/200 of the course mark is linked to the completion of preparatory work or post session activities for Workshops as included in the online lesson materials.

If a lockdown occurs, instructors will host the Workshop sessions synchronously online using MS Teams.

5.2 Design Studios Labs (2-hours, Sections 011-027)
Coded as laboratories in timetables, Design Studios are the primary instructional spaces for teams to work together on their projects with mentorship and guidance provided by their Studio instructors and TAs. Students
will be placed into teams of approximately five within the Studios, one team for the Fall and one for the Winter terms. In these teams, students will be required to complete two major design projects over the course of the year and some other challenges. Project work will provide the context for assessing individual student’s development of Teamwork and Design Process knowledge and skills. Project grading heavily weights INDIVIDUAL student’s development of Team Skills and Design Process capabilities: ~1/3rd team skills, ~1/3rd design process, ~1/3 team project outcome. Details will be included in the project overviews.

Face-to-face sessions will be held EVERY WEEK of the year unless otherwise announced. Students will be expected to observe appropriate masking and hand cleansing protocols for safety reasons. If a lockdown occurs, instructors will host the Studio sessions synchronously online using MS Teams and student Teams will work in their private MS Teams channels on Studio activities. TAs and instructors will then join online student teams to review progress and challenges. To close sessions, instructors may ask student teams (rotating reporting role) to provide brief (~1min) summary reports to the entire Studio of their weekly progress.

Student teams are responsible for scheduling working times outside the course schedule to complete any work not completed in Studio sessions.

5.3 Tutorial Sessions
The instructor team will do its best to keep the workload imposed on students by the course reasonable. Friday 16:30-18:30 Tutorials will be used to provide supported time to complete work arising in the week’s activities. The tutorial times may also be used to have timed summative assessments of skills learned in Workshops or enable external guests to address the entire cohort simultaneously. Tutorials will be scheduled as required and will be announced through MS Teams Forums. Students are encouraged to come prepared to Workshops and make effective use of these tutorials to complete course exercises and build individual skills in a timely fashion.

5.4 Learning Resources
Students will regularly use the following course resources:

| OWL Course Site | • Navigate the course  
|                 | • Access pre-Workshop lessons, activities, and quizzes and post-Workshop activities  
|                 | • Get and submit individual and team assignments  
|                 | • Access support materials for lectures, design project, and Studios.  |
| Microsoft Teams | • Receive instructional content for Design Studio activities  
|                 | • Attend Studio sessions and hold Student Team meetings and collaborate on the projects  
|                 | • Attend Workshop Sessions if they have to be moved online  |
| Course Forum    | • Microsoft Teams will be used to support all course announcements and project or assignment discussion forums. See Section 6 for details.  |
| Gradescope      | • Submit most individual and project deliverables, request regrades  |

6 Course Forums and Virtual Platforms
ES1050 will use dedicated MS Teams Channels to share course announcements, project documents and host discussion forums for Q & A activities. Unlike OWL, Teams facilitates reacting or responding to posts, searching
for previous announcements and configuration of notification frequency. With 800+ students, **individual instructors will not generally respond to personal email:**

- Answers are probably relevant to more than just one person and should be shared to be fair
- Other students often already have the answer and can respond faster than instructors
- Duplicate questions, effort and confusion can be avoided **IF people check for existing responses before posting**

The following structure will be implemented in MS Teams (students will be included in only those Sites and Channels relevant to them):

<table>
<thead>
<tr>
<th>Team or Team Channel</th>
<th>Purpose</th>
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<tbody>
<tr>
<td><strong>Team: ES1050 21-22 Main Site</strong></td>
<td>Host course wide resources (files, videos, announcements, discussion forums)</td>
</tr>
<tr>
<td><strong>Channel: General Q and A</strong></td>
<td>Course wide Q and A – General questions relevant to all sections</td>
</tr>
<tr>
<td><strong>Channel: Fall Project Resources</strong></td>
<td>Q and A, files, special announcements associated with the Fall Project</td>
</tr>
<tr>
<td><strong>Channel: Official Announcements</strong></td>
<td>Course wide announcements – requests for clarification on announcements possible</td>
</tr>
<tr>
<td><strong>Channel: Winter Project Resources</strong></td>
<td>Q and A, files, special announcements associated with the Winter Project</td>
</tr>
<tr>
<td><strong>Team: Workshop 001-006 Section</strong></td>
<td>Host for Workshop Section specific announcements and resources. <em>Mostly likely used to share section specific scheduling instructions or host virtual classes under lockdowns or for guest presentations.</em></td>
</tr>
<tr>
<td><strong>Team: ES1050 Studio 11-26 2021</strong></td>
<td>Host for Studio specific announcements and resources. Also acts as the parent Team Site for private student project team channels. Allows us to pivot online if there is a shutdown.</td>
</tr>
<tr>
<td><strong>Channel: SXTY (X and Y will vary by Studio and student team)</strong></td>
<td>Private channels for all student teams to hold all files, chats, messaging, host virtual meetings and support virtual engagement in case of a shutdown or illness.</td>
</tr>
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</table>

