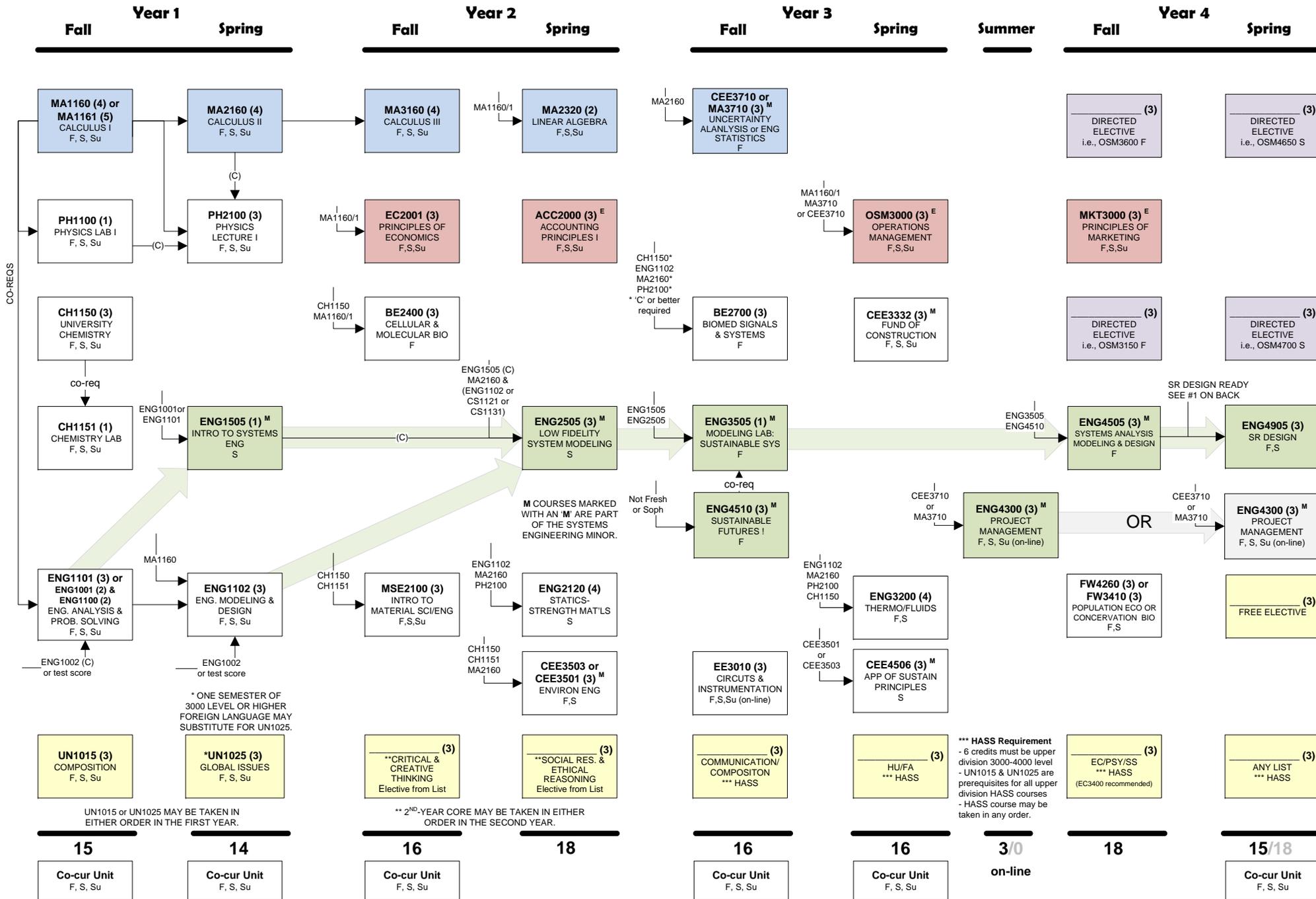
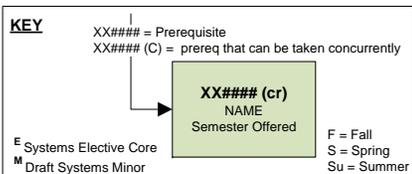


2018-19 BSE with Systems Engineering

Updated March 2018

This is not an official list of degree requirements. Adjustments may be required due to curriculum changes.
See back of academic plan for more information on requirements for elective courses.



