

ECOR 1010

Introduction to Engineering

Lecture 1

Glenn McRae PhD, P.Eng.

Who am I? (besides your instructor)



- Glenn McRae, Ph.D. (UBC), P.Eng.
- Joined Mech & Aero Eng. Dept. at Carleton in July 2009
- Previously worked at
 - Jet Propulsion Laboratory (Caltech) for 3 yrs
 - Atomic Energy of Canada Ltd. for 22 yrs.
- Current Research:
 - Cracking and degradation of metals used in nuclear reactors
 - Targets for cyclotron production of ^{99m}Tc
 - Biofuel from organic wastes

Also teach: MAAE 2400 Thermodynamics & Heat Transfer;
MAAE 4906C Corrosion;
MAAE 4906E and MECH 5203 Nuclear Engineering

ECOR 1010: Course Objectives

Calendar Description: Technology, society and the environment. Graphical design communication: sketching, graphical projections; CAD. Managing data: statistical methods; spreadsheets. Design analysis: matrix programming software; symbolic computer algebra systems. Design process: proposals; reports; presentations; reporting software.

- To introduce “engineering”
- 5 major components to ECOR 1010:
 - Professional Practice
 - Health and Safety
 - Engineering Analysis
 - Engineering Design
 - Technology, Society and the Environment (TSE)

cuLearn

- For ECOR 1010:
 - Lecture slides
 - Support materials
 - Laboratory assignments (9) (download and upload)
 - Project assignment (1) (download only)
 - Marks
- Access via link on <https://carleton.ca/culearn/>
- Login: same as your **cmail account**

ECOR 1010: Lectures and Labs

([Course Outline](#) on cuLearn)

- **Lectures:**

- Two 1.5 h lectures per week (25 Lectures)
 - Professional Practice & Health and Safety
 - Engineering Analysis
 - Engineering Design
- One 1 h lecture on Fridays (10 Lectures)
 - Technology, Society & Environment (TSE)

- **Labs:**

- Two hours per week (9 Labs plus the Project)

Lecture & Lab Schedule:

ECOR 1010 Lecture & Laboratory Schedule – Fall Term 2017

Revision 1 – Sept

Available on cuLearn

Look at Due Dates

Reading Assignments

The TSE lecture topics after the midterm will be made available later: check cuLearn for updates

If there are any discrepancies between the due dates listed in the schedule and elsewhere, the due dates in the schedule are to be taken as correct. Please ask if you are not sure of the due dates.

Date (Lecture)	Lecture	Lecturers*	Topic	Chapters	Laboratories & Due Dates**
Sept. 7 (1.5 h)	Lect. 1	McRae, Laughton	Intro-Design Project–Time Management–Lab 0	1 to 3	
Sept. 8 (1 h)	TSE 1	McRae	Energy & Sustainability		
Sept. 12 (1.5 h)	Lect. 2		Engineering Introduction		Week of Sept 11
Sept. 14 (1.5 h)	Lect. 3		Engineering Reporting & Measurements	10	Lab Zero: Orientation
Sept. 15 (1 h)	TSE 2		Energy & Sustainability (con't)	9	
Sept. 19 (1.5 h)	Lect. 4		Measurements, Units & Errors	11	Week of Sept 18
Sept. 21 (1.5 h)	Lect. 5		Engineering Graphics - 1	12	Lab. 1 Engineering Reporting
Sept. 22 (1 h)	TSE 3		Engineers & Sustainability		
Sept. 26 (1.5 h)	Lect. 6		Engineering Graphics - 2	13	Week of Sept. 25
Sept. 28 (1.5 h)	Lect. 7		Engineering Graphics - 3	14	Lab. 2 Units, Dimensions & Sig. Figs
Sept. 29 (1 h)	TSE 4		Problems without Technical Solutions		
Oct. 3 (1.5 h)	Lect. 8		Design	15	Week of Oct 2
Oct. 5 (1.5 h)	Lect. 9		Creo, 3D Printing & Rapid Prototyping	16 & 17	Lab. 3 3D Drawing
Oct. 6 (1 h)			No Lecture		
Oct. 10 (1.5 h)	Lect. 10		Review for Mid-Term		Week of Oct. 9 (Oct 9 is a holiday)
Oct. 12 (1.5 h)			Mid-Term: Material from Lect. 1 to 9 & TSE 1 to 4		Lab. 4 2D Drawing- 3D Printing 2230ME
Oct. 13			No Lecture		
Oct. 17 (1.5 h)	Lect. 11		Engineering Statistics I: Measures of central tendency, histograms	11 & 18	Week of Oct. 16
Oct. 19 (1.5 h)	Lect. 12		Engineering Statistics II: Measures of spread, probability distributions	19, 21 to 23	Project: Creo Solid Modelling & STL File Preparation
Oct. 20 (1 h)	TSE 5	TBD			
Oct. 23 –Oct. 27			MidTerm Break - No Classes		
Oct. 31 (1.5 h)	Lect. 13		Estimating Population Means, Confidence Limits	19, 24	Week of Oct. 30: Project: Creo Solid Modelling & STL File Preparation
Nov. 2 (1.5 h)	Lect. 14		Regression and Correlation I	20, 25	Project STL files due Friday Nov. 3 at 16:30
Nov. 3 (1 h)	TSE 6	TBD			
Nov. 7 (1.5 h)	Lect. 15		Regression and Correlation II	20, 25	Week of Nov. 6
Nov. 9 (1.5 h)	Lect. 16		Linear Systems in Engineering and Introduction to MATLAB: Vectors & Scalars	29	Lab. 5 Univariate Data
Nov. 10 (1 h)	TSE 7				
Nov. 14 (1.5 h)	Lect. 17		MATLAB I: Matrices & Matrix Operations	30, 32	Week of Nov. 13
Nov. 16 (1.5 h)	Lect. 18		MATLAB II: Programming & Plotting	31	Lab. 6 Bivariate Data and Regression
Nov. 17 (1 h)	TSE 8	TBD			
Nov. 21 (1.5 h)	Lect. 19		Maple: Symbolic Manipulation of Equations and Calculus	33 to 37	Week of Nov. 20
Nov. 23 (1.5 h)	Lect. 20	TBD	Departmental Presentations I		Lab. 7 MATLAB I: Matrix Operations, Presentation of 3D Models
Nov. 24 (1 h)	TSE 9	TBD			
Nov. 28 (1.5 h)	Lect. 21	TBD	Departmental Presentations II		Week of Nov. 27
Nov. 30 (1.5 h)	Lect. 22		Engineering as a Profession	4 & 5	Lab. 8 MATLAB II: Programming in MATLAB, Presentation of 3D Models
Dec. 1 (1 h)	TSE 10	O. Basu	Tanzania Water Project		Reverse Engineering Design Project Report Due Dec. 1 at 16:30 in ECOR 1010 slot, grey cabinet in hall at 3135ME
Dec. 5 (1.5 h)	Lect. 23		Health & Safety	7 & 8	Week of Dec. 4
Dec. 7 (1.5 h)	Lect. 24		Wrap-Up & Review		Lab. 9 Maple, Symbolic Computations, Presentation of 3D Models
Dec. 8			No Lecture		SafeSmart must be completed on cuLearn by 16:30 on Dec. 7 Lab. 9 must be uploaded to cuLearn by Midnight Dec. 8

*Lectures will be given by Prof. McRae unless otherwise noted.

** All due dates-times are FIRM. Late submissions will NOT be accepted.

† TSE – These lectures will present specific topics related to Technology, Society and the Environment.

