

**Course 16 S.B. in Aerospace Engineering – ABET Accredited**

Graduation requirements of 17 GIRs and 192-198 units beyond GIRs cannot be completed by taking 48 units each term. With the approval of his/her advisor, a student may need to carry a heavier load in at least two terms or enroll in IAP classes. Also note that units from departmental requirements that also fulfill the Lab and REST requirements (a total of 36 units) do not count in units beyond GIRs. A student will fill this unit gap in their departmental program by taking 36 additional elective units. Please check the current *MIT Course Catalogue* for the availability and description of each required subject.

Student \_\_\_\_\_ Advisor \_\_\_\_\_ Class Year \_\_\_\_\_  
 (Last/First/Middle)

Below please indicate subjects completed and planned subjects by term to be taken [example: F19=Fall 2019; S20 = Spring 2020].

**I. General Requirements**

**A. General Institute Requirements (17 GIRS)**

**Science (6)**

- \_\_\_\_\_ Chemistry (3.091 or 5.11)
- \_\_\_\_\_ Biology (7.\_\_\_\_)
- \_\_\_\_\_ Physics I (8.01)
- \_\_\_\_\_ Physics II (8.02)
- \_\_\_\_\_ Calculus I (18.01\_\_)
- \_\_\_\_\_ Calculus II (18.02\_\_)

**HASS (total of 8)**

**Distribution (3)**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Concentration (3-4)**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Other HASS**

Proposal Form \_\_\_\_\_

Completion Form \_\_\_\_\_

Note — HASS-Distribution: students must take the 3 HASS-D subjects from each of the following categories: Arts, Humanities, and Social Sciences. See the current *Course Catalogue* for more information.

**Institute Lab (1)**

- \_\_\_\_\_ 16.405J
- \_\_\_\_\_ 16.622
- \_\_\_\_\_ 16.821
- \_\_\_\_\_ 16.831J

**REST (2)**

- \_\_\_\_\_ 6.0001-6.0002
- \_\_\_\_\_ 6.041
- \_\_\_\_\_ 16.001
- \_\_\_\_\_ 18.03 or 18.032

**Communication** (satisfied through 4 subjects that can count elsewhere — 1 CI-H each in freshman and sophomore years and 1 CI-M each in junior and senior years.

CI-H \_\_\_\_\_ CI-H \_\_\_\_\_ (among subjects designated CI-H in the *Course Catalogue*)

CI-M\* \_\_\_\_\_ 16.405J \_\_\_\_\_ 16.622 \_\_\_\_\_ 16.82 \_\_\_\_\_ 16.821 \_\_\_\_\_ 16.83J \_\_\_\_\_ 16.831J \_\_\_\_\_

\*Please see the *Planned Calendar for Lab and Capstone Subjects* at

<http://aeroastro.mit.edu/academics/forms- documentation/undergraduate-forms-documentation>.

**B. Unrestricted Electives** (48 units, including UROP-for-credit and approved special topics)  
(Please list prerequisites, if any, in parentheses.)

\_\_\_\_\_ ( ) \_\_\_\_\_  
 \_\_\_\_\_ ( ) \_\_\_\_\_  
 \_\_\_\_\_ ( ) \_\_\_\_\_  
 \_\_\_\_\_ ( ) \_\_\_\_\_  
 \_\_\_\_\_ ( ) \_\_\_\_\_

**II. Departmental Requirements (a total of 150 units)**

**A. Core Subjects** (108 units)

(Prerequisites are italicized; coreqs are italicized; and underlined.)

_____ 6.0001 ( )	_____ 6.0002 (6.0001 or permission of instructor)
_____ 16.001 ( <i>8.01, 18.02, <u>16.002, 18.03</u> or 18.032</i> )	_____ 16.002 ( <i>18.02, <u>8.02, 16.001, 18.03</u> or 18.032</i> )
_____ 16.003 ( <i>18.02, 8.02, 18.03 or 18.032, <u>16.004</u></i> )	_____ 16.004 ( <i>18.02, 8.02, 18.03 or 18.034, <u>16.003, 3.091</u> or 5.11</i> )
_____ 16.06 ( <i>16.002, 16.003 or 16.004</i> )	_____ 16.07 ( <i>16.001 or 16.002, 16.003 or 16.004</i> )
_____ 16.09 ( <i>18.02</i> ) or _____ 6.041 ( <i>18.02</i> )	_____ 18.03 ( <i><u>18.02</u></i> ) or 18.032 ( <i><u>18.02</u></i> )

**B. Professional Area Subjects** (48 units)

(Prerequisites are italicized; coreqs are also underlined.)

Fluid Mechanics — **16.100** (*16.003, 16.004*)  
 Materials and Structures — **16.20** (*16.001*)  
 Propulsion — **16.50** (*16.003, 16.004 or 2.005*)  
 Computational Tools — **16.90** (*16.004 or permission of instructor, 16.09 or 6.041*)  
 Estimation and Control — **16.30** (*16.06 or 6.302*)  
 Computer Systems — **6.111** (*6.002, 6.071, or 16.004*); **16.35** (*1.00, 6.0002, or 6.005*)  
 Communication Systems — **16.36** (*16.002 or 6.003, 16.09 or 6.041*)  
 Humans and Automation — **16.400** (*16.09 or 6.041, or permission of instructor*), **16.410** (*1.00 or 6.0002*)

**Requirements:** Students must take a minimum of 48 units (4 subjects), including subjects from at least 3 professional areas. For students who wish to complete an “option” in aerospace information technology, 36 of the 48 units must come from subjects other than 16.100, 16.20, 16.50, and 16.90. Note that the IT option is not a degree in itself.

1 <sup>st</sup> subject _____	3rd _____
2nd _____	4 <sup>th</sup> _____

**C. Laboratory/Capstone Subjects** (24-30 units)

(Prerequisites are italicized; coreqs. are also underlined.)

One of the following two subjects:

____ 16.82 Flight Vehicle Engin (2 PAS subjects)	12	_____
____ 16.83J Space Systems Engin (2 PAS subjects)	12	_____

Plus one of the following three sequences

____ 16.405J Robotics: Science and Systems, <a href="#">1.00</a> or <a href="#">6.0001</a> ; <a href="#">2.003</a> , <a href="#">6.006</a> , <a href="#">6.009</a> , or <a href="#">16.06</a> ; or permission of instructor	12	_____
or		
____ 16.621 Experimental Lab I ( <a href="#">16.06</a> or <a href="#">16.07</a> ), and	6	_____
____ 16.622 Experimental Lab II (16.621)	12	_____
or		
____ 16.821 Flight Vehicle Devel, permission of department	18	_____
or		
____ 16.831J Space Systems Development, permission of department	18	_____

### III. Term-by-Term Worksheet

(Please list below all subjects the student intends to take; the list can be updated as necessary.)

FALL/IAP—Sophomore

SPRING—Sophomore

(May include a sophomore exploratory subject in each term, including  
a non-elective subject or a “cross-registered” subject. )

FALL/IAP—Junior

SPRING—Junior

FALL/IAP—Senior

SPRING—Senior

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\* 16.821 and 16.831J are offered alternate years. Please check the “**Course 16 Planned Calendar for Lab and Capstone Subjects**”.