Mechanical Engineering Academic Advising Center
http://www.mtu.edu/mechanical/undergraduate/advising/
Hours: 8:00 a.m. - 5:00 p.m. Monday – Friday **Walk-in or by email/phone**

Academic Advisors:
Ryan Towles
204A (203) R.L. Smith Bldg (MEEM)
906-487-2564
ratowles@mtu.edu

Tricia Stein
204B (203) R.L. Smith Bldg (MEEM)
906-487-2564
pmstein@mtu.edu

Important dates for Fall Semester 2020

Wednesday, August 26th – Fall bills due/confirm enrollment online by 5:00pm (all students). $50 late fee afterwards.

Thursday, August 27th – Classes begin.

Friday, September 4th – Last day to add a full semester class online by 5:00pm. Late add policy – instructor approval needed – afterwards (will also need orange first-year drop/add slip after this date).

Monday, September 7th – Labor Day (no class)

Wednesday, September 9th – Last day to drop a full semester class with a refund if dropping below 12 total credits. Online drops until 5:00pm. Full-time status (12 or more credits) established at 5:00pm. No further online drops. All drops after this deadline must be made in person at the Student Service Center or by emailing registrar@mtu.edu

Friday, September 18th – Last day to drop a full semester class without a grade (by 5:00pm) – **No refund**.

Wednesday-Thursday, September 23rd-24th – VirtualCareer Fair (www.mtu.edu/career/events/career-fair/fair/)

Thursday-Friday, October 15th-16th – Fall Break (no class)

Monday, October 19th – Mid-term progress reports available online (BanWeb) after 5:00pm (first year students only).

Monday, October 19th – Part of Term B begins (PE courses).

Sunday, October 25th – Registration for spring/summer semesters begins for current undergraduate students.

Friday, November 6th – Last day to drop a full semester class with a "W" grade, by 5:00pm.
Note: After this date and time you cannot drop a full-semester class for Fall 2020 unless there are clearly extenuating circumstances that prohibit you from completing the course (Late Drop policy in effect). A "W" will still appear on your transcript if a late drop request is approved. **Late drops are not approved just to avoid poor grades without additional justification.**

November 23rd – 27th – Thanksgiving Break

December 14th – 18th – Final Exams

December 19th – Mid-Year Commencement

Spring/Summer 2021 Registration Priority Schedule

Registration opens at 10PM unless otherwise noted

Date	**Earned Credits**
Sunday, October 25 (NOON)	Graduate students, student veterans
Monday, October 26 (10pm)	124 or more
Monday, October 26 (11pm)	111 - 123.5
Tuesday, October 27 (10pm)	101 - 110.5
Tuesday, October 27 (11pm)	90 - 100.5
Wednesday, October 28	79 - 89.5
Thursday, October 29	69 - 78.5
Friday-Saturday October 30-31	*Open to all above groups*
Sunday, November 1	60 - 68.5
Monday, November 2	49 - 59.5
Tuesday, November 3	38 - 48.5
Wednesday, November 4	30 - 37.5 and new transfer students
Thursday, November 5	19 - 29.5
Friday-Saturday, November 6-7	*Open to all above groups*
Sunday, November 8	9 - 18.5
Monday, November 9	1 - 8.5
Tuesday, November 10	0 - .5
Wednesday, November 11	Non-degree seeking
Thursday-Sunday, November 12-15	*Open to all above groups*

- Priority is based on the number of credits earned at the time of registration.
- Students may register anytime on or after their scheduled day.
- Registration closes at midnight Sunday, November 15 and reopens at 10:00pm Tuesday, November 17.
- The web will be unavailable for registration from 2:00am until 2:30am each day.
- Students with questions or problems should contact the Registrar's Office at 487-2319 or email schedule@mtu.edu

DEPARTMENTAL CONTACTS FOR FILLED SECTIONS

AF	Karma Kilpela	7-2652	ROTC karma
AR	Jonathan Fox Evelyn Colon-Peters	7-3446 7-2650	ROTC jafox ecolonpe
ACC/BUS/EC/FIN/ MGT/MIS/MKT/OSM/CMG	Jodie Filpus-Paakola	7-3597	AOB 108 jrfilpus
BE	Mike LaBeau	7-3655	M&M 342 malabeau
BL	Travis Wakeham	7-3435	Dow 738 twakeham
CEE, CMG, SU	Julie Ross	7-3410	Dillman 103 jzross
CH	Jeremy Brown Denise Laux	7-2297 7-2048	Chem Sci 206A jelbrown Chem Sci 607C djlaux
CM	Alexis Snell	7-2472	Chem Sci 203A aesnell
CS	Denise Landsberg	7-3643	Rekhi Hall 221 dllandsb
ED, PSY	Rachelle Gariepy	7-2460	Meese 108 rmgariep
EE	Judy Burl Liz Fujita	7-2232 7-1161	EERC 131 jmburl eafujita
EET, SAT	Kay Oliver	7-2524	Rekhi Hall 221 koliver
ENG	Darlene Saari	7-3057	Dillman 112 dfsaari
ENT	Rick Berkey	7-4309	M&M 722 rjberkey
FA	Tanya Maki	7-2067	Walker 209 tanya
FW	Stacy Cotey	7-2953	Noblet 120 srcotey
GE	Brittany Buschell	7-2531	Dow 630 babusche
HU Modern Language	Jackie Ellenich Maria Bergstrom	7-2008 7-0984	Walker 301A jmelleni Walker 316 mjbergst
MA	Teresa Woods	7-1031	Fisher 205A tmthomps
MEEM	Ryan Towles Tricia Stein	7-2564	MEEM 204A/B ratowles pmstein
MET	Danise Jarvey	7-2259	EERC 319A dnjarvey
MSE	Dan Seguin	7-3375	M&M U101 djseguin
PE/KIP	Kristi Kesti-Pieti Terry Anderson	7-2715 7-2994	SDC 231 krkesti terry
PH	Will Slough	7-2273	Fisher 221 wjslough
SS	Gina Stevens	7-2114	AOB 214 gmsteven

Michigan Tech Advising Syllabus

Mission*: Advisors and students working together to develop an individualized academic plan for accomplishing student goals*

Definition of Advising

Academic Advising is a relationship and a process that results in benefits for student, advisor, and university as a whole. The advisor and student collaborate to develop, follow, and complete an academic plan. A productive advising relationship will help students envision, foster, and realize their goals here at Michigan Tech and for a lifetime.

Student Learning Outcomes

- Knowledge of university student learning goals and degree requirements
- A thorough understanding of your academic plan
- Ability to find and use advising resources
- Increased and improved self-awareness and decision-making skills

Student Responsibilities (What you should do)

- Take responsibility for academic planning
- Understand learning goals and degree requirements
- Follow academic procedures and policies
- Communicate with your advisor: read all advising correspondence
- Attend advising meetings prepared
- Apply advising recommendations in order to achieve your academic plan
- Seek assistance from instructors, learning centers, and other university services
- Contact your advisor promptly when you have questions or concerns
  - When faced with a difficult question or challenging situation, your academic advisor is always a good place to begin
- Problem-solve to revise and achieve your academic plan

Activities (How advisors and students realize outcomes and goals)

- Identify a degree program that aligns with your academic interests and abilities
- Create an educational plan that fulfills the academic plan
- Select appropriate classes to satisfy your evolving goals
- Learn the benefits of internships, co-ops, and study abroad
- Explore academic options: Enterprise program, undergraduate research, Pavlis Honors College, dual majors, secondary degrees, minors, and graduate study
- Locate and use resources and services
- Interpret university requirements, policies, regulations, and procedures
- Develop decision-making skills, self-awareness, and self-direction
- Clarify and evaluate progress toward academic and life goals

Advisors advocate for students, protect and ensure their privacy and their rights as advisees in compliance with University policies

- *www.mtu.edu/deanofstudents/students/disability/policy/*
- *www.mtu.edu/registrar/faculty-staff/ferpa/*
- *www.mtu.edu/registrar/students/advising/*