†† TBD – to be determined: the titles of the talks, and names of the presenters, will be given at a later date

Fall 2017 [3]

Winter 2018 [0]

	Mon	Tue	Wed	Thu	Fri
08:30					
09:00					
09:30					
10:00					
10:30					
11:00					
11:30					
12:00		ECOR 1010 C <input checked="" type="checkbox"/>		ECOR 1010 C <input checked="" type="checkbox"/>	ECOR 1010 A MC 2000 <input checked="" type="checkbox"/>
12:30		11:35 - 12:55 MC 2000		11:35 - 12:55 MC 2000	ECOR 1010 C MC 2000 <input checked="" type="checkbox"/>
13:00					ECOR 1010 B MC 2000 <input checked="" type="checkbox"/>
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15:00		14:35 - 15:55 RB 2200		14:35 - 15:55 RB 2200	
15:30					
16:00					
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17:00					
17:30					
18:00		ECOR 1010 A <input checked="" type="checkbox"/>		ECOR 1010 A <input checked="" type="checkbox"/>	
18:30		18:05 - 19:25 MC 2000		18:05 - 19:25 MC 2000	
19:00					
19:30					
20:00					
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21:00					
21:30					
22:00					

Course Outline:

Available on **cuLearn**

Shown here is the first
page. Go to **cuLearn**
and read the
complete updated
course outline
carefully !

Carleton University
Faculty of Engineering & Design
ECOR 1010: Introduction to Engineering
Fall 2017 – Course Outline

Fall Term:	Lectures 4 hours per week, laboratory 2 hours per week
Faculty Instructors:	Glenn McRae
Laboratory TA Manager:	Xiaozhou (Joe) Zhang
Reverse Engineering Project TA:	TBA
3D Print Manager:	Stephan Biljan – 2230ME

Course Description (from Undergraduate Calendar):

ECOR 1010 [0.5 credit]

Introduction to Engineering

Technology, society and the environment. Graphical design communication: sketching, graphical projections, CAD; Managing data: statistical methods; spreadsheets. Design analysis: matrix programming software; symbolic computer algebra systems. Design process: proposals; reports; presentations; reporting software.

Course Structure

A week-by-week lecture schedule, with laboratory assignments, and important deadline dates is available on the ECOR 1010 cuLearn web site (See document: Lecture Schedule 2016). Lectures will be presented by Prof. G. McRae, and various guest lecturers.

The course consists of two interrelated series of lectures. The two 1.5-hour lectures each week will introduce the engineering knowledge required for the weekly laboratory assignments; corresponding textbook chapters are included in the Lecture Schedule.

The 1-hour TSE lecture each week (the green lines in the Lecture Schedule) is devoted to presentations on Technology, Society and the Environment. Several Guest Lectures will present many of the TSE lectures. The mid-term and final exams will include questions from all lectures.



Textbook: “Introduction to Engineering”, 8th edition ISBN-13: 9781323776971

Professional Behaviour in Class

In order to ensure that all classes are carried out in a quiet and respectful environment that allows all students to learn effectively, please adhere to the following expectations. Failure to meet behavioural expectations may result in a request to leave the meeting and/or course.

- Be on time for class. Plan for the possibility of transport delays. If you are late, minimize disruption to both the instructor and other students by being quiet and finding a seat quickly.
- Laptops and mobile devices are permitted to facilitate active learning; however, please ensure that mobile devices are set to silent mode to avoid disrupting the class. Also, please do not use electronic devices to access games, facebook, twitter or other non-course-related material because it is a distraction to other students.
- If you feel affected by the behaviour of other students, then please let your Teaching Assistant or Prof McRae know about your concerns as soon as possible so that they can be addressed promptly.
- No recording of lectures is permitted without permission of the instructor.

ECOR 1010: Labs

- No Labs this week.
- Lab Zero starts next week
-  No food or drinks in Labs
 - If you are caught, you will lose lab privileges
 - Strictly Enforced
-  No cell phones, computer games, videos, etc.
 - Respect Fellow Students
 - Do not disrupt

Laboratories

- Laboratory assignments available on cuLearn
- Each laboratory is worth 2.5% of your final mark for the course
- **Must complete 7 of 9 Labs to Pass Course (min mark 1/10)**
 - Fewer than 7 means a “FND” grade
 - More than 7, take best 7 marks
 - If you get $\geq 5/10$ on 8 labs, get a bonus 2 %
 - If you get $\geq 5/10$ on 9, get an additional 2 %
- ***YOU*** should do the labs well:
 - Compared with mid-term & final exams, these are easy marks.
 - **More importantly, they are an effective way to learn course material.**

Laboratories: Submission Procedure

- Laboratories assigned one week are due within the first 30 minutes of the next laboratory period or they will be considered late
- **Late labs will not be accepted**
- Labs must be written using the template on cuLearn
- Labs are to be electronically uploaded onto cuLearn
 - Word files only

Course Evaluation

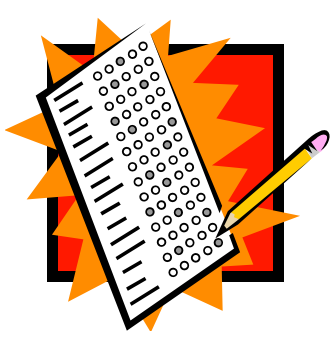
(from Course Outline)

- ECOR 1010 Introduction to Engineering
 - Laboratories (best 7 of 9) 17.5%
 - Design Project (Reverse Engineering) 10%
 - SafeSmart (cuLearn) 2.5%
 - Midterm Exam 20%
 - Final Exam 50%

100%

Bonus (the other two labs) (2-4)%

➤ For a passing grade – you must complete all of the above course elements



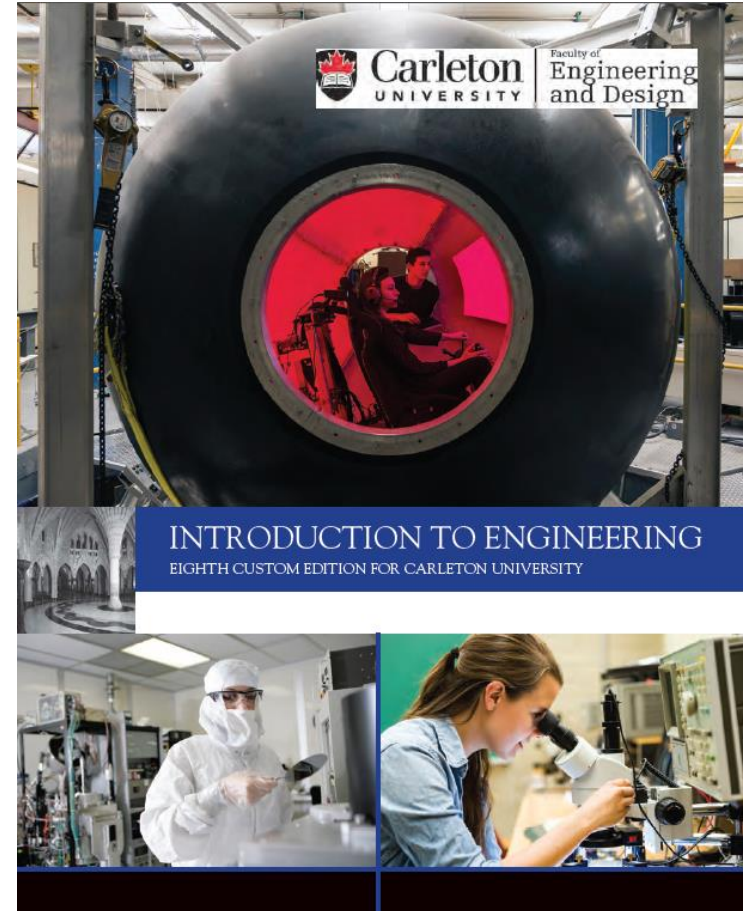
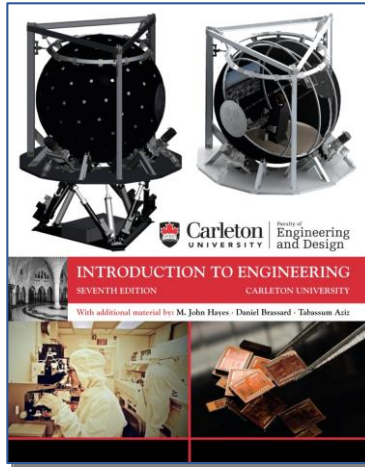
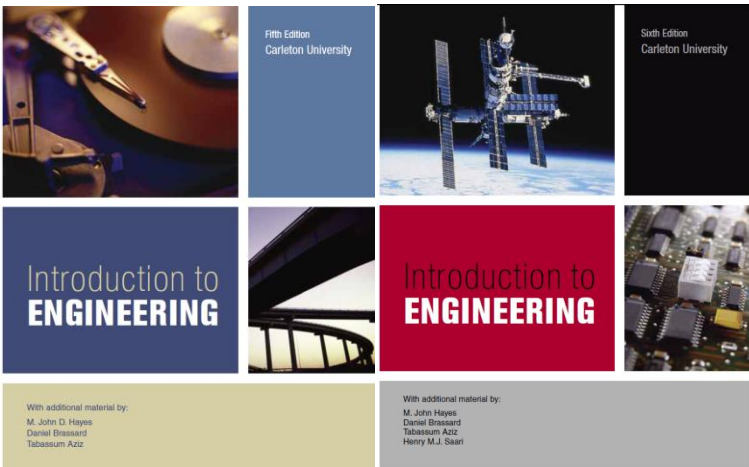
Mid-Term Exam

