Sample Academic Pathways for Course 16 Students Entering the Major in the Spring Term of the Sophomore Year

Freshmen intending to major in Course 16 are urged to carefully plan their spring course load to ensure they complete the prerequisites for Unified Engineering 16.001-002. The sample course load (57 units) in Spring of freshman year below may not be suitable for all students.

The following roadmaps show the paths typically taken by students who enter Course 16 in the Fall term of the sophomore year and later enroll in the 16.62x-16.83 or 16.82 capstone sequences. Students who wish to complete an option in aerospace information technology will follow the same pathways but they must take at least three (36 units) of the four (48 units) required professional subjects in subjects other than 16.100, 16.20, 16.50, or 16.90.

Students must discuss their individual course plan with their academic advisor and consult the current *MIT Course Catalogue* (http://student.mit.edu/catalog/index.cgi) for up-to-date information on degree requirements, course prerequisites, and the terms in which courses are offered. Also check the *Course 16 Calendar for Experimental and Capstone Subjects*.

Program 16 – Aerospace Engineering

Subject & Units	Institute Requirement	Units Beyond GIRS
1. Freshman Year		
Fall Term		
3.091 Intro to Solid-State Chemistry (12)	CHEM	
8.01-Physics I (12)	PHYS	
18.01-Calculus I (12)	CALC	
HASS (12)	HASS	
Term Units = 48		
Spring Term		
8.02-Physics II (12)	PHYS	
18.02-Calculus II (12)	CALC	
HASS (12)	HASS	
HASS (12), CI-H	HASS	
Term Units = 48		
2. **Sophomore Year**		
Fall Term		
6.0001 Intro to Computer Programming in Python (6)		6
6.0002 Intro to Computational Thinking & Data Sc. (6)		6
7.012-Introductory Biology (12)	BIO	
18.03 Differential Equations (12)	REST	
HASS-D (12)	HASS	
Term Units = 48		

Independent Activities Period		
A six-unit elective, i.e. UROP-for-credit		6
Spring Term		
*16.09 Statistics & Probability (12)		12
Elective (12)		12
HASS (12)	HASS	
HASS-D (12), CI-H	HASS-D	
Term Units = 48		

*Students have the option of taking 6.041A-6.041B Intro to Probability I-II.

3. Junior Year

Fall Term		
16.001-Unified Engineering I (12),	REST	
16.002-Unified Engineering II (12)		12
16.400 Human Factors Engineering (12)		12
HASS-D (12)	HASS-D	
Term Units = 48		
Independent Activities Period		
A six-unit elective, i.e. UROP-for-credit		6
Spring Term		
16.003-Unified Engineering III (12)		12
16.004-Unified Engineering IV (12)		12
16.621 Experimental Projects I (6)		6
Elective (6)		6
HASS (12)	HASS	
Term Units = 48		

4. Senior Year

Fall Term		
16.06-Principles of Automatic Control (12)		12
16.07-Dynamics (12)		12
16.100 Aerodynamics (12)		12
16.622 Experimental Projects II (12)	LAB	
Term Units = 48		
Independent Activities Period		
A six-unit elective, i.e. UROP-for-credit		6
Spring Term		
16.20 Structural Mechanics (12)		12
[*]16.83J Space Systems Engineering (12), CI-M		12
16.90-Computational Methods in Aero Engineering (12)		12
Elective (12)		12

[*] Students may also select 16.82 (CI-M) – Flight Vehicle Engineering.

Term Units = 48

TOTAL UNITS BEYOND GIRS **198**

Notes:

1. The two Institute REST requirements (24 units) can be satisfied from among 6.0001-6.0002, 18.03 or 18.034, and 16.001. The Institute Lab requirement (12 units) for students choosing these pathways is fulfilled through 16.622. Units from departmental subjects that fulfill the REST and Lab requirements do not count in units beyond GIRS. Therefore, students must fill the 36-unit gap in their departmental program by taking additional electives.
2. Students take a minimum of four professional subjects (48 units) in three different areas. As mentioned earlier, students interested in doing the option in aerospace information technology also take 48 units, 36 of which must come from subjects other than 16.100, 16.20, 16.50, 16.90.
3. Students interested in taking capstone 16.82 or 16.83 must complete a minimum of two professional area subjects before enrolling in either capstone.