September 2018

Student Academic Advising Checklist

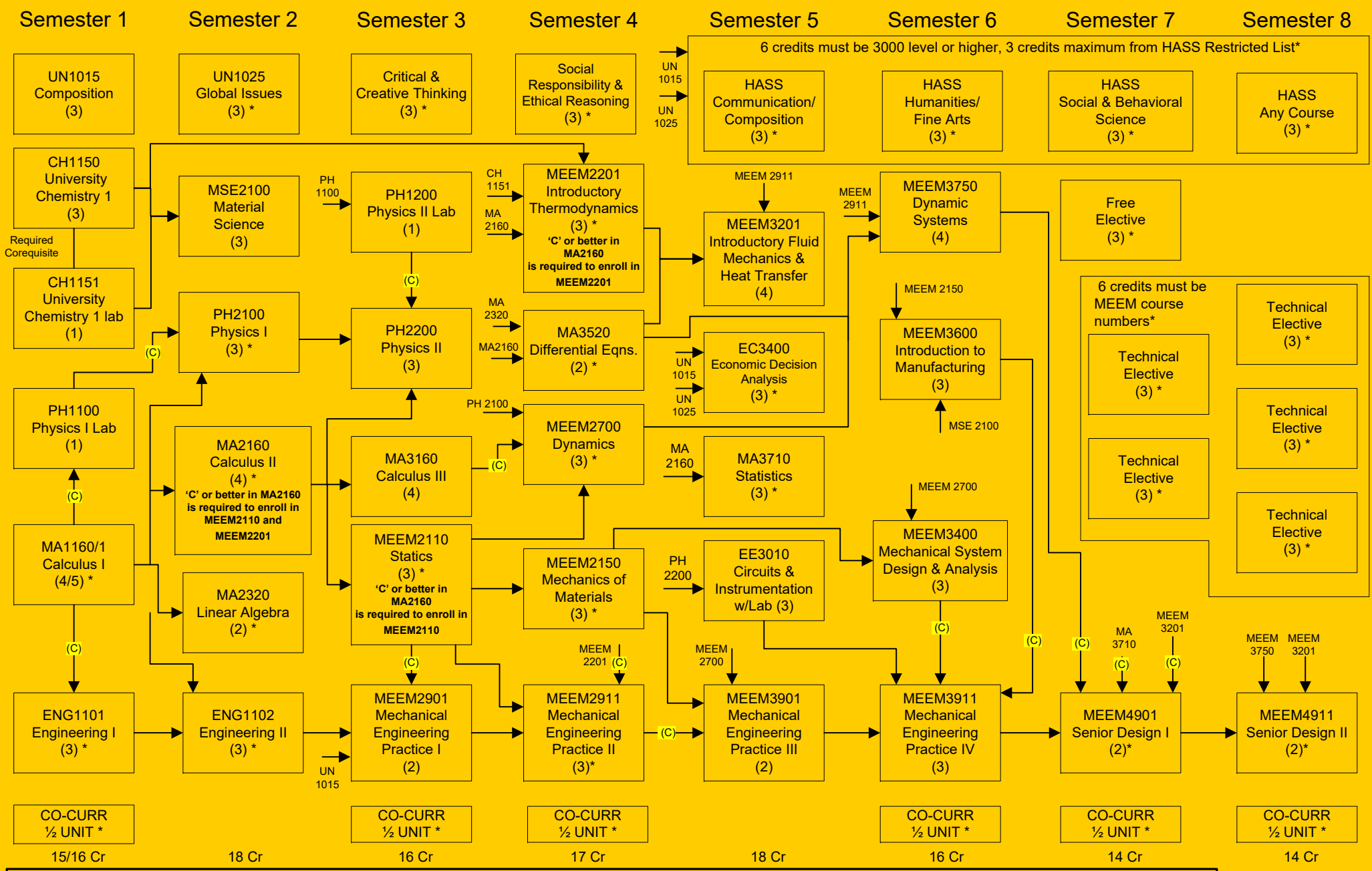
Orientation Week *preparing for your first semester*	☐ Login to MyMichiganTech and review your transcript • Are AP credit and transfer credits correct? ☐ Meet academic advisor ☐ Complete class registration and print class schedule ☐ Explore Campus Resources and visit these websites • Your department and advisor • Undergraduate Catalog - *www.mtu.edu/catalog/* • Dean of Students - *www.mtu.edu/deanofstudents/* • Registrar - *www.mtu.edu/registrar/* • Advising - *www.mtu.edu/registrar/students/advising/* • Library - *www.mtu.edu/library/* - take a library tour • Wellness and Counseling - *www.mtu.edu/counseling/*
Year 1 *transitioning and adjusting to college life*	☐ Attend first year advising meeting with your major advisor • What to do if you are unsure about your major, meet with - General sciences/arts undeclared advisor: *www.mtu.edu/sciences-arts/undergraduate/gsa/ or* - General/undecided engineering advisor: *www.mtu.edu/ef/degree/advising/* ☐ Review major requirements • Run interactive audit each semester after registration - *www.mymichigantech.mtu.edu* ☐ Review Academic Policies and Academic Integrity - *www.mtu.edu/deanofstudents/* ☐ Review University Student Learning Goals and your major's learning goals • *www.mtu.edu/learning-goals* ☐ Visit Career Services - *www.mtu.edu/career/* • Go to Career Cruising 'Explore my Interests' - *www.mtu.edu/career/students/advising/career-cruising/* ☐ Create a resume and attend career fairs ☐ Begin to explore Pavlis Honors College, internship, co-op, research, study abroad, minors ☐ Learn about campus activities and student organizations • *www.involvement.mtu.edu/organizations*
Year 2 *academic and career exploration and personal development*	☐ Meet with advisor, bring your academic plan • Run interactive audit each semester after registration - *www.mymichigantech.mtu.edu* ☐ Explore interests, strengths, and careers • Within your department & network with faculty in your major • Career Services - *www.mtu.edu/career* ☐ Update your resume and attend career fairs ☐ Explore/Participate Pavlis Honors College, internship, co-op, research, study abroad, minors ☐ Consider joining an Enterprise - *www.mtu.edu/enterprise/*
Year 3 *academic enhancement and career goal setting*	☐ Run interactive audit each semester after registration - *www.mymichigantech.mtu.edu* ☐ Meet with advisor to prepare for graduation ☐ Network with faculty in your major ☐ Attend Career Services and Graduate School workshops for career planning • Consider Accelerated Masters - *www.mtu.edu/accelerated/* • Consider Senior Rule Classes - *www.mtu.edu/registrar/students/registration/policies/senior-rule/* ☐ Develop career goals ☐ Explore/Participate Pavlis Honors College, internship, co-op, research, study abroad, minors ☐ Update resume and attend career fairs
Final *transitioning out of college into career or graduate school*	☐ Apply for graduation by 10th week of the semester prior to graduation • Must have earned 90 credits or more • *www.mtu.edu/registrar/students/graduation/degree/* ☐ Meet with advisor for final degree audit one semester before graduation • Run interactive audit each semester after registration - *www.mymichigantech.mtu.edu* ☐ Network with faculty in your major ☐ Finalize career/graduate school plans • Complete the First Destination survey - *https://mtu.joinhandshake.com/login* • Complete Loan Exit Counseling for Financial Aid, if needed - 906-487-2662 ☐ Graduation • Check for your name on the Graduation Candidate List - *www.mtu.edu/commencement/* • Order cap and gown, honor cords - *Optional* - *www.mtu.edu/commencement/* • Participate in commencement ceremony - *Optional*

When faced with a difficult question or challenging situation, your academic advisor is always a good place to begin

