

Curriculum and Course Schedule Change

Starting September 2016

Based upon the review of Mechanical Engineering program and the inputs from many of our students, The Department has decided to introduce the following major Curriculum and Course Schedule changes starting this fall.

The changed Curriculum and Course Schedule are 100% compatible with our present course schedule. You may follow the old schedule if it fits to your need better, taking 6 courses per term in the 3rd and 4th year. However, the changes listed below present many benefits to most students.

In a nutshell, we will add a 4C term in the fall, allowing students to take 5 courses per term, rather than 6 courses per term in the 3rd and 4th year.

You can now complete your study at the end of any of the three 4th year terms: Spring, Summer or Fall, and you can take these three terms in any combinations and order. We now offer several key 4th year technical elective courses in the fall as well and the required Capstone Design Course MECH400 twice a year in both summer and spring.

In the fall of 2016 (Sep – Dec), the following technical electives will be available:

- MECH410/520 Computer Aided Design and Engineering (offered in: F, K)
- MECH458/580 Mechatronics (offered in: F, S)
- MECH450/531 Advanced Fluid Dynamics (offered in: F)
- MECH499 Technical Project (offered in: F, K, S)
- MECH498 Honor Thesis (offered in: F, K, S)
- CSC349A Numerical Analysis (offered in: F, S)
- ENGR280/ECON180 Engineering Economics (offered in: F, K)
- (Possible offering: MECH498 Engineering Law) (offered in: F?, S)

(F: Fall Term; K: Summer Term; and S: Spring Term)

Here are the objectives, benefits, and detailed schedule.

Objectives:

- 1) Address the bottleneck class size and lab space problem for several key elective courses, and the shortage of fall graduate courses (with jointly offered elective and graduate courses);
- 2) Improve student's learning quality and experience
 - Reduce students' course load in 3rd and 4th year from 6 to 5 per term
 - Support 8 month co-op work terms in the 4th year
 - Start in Jan 2017 to change the Capstone Design Project MECH400 to a 3 credit hour course, offer it in both Spring and Summer Terms to provide better supervision and shop support
- 3) Facilitate the course taking pattern/actual schedule of most present students (5 courses/term), and retain the present 6 courses/term option.

- 4) Preserve the present academic requirements and be compatible with the present academic and co-op term path, without losing the present Electives and Specializations.
- 5) Form the foundation for further restructuring of all courses in different areas; and possible course reduction in the first and second year.

Six Representative Possible Paths:

	Year 1			Year 2			Year 3			Year 4			New	Year 5		
			Sum	Fall	Spr	Sum	Fall	Spr	Sum	Fall	Spr	Sum		Fall	Spr	Sum
Present Standard	1A	1B	C1	2A	C2	2B	C3	3A	C4	3B	C5	4A	C6	4B		
Present 2 nd Option	1A	1B	C1	2A	C2	2B	C3	3A	C4	3B	4B	4A	C5			
Present Fastest Path	1A	1B	C1	2A	C2	2B	C3	3A	C4	3B	4B	4A				
New 1 (Fastest)	1A	1B	C1	2A	C2	2B	C3	3A	C4	3B	4B	4A	4C			
New 2 (Faster)	1A	1B	C1	2A	C2	2B	C3	3A	C4	3B	C5	4A	4C	4B		
New 3 (8 month co-op)	1A	1B	C1	2A	C2	2B	C3	3A	C4	3B	C5-6		4C	4B	4A	
New 4 (8 month co-op)	1A	1B	C1	2A	C2	2B	C3	3A	C4	3B	4B	4A*	C5-6		4A*	

Notes:

- 1) CX - Coop Term #X;
- 2) * - The Path **New 4** needs good planning to take different courses in the two 4A terms;
- 3) Core Design Course MECH400 is offered in both 4A and 4B;
- 4) No 8-month co-op starts in the Summer Term due higher challenge for summer job placement;
- 5) - Six Course Term;
- 6) - Five Course Term;
- 7) CSC349A Numerical Analysis is presently offered in both Fall and Spring terms;
- 8) ENGR280/ECON180 Engineering Economics is presently offered in both Fall and Summer terms.