

APS100H1F: ORIENTATION TO ENGINEERING - COURSE SYLLABUS FOR FALL 2016

COURSE OBJECTIVES

This course is designed to help students transition into first-year engineering studies and to develop and apply a greater understanding of the academic learning environment, the field of engineering, and how the fundamental mathematics and sciences are used in an engineering context. Topics covered include: study skills, time management, problem solving, successful teamwork, effective communications, exam preparation, stress management and wellness, undergraduate research, extra- and co-curricular involvement, engineering disciplines and career opportunities, and applications of math and science in engineering.

INSTRUCTORS

Micah Stickel (Course Coordinator), Dean's House BA1009, 44 St. George Street, m.stickel@utoronto.ca
Leslie Grife, Galbraith Building, GB170, grife@ecf.utoronto.ca
Cori Hanson, Galbraith Building, GB170, cori.hanson@ecf.utoronto.ca

SUGGESTED READINGS

There is no required textbook for this course. You may find these books to be useful references for this course and your other first-year courses.

- 1) Krista Donaldson, *The Engineering Student Survival Guide*, 3rd Ed., Boston, MA: McGraw-Hill, 2005
- 2) Elizabeth A. Stephan, et. al., *Thinking Like an Engineer*, 3rd Ed., Boston, MA: Pearson, 2015
- 3) Thomas R. Klassen and John A. Dwyer, *How to Succeed at University (and Get a Great Job!)*, Vancouver, BC, UBC Press, free ebook available [here](#).
- 4) Cal Newport, *How to Become a Straight-A Student*, New York, NY: Three Rivers Press, 2006

The first book is available for short-term loan from the Engineering Library and the First-Year Office (GB170) has a few of copies of this book also available for short-term loan.

COURSE MARKS

Final Test - 30%, Term Work - 25%, Tutorial Engagement - 24%, In-Class Questions (Top Hat) - 12%, Online Discussion – 5%, DELNA Quiz – 2%, Student Assessment Survey – 2%, Max. Total: 100%. Final course grade will be based on the following system: Fail (F) 0% - 59%, Pass (P) 60% - 80%, High Pass (H) 80% - 100%. **To pass the course, you must achieve a passing grade ($\geq 50\%$) on the Final Test.**

FINAL TEST

- There will be a final test for the course on Tuesday, December 6th from 1-2 PM.
- The test will cover material related to engineering ethics and professional practice, fundamentals of engineering problem solving and time mapping, and will ask you to reflect on some of the experiences you have had in the classes and/or tutorials.

ONLINE DISCUSSION

- A few times during the course you will have the opportunity to respond to questions that we post to an online discussion forum. We will ask that you each provide a brief response and engage in the subsequent discussion.

TUTORIALS

- The weekly tutorials will be one-hour long and **start the first full week of class (Sept. 12-16)**.
- The tutorials will be run by your own upper-year undergraduate teaching assistant (TA) mentor.
- These mentors will help guide you through the course material and exercises and provide you with support throughout your first-year experience.

TOP HAT QUESTIONS

- Throughout the term, you will be asked to participate in class by answering Top Hat questions.
- All of you should be able to access the Top Hat course website by going to www.tophat.com and creating an account with Top Hat. During the first lecture we will have you sign into the appropriate course site. **When asked for your Student ID by Top Hat you MUST enter your U of T student number (i.e., the ten digit number.)**

COURSE WEBSITE AND PIAZZA

- The course Blackboard website is accessible through the main UofT portal (<https://portal.utoronto.ca>). Under your “My Courses” tab you should all have the course, [Fall-2016-APS100H1-F-LEC0101.LEC0102.LEC0103.LEC0: APS100 - Orientation to Engineering](#). All of the communication and handouts will be found at this site.
- Your learning in this course will also be heavily supported through the online discussion forum known as *Piazza*. You can sign up to this Piazza site for this course at: <https://piazza.com/utoronto.ca/fall2016/aps100>.

APS100H1S – COURSE SCHEDULE 2016

Week	Date	Course Work (Subject to Change, as of September 8 th)	
1	Sept. 8 – 9	No Lectures	No Tutorials
2	Sept. 12 – 16	Lecture #1 <i>Introduction to the Faculty (FASE)</i> Course Introduction, Faculty Support, Departments and the First-Year Curriculum	Tutorial #1 Introductions Weekly Workload and Two-Week Plan
		DELNA Quiz – This 30 minute online test will be written during the week of Sept 12 – 16. Further details will be posted.	
3	Mon., Sept. 19 th	Two-Week Plan Part 1 – Due by 11:59 PM Monday, September 19 th	
	Sept. 19 – 23	No Lectures	Tutorial #2 Syllabus into Action
4	Mon., Sept. 26 th	Two-Week Plan Draft – Due by 11:59 PM Monday, September 26 th	
	Sept. 26 – 30	Lecture #2 <i>The Engineering Academic Environment</i> The Learning Continuum/Effective Learning Preparing for Tests and Exams	Tutorial #3 Tips for Writing Tests Stress Reduction
5	Oct. 3 - 7	No Lectures	Tutorial #4 Academic Integrity Academic and Student Codes of Conduct
6	Mon., Oct. 10 th	Thanksgiving Day – All Classes Cancelled	
	Tues., Oct. 11 th	Two-Week Plan Reflection – Due by 11:59 PM Tuesday, October 11 th	
	Oct. 10 – 14	Lecture #3 <i>How Engineers Think?</i> Engineering Problem Solving	No Tutorials – TA Office Hours
7	Oct. 17 - 21	No Lectures	Tutorial #5 Problem Solving Strategy put Into Action
8	Oct. 24 – 28	Lecture #4 <i>How Engineers Think?</i> Mathematics in Engineering	Tutorial #6 Test Review Strategies Defining Personal Success
9	Oct. 31 – Nov. 4	No Lectures	Tutorial #7 One-Minute Presentations
10	Nov. 7 - 11	Lecture #5 <i>Engineering Disciplines</i> Interactive Presentations of the Core 8	Tutorial #8 Engineering Grand Challenges Values, Mission, and Goals
11	Nov. 14 - 28	No Lectures	Tutorial #9 Professional Ethics
12	Nov. 21 - 25	Lecture #6 <i>Engineering Careers and Leadership</i> Skills Necessary for Career Success	Tutorial #10 Developing your Resume
	Mon., Nov. 21 st	Engineering Ethics Case Study – Due by 11:59 PM, Monday, November 21 st	
13	Nov. 28 – Dec. 2	No Lectures	Tutorial #11 Course Summary and Next Steps
	Mon. Nov. 28 th	Resume Draft – Due by 11:59 PM Monday, November 28 th	
14	Tues., Dec. 6	Final Course Test – Tuesday, December 6 th 1 – 2PM	