- Mid-Term Exam: *Thursday, 12 October 2016*
 - In class
 - 1 hour
 - \approx 30 multiple choice questions
 - Covers material in Lectures 1–9 & TSE 1-4
 - **To pass this course you MUST write the mid-term exam**
 - ***DO NOT BE LATE***
 - ***DO NOT FORGET***
 - ***BE PREPARED !***



Textbook

- Required Text
 - Introduction to Engineering, 8th edition (Bookstore, Haven Books)
 - 5th, 6th and 7th editions almost the same
 - Some errors not corrected



ECOR 1010 Design Project

Reverse Engineering and Redesign

Fall 2017

Introduction

- Reverse engineering is the process of taking an **existing product, measuring and evaluating** it, and creating a CAD database to **reproduce it**
- Redesign is modifying an existing design
- While this project is open-ended and limited only by your imagination, your grade will be based on reasonable fulfillment of the requirements
- You are encouraged to strive for excellence, but keep the notion of diminishing returns in mind

Project Groups

- You must find two partners to form a group of **THREE**
- All group members **MUST** be in the **SAME LABORATORY SECTION**
- Tell your TA who is in your group, and you will be assigned a group number that will start with your Lab Section number
- For example, A2-2 is Group 2 in Section A2

Project Requirements

- Find a one-piece, simple object that you can hold in your hand
- Reverse engineer and redesign this piece
- The piece must have some simple features such as a hole, flange, boss, etc.
- Simple solids (cube, rectangle, etc) are not acceptable
- The part can be anything: a screwdriver, a shelf bracket, a simple part found at a hardware store



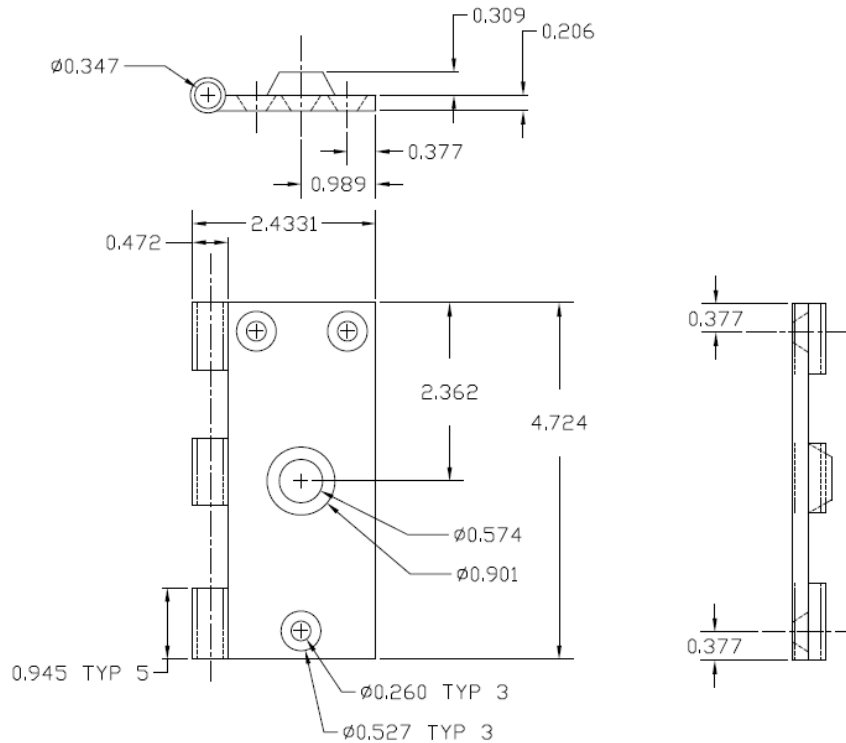
Locking door-hinge

Project Requirements

1. Determine (and indicate in your report) the **purpose** of the part. What is it called?
2. **Measure** all of the important dimensions;
3. Determine the **material** the part is made from;
4. Describe the **manufacturing process** required to go from raw material to finished part;
5. Identify one **failure mode** for your part;
6. Describe the **value and benefit** of your redesign in approximately 200 words, considering creativity, usefulness, part integrity, and aesthetics;
7. Generate a engineering drawing of the part, including all relevant dimensions;
8. Generate a rendered solid model of the part to include in the Design Report, and a scaled model converted to STL* file format;
9. Submit the STL file for printing on one of two **3D printers**.

* STL = STereoLithography

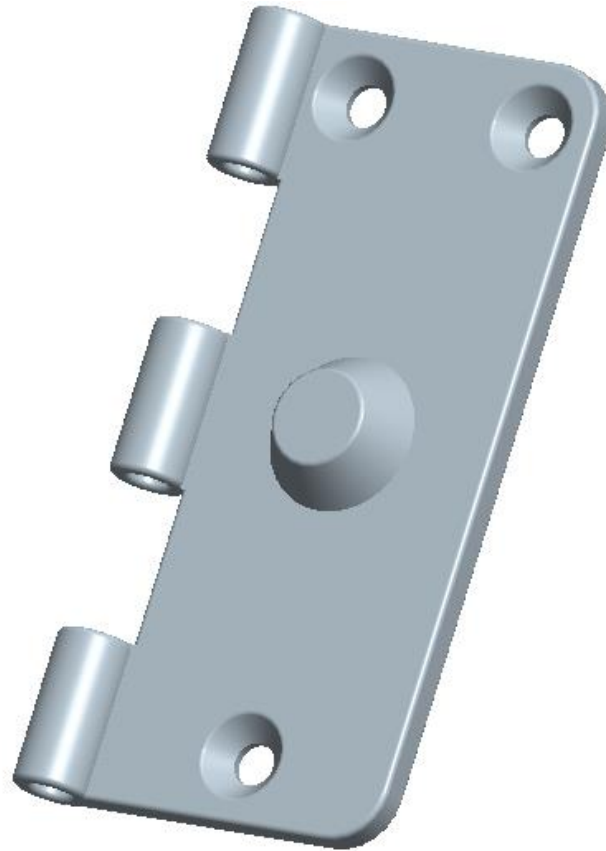
Engineering Drawing



ALL DIM = INCHES
 MATERIAL = STEEL
 ALL EDGES ROUNDED (R=0.0337)