**ES1050 is a team learning experience.** Students are encouraged to support each other's learning by asking good questions and giving good answers in the forums. Course questions or requests for clarification must be posted in the appropriate forum to be responded to and will be ignored if sent directly to instructor’s email addresses. Private/confidential messages (e.g. about marks, individual academic accommodations ...) can be sent to instructors through MS Team Chat functionality or by email. Instructors reserve the right to edit, remove messages or copy over select parts of private chats that are generally relevant to the course student body.

7 **Methods of Evaluation**

ES1050 is a full year course and thus has twice the grading weight as most single term courses on your transcript. To keep this weighting clear the grading breakdown for the course is calculated out of 200.
## Mandatory Course Elements:

Successful completion of ES1050 requires demonstrating at least a minimum level of competence or capability in multiple areas. To pass the course students are required to:

1. Get an overall passing grade in the course
2. Get a passing mark for their combined Individual Teamwork project components
3. Get a passing mark for their combined Individual Design Process project components
4. Complete and submit a Western WHMIS Training Certificate – worth 2 marks (1%) in individual assessments if completed by the end of September (details will be posted on OWL)
5. Complete Level 1 Shop Training – worth 2 marks (1%) in individual assessments if completed by the end of September (details will be posted on OWL)

### 7.1 Fall Project

- Students are assigned to teams of ~5-6 for the term.
- Reduced weighting to allowing time to develop team and design skills in a lower risk situation.
- Teamwork marks are awarded individually and are based on 1) Participating in the team feedback surveys, 2) Individual teamwork reflections, and 3) Averaged team feedback assessment ratings.
- Design Process marks are awarded individually and are based on individual student’s design critique portfolios assembled over the term.
- Project Deliverables marks are awarded to the team as a whole for completing project deliverables.
- Studio Instructors reserve the right to adjust teamwork marks based on their own observations and team documentation.
7.2 Winter Project
The Winter Project proceeds in a similar fashion as the Fall Project but efforts are made to assign students to new teams based on student expression of interest toward the designated project areas. Working with different people in a new team further develops teamwork skills. The Winter Project is expected to include work for clients and is worth more to allow students to earn marks based on their more advanced, yet still developing, Team, Design and Communication skills.

7.3 Individual Assessments
Individual exercises associated with the Workshop sections are designed so that students can acquire, practice, and receive feedback on skills and knowledge required to successfully contribute to team design projects and their future practice. Model solutions for these exercises will be released approximately 1 week after the exercises are released. **Students are responsible for doing the exercises, vetting their understanding of the material using the model solutions and getting assistance where needed.**

Summative assessments may be organised during course time (generally tutorial time) to assess, under time limited conditions, the student’s mastery of the lesson material.

7.4 Contribution Marks
Contribution marks are earned for completing pre-Workshop activities, quizzes, post-Workshop reflections, and other individual deliverables ensuring skills or knowledge are sufficiently developed and practiced to ensure they are applied **in support of team efforts** on the design projects. These deliverables will be clearly indicated in OWL Lessons and course announcements.

7.5 Regrade Requests
Regrade requests may **NOT** be submitted until after 24-hours following the release of marks for an assessment. Use this time to make sure you understand the feedback you were given before asking for a regrade. Regrade requests will only be accepted within a 7-day period following the first 24-hours after marks are returned (i.e. days 1 through 8).

7.6 Bonus Mark Opportunities
7.6.1 Psychology Teamwork Research Surveys
ES1050 partners with the Psychology department to deliver team skills training and complete teamwork related research studies. Four team surveys will be administered by the Psychology Department during the year and participation in these surveys can earn up to 2% in bonus marks.

7.6.2 Endorsed Engineering Events
Engineering Competitions and Events are periodically organised with the blessing of the Faculty of Engineering. Bonus marks may be offered for participation in some of these that are determined to be well aligned with the course learning objectives. The **Western Engineering Competition** is one of these for the 2021-22 Academic year.