Michigan Tech

Bachelor of Science-Mechanical Engineering

Academic Year 2019-2020 and later



1. ***General Education Requirements:*** 24 total credits. Required courses are UN1015-Composition (3 credits), UN1025-Global Issues (3 credits), a Critical & Creative Thinking course (3 credits), a Social Responsibility & Ethical Reasoning course (3 credits), and 12 HASS (Humanities, Arts, & Social Sciences) credits. The 12 total credits of HASS must include a minimum of 3 credits each in Communication/ Composition, Humanities/Fine Arts and Social & Behavioral Science. Approved course lists are available in the ME Advising Center and are linked on the ME Advising web page. **6 credits must be 3000 level or higher (does not include EC3400). EC3400 is not a HASS course for ME students, but is still required for the BSME.** No more than 3 credits may be used from the HASS Restricted List. All 3000 level or higher HASS courses require UN1015 and UN1025 as non-concurrent prerequisites.
2. ***UN1025 Global Issues Language Option:*** 3 credits of 3000-level or higher modern language may be substituted directly for UN1025. A list of approved courses is located on the Modern Language webpage. **Any students with previous language experience in Spanish, French, German, or Mandarin must take the Modern Language Online Placement Test.** Instructions are linked on the ME Advising web page.
3. ***Technical electives***: Any 4000+ level courses in the College of Engineering except MET courses are acceptable for ME technical electives. **MET courses are not acceptable for ME technical elective credits.** These prefixes - BE, CM, CEE, EE, ENG, GE, MEEM, MSE - may be used by BSME students for technical elective credits (if allowed to enroll in the course by the offering department) with the following exceptions: BE4900, BE4901, BE4910, BE4930, BE5000, CEE4900, CEE4905, CEE4910, CEE4915, CEE4916, CEE4920, CEE4930, CEE5190, CEE5250, CEE5390, CEE5490, CEE5560, CEE5561, CEE5562, CEE5563, CEE5590, CEE5890, CEE5920, CEE5930, CEE5990, CEE5991, CEE5992, CEE5994, CEE5997, CEE5998, CEE5999, CM4855, CM4860, CM4861, CM4900, CM4910, CM5900, CM5950, CM5990, EE4870, EE4901, EE4910, EE4800, EE4805, EE5290, EE5805, EE5900, EE5990, EE5991, EE5992, EE5994, ENG4060, ENG4070, ENG4900, ENG4905, ENG4910, ENG4990, ENG5060, ENG5100, ENG5200, ENG5300, ENG5400, ENG5990, ENG5998, GE4900, GE4910, GE4916, GE4930, GE4931, GE4933, GE4934, GE4961, GE4962, GE4970, GE5187, GE5930, GE5940, GE5950, GE5960, GE5970, GE5994, GE5995, GE5998, GE5999, MEEM4990, MEEM4901, MEEM4911, MEEM4999, MEEM5010, MEEM5990, MEEM5994, MEEM5995, MEEM5999, MEEM6000, MSE4130, MSE4131, MSE4140, MSE4141, MSE4970, MSE5100, MSE5900, MSE5970, and MSE5990 or any other research/special topics/seminar/etc credits (courses without a specific course description and/or syllabus). Undergraduate students cannot typically enroll in 6000-level courses. Special topics courses (4990, 5990, etc.) may be approved on an individual section/semester basis if a student/faculty member submits or creates a course syllabus for evaulation. OSM 4300 is also acceptable.
4. ***Engineering Fundamentals:*** ENG1001 (2 credits) plus ENG1100 (2 credits) is equivalent to ENG1101 (3 credits). ENG1002 or passing spatial visualization test is required for ENG1001 and ENG1101 as a concurrent pre-requisite. ENG1002 or passing the spatial visualization test is also a pre-requisite for ENG1102. MA1160/1161 is a concurrent pre-requisite for ENG1101, and MA1031 or MA1032 are concurrent pre-requisites for ENG1001. MA1160/1161 is a non-concurrent pre-requisite for ENG1102. ENG1102 project content varies by section number.
5. ***Math:*** Students are placed into an initial math course based on ACT/SAT math score, or a math placement exam score for credit (AP, IB, CLEP). MA1160 (4 credits) or MA1161 (5 credits) satisfy the Calculus I requirement. MA2320 and MA3520 are offered as full semester courses for students taking these courses in separate semesters. The Math department also teaches MA2321 as an accelerated course (equivalent to MA2320) in the first half of a given semester and MA3521 as an accelerated course (equivalent to MA3520) in the second half of the semester (registration must be for the same section number of both MA2321 and MA3521 in the same semester) MA2320, MA2321, or MA2330 are all equivalent and are approved pre-requisites for MA3520 or MA3521. MA3530 or 3560 are also equivalent to MA3520/3521. Both MA2710 and 2720 are acceptable in place of MA3710.
6. ***A grade of 'C' or better in MA2160 is required as a pre-requisite for MEEM2110 and MEEM2201.***
7. For students earning a 'CD' or 'D' grade in MA1160/1161, PH2110 (University Physics Workshop 1) is a required co-requisite for PH2100.
8. ***Free electives***: Any credits that are 1000-level or above, not on the co-curricular activities list, and not non-repeatable duplicated or equivalent courses. UN3002, UN3003, etc. (Cooperative Education credits) can be used as free electives in the BSME curriculum.
9. ***Co-curricular Activities***: Mainly physical education courses with some additions. Three units (or six half units) are required for graduation. These units will be included as earned hours and may be used to determine full-time enrollment status. These are in addition to the 128 total credits required for the BSME. Co-curricular list is available in the ME Advising Center and is linked on the ME Advising web page. These units are graded pass/fail and are not included in credit hours used for calculation of any grade point averages (cumulative, engineering, or departmental).
10. ***Prerequisite*** courses are noted by a plain arrow. The prerequisite course must be successfully completed **prior** to taking the subsequent course. ***Concurrent prerequisites*** are noted by a **'C'** within the arrow and may be taken at the same time, although it is not necessary to take these courses together if the prerequisite course is completed first.
    a. ***The prerequisites for MEEM4901 are: MA3710, MEEM3911, MEEM3201(concurrent) & MEEM3750(concurrent).***
    b. ***The prerequisites for MEEM4911 are: MA3710, MEEM3911, MEEM3201(non-concurrent) & MEEM3750 (non-concurrent).***
11. ***Co-requisite*** courses are courses that must be taken together in the same semester.
12. ***Transfer, Advanced Placement, or study abroad courses*** are not included in credit hours used for GPA calculations. Transfer credit is awarded for Michigan Tech equivalent course work only if a grade of 'C' or better (2.00/4.00) or equivalent is earned at a transfer institution. Study abroad credit – which is considered Michigan Tech credit for residency purposes – will be awarded by International Programs and Services based on passing a course according to equivalent international standards. Advanced Placement credit is awarded according to published AP Exam score standards (also IB and CLEP).

This flow chart is not an official list of degree requirements. Adjustments may be required due to curriculum changes.