TOLERANCES: .XXX +/- 0.0005	DRAWN BY A3-16	Carleton University	DATE: 26 NOV 2010
	STUDENT ID NUMBER:		SCALE: 1:1
HINGE		DRAWING NO: 1	

CAD Solid Model



3D Print Requirements

- Volume limits:
 - Dimensions: 1 in³ maximum material volume; Minimum thickness is 0.0625 in (1/16th in)





Disney Research



Project Deliverable Deadlines

- Project: Reverse Engineering
 - Assigned today
 - All deliverables are **COMPULSORY**
 - Deliverable Deadlines (Drop-Dead Dates)
 - STL files: 16:30 Friday, November 3, 2017
 - Report: 16:30 Friday, December 1, 2017 (ECOR 1010 slot in the metal cabinet outside room 3135ME)
- Late project deliverables will not be accepted
- Failure to complete and submit the Project will result in a course grade of 'FND'



Read, Read, Read

- Read the Project description!
- You will find it on cuLearn

SafeSmart

SafeSmart for Workplace Leaders Test

This comprehensive assessment tests knowledge of Ontario's health and safety legislation.

10 questions are selected randomly from a large bank of questions.

Please answer all questions by clicking the radio button next to the answer.

Click the test button when you are ready to begin.

Test



!! Deadlines !!

Late Lab Assignments, Design Project, SafeSmart will **NOT** be accepted

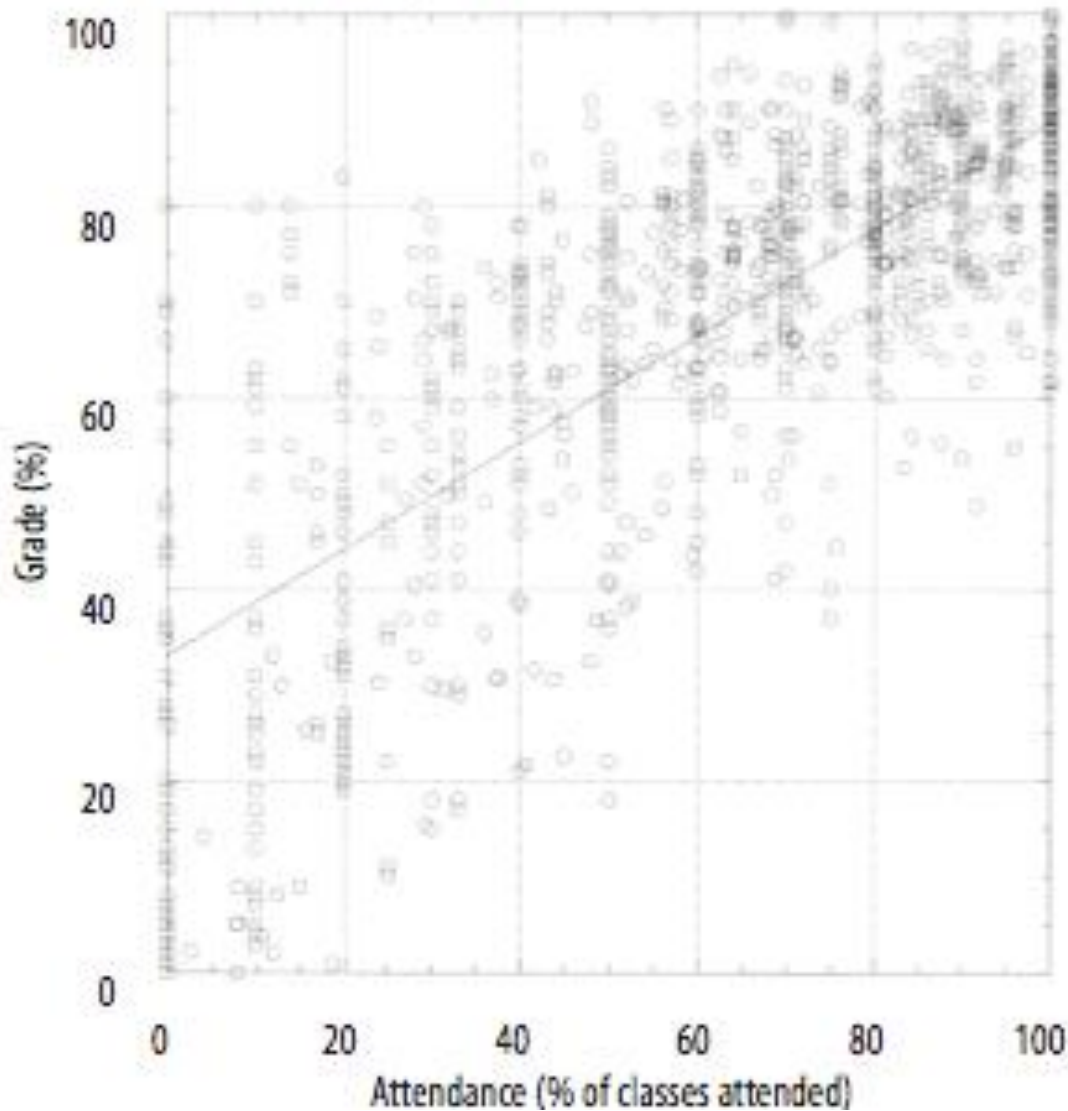
- Lab Assignments are due 30 minutes after start of next Lab Session (upload electronic copy to cuLearn)
- Design Project
 - STL file due 16:30 Friday November 3, 2017
 - Report (hardcopy in 'cabinet') due Friday, 16:30 December 1, 2017
- SafeSmart shall be completed by 16:30 Friday, December 7, 2017

University is different from high school

- Less time in class and more homework, which places greater responsibility on you
- Larger class sizes, which mean less personal attention—and often loss of focus
- Different attendance expectations, which shifts accountability from the teacher to you

Figure 1.

The relation of class attendance and course grades in our Introductory Science classes. The size of this sample exceeded 1400. The equation for these data is $y = 33.1 + 0.55x$, and the correlation coefficient (r) = 0.78.



Showing Up: The Importance of Class Attendance for Academic Success in Introductory Science Courses

Randy Moore, Murray Jensen, Jay Hatch, Irene Duranczyk, Susan Staats, and Laura Koch General College, University of Minnesota, Minneapolis, MN
(American Biology Teacher, v65 n5 p325-29 May 2003)

If You Have Questions / Difficulties ?

- Consult University Calendar
- Ask Teaching Assistant
- Visit Student Academic Success Centre
- Contact Paul Menton Centre for students with disabilities
- Contact Professor
- Contact Program Undergraduate Assoc. Chair

“Professors and TAs want you to succeed. If you need help, ask for it” Eric Duivesteyn, B.Eng. 2011

Advice from the classes of 2010&2011: If you could give one piece of advice to a first-year engineering student, what would it be?

- “Stop partying, start thinking, engineering is hard”
Alex Pharland, BEng 2010
- “If you get into the habit of going to class & doing all your work now it’s easier to time manage in the following years.” Sylvie Tremblay, BEng 2010
- “try to create good study habits as early on in your university career as possible, you will have to figure it out sooner or later, might as well be sooner.”
Michael Michalak, BEng 2010

- “Don’t copy assignments; won’t learn anything”
Marc Bacler, BEng 2010
- “Remember that in 4 years you will be expected to actually know all the subject matter you have covered. So don’t just focus on getting the assignments done, or studying enough to pass a test, make sure you actually learn the material and keep it” Matthew Parker, BEng 2010

- “Engineering is a pyramid of knowledge. By the end, all your subjects merge into one big subject: Engineering. If you don’t have a solid foundation for your pyramid, life will only get harder. So, please, master all the skills in the early years and you’ll be laughing by the end.”