BSE Systems Emphasis 2018-19
(minimum of 131 credits)

Academic questions: E-mail eadvise@mtu.edu

1 Senior Design Ready:

a. Senior Design Prerequisite courses:

EE3010, ENG1101, ENG1102, ENG2120, ENG 2505, ENG3200, ENG4505.

b. Core Competency Check test - Take and pass the test; test topics include all ENG4905 prerequisite courses except ENG4505.

2 General Education Requirements (24 credits + 3 PE units):

I. Core Courses (12 credits)

___ UN1015 Composition

___ UN1025 Global Issues or 3000+ Modern Language _____

___ Critical/Creative Think List _____

___ Social Resp./Ethical Reason List _____

II. HASS Courses Requirements (12 credits)
 (www.admin.mtu.edu/em/documents/HASS Distribution List.pdf)

- 6 credits upper level (3000- 4999)
- 3 credits from each listed below

___ Communication/Composition _____

___ Humanities/Fine Arts List (HU/FA) _____

___ Social & Behavioral Science List (EC/PSY/SS) _____

___ 3 credits from any list _____

* Either **EC2001** or **EC3400** is required by the degree, if both are taken only **ONE** may be counted as a Social Resp./ Ethical Reason or HASS course. If one is taken it may **NOT** be counted as a Social Resp./ Ethical Reason or HASS course.

III. Co-curricular activities (3 units)

In the co-curricular requirement, the three semester units will be physical education activities. These units are required for graduation, but are not included in the calculation of the GPA, nor in the overall degree-credit requirement. Note: most physical education activities will last for 7 ½ weeks or ½ semester. A student would need **six** of these ½-semester units to fulfill the 3-semester unit co-curricular requirement.

PE _____ PE _____ PE _____

PE _____ PE _____ PE _____

3 **DRAFT* Systems Minor Requirements (20 credits) *DRAFT**

Required courses (14 credits)

- ___ ENG1505 (1) Introduction to Systems Engineering
- ___ ENG2505 (3) Low Fidelity Systems Modeling
- ___ ENG3505 (1) Modeling Laboratory for Sustainable Systems
- ___ ENG4300 (3) Engineering Project Management
- ___ ENG4505 (3) Systems Analysis, Modeling, and Design
- ___ ENG4510 (3) Sustainable Futures I

Select 6 credits from one of the following groups (6 credits)

A. Environmental Engineering and Sustainability
 ___ CEE3501 OR CEE3503 (3) AND CEE4506 (3)

B. Supply Chain, Logistics, Procurement, and Management ___
 OSM3150 OR OSM4700 (3) AND OSM3600 (3)

C. Six Sigma and Lean – select from below, planned with advisor
 ___ ENT3959 (1), ENT3967 (1), ENT3982 (1), ENT3982) (1), OSM46540 (3)

4 Systems (Focus) Directed Electives (12 credits):

Select 12 credits from one of the following groups.

Enterprise (12 credits)

- ___ ENT3950 (1) Enterprise Project Work III
- ___ ENT3960 (1) Enterprise Project Work IV
- ___ ENT4950 (2) Enterprise Project Work V Capstone
- ___ ENT4960 (2) Enterprise Project Work VI Capstone
- ___ ENT2961 (2) Teaming in the Enterprise
- ___ ENT2962 (1) Communication Contexts
- ___ ENT3984 (3) Lean Six Sigma Principles OR
 - ___ ENT3959 (1) Fundamentals of Six Sigma I AND
 - ___ ENT3967 (1) Design for Six Sigma AND
 - ___ ENT3982 (1) Continuous Improvement Using Lean Principles

Minor (12 credits): Select 12 credits in a coherent plan of study as partial fulfillment of a university minor, with BSE program approval.