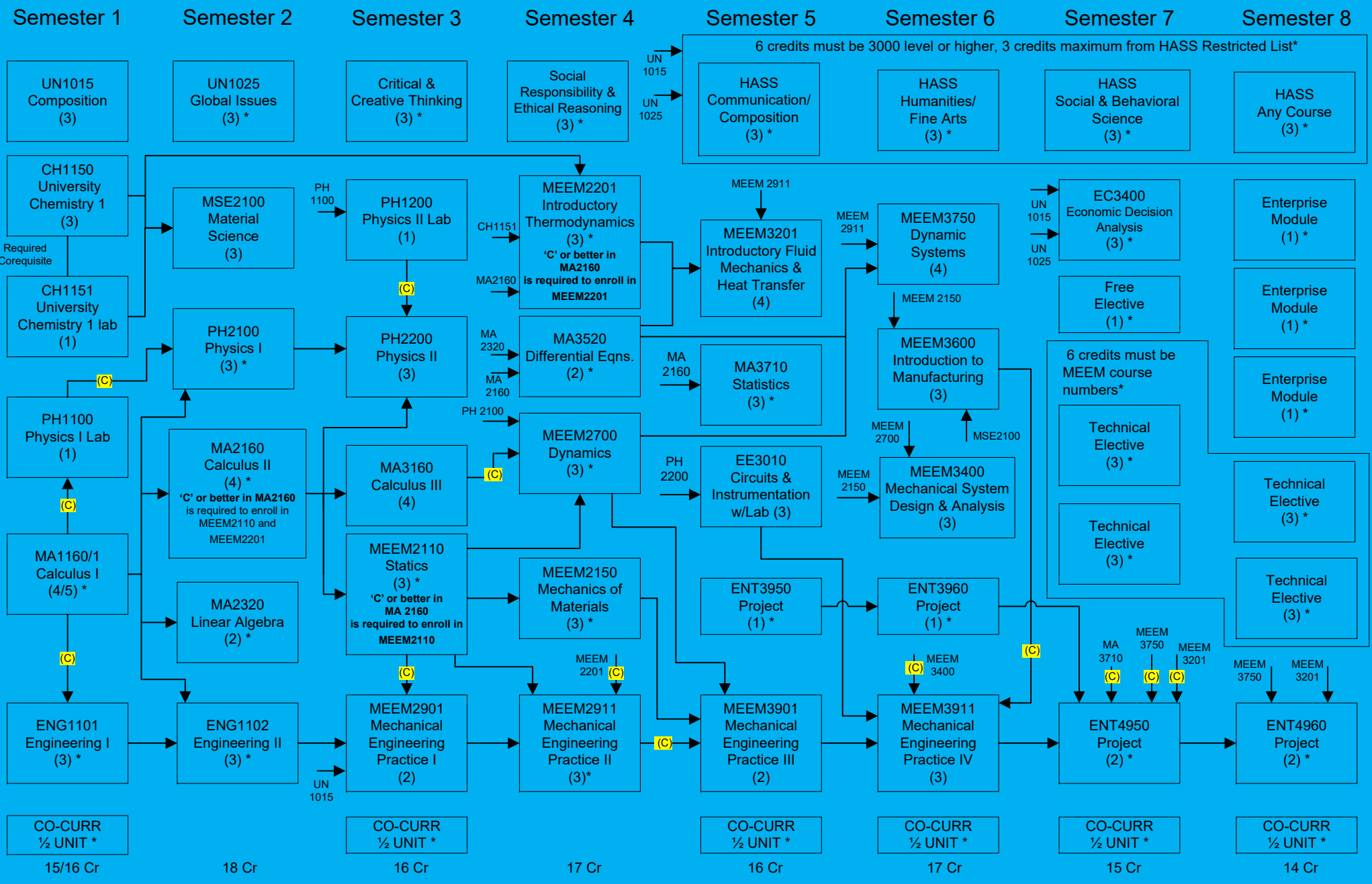
March 2019

ME Advising web page: http://www.mtu.edu/mechanical/undergraduate/advising/

Michigan Tech

Bachelor of Science-Mechanical Engineering

Enterprise Concentration Academic Year 2019-2020 and later



128 Total Credits
March 2019

1. ***General Education Requirements:*** 24 total credits. Required courses are UN1015-Composition (3 credits), UN1025-Global Issues (3 credits), a Critical & Creative Thinking course (3 credits), a Social Responsibility & Ethical Reasoning course (3 credits), and 12 HASS (Humanities, Arts, & Social Sciences) credits. The 12 total credits of HASS must include a minimum of 3 credits each in Communication/ Composition, Humanities/Fine Arts and Social & Behavioral Science. Approved course lists are available in the ME Advising Center and are linked on the ME Advising web page. **6 credits must be 3000 level or higher (does not include EC3400). EC3400 is not a HASS course for ME students, but is still required for the BSME.** No more than 3 credits may be used from the HASS Restricted List. All 3000 level or higher HASS courses require UN1015 and UN1025 as non-concurrent prerequisites.
2. ***UN1025 Global Issues Language Option:*** 3 credits of 3000-level or higher modern language may be substituted directly for UN1025. A list of approved courses is located on the Modern Language webpage. **Any students with previous language experience in Spanish, French, or German must take the Modern Language Online Placement Test.** Instructions are linked on the ME Advising web page.
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4. ***Engineering Fundamentals:*** ENG1001 (2 credits) plus ENG1100 (2 credits) is equivalent to ENG1101 (3 credits). ENG1002 or passing spatial visualization test is required for ENG1001 and ENG1101 as a concurrent pre-requisite. ENG1002 or passing the spatial visualization test is also a non-concurrent pre-requisite for ENG1102. MA1160/1161 is a concurrent pre-requisite for ENG1101 and MA1031 or MA1032 are concurrent pre-requisites for ENG1001. MA1160/1161 is a non-concurrent pre-requisite for ENG1102. ENG1102 project content varies by section number.
5. ***Math:*** Students are placed into an initial math course based on ACT/SAT math score, or a math placement exam score for credit (AP, IB, CLEP). MA1160 (4 credits) or MA1161 (5 credits) satisfy the Calculus I requirement. MA2320 and MA3520 are offered as full semester courses for students taking these courses in separate semesters. The Math department also teaches MA2321 as an accelerated course (equivalent to MA2320) in the first half of a given semester and MA3521 as an accelerated course (equivalent to MA3520) in the second half of the semester (registration must be for the same section number of both MA2321 and MA3521 in the same semester) MA2320, MA2321, or MA2330 are all equivalent and are approved pre-requisites for MA3520 or MA3521. MA3530 or 3560 are also equivalent to MA3520/3521. Both MA2710 and 2720 are acceptable in place of MA3710.
6. ***A grade of 'C' or better in MA2160 is required as a pre-requisite for MEEM2110 and MEEM2201.***
7. For students earning a 'CD' or 'D' grade in MA1160/1161, PH2110 (University Physics Workshop 1) is a required co-requisite for PH2100.
8. ***Enterprise*:**

a) Choose from the following modules: CEE3490, ENT2950, ENT2960, ENT 2961 (2CR), ENT 2962 (ENT2961 and/or ENT2962 also usable as HASS Restricted but not both as ENT Modules and HASS) ENT3953, ENT3954, ENT3955, ENT3956, ENT3958, ENT3959, ENT3961, ENT3962, ENT3963, ENT3964, ENT3966, ENT3967, ENT3969, ENT3971, ENT3972, ENT3973, ENT3974, ENT3975, ENT3976, ENT3979, ENT3980, ENT3982, ENT3983, ENT3984, ENT3985, ENT3987 (2 CR), ENT4951, ENT4954, ENT4955, ENT4961, and ENT4962. UN3002 and/or UN3003 (Cooperative Education): Up to 2 credits total can be used as Enterprise module credits in the BSME-Enterprise curriculum. Modules may not be offered every semester and may have pre-requisites and/or restrictions.

b) In order to enroll in ENT4950 to begin Enterprise capstone project work, the Verification of Senior Design Objectives through Enterprise Experience form must be completed and approved by the ME-EM department. Complete instructions for this process are available in the ME Advising Center and are linked on the ME Advising web page.

c) **All four required Enterprise project semesters, ENT3950/3960/4950/4960, must be completed with the same Enterprise team.**

9. ***Free electives***: Any credits that are 1000-level or above, not on the co-curricular activities list, and not non-repeatable duplicated or equivalent courses.
10. ***Co-curricular Activities***: Mainly physical education courses with some additions. Three units (or six half units) are required for graduation. These units will be included as earned hours and may be used to determine full-time enrollment status. These are additional to the 128 total credits required for the BSME. Co-curricular list available in the ME Advising Center and is linked on the ME Advising web page. These units are graded pass/fail and are not included in credit hours used for calculation of any grade point averages (cumulative, engineering, or departmental).
11. ***Prerequisite*** courses are noted by a plain arrow. The prerequisite course must be successfully completed **prior** to taking the subsequent course. ***Concurrent prerequisites*** are noted by a **'C'** within the arrow and may be taken at the same time, although it is not necessary to take these courses together if the pre-requisite course is completed first.
    a. ***The prerequisites for ENT4950 are: MA3710, MEEM3911, MEEM3201(concurrent), MEEM3750(concurrent), ENT 3950(same team), & ENT 3960(same team).***
    b. ***The prerequisites for ENT4960 are: MA3710, MEEM3911, MEEM3201(non-concurrent), MEEM3750 (non-concurrent), & ENT 4950(same team).***
12. ***Co-requisite*** courses are courses that must be taken together.
13. ***Transfer, Advanced Placement, or study abroad courses*** are not included in credit hours used for GPA calculations. Transfer credit is awarded for Michigan Tech equivalent course work only if a grade of 'C' or better (2.00/4.00) or equivalent is earned at a transfer institution. Study abroad credit – which is considered Michigan Tech credit for residency purposes – will be awarded by International Programs and Services based on passing a course according to equivalent international standards. Advanced Placement credit is awarded according to published AP Exam score standards (also IB and CLEP).