Alex J. Kotler, BEng 2011

- “Hard work, diligence and team work all equal excellence in engineering in both the classroom and in the workplace.” Rich Chapple, BEng 2011

- “Stick with it! No one says its easy but it’s definitely worth it!” Alexandre Adcock, BEng 2010

- “Manage your time properly” Yogendra Sawh, BEng 2010
- “Stay on top of your coursework and topics. If done the workload and theories are very manageable, otherwise allowing them to pile up = stress!! Enjoy.”
Adrian Barber, BEng 2010
- “... if you stay disciplined you’ll learn a lot of cool things and the rewards are huge.” Damiano Alloggia, BEng 2010

Finally ...

- “I would advise 1st year students that not every class can be learnt the day before the final exam. They need the time throughout the whole term. And also, that stressing over everything isn't going to help at all.”
Anali Christina Stewart, BEng 2011

Academic Integrity

~~Cheating~~

It is your responsibility to know the rules regarding cheating. This means we do not accept “I didn’t know” as an excuse!

Academic Offences

- **Cheating: “Unauthorized Cooperation or Collaboration”**
 - Students shall not cooperate or collaborate in the completion of an academic assignment, in whole or in part, when the instructor has indicated that the assignment is to be completed on an individual basis.
 - ALL LABS ARE TO BE COMPLETED ON AN INDIVIDUAL BASIS.
- **Plagiarism:**
 - Plagiarism is presenting, whether intentional or not, the ideas, expression of ideas or work of others as one's own.

Academic Offences

- Penalties for Cheating &/or Plagiarism:
 - Expelled
 - Suspended
 - Reprimanded
 - placed on probation
 - grade penalty, including grade of F.



Reading Assignment

- Chapters 1 to 3
- Section 14 of Undergraduate Calendar on Academic Integrity
- Read Chapter 3 in the text several times: “Advice on Studying, Exams and Learning”
 - Read Chapter 3 before you *need* Chapter 3

Technology, Society & Environment

Friday lectures

What Will You Do to Help Society ?

Why Technology, Society & Environment ?

Engineer's Attributes:

- First rate *technical* knowledge ← - - - - - → engineering, science & math
- Create what has not been ← - - - - - → innovation & design skills
- Not only do things right, but know what to do ← → critical thinking & problem solving
- Connect ethical, political, international ← - - - - - → humanities / complementary studies
environmental, economic factors

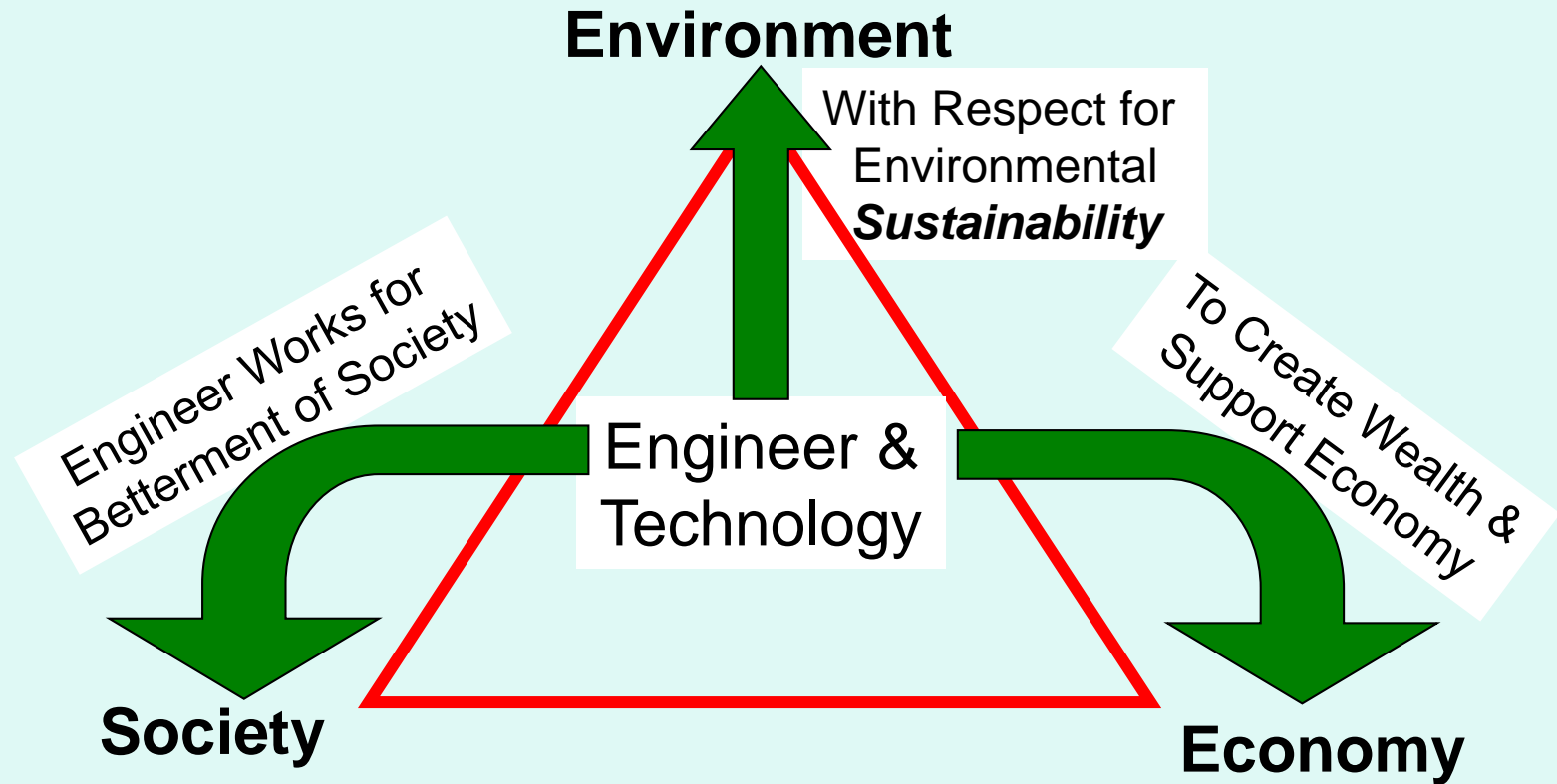
Curriculum Component:

Allows Engineers To:

- Put *technical* knowledge to work for *society*
- Catalyze private sector to create wealth