7.7 Late Submissions and SRAs (Self-Reported Absences)
It is the student’s responsibility to ensure that all assignments are submitted to the specified location on or before the specified due date. **Assignments will be accepted up to an hour late with a flat penalty of 20% of the assignment mark.** Assignments submitted over an hour late will not be accepted without official accommodations.
Students choosing to self-report an absence for academic considerations (SRA) as outlined in [https://registrar.uwo.ca/academics/academic_considerations/](https://registrar.uwo.ca/academics/academic_considerations/) will be granted a 48-hour extension in OWL and do not need to follow up with instructors by email.

Some individual assessment modules (e.g. Excel, Onshape, WHMIS, Shop Level 1 Theory …), as indicated in their descriptions, will have extended (multi-week) deadlines for completion. **These will not be accepted late at all**, without officially approved accommodation. Note: SRAs will NOT be accepted for these elements either so do not leave these to the last minute.

To ensure consistency between Studio sections, marks for projects and assignments may be normalized. The procedure for normalizing marks will be made available, if necessary.

7.8 Use of English
In accordance with Senate and Faculty Policy, students may be penalized up to 10% of the marks on all assignments, tests and examinations for the improper use of English. Additionally, poorly written work may be returned without grading. If resubmission of the work is permitted, it may be graded with marks deducted for poor English and/or late submission.

7.9 Cheating
University policy states that cheating, including plagiarism, is a scholastic offence. The commission of a scholastic offence is attended by academic penalties that might include expulsion from the program. If you are caught cheating, there will be no second warning. Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, in the relevant section of the Academic Handbook: [http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf)

**Plagiarism:** Students must write their essays and assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Penalties for plagiarism on reports will start with, but are not limited to, partial or complete loss of marks on the assignment.

All required papers may be subject to submission for textual similarity review to commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted will be included as source documents on the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between the University of Western Ontario and Turnitin.com ([http://www.turnitin.com](http://www.turnitin.com)).

7.10 Attendance
Any student who fails to attend 80% of a course component, or in the opinion of the Studio Instructor, is absent too frequently from lecture/Workshop, laboratory/Studio, or other course instructional sessions shall be removed from their project team and required to meet with the Course Coordinator. The meeting will review the reasons for the student’s absences and establish consequences and any conditions that must be satisfied for the student to return to active participation in team elements of the course. The outcome of the meeting will be summarized and communicated to the Assistant Dean, First Year Studies, to be included in the student’s file. On the recommendation of their Studio Instructor, and with the permission of the Assistant Dean, First Year Studies, the student can be debarred from further participation in the course and from sharing in any marks from ongoing team project work.
Student’s choosing to self-report absences for academic considerations as outlined in
https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Consideration_for_absences.pdf must
ensure they do not fall below attendance thresholds set to ensure fair team contributions and are strongly
recommended to discuss any needs for prolonged or multiple absences with their Studio instructor and/or the
Undergraduate Office.

Some activities cannot be made-up if missed, including community partner meetings, specialized Workshops or
Studio sessions. If the missed session had course grading elements associated with it, students are expected to
communicate with their Studio instructor (for Studio related activities) or course coordinator (for all other
activities) to address grading expectations.

7.11 Sickness and Other Problems
Students should immediately notify their Studio Instructor by private communication if they have any problems
that could affect their performance in the course. Immediate notification is required to ensure teamwork
components of the course are not adversely affected. If the Studio Instructor does not respond within 1 business
day students should contact the course coordinator or the Undergraduate Services Office, SEB 2097. Where
appropriate, the problems should be documented. The student should seek advice from their Studio Instructor
about how to deal with the problem as it relates to their performance and their team’s performance in the
course.

For more information concerning medical accommodations, see the relevant section of the Academic Handbook:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_medical.pdf

For more information concerning accommodations for religious holidays, see the relevant section of the Academic

8 Student Conduct & Behaviour
Students are expected to arrive at course sessions on time, and to conduct themselves during class in a
professional and respectful manner that is not disruptive to others. Please turn off your cell phone before
coming to a class, tutorial, quiz or exam. On the premises of the University or at a University-sponsored
program, students must abide by the Code of Student Conduct:
https://www.uwo.ca/univsec/pdf/board/code.pdf

8.1 Notification
Students are responsible for checking their university email account (@uwo.ca) and the course announcement
channels regularly to receive notices posted by the Instructors regarding the ES 1050 course. When
communicating with instructors by email, students are required to use their university email account.

8.2 Consultation
Students are encouraged to discuss problems with their Teaching Assistants (TAs) and/or Studio Instructor
during Studio or Team Meeting sessions. Additional consultations will be arranged for students to meet Studio
Instructors and Teaching Assistants upon request.

