



COURSE OUTLINE
ENGR 121 – Design II
Spring 2014

Instructor:

Dr. Michael McGuire
Phone (250) 721-8684
E-mail: mmcguire@ece.uvic.ca

Office Hours:

Days: Wednesday
Time: 13:00-15:00
Location: EOW 431

ENGR 121:

Lectures:

A-Section(s):	Location	Days	Time
A01 / CRN 21300	UVC B144	T	8:30-9:20
	University Centre Auditorium		

Labs:

B-Section(s):	Days	Time
B01 / CRN 21301	M	14:30-16:20
B02 / CRN 21302	M	17:00-18:50
B03 / CRN 21303	T	14:30-16:20
B04 / CRN 21304	T	17:00-18:50
B05 / CRN 21305	W	14:30-16:20
B06 / CRN 21306	W	17:00-18:50
B07 / CRN 21307	R	14:30-16:20
B08 / CRN 21308	R	17:00-18:50
B09 / CRN 21309	F	14:30-16:20
B10 / CRN 21310	F	17:00-18:50
B11 / CRN 21311	W	12:30-14:20
B12 / CRN 21313	F	12:30-14:20
B13 / CRN 23763	M	19:00-20:50
B14 / CRN 23765	T	19:00-20:50
B15 / CRN 23767	W	19:00-20:50
B16 / CRN 23769	R	19:00-20:50
B17 / CRN 23771	T	11:30-13:20

Location: ELW A359

References:

[Additional resources](#)

- ENGR 120 Course Site on Moodle: <http://moodle.uvic.ca>; Check this site regularly for updates.
- The Writing Centre: <http://www.ltc.uvic.ca/servicesprograms/twc.php>
- UVic Library (Engineering Librarian Katy Nelson: katnel@uvic.ca)
- CALL Centre (for English language help): <http://www.sfg.uvic.ca/call.php>

Costs (prices are approximate)

Communication Text	\$75.00
Design Project allowance	\$TBD/student
Software	\$78.99 CAD from VEX (http://www.vexrobotics.com/robotc-cortex-pic.html) \$49 USD (365 day license) ((http://www.robotc.net/purchase/vexrobotics/))
Deposit for VEX kits	\$80/student (\$30 fee +\$50 refundable)

Design Laboratory Information:

The design laboratory will be start during the week of January 13th. During the lab of that week, students will be assigned to a group. You will be working with this group for the full term. Please bring your VEX deposit to your first lab session.

Assessment:

Engineering Design Grade

Design Assignments/Labs*	40%
Design Quizzes [†]	10%
<u>Design Final Project:</u>	<u>50%</u>
Total	100%

* All labs and assignments will be weighted equally.

[†] The design quiz will be delivered in the last communications classes.

NOTE: You must attend all Design Laboratory sessions to pass the course.

The final grade obtained from the above marking scheme will be based on the following percentage-to-grade point conversion:

Passing Grades	Grade Point Value	Percentage for Instructor Use Only	
A+	9	90 – 100	
A	8	85 – 89	
A-	7	80 – 84	
B+	6	77 – 79	
B	5	73 – 76	
B-	4	70 – 72	
C+	3	65 – 69	
C	2	60 – 64	
D	1	50 – 59	
Failing Grades	Grade Point Value	Percentage for Instructor Use Only	Description
E	0	35 - 49	Fail, conditional supplemental exam. (For undergraduate courses only)
F	0	0 – 49	Fail, no supplemental.
N	0	0 – 49	Did not write examination, Lab or otherwise complete course requirements by the end of term

			or session; no supplemental exam.
--	--	--	-----------------------------------

The rules for supplemental examinations are found on page 80 of the current 2013/14 Undergraduate Calendar.

Term in which E Grade Was Obtained	Application Deadline for Supplemental Exam	Supplemental Exam Date
First term of Winter Session (Sept – Dec)	February 28 in the following term	First week of following May
Second term of Winter Session (Jan – Apr)	June 30 in the following term	First week of following September
Summer Session (May – Aug)	October 31 in the following term	First week of following January

Deferred exams will normally be written at the start of the student's next academic term; i.e., approximately 4 months following the deferral of the exam.

Course Description

In ENGR 121 you will be introduced to fundamental principles and practical aspects of computer, electrical, mechanical, and software engineering and will apply this knowledge in developing and implementing your own designs.

The contact hours for this course are allocated as follows:

Activity	Hrs/Wk	Section Size
Plenary lecture	1	All students
Engineering design laboratory	2	≤32

Plenary Lectures

Plenary lectures provide technical information you will need to undertake Design Laboratory work, as well as discussion of topics on other aspects of the engineering profession. Attendance is mandatory since materials in the plenary lectures will form the basis for lecture and lab quizzes and questions.

Engineering Design Laboratory

You will work in teams of 4 to complete a number of design exercises and one major design project. Parts of the design exercises and the entire design project will be completed using the VEX robotic kits (<http://www.vexrobotics.com/vex>).

Assignments

Detailed descriptions of assignments will be posted on course site and discussed in Plenary Lectures and Design Laboratories. All assignments must be completed to the satisfaction of your instructors in order to pass the course.

Course Objectives and Learning Outcomes

Students exiting ENGR 121 will be able to

- follow a standard structured process to design a system comprised of computer, electrical, mechanical, and software subsystems;
- apply discipline-specific technical knowledge in the design process and understand the relevance of that knowledge to the disciplines in professional practice;
- demonstrate teamwork skills in the successful accomplishment of an engineering design project;

- identify business, social, environmental and regulatory considerations relevant to the execution of an engineering design project;
- apply selected tools for effective management of time and resources in the context of an engineering design project.

Note to Students:

Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the ECE Chair by email or the ECE Chair's secretary to set up an appointment.

Accommodation of Religious Observance

See <http://web.uvic.ca/calendar2013/GI/GUPo.html>

Policy on Inclusivity and Diversity

See <http://web.uvic.ca/calendar2013/GI/GUPo.html>

Standards of Professional Behaviour

You are advised to read the Faculty of Engineering document Standards for Professional Behaviour at <http://www.uvic.ca/engineering/current/undergrad/index.php#section0-25> which contains important information regarding conduct in courses, labs, and in the general use of facilities.

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult

<http://web.uvic.ca/calendar2013/FACS/UnIn/UARe/PoAcI.html> for the UVic policy on academic integrity.

<p>Plagiarism detection software may be used to aid the instructor and/or TA's in the review and grading of some or all of the work you submit.</p>
--