Application of Engineer's Technical Knowledge

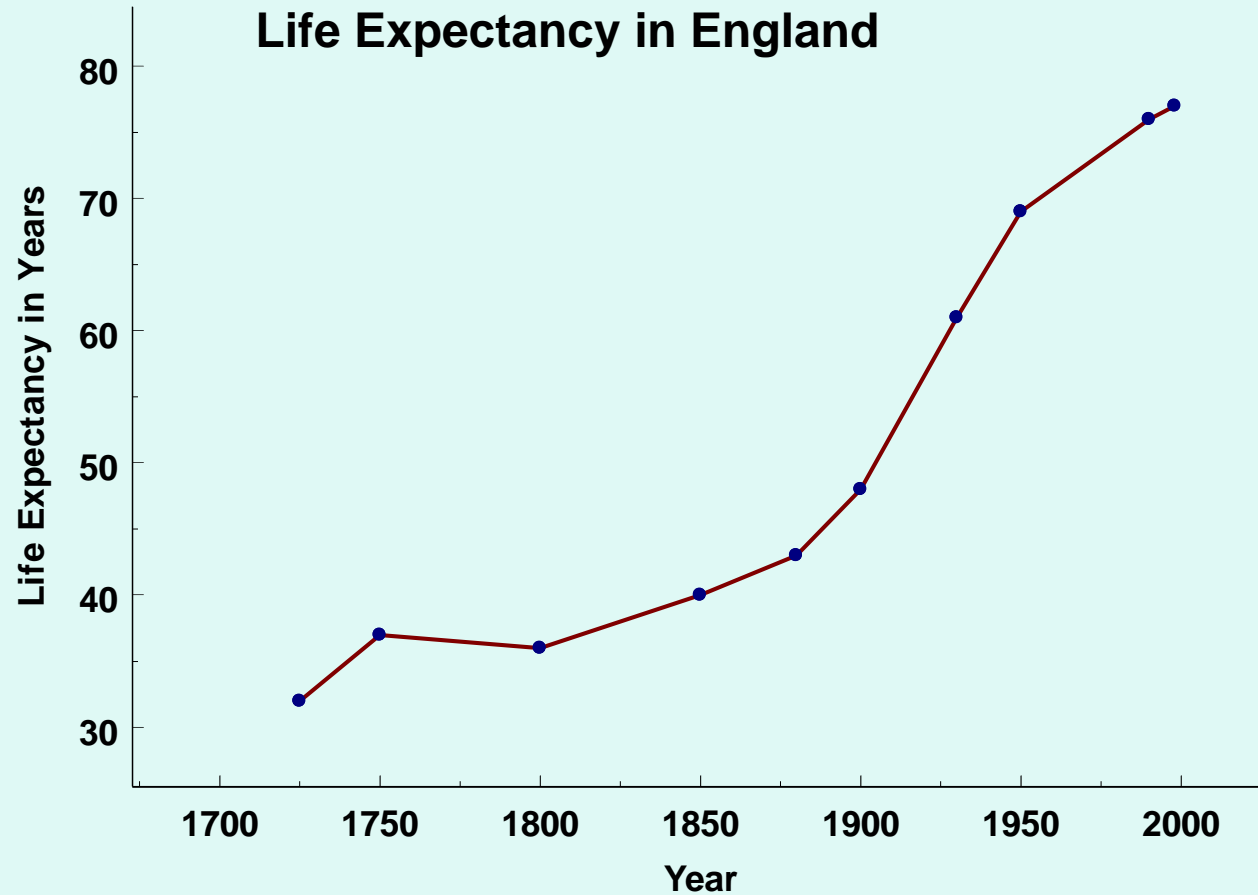


Interface between Society-Economy-Environment

Difficult task to balance all three

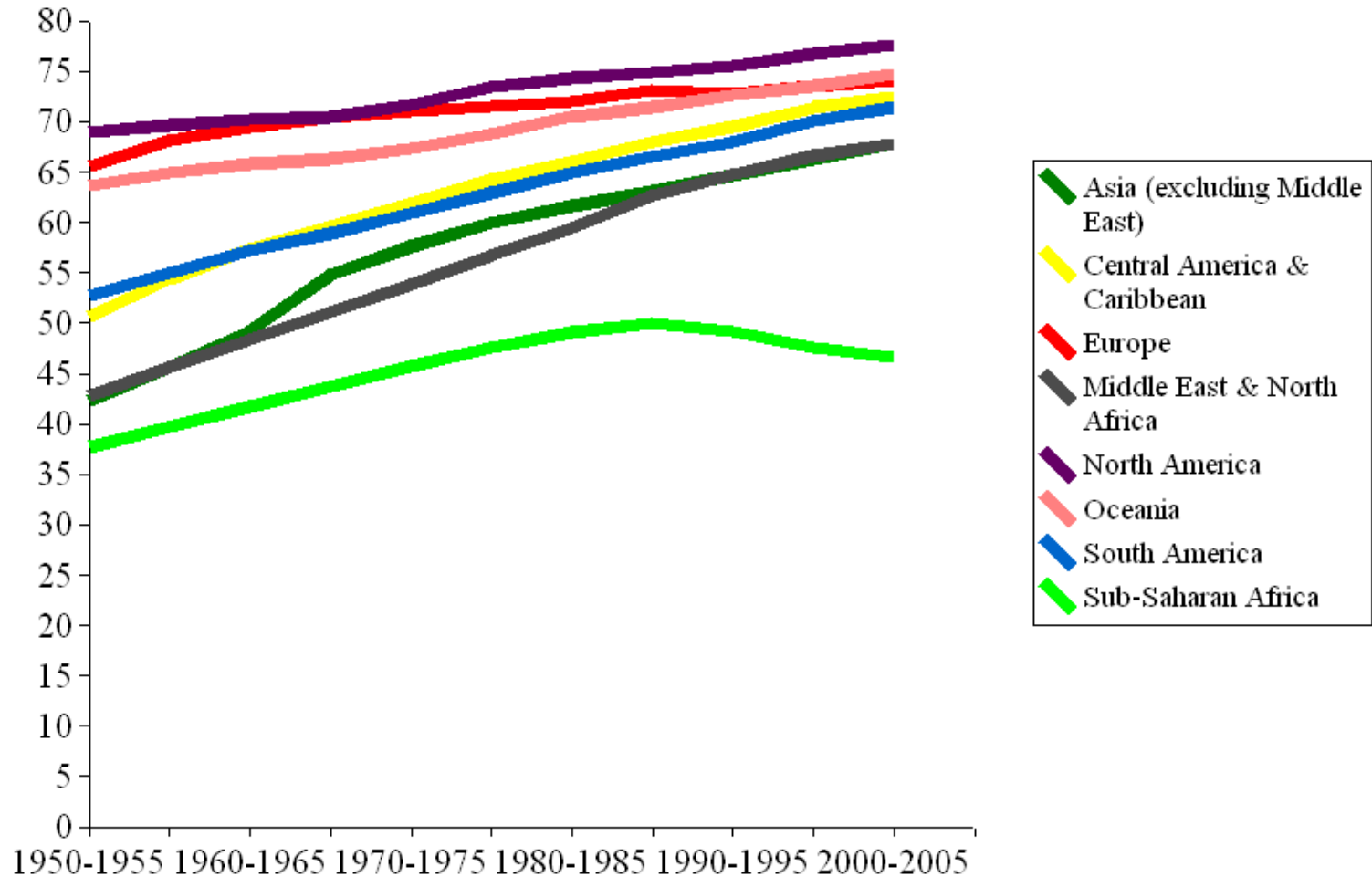
Requires Substantial '*Engineering Skill & Judgement*'

