

**Simon Fraser University
SCHOOL OF ENGINEERING SCIENCE**

ENSC 405W: Project Documentation, User Interface Design, and Group Dynamics

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Webpage: <http://www2.ensc.sfu.ca/~whitmore/courses/ensc305/> (in transition to:
<http://www2.ensc.sfu.ca/~whitmore/courses/ensc405W/>)
405W TAs: Neha Chhatre, nchhatre@sfu.ca; Shaun Fickling, sficklin@sfu.ca
Classrooms: SWH 10041 on Mondays (08:30-10:20) & Fridays (08:30-10:20)

Overview: ENSC 405W (*Project Documentation, User Interface Design, and Group Dynamics*) is a communication course integrated with ENSC 440 (*Capstone Engineering Science Project*) offered in the following semester. Note that you are required to complete both ENSC 405W and ENSC 440 in consecutive semesters. Further note that you are not permitted to enroll in a Co-op semester while taking ENSC 440. The instructional approach taken in our classes will be a combination of workshops, lectures, and team presentations.

Topics covered include the following: group dynamics, dispute resolution, project management, collaborative writing, group oral presentations, engineering design processes, engineering standards, entrepreneurship, and shop safety. In addition, this course will examine the organizational, format, and content requirements for a range of documents written within the project setting: proposals, requirements specifications, design specifications, progress reports, user manuals, and engineering journals. By the end of ENSC 405W/440W, you will have a sound understanding of the Engineering design process as well as the documentation and group work which enables that process.

As well as meeting part of the *Capstone Project Course* requirements of the Canadian Engineering Accreditation Board, ENSC 405W also fulfills the SFU requirement for an upper division W Course.

Evaluation: The documents you produce for 405W are graded by the course instructors and TAs for content, organization, format, and style. The following is a breakdown of the grading for this course:

Due Dates	Assignments	Length	Weighting
Throughout	Professionalism & Class Attendance	N/A	10%
Weds, Jan 31	Project Proposals	15-20 pages	10%
Weds, Feb 07; Weds, Apr 11	Teamwork Inventories (X2)	N/A	P/F
Mon, Feb 19; Wed, Feb 21 & Mon, Mar 26; Wed, Mar 28	Design Progress Meetings (X2)	15 mins/team	10%
Weds, Feb 21	Requirements/Functional Specifications	15-20 pages	15%
Weds, Mar 28	PoC Prototype Design Specifications	15-20 pages	15%
Weds, Mar 28	UI Design Appendix	5-10 pages	10%
Weds, Mar 28	440 Project Planning Appendix	5-10 pages	10%
Mon, Apr 09	Engineering Journals	Varies	10%
Mon, Apr 09	Poster Presentation/Demo	4 hours	10%

Documents must be submitted by 11:59 PM on the due date (as .pdf attachments to whitmore@sfu.ca). **Late documents are penalized 10% per day late (or part thereof).** Each team is permitted one free late (maximum 3 days), which may only be used for the requirements or the design specifications.

Assignments for ENSC 405W are graded from A+ (96-100%) to F (0-50%). The grading rubrics and examples for the proposal, functional and design specifications, meeting minutes, and engineering journal are posted on the course website. Please read the rubrics and example documents carefully as no rewrites will be permitted. The following table provides the grade equivalencies at SFU:

Letter Grade	Definition	GPA	Percentage
A+	Excellent Performance	4.33	96-100
A		4.00	91-95
A-		3.67	86-90
B+	Good Performance	3.33	81-85
B		3.00	76-80
B-		2.67	71-75
C+	Satisfactory Performance	2.33	66-70
C		2.00	61-65
C-	Marginal Performance	1.67	56-60
D	Unsatisfactory Performance	1.00	51-55
F		0.00	00-50

Individual grades may be adjusted up or down for 405W depending upon the results from the two teamwork inventories completed during the semester. The grades for professionalism/attendance (10%) and the engineering journals (10%) are also assessed on an individual basis.

Note that your attendance to all scheduled ENSC 405W lectures is mandatory for you to receive full marks for Professionalism. Attendance will be taken. Please ensure you arrive on time (chronic lateness will be penalized). Except in the case of documented extenuating circumstances or after one free absence, each missed ENSC 405W class results in a 50% deduction for lack of professionalism (3 missed classes = 0% for attendance). Similarly, failure to submit the two required Teamwork Evaluation Inventories on the specified due dates will result in a 100% deduction for teamwork.

Required Textbooks: In order to complete the UI Design Appendix (for the Design Specifications), you will need to consult a copy of *The Design of Everyday Things*, Don Norman, Basic Books, New York, NY, 2013. Multiple soft copies are available at the SFU Library, so you do not need to purchase a copy: <http://search.lib.sfu.ca/?q=the%20design%20of%20everyday%20things>.

Manage. Lead. Transform., Shakeel Akhtar & Ayesha Hakim, Amazon, 2017. This book is available from Amazon.ca, costs \$10.99 and is required for the 440 Project Planning Appendix.

Deliverables: You are required to submit **ALL** the following documents in the specified format in order to complete the course:

- Proposal, Requirements Specification, Design Specification – as e-mail attachments **in .pdf format** (*Adobe Acrobat*)
- Engineering Journals – **in lab books** (*submitted during poster presentations*).
- Teamwork Inventories – as an e-mail attachment in **.pdf format**.
- Poster Presentation – as an e-mail attachment in **.pptx format** (*Microsoft PowerPoint*).

All project documents are required by the School of Engineering Science and the Canadian Engineering Accreditation Board (CEAB) to be posted on the website. In exceptional circumstances, you may request that your documents remain confidential for a **maximum of one year** following completion of the course. To request that your documents remain confidential, you must submit a written request that outlines the intellectual property you are trying to protect and a timeline for completing a prototype and seeking patent protection. Please make a confidentiality request only if you seriously intend to take your product to market.

Academic Integrity: As with all courses at SFU, you are expected to follow proper citation and referencing practices in ENSC 405W (see the SFU *Code of Academic Integrity and Good Conduct* - <http://www.sfu.ca/policies/gazette/student/s10-01.html>). This means that you must cite and reference the sources for any material that you have taken from journals, books, and websites in your documentation.

The sources for short quotations, paraphrases, figures, and tables must be clearly cited in the text of the documents using the IEEE format. More lengthy material, such as copies of standards, should be placed in appendices which clearly indicate the source. Complete reference lists are also required.

Failure to follow proper citation and referencing practices will result in a grade of 0 for the specific team-written document involved (as well as the requirement to revise and resubmit the document). A second infraction will result in a recommendation of an F for ENSC 405W. Any penalties assessed will apply to all team members as everyone is responsible for reviewing team documents to ensure that they comply with academic practice. Ensure you carefully review all team documents for compliance.

Submitting a faked engineering journal will result in a grade of 0 for that assignment. Fakery can include such infractions as removing pages in your journal or compiling your journal at the end of the semester from on-line material or from memory. Your journal must be generated throughout the semester. You may be required to submit your journals at any point in the semester.

Please see the following page for a tentative class schedule. Updates will be e-mailed to the course maillist.