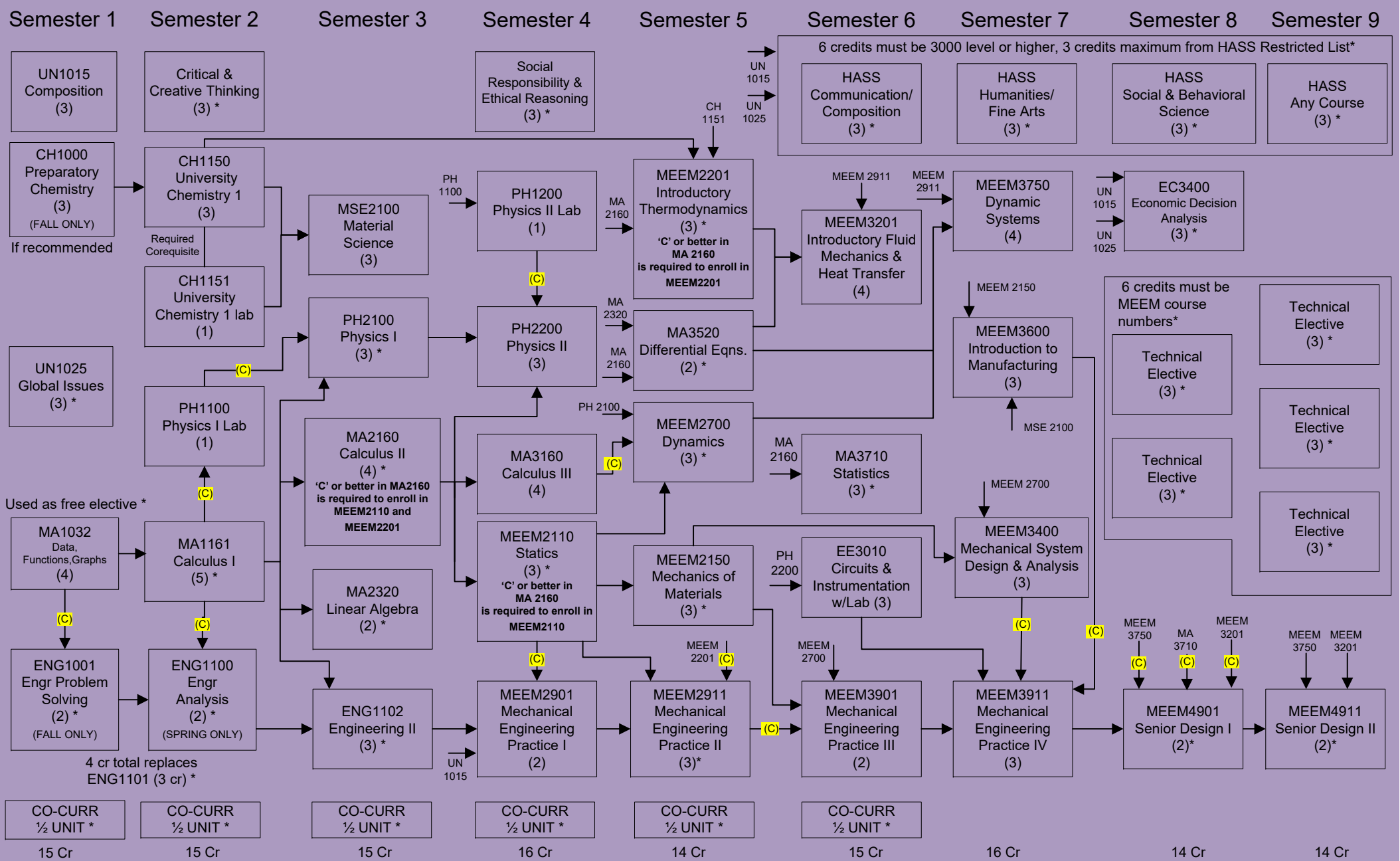
March 2019

This is not an official list of degree requirements. Adjustments may be required due to curriculum changes. ME Advising web page: http://www.mtu.edu/mechanical/undergraduate/advising/

Michigan Tech

Bachelor of Science-Mechanical Engineering

Academic Year 2019-2020 and later for students placed into MA1032



1. ***General Education Requirements:*** 24 total credits. Required courses are UN1015-Composition (3 credits), UN1025-Global Issues (3 credits), a Critical & Creative Thinking course (3 credits), a Social Responsibility & Ethical Reasoning course (3 credits), and 12 HASS (Humanities, Arts, & Social Sciences) credits. The 12 total credits of HASS must include a minimum of 3 credits each in Communication/ Composition, Humanities/Fine Arts and Social & Behavioral Science. Approved course lists are available in the ME Advising Center and are linked on the ME Advising web page. **6 credits must be 3000 level or higher (does not include EC3400). EC3400 is not a HASS course for ME students, but is still required for the BSME.** No more than 3 credits may be used from the HASS Restricted List. All 3000 level or higher HASS courses require UN1015 and UN1025 as non-concurrent prerequisites.
2. ***UN1025 Global Issues Language Option:*** 3 credits of 3000-level or higher modern language may be substituted directly for UN1025. A list of approved courses is located on the Modern Language webpage. **Any students with previous language experience in Spanish, French, German, or Mandarin must take the Modern Language Online Placement Test.** Instructions are linked on the ME Advising web page.
3. ***Technical electives***: Any 4000+ level courses in the College of Engineering except MET courses are acceptable for ME technical electives. **MET courses are not acceptable for ME technical elective credits.** These prefixes - BE, CM, CEE, EE, ENG, GE, MEEM, MSE - may be used by BSME students for technical elective credits (if allowed to enroll in the course by the offering department) with the following exceptions: BE4900, BE4901, BE4910, BE4930, BE5000, CEE4900, CEE4905, CEE4910, CEE4915, CEE4916, CEE4920, CEE4930, CEE5190, CEE5250, CEE5390, CEE5490, CEE5560, CEE5561, CEE5562, CEE5563, CEE5590, CEE5890, CEE5920, CEE5930, CEE5990, CEE5991, CEE5992, CEE5994, CEE5997, CEE5998, CEE5999, CM4855, CM4860, CM4861, CM4900, CM4910, CM5900, CM5950, CM5990, EE4870, EE4901, EE4910, EE4800, EE4805, EE5290, EE5805, EE5900, EE5990, EE5991, EE5992, EE5994, ENG4060, ENG4070, ENG4900, ENG4905, ENG4910, ENG4990, ENG5060, ENG5100, ENG5200, ENG5300, ENG5400, ENG5990, ENG5998, GE4900, GE4910, GE4916, GE4930, GE4931, GE4933, GE4934, GE4961, GE4962, GE4970, GE5187, GE5930, GE5940, GE5950, GE5960, GE5970, GE5994, GE5995, GE5998, GE5999, MEEM4990, MEEM4901, MEEM4911, MEEM4999, MEEM5010, MEEM5990, MEEM5994, MEEM5995, MEEM5999, MEEM6000, MSE4130, MSE4131, MSE4140, MSE4141, MSE4970, MSE5100, MSE5900, MSE5970, and MSE5990 or any other research/special topics/seminar/ etc credits (courses without a specific course description and/or syllabus). Undergraduate students cannot typically enroll in 6000-level courses. Special topics courses (4990, 5990, etc.) may be approved on an individual section/semester basis if a student/faculty member submits or creates a course syllabus for evaulation. OSM 4300 is also acceptable.
4. ***Engineering Fundamentals:*** ENG1001 (2 credits) plus ENG1100 (2 credits) is equivalent to ENG1101 (3 credits). ENG1002 or passing spatial visualization test is required for ENG1001 and ENG1101 as a concurrent pre-requisite. ENG1002 or passing the spatial visualization test is also a pre-requisite for ENG1102. MA1160/1161 is a concurrent pre-requisite for ENG1101, and MA1031 or MA1032 are concurrent pre-requisites for ENG1001. MA1160/1161 is a non-concurrent pre-requisite for ENG1102. ENG1102 project content varies by section number.
5. ***Math:*** Students are placed into an initial math course based on ACT/SAT math score, or a math placement exam score for credit (AP, IB, CLEP). MA1160 (4 credits) or MA1161 (5 credits) satisfy the Calculus I requirement. MA2320 and MA3520 are offered as full semester courses for students taking these courses in separate semesters. The Math department also teaches MA2321 as an accelerated course (equivalent to MA2320) in the first half of a given semester and MA3521 as an accelerated course (equivalent to MA3520) in the second half of the semester (registration must be for the same section number of both MA2321 and MA3521 in the same semester) MA2320, MA2321, or MA2330 are all equivalent and are approved pre-requisites for MA3520 or MA3521. MA3530 or 3560 are also equivalent to MA3520/3521. Both MA2710 and 2720 are acceptable in place of MA3710.
6. ***A grade of 'C' or better in MA2160 is required as a pre-requisite for MEEM2110 and MEEM2201.***
7. For students earning a 'CD' or 'D' grade in MA1160/1161, PH2110 (University Physics Workshop 1) is a required co-requisite for PH2100.
8. ***Free electives***: Any credits that are 1000-level or above, not on the co-curricular activities list, and not non-repeatable duplicated or equivalent courses. UN3002, UN3003, etc. (Cooperative Education credits) can be used as free electives in the BSME curriculum.
9. ***Co-curricular Activities***: Mainly physical education courses with some additions. Three units (or six half units) are required for graduation. These units will be included as earned hours and may be used to determine full-time enrollment status. These are in addition to the 128 total credits required for the BSME. Co-curricular list is available in the ME Advising Center and is linked on the ME Advising web page. These units are graded pass/fail and are not included in credit hours used for calculation of any grade point averages (cumulative, engineering, or departmental).
10. ***Prerequisite*** courses are noted by a plain arrow. The prerequisite course must be successfully completed **prior** to taking the subsequent course. ***Concurrent prerequisites*** are noted by a **'C'** within the arrow and may be taken at the same time, although it is not necessary to take these courses together if the prerequisite course is completed first.
    a. ***The prerequisites for MEEM4901 are: MA3710, MEEM3911, MEEM3201(concurrent) & MEEM3750(concurrent).***
    b. ***The prerequisites for MEEM4911 are: MA3710, MEEM3911, MEEM3201(non-concurrent) & MEEM3750 (non-concurrent).***
11. ***Co-requisite*** courses are courses that must be taken together in the same semester.
12. ***Transfer, Advanced Placement, or study abroad courses*** are not included in credit hours used for GPA calculations. Transfer credit is awarded for Michigan Tech equivalent course work only if a grade of 'C' or better (2.00/4.00) or equivalent is earned at a transfer institution. Study abroad credit – which is considered Michigan Tech credit for residency purposes – will be awarded by International Programs and Services based on passing a course according to equivalent international standards. Advanced Placement credit is awarded according to published AP Exam score standards (also IB and CLEP).