Are Engineers & Technology Making a Difference ? - 1

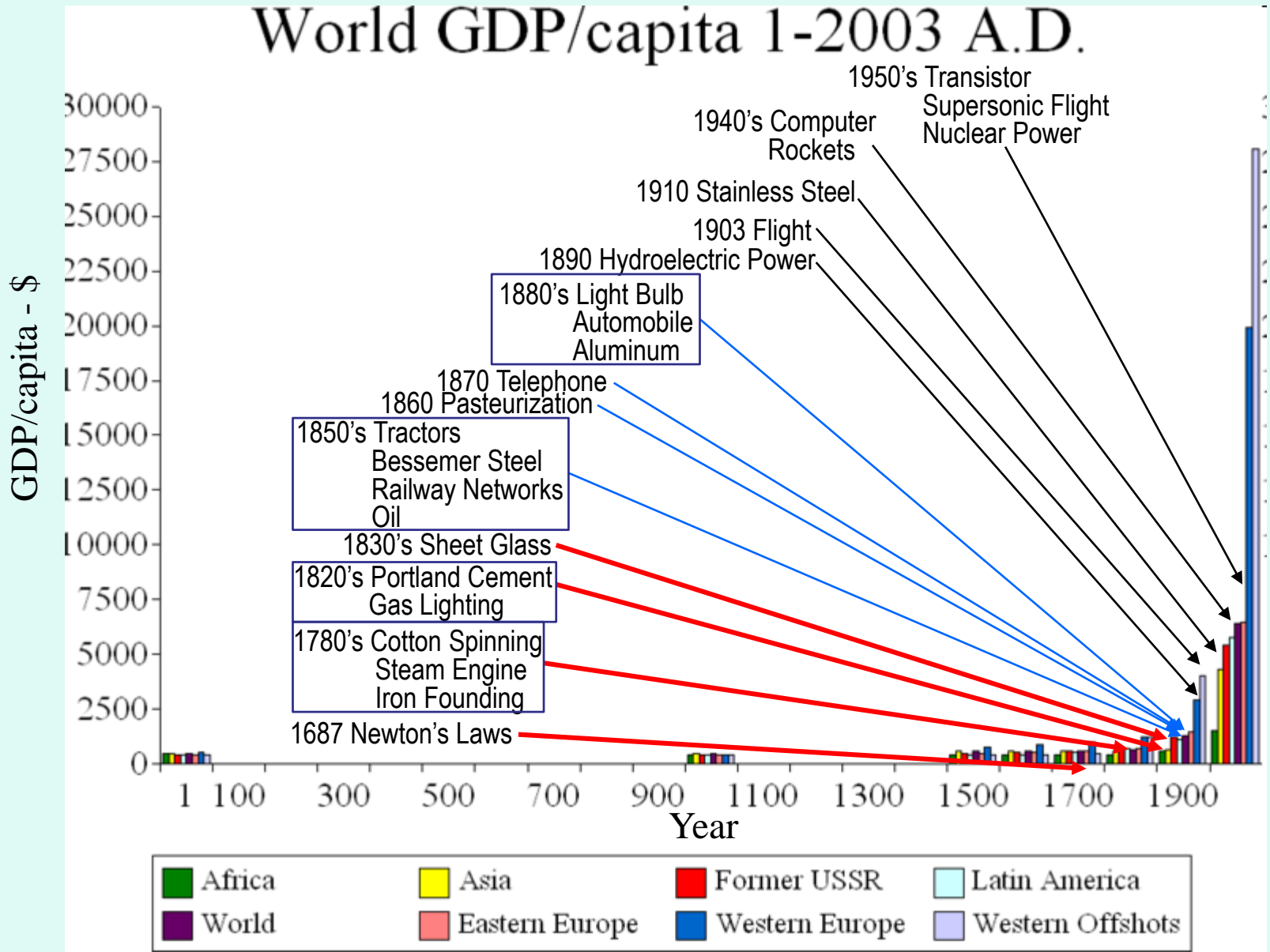


Are Engineers & Technology Making a Difference ? - 2

Life expectancy 1950-2005



Are Engineers & Technology Making a Difference ? - 3

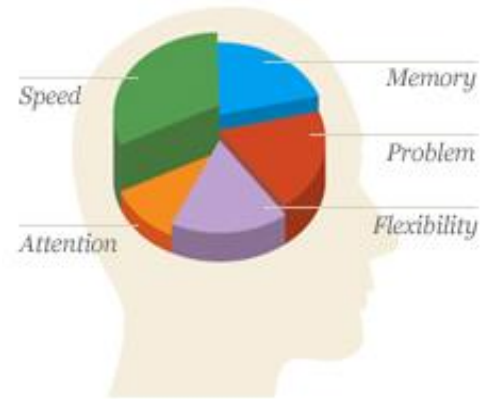


How Are You Going to Make a Difference ?

How Do You Plan to Contribute to Aims of Engineering Profession ?

- Put *technical* knowledge to work for *society*
- Catalyze *economy* to create wealth for the benefit of *society*
- What is your plan ?
- No plan yet ? ... That's Okay ... It's only the first day of 1st Year !!
- Tomorrow we start ...
- But watch this TED talk:
http://www.ted.com/talks/bertrand_piccard_s_solar_powered_adventure.html





Time Management

CARLETON STUDENT
ENGINEERING SOCIETY



The Key to Success in C Eng
And Beyond?



Carleton
UNIVERSITY



PILOTS



Discover the Team behind the
Pilots >

Two men, both pioneers and innovators, both pilots, are the driving force behind Solar Impulse.

Bertrand Piccard, doctor, psychiatrist and aeronaut, who made the first non-stop round-the-world balloon flight, is the initiator and chairman.

André Borschberg, an engineer and graduate in management science, a fighter pilot and a professional airplane and helicopter pilot, is the co-founder and CEO.

The former's avant-gardist vision and the latter's entrepreneurial and managerial experience are an ideal combination.

Here are six terrific truths about time:

First: *Nobody can manage time.* But you can manage those things that take up your time.

Second: *Time is expensive.* As a matter of fact, 80 percent of our day is spent on those things or those people that only bring us two percent of our results.

Third: *Time is perishable.* It cannot be saved for later use.

Fourth: *Time is measurable.* Everybody has the same amount of time...pauper or king. It is not how much time you have; it is how much you use.

Fifth: *Time is irreplaceable.* We never make back time once it is gone.

Sixth: *Time is a priority.* You have enough time for anything in the world, so long as it ranks high enough among your priorities.

Top 10 Ways of “Wasting” Time in University

<http://collegelife.about.com/od/TimeManagement/a/Top-10-Ways-Of-Wasting-Time-In-College.htm>

- **1. Social media (think Facebook, Twitter, etc.).**
- **2. People.**
- **3. The World Wide Web.**
- **4. The Party Scene.**
- **5. Drama.**
- **6. Email.**
- **7. Cell Phone.**
- **8. Movies and You Tube.**
- **9. Video games.**
- **10. Not getting enough sleep.**

Chapter 3

Advice on Studying, Exams, and Learning

Studying to be an engineer is not a spectator sport—success requires participation. Even if you were at the top of your class in high school, you are in a new league now, with classmates who know how to set priorities, schedule their time, take notes, and organize their studies. This chapter will help you to excel academically, but for best results, you must “read it before you need it.” That is, you should read this chapter early in the academic year and apply these skills regularly. This chapter tells you:

- how much time you should expect to spend studying,
- how to organize yourself to study effectively,
- how to prepare for examinations and write them,
- what to do if things should go wrong in your studies.

SECTIONS

- 3.1 The Good and Bad News About University Studies
- 3.2 How Much Study Time Is Required?
- 3.3 Managing Your Time
- 3.4 Preparing for the Start of Lectures
- 3.5 Developing a Note-Taking Strategy
- 3.6 A Checklist of Good Study Skills
- 3.7 Collaborating on Assignments
- 3.8 Preparing for Examinations
- 3.9 Writing Examinations
- 3.10 When Things Go Wrong
- 3.11 Your Professional Career and Lifelong Learning
- 3.12 Further Study
- 3.13 References

John Hayes, Daniel Brassard & Tabassum Aziz,
Introduction to Engineering, seventh edition, Pearson
Learning Solutions, Boston, MA, USA, 2011, p 29

Section 3.3 Managing Your Time

- Term calendar
 - general plan of the term
 - a calendar showing the dates of key events
- Weekly timetable
 - classes/labs/tutorials
 - can be used to calculate your free time
- “To do” list
 - a “to do” list of tasks to be done, and their deadlines
 - to help set priorities for your work
- Synchronizing
 - you must synchronize the above every few days
 - to avoid conflicts, set priorities & allocate free time effectively

Paraphrased from John Hayes, Daniel Brassard & Tabassum Aziz, *Introduction to Engineering*, seventh edition, Pearson Learning Solutions, Boston, MA, USA, 2011, pp 31-32



time management



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As at 0920 hrs September 7th, 2017

Improve Time Management - DaleCarnegie.com

www.dalecarnegie.com/Time-Management

Reduce Workplace Stress Using Dale Carnegie's Time Management Guide!