Students are expected to use the appropriate course MS Teams channels to ask any general course content
related questions (e.g. logistics, assessment clarifications, variations or alternate approaches, …) and to only use
private chats and emails to address private issues (e.g. course marks, accommodations …). Students are strongly
couraged to support each other in the forums and course instructors will moderate and correct responses in
the forum for the benefit of all students. Last minute questions (24 hours before a deadline) about assignments will not be addressed by instructional members.

**Unprofessional behavior** in forums, online or in class spaces, including posting of abusive, inappropriate, or otherwise objectional content, will be cause for any or all of the following: being called to explain their actions with instructors or the course coordinator, loss of Contribution marks, being banned from participating in discussion forums, documentation of the infraction being added to the student’s record, referral to the Assistant Dean and further penalties as outline in the University Code of Student Conduct.

8.3 **Accessibility and Support Services**

Please contact the course coordinator if you require material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Services for Students with Disabilities (SSD) at 661-2111 x 82147 for any specific question regarding an accommodation.

**Support Services:**

- Student Development Centre, [http://www.sdc.uwo.ca/](http://www.sdc.uwo.ca/)
- Engineering Undergraduate Services, [http://www.eng.uwo.ca/undergraduate/](http://www.eng.uwo.ca/undergraduate/)
- USC Student Support Services, [http://westernusc.ca/services/](http://westernusc.ca/services/)

Students who are in emotional/mental distress should refer to Mental Health @ Western, [http://www.health.uwo.ca/mental_health/](http://www.health.uwo.ca/mental_health/), for a complete list of options about how to obtain help.

8.4 **Device Use**

Laptops or mobile devices can support your learning in this course, but they can also be a source of distraction for you and other students around you when physically collocated. Please turn off all sound notifications before you enter face-to-face sessions. You are welcome to use your devices for course-related activities such as taking notes, researching lecture topics, collaborating on group projects, viewing documents in OWL, and communicating with other students about the course material. You are not permitted to use these devices for any non-course-related activities. During activities that do not require these devices, such as group discussions, you are expected to close or put them away. If you have concerns or comments about how the use of laptops or mobile devices is affecting your learning during the course, please make an appointment to talk with the course coordinator.

8.5 **Recordings**

The course intellectual content belongs to the instructors and/or the Faculty of Engineering. The recording of audio, video or pictures by students is strongly discouraged for privacy reasons. Recordings made with instructor’s permission are strictly limited for use in study for this course and may not be shared without express permission. Any recording of course activities taken by course instructors will only be used to improve course delivery, instructional content or feedback to students, unless otherwise notified. This may include, but is not limited to, a) videos of student presentations for presentation skills feedback, b) pictures of project displays or deliverables for instructional feedback and c) pictures or video of Workshop activities for illustrating future instructional material.

Photos and videos will be taken at major course events to promote public engagement at future events, to promote Western University’s Engineering program, and to improve instructional materials for future ES1050 courses. Student’s wishing to discuss the collection and use of recordings during course activities should contact the course coordinator.
Remote Learning Session Recordings: Some of the remote learning sessions for this course may be recorded to support students’ study of the material and evaluations where synchronous participation in the course element is not possible or reliable. The data captured during these recordings may include your image, voice recordings, chat logs and personal identifiers (name displayed on the screen). The recordings may be disclosed to other individuals participating in the course for their private or group study purposes. Please contact the instructor if you have any concerns related to session recordings.

Participants in this course are not permitted to record the sessions, except where recording is an approved accommodation, or the participant has the prior written permission of the instructor. Students are not allowed to disclose any recordings or their content to anyone not participating in the course without written authorisation from the instructor.

9 Course Revisions
The instructors reserve the right to adjust course content and/or delivery if required to meet faculty, program and course academic objectives or to respond to unanticipated events.

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, all remaining course content will be delivered entirely online, either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). The overall grading scheme will not change. Any remaining assessments will be conducted online at the discretion of the course instructor.

10 Year Over Year Changes
To improve the learning outcomes of this course the following course changes have been made: (list is not exhaustive)

- Shift to competency-based evaluation and minimal performance requirements for Teamwork Skills and Design Process skills (see Section 7)
- Shift to multi-week deadlines for submission of Excel and Solid Modelling assessments.
- Shift to using OWL and MS Teams to deliver the course (eliminating Piazza and Zoom).
- Expanded use of Peer Feedback (using ComPAIR) to support formative learning opportunities
- More emphasis on formative feedback with select project deliverables marking.

The document “INSTRUCTIONS FOR STUDENTS UNABLE TO WRITE TESTS OR EXAMINATIONS OR SUBMIT ASSIGNMENTS AS SCHEDULED” is part of this course outline.