This flow chart is not an official list of degree requirements. Adjustments may be required due to curriculum changes. ME Advising web page: http://www.mtu.edu/mechanical/undergraduate/advising/

March 2019

General Education: Core & Humanities, Arts and Social Sciences (HASS)

24 credits required: 12 credits from Core & 12 credits from HASS

2020-2021

Core Courses: 12 credits required

UN1015 Composition: 3 credits	UN1025 Global Issues: 3 credits or 3000-level or higher Modern Language course: 3 credits
Critical and Creative Thinking: 3 credits • Select one course FA2330 Art Appreciation FA2520 Music Appreciation FA2720 Sound in Art and Science FA2820 Theatre Appreciation HU2130 Introduction to Rhetoric HU2324 Introduction to Film HU2501 American Experience in Literature HU2503 Introduction to Literature HU2538 British Experience in Literature HU2700 Introduction to Philosophy HU2820 Communication and Culture HU2910 Language and Mind SS2300 Environment and Society TA2XX4 Critical & Creative Thinking Core *(Transfer Agreement credit only)*	Social Responsibility & Ethical Reasoning: 3 credits • Select one course EC2001 Principles of Economics PSY2000 Introduction to Psychology SS2100 Introduction to Cultural Anthropology SS2200 Introduction to Archaeology SS2400 Introduction to Human Geography SS2500 United States History to 1877 SS2501 US History Since 1877 SS2502 European History to 1650 SS2503 European History Since 1650 SS2504 World History to 1500 SS2505 World History Since 1500 SS2600 American Government and Politics SS2610 Introduction to Law and Society SS2700 Introduction to Sociology TA2XX8 Social Responsibility & Ethical Reasoning Core *(Transfer Agreement credit only)*

Humanities, Arts, and Social Sciences (HASS): 12 credits required

Students must take a minimum of 12 credits in HASS following these requirements:

- 6 credits must be upper level (3000-4999) courses
  - UN1015 AND (UN1025 or Modern Language – 3000 level or higher) are prerequisites to all upper level *non-language* HASS courses
  - Prerequisites for upper level language courses are appropriate placement score OR required lower level language course
- 3 credits are required from each of the following lists:
  - Communication and Composition
  - Humanities and Fine Arts (HU/FA)
  - Social and Behavioral Sciences (EC/PSY/SS)
- No more than 3 credits from the Restricted HASS list may be counted toward the HASS requirement
- Some courses are on more than one HASS list, on a HASS list and a Core list, or on the HASS list and the STEM list, but each course can satisfy only one requirement

<u>Communication and Composition</u>

- Minimum of 3 credits required

HU2810	Research & Writing in Communication	3
HU2830	Public Speaking & Multimedia	3
HU3015	Advanced Composition	3
HU3120	Technical and Professional Communication	3
HU3130	Rhetoric of Science and Technology	3
HU3151	The Rhetoric of Everyday Texts	3
HU3621	Introduction to Journalism	3
HU3693	Science Writing	3
HU3694	Grant Writing	3
HU3832	Advanced Digital Presentation	3
HU4625	Risk Communication	3
TA1XX5	Communication Elective (*Transfer Agreement credit only)*	var
TA3XX5	Communication Elective (*Transfer Agreement credit only)*	var

Humanities and Fine Arts (HU/FA)

- Minimum of 3 credits required

FA2050	Drawing I	3
FA2110	Outdoor Sculpture	3
FA2123	World Music	3
FA2150	Creative Drawing Processes	3
FA2160	Creative Practices: A Studio Course in Making Visual Art	3
FA2190	Art and Nature	3
FA2222	Film Music	3
FA2300	Art and Design Studio	3
FA2305	Ceramics I	3
FA2315	Beginning Wheel Throwing	3
FA2330	Art Appreciation	3
FA2520	Music Appreciation	3
FA2600	Beginning Acting	3
FA2720	Sound in Art and Science	3
FA2820	Theatre Appreciation	3
FA3133	Contemporary Music: The Search for New Sounds	3
FA3305	Creative Ceramics	3
FA3330	Art History-Prehistory to Renaissance	3
FA3333	Contemporary Sculpture Studio	3
FA3335	Traditional Sculpture Studio	3
FA3340	Art History-Renaissance to Today	3
FA3550	History of Jazz	3
FA3560	Music History	3
FA3600	Advanced Acting	3
FA3625	History of Rock	3
FA3630	Beatles and Beach Boys	3
FA3640	Puppetry: Puppet Construction & Manipulation	3
FA3760	Costume Design	3
FA3810	Theatre History I	3
FA3821	Theatre History II	3
FA3860	Costume History	3
FA4620	Musical Theatre Performance	3
HU2130	Introduction to Rhetoric	3
HU2241	Level I-A Less Commonly Taught Languages *(transfer or study abroad credit only)*	var
HU2242	Level I-B Less Commonly Taught Languages *(transfer or study abroad credit only)*	var
HU2271	Level I-A French Language & Culture	3
HU2272	Level I-B French Language & Culture	3
HU2273	Transitional Level I French Language & Culture	3
HU2281	Level I-A German Language & Culture	3
HU2282	Level I-B German Language & Culture	3
HU2291	Level I-A Spanish Language & Culture	3
HU2292	Level I-B Spanish Language & Culture	3
HU2293	Transitional Level I Spanish Language & Culture	3
HU2324	Introduction to Film	3
HU2500	Ways of Reading	3
HU2501	American Experience in Literature	3
HU2503	Introduction to Literature	3
HU2510	Intro to Creative Writing	3
HU2538	British Experience in Literature	3
HU2548	Young Adult Literature	3
HU2633	Fundamentals of Digital Imaging	3
HU2700	Introduction to Philosophy	3
HU2702	Ethical Theory and Moral Problems	3
HU2810	Research & Writing in Communication	3
HU2820	Communication and Culture	3
HU2830	Public Speaking & Multimedia	3

Humanities and Fine Arts (HU/FA) cont

HU2840	Interpersonal Communication	3
HU2910	Language and Mind	3
HU2920	Language and Society	3
HU3015	Advanced Composition	3
HU3120	Technical and Professional Communication	3
HU3130	Rhetoric of Science and Technology	3
HU3150	Topics in Literacy Studies	3
HU3151	The Rhetoric of Everyday Texts	3
HU3241	Level II-A Less Commonly Taught Languages *(transfer or study abroad credit only)*	var
HU3242	Level II-B Less Commonly Taught Languages *(transfer or study abroad credit only)*	var
HU3261	Communicating Across Cultures	3
HU3262	Topics in Francophone Cultures	3
HU3263	Topics in German-Speaking Culture	3
HU3264	Topics in Spanish-Speaking Culture	3
HU3271	Level II-A French Language & Culture	3
HU3272	Level II-B French Language & Culture	3
HU3274	Level III French Literature & Culture	3
HU3275	French for Special Purposes	3
HU3280	Level I-C German Language and Culture	3
HU3281	Level II-A German Language & Culture	3
HU3282	Level II-B German Language & Culture	3
HU3283	Level II German for Special Purposes	3
HU3284	Level III German Literature & Culture	3
HU3285	Level III German Film & Media	3
HU3291	Level II-A Spanish Language & Culture	3
HU3292	Level II-B Spanish Language & Culture	3
HU3293	Level II-C Spanish Composition & Conversation	3
HU3294	Hispanic Literatures and Culture	3
HU3295	Level III Advanced Spanish for Literacies	3
HU3296	Introduction to Hispanic Literatures and Cultures	3
HU3326	Topics in World Cinema	3
HU3327	Film Style and Genre	3
HU3400	Topics in Diversity Studies	3
HU3401	Gender and Culture	3
HU3410	Introduction to Diversity Studies	3
HU3502	Mythology	3
HU3504	Studies in the Novel	3
HU3505	Literary Forms, Genres, and Modes	3
HU3506	Major Authors	3
HU3507	Cultural Traditions in Literature	3
HU3508	Literature and the Environment	3
HU3513	Shakespeare	3
HU3514	Workshop Creative Nonfiction	3
HU3515	Workshop in Poetry	3
HU3516	Workshop in Fiction	3
HU3517	Literary Theory and Criticism	3
HU3518	Workshop in Sci Fi Writing	3
HU3519	Workshop in Nature Writing	3
HU3545	Literature across Borders	3
HU3554	Science Fiction	3
HU3557	Literature and Science	3
HU3621	Introduction to Journalism	3
HU3693	Science Writing	3
HU3694	Grant Writing	3
HU3700	Philosophy of Science	3
HU3701	Philosophy of Technology	3
HU3702	Philosophy of Religion	3
HU3710	Engineering Ethics	3
HU3711	Biomedical Ethics	3

Humanities and Fine Arts (HU/FA) cont

HU3800	Media and Society	3
HU3802	Media and Globalization	3
HU3810	Technology and Culture	3
HU3825	Environmental Communication	3
HU3830	Creativity, Culture, & Change	3
HU3832	Advanced Digital Presentation	3
HU3840	Organizational Communication	3
HU3850	Cultural Studies	3
HU3852	Surveillance, Media, and Film	3
HU3860	Popular Culture	3
HU3871	New Media Theory	3
HU3872	Color, Visuality, and Culture	3
HU3882	Media Industries	3
HU3890	Documentary	3
HU3910	Language and Globalization	3
HU3940	Language and Identity	3
HU4271	Modern Language Seminar I-French	3
HU4272	Modern Language Seminar II-French	3
HU4273	Modern Language Seminar III-French	3
HU4281	Modern Language Seminar I-German	3
HU4282	Modern Language Seminar II-German	3
HU4283	Modern Language Seminar III-German	3
HU4291	Modern Language Seminar I-Spanish	3
HU4292	Modern Language Seminar II-Spanish	3
HU4293	Modern Language Seminar III-Spanish	3
HU4625	Risk Communication	3
HU4701	Political Philosophy	3
HU4725	Existentialism and Phenomenology	3
HU4890	Topics in Communication	3
IS2001	International Studies in situ-Humanities/Fine Arts *(study abroad credit only)*	var
IS3001	International Studies in situ-Humanities/Fine Arts *(study abroad credit only)*	var

Social and Behavioral Sciences (EC/PSY/SS)

- Minimum of 3 credits required

EC2001	Principles of Economics	3
EC3002	Microeconomic Theory	3
EC3003	Macroeconomic Theory	3
EC3100	International Economics	3
EC3300	Industrial Organization	3
EC3400	Economic Decision Analysis	3
EC4050	Game Theory/Strategic Behavior	3
EC4400	Banking and Financial Institutions	3
EC4500	Public Sector Economics	3
EC4620	Energy Economics	3
EC4630	Mineral Industry Economics	3
EC4640	Natural Resource Economics	3
EC4650	Environmental Economics	3
EC4710	Labor/Human Resource Economics	3
FW3313	Sustainable Science	3
FW3760	Human Dimensions of Natural Resources	3
GE4630	Mineral Industry Economics	3
IS2002	International Studies in situ-Social/Behavorial Sci *(study abroad credit only)*	var
IS3002	International Studies in situ-Social/Behavorial Sci *(study abroad credit only)*	var
MGT3650	Intellectual Property Management	3
PSY2000	Introduction to Psychology	3

Social and Behavioral Sciences (EC/PSY/SS) cont.

PSY2080	Special Topics in Psychology	3
PSY2110	Educational Psychology	3
PSY2300	Developmental Psychology	3
PSY2400	Health Psychology	3
PSY2600	Death and Dying	3
PSY2900	An Introduction to Restorative Practices	3
PSY3010	Theories of Personality	3
PSY3030	Abnormal Psychology	3
PSY3070	Cross-Cultural Psychology	3
PSY3720	Social Psychology	3
PSY4080	Topics in Psychology	3
SS2100	Introduction to Cultural Anthropology	3
SS2200	Introduction to Archaeology	3
SS2210	Evolution of Cities	3
SS2300	Environment and Society	3
SS2400	Introduction to Human Geography	3
SS2500	United States History to 1877	3
SS2501	United States History since 1877	3
SS2502	European History to 1650	3
SS2503	European History since 1650	3
SS2504	World History to 1500	3
SS2505	World History since 1500	3
SS2510	Gender and the Past	3
SS2600	American Government & Politics	3
SS2610	Introduction to Law and Society	3
SS2635	Comparative Politics	3
SS2700	Introduction to Sociology	3
SS3105	Native American and Indigenous Communities	3
SS3110	Food Systems and Sustainability	3
SS3200	Archaeology of the Modern World	3
SS3210	Field Archaeology	var
SS3225	Capitalism and the Modern World	3
SS3230	Archaeology of Industry	3
SS3240	Reading the Landscape	3
SS3250	Biological Anthropology	3
SS3260	Latin American Cultural History	3
SS3270	Archaeology of the African Diaspora	3
SS3280	Anthropology of Energy	3
SS3300	Environmental Problems	3
SS3313	Sustainability Science	3
SS3315	Population and Environment	3
SS3400	Contemporary Europe	3
SS3505	Military History of the U.S.	3
SS3510	History of American Technology	3
SS3511	History of Science in America	3
SS3513	History of Making Things: Craft and Industry in America	3
SS3515	History of American Architecture	3
SS3520	U.S. Environmental History	3
SS3530	The Automobile in America	3
SS3540	History of Michigan	3
SS3541	The Copper Country	3
SS3552	Renaissance & Reformation	3
SS3553	Empires in World History	3
SS3560	History of England I	3
SS3561	History of England II	3
SS3570	History of Canada	3
SS3580	Technology and Western Civilization	3
SS3581	History of Science	3
SS3600	American Foreign Policy	3
SS3612	International Relations	3

Social and Behavioral Sciences (EC/PSY/SS) cont.

SS3621	Introduction to Public Policy and Public Management	3
SS3630	Environmental Policy & Politics	3
SS3636	Perceptions of the Modern State and Governance	3
SS3640	Selected Topics in Cyber-Law	3
SS3650	Intellectual Property Management	3
SS3660	Constitutional Law	3
SS3661	Civil Rights & Civil Liberties	3
SS3665	Crime, Incarceration, and Policy	3
SS3760	Human Dimensions of Natural Resources	3
SS3800	Energy Policy and Technology	3
SS3801	Science, Technology, & Society	3
SS3805	Environmental Justice	3
SS3811	Energy Security and Justice	3
SS3815	Energy and Society	3
SS3910	Histories and Cultures	3
SS3920	Topics in Anthropology/Archaeology	3
SS3950	Topics in American History	3
SS3951	Topics in European History	3
SS3952	Topics in World History	3
SS3961	Preparing for Cross-Cultural Immersion Experiences	3
SS3990	Topics in the Social Science	3
SS4001	History of Social Thought	3
SS4120	Anthropology of International Development	3
SS4200	Environmental Anthropology	3
SS4220	Archaeological Thought in Society	3
SS4390	Seminar in Sustainability	3
SS4530	Deindustrialization and the Urban Environment	3
SS4550	History of Technology	3
SS4552	Historical Archaeology	3
SS4553	Material Culture Studies	3
SS4700	Communities and Research	3
SS4921	Washington Experience Seminar	var

Restricted HASS

- No more than 3 credits

BL2001	Valuing the Great Lakes	3
BL3970	Current Health Issues	3
ED3510	Communicating Science I	3
ENT2961	Teaming in the Enterprise	2
ENT2962	Communication Contexts	1
FIN2400	Financial Literacy	3
FW3113	Alberta: Place, People, History	3
FW3116	Ethnobotany	3
FW3765	Maple Syrup Management and Culture	1
FW4111	Indigenous Natural Resources Management	3
GE2100	Environmental Geology	3
HON3150	Pavlis Seminar II	1
HON3410	Culture, Language, and Project Development	3
HON4150	Pavlis Seminar III	1
KIP2600	Introduction to Public Health	2
MA4945	History of Mathematics	3

APPROVED TRANSFER COURSES

The following courses are available ONLY by transfer.