30 Principles of Change · Conflict Resolution · Boost Sales · Improve Your Sales Skills

Courses: The Dale Carnegie Course, Leadership Training, Sales Training, Change Management, P...

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How to Manage Time - 10 tips for organizing better life

www.heartfulnessmagazine.com/

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10 Common Time Management Mistakes

<http://www.mindtools.com/pages/article/time-management-mistakes.htm>

- Mistake #1. Failing to Keep a To-Do List
- Mistake #2. Not Setting Personal Goals
- Mistake #3. Not Prioritizing
- Mistake #4. Failing to Manage Distractions
- Mistake #5. Procrastination
- Mistake #6. Taking on too Much
- Mistake #7. Thriving on "Busy"
- Mistake #8. Multitasking
- Mistake #9. Not Taking Breaks
- Mistake #10. Ineffectively Scheduling Tasks

Effective Scheduling

Planning to Make the Best Use of Your Time

http://www.mindtools.com/pages/article/newHTE_07.htm

- Scheduling is the art of planning your activities so that you can achieve your goals and priorities in the time you have available. When it's done effectively, it helps you:
 - Understand what you can realistically achieve with your time.
 - Make sure you have enough time for essential tasks.
 - Add contingency time for "the unexpected."
 - Avoid taking on more than you can handle.
 - Work steadily toward your personal and career goals.
 - Have enough time for family and friends, exercise and hobbies.
 - Achieve a good work-life balance



Five Step Scheduling Process

http://www.mindtools.com/pages/article/newHTE_07.htm

Scheduling is a six-step process:

- Step 1. Identify Available Time.
- Step 2. Schedule Essential Actions.
- Step 3. Schedule High-Priority Activities.
- Step 4. Schedule Contingency Time.
- Step 5. Schedule Discretionary Time.

Step 6 - If you have little or no discretionary time left by the time you reach step five, then revisit the assumptions you have made in steps two to four.

Some Time Management Web-Pages

- [https://www.mindtools.com/pages/main/newMN_HTE
.htm](https://www.mindtools.com/pages/main/newMN_HTE.htm)
- [http://collegelife.about.com/od/TimeManagement/a/G
uide-To-Time-Management-For-Students.htm](http://collegelife.about.com/od/TimeManagement/a/Guide-To-Time-Management-For-Students.htm)
- [http://www.mytimemanagement.com/student-time-
management.html](http://www.mytimemanagement.com/student-time-management.html)

ECOR 1010 Lab 0 - Preparation

- **Complete Questionnaire as follows:**

- 1. To log in to CuLearn, go to this web page: <https://carleton.ca/culearn/>
- 2. Type in your MyCarleton One user name and password
- 3. Inside CuLearn you will see your Fall 2017 and Winter 2018 courses as well as the 'Ongoing courses' category
- 4. Click on the course titled: Self-Assessment for Engineers (SAFE): Diagnostic Questionnaire (under the 'Ongoing courses').
- 5. To start the questionnaire, click on its title, then on text: "Answer the questions".
- 6. **Do not forget** to click on the 'Submit your answers' button at the end of the questionnaire.

- Watch [youtube.com/watch?v=6insJFLqr1g](https://www.youtube.com/watch?v=6insJFLqr1g)

Your Lab Next Week

- **Attend your lab during the scheduled time – arrive on time or a few minutes early – do not be late!**
- **For this week only, the lab will be held in Canal Building 4301**
- **Bring a pen or pencil and a calculator**



Good Luck to You All!!



The following slides are from the Associate Dean's Office.

- Getting access to a test before it is administered
- Resubmitting an old assignment for a different class or submitting someone else's assignment from any class
- Impersonating someone else on an exam
- **Unauthorized Collaboration** - Working together with friends or in groups in ways not authorized by the professor
 - **Expect to do your own work. Unless allowed to submit a group work/report**
 - **Avoid looking at (copying) each other's work when doing your assignment/lab report/essay**
 - **Discuss, but do not show your work to others (unless specified not to discuss by your instructor)**



Examples of Academic Fraud

- Submitting false documentation such as a forged medical note
- Submitting sections of someone else's computer code as your own
 - **Avoid showing your code to others**
 - **Do not leave your computer (login)/work unattended**
 - **Dispose of your (old) work properly**
- Falsifying facts on assignments, including lab data
- Copying data or text from old lab reports



- Not citing information
- Trying to read someone else's answers on an exam
- Helping someone commit academic fraud is the same as committing it yourself
 - **Give/lend assignment, essay or lab report to someone (avoid asking someone to hand in your assignment)**
 - **Allow someone to read your exam (avoid sitting close to friends)**



- **You**

- Possible Sanctions include:
 - Receiving a grade of zero on an assignment
 - Educational Assignments
 - Grade point reduction
 - Failing the class
 - Having Additional degree requirements
 - Suspension
 - Expulsion
- Difficulties with exams and future courses
- Future employment

We expect that you know the rules from day one

- **Others**

- The people who help fund your education: they expect you to know engineering.



- **Difficulties with Writing**
 - Students who do not budget enough time for assignments and lab reports and who are struggling with writing are tempted to copy from old assignments and reports
 - ESL students may have an especially difficult time writing under pressure
 - Remember, a poorly written lab report that earns low marks is better than a zero for the lab report
(or worse: possible failure, suspension and expulsion)



- **Time Management**

Not having enough time is the most common excuse for cheating

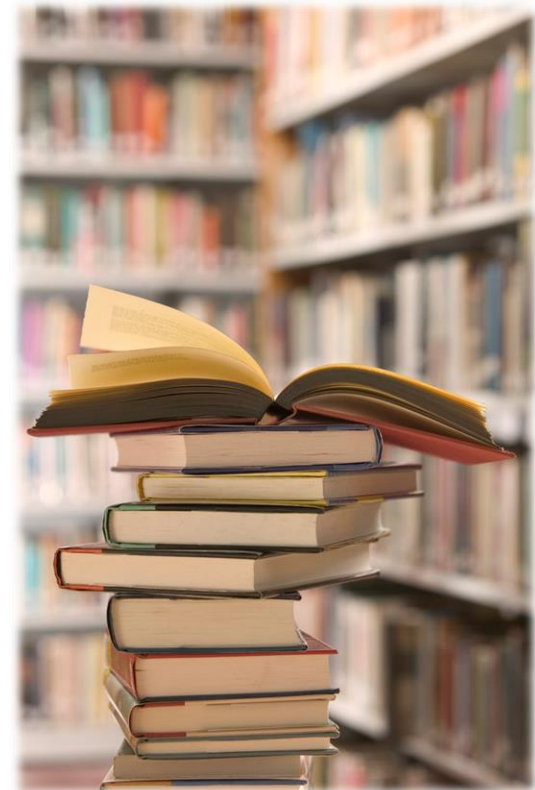
- Give yourself enough time to finish your assignment
- Take advantage of the workshops offered by LSS (4th Floor Library)

- **Ask for Help**

When in doubt ask for help:

- If you think something might be plagiarism ask your instructor before submitting the assignment
- If you are unclear about how much group work is permitted then ask your instructor
- Download “How to Cite” Guides from the Library’s website or from individual departments’ websites

- **Use Proper Research Methods**
 - Take detailed notes while researching
 - Ensure that you cite all material that is not yours, even when you are paraphrasing, no matter how small the phrase
 - Ensure that you use quotation marks to indicate when you use words that are not your own





Conclusion

Carleton has an academic integrity policy. It is enforced and you are expected to maintain academic honesty at all times

For more information on academic integrity or to read the Academic Integrity Policy visit the Office of Students website:

<http://www2.carleton.ca/studentaffairs/academic-integrity/>