Communication and Composition

HU1XX5	*Approved Transfer HASS Communication/Comp*	*3*
HU2XX5	*Approved Transfer HASS Communication/Comp*	*3*
HU3XX5	*Approved Transfer HASS Communication/Comp*	*3*
HU4XX5	*Approved Transfer HASS Communication/Comp*	*3*

Humanities and Fine Arts (HU/FA)

FA1XXX	*Approved Transfer HASS Elective*	*3*
FA2XXX	*Approved Transfer HASS Elective*	*3*
FA3XXX	*Approved Transfer HASS Elective*	*3*
FA4XXX	*Approved Transfer HASS Elective*	*3*
HU1XXX	*Approved Transfer HASS Elective*	*3*
HU2XXX	*Approved Transfer HASS Elective*	*3*
HU3XXX	*Approved Transfer HASS Elective*	*3*
HU4XXX	*Approved Transfer HASS Elective*	*3*
HU1XX5	*Approved Transfer HASS Communication/Comp*	*3*
HU2XX5	*Approved Transfer HASS Communication/Comp*	*3*
HU3XX5	*Approved Transfer HASS Communication/Comp*	*3*
HU4XX5	*Approved Transfer HASS Communication/Comp*	*3*

Social and Behavioral Sciences (EC/PSY/SS)

EC1XXX	*Approved Transfer HASS Elective*	*3*
EC2XXX	*Approved Transfer HASS Elective*	*3*
EC3XXX	*Approved Transfer HASS Elective*	*3*
EC4XXX	*Approved Transfer HASS Elective*	*3*
PSY1XXX	*Approved Transfer HASS Elective*	*3*
PSY2XXX	*Approved Transfer HASS Elective*	*3*
PSY3XXX	*Approved Transfer HASS Elective*	*3*
PSY4XXX	*Approved Transfer HASS Elective*	*3*
SS1XXX	*Approved Transfer HASS Elective*	*3*
SS2XXX	*Approved Transfer HASS Elective*	*3*
SS3XXX	*Approved Transfer HASS Elective*	*3*
SS4XXX	*Approved Transfer HASS Elective*	*3*

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Co-curricular Courses
2020-2021 Academic Year

Three co-curricular units are required for graduation. A unit involves the same time commitment as an academic semester credit.

Co-curricular units:

- Count toward full-time status for financial aid
- Are not included in GPA calculation
- Are not included in the total credits required for a degree
- Will appear on the transcript with a Pass/Fail grade
- Will count toward satisfactory progress for financial aid purposes
- Will not count toward the 12 credits of gradable courses required for recognition on the dean's list or other university honors.

Repeatability for general education:

- .5 co-curricular unit courses may be repeated once for general education co-curricular credit.
- 1 co-curricular unit courses may not be repeated for general education co-curricular credit.

Co-curricular Courses

AF0120	Physical Conditioning	.5
AF0130	Air Force Elite Forces Workout	1
AF0230	Precision Drill Team	.5
AF0340	Field Training	1
AR0340	Internship in Advanced Military Leadership	3
AR2068	Fall Military Physical Conditioning	1
AR2069	Spring Military Physical Conditioning	1
AR3068	Physical Training Leadership I	1
AR3069	Physical Training Leadership II	1
FA2400	Huskies Pep Band	1
FA2402	Campus Concert Band	1
FA2570	Private Music Instruction	.5
PE0101	Flag Football	.5
PE0103	Bait and Fly Casting	.5
PE0104	Ultimate Frisbee	.5
PE0105	Beginning Bowling I	.5
PE0106	Beginning Golf	.5
PE0107	Floor Hockey	.5
PE0108	Broomball	.5
PE0109	Aikido	.5
PE0113	Disc Golf	.5
PE0115	Beginning Swimming	.5
PE0116	Beginning Basketball	.5
PE0117	Beginning Hockey	.5
PE0118	Beginning Weight Training	.5
PE0119	Beginning Fitness Training	.5
PE0120	Beginning Alpine Skiing (Downhill)	.5
PE0121	Beginning Snowboarding	.5
PE0122	Softball	.5
PE0123	Telemark Skiing	.5
PE0125	Sand Volleyball	.5
PE0126	Beginning Volleyball	.5
PE0130	Water Aerobics	.5
PE0132	Beginning Soccer	.5
PE0135	Beginning Cross Country Skiing	.5
PE0137	Table Tennis	.5
PE0138	Beginning Racquetball/Squash	.5
PE0139	Beginning Badminton	.5
PE0140	Beginning Tennis	.5
PE0142	Introduction to Brazilian Jiu Jitsu	.5
PE0145	Beginning Rifle	.5
PE0146	Beginning Billiards	.5
PE0148	Beginning Skating	.5
PE0150	Outdoor Lifetime Activities	.5
PE0151	Indoor Lifetime Activities	.5
PE0152	Social Dance I	.5
PE0153	Aerobics I	.5

Co-curricular Courses cont.

PE0155	Beginning Road Biking	.5
PE0156	Beginning Mountain Biking	.5
PE0165	Introduction to Rowing	.5
PE0166	Moving for Fitness	.5
PE0167	Beginning Yoga	.5
PE0169	Indoor Cycling	.5
PE0170	TaeKwonDo and Hapkido I	.5
PE0175	Hiking	.5
PE0177	Fundamentals of Laser Tag	.5
PE0205	Bowling II	.5
PE0206	Intermediate Golf	.5
PE0209	Intermediate Aikido	.5
PE0210	Special Topics in Physical Education	.5
PE0215	Intermediate Swimming	.5
PE0216	Intermediate Basketball	.5
PE0217	Intermediate Hockey	.5
PE0218	Intermediate Weight Training	.5
PE0219	Intermediate Fitness Training	.5
PE0220	Intermediate Alpine Ski (Downhill)	.5
PE0221	Intermediate Snowboarding	.5
PE0226	Intermediate Volleyball	.5
PE0230	Water Polo	.5
PE0232	Intermediate Soccer	.5
PE0235	Intermediate Cross Country Ski	.5
PE0237	Intermediate Table Tennis	.5
PE0238	Intermediate Racquetball/Squash	.5
PE0239	Intermediate Badminton	.5
PE0240	Intermediate Tennis	.5
PE0242	Brazilian Jiu Jitsu II	.5
PE0245	Intermediate Rifle	.5
PE0246	Intermediate Billiards	.5
PE0248	Intermediate Skating	.5
PE0250	Paintball	.5
PE0252	Social Dance II	.5
PE0253	Aerobics II	.5
PE0256	Intermediate Mountain Biking	.5
PE0266	Running for Fitness	.5
PE0267	Intermediate Yoga	.5
PE0270	Cardio TaeKwonDo	.5
PE0277	Strategies of Laser Tag	.5
PE0315	Fitness Swimming	.5
PE0320	Advanced Skiing	.5
PE0321	Advanced Snowboarding	.5
PE0330	Club Sports	.5
PE0352	Social Dance III	.5
PE0353	Aerobics III	.5
PE0355	Advanced Road Biking	.5
PE0367	Mindful Yoga	.5
PE0420	Ski Instructor Training	.5
PE0421	Snowboard Instructor Training	.5
PE0425	Intramurals	.5
PE0430	Club Sports Leadership	.5
PE0450	Physical Education Fusion – Full	1
PE0451	Mountain/Road Bike Fusion	.5
PE0520	Alpine Skiing Fusion	.5
PE0521	Snowboard Fusion	.5
PE1000	Fitness Foundations	1
PE1010	Active Michigan Tech	1
PE1028	Ski Patrol (Hill)	1
PE1101	Team Sports	1
PE1105	Bowling	1
PE1106	Golf	1
PE1113	Disc Sports	1
PE1118	Weight/Fitness Training	1
PE1119	Conditioning	1
PE1138	Racquet Sports	1
PE1140	Tennis	1

Co-curricular Courses cont.

PE1169	Indoor Cycling	1
PE1170	TaeKwonDo	1
PE1210	Special Topics	1
PE1215	Introduction to Backcountry Travel	1
PE1220	Introduction to Canoeing	1
PE1225	Indoor Rock Climbing	1
PE1230	Introduction to Kayaking	1
PE1235	Introduction to Log Rolling	1
PE1240	Snowshoeing	1
PE1245	Wilderness First Responder	1
PE1435	Self-Defense for Women	1
PE1436	Self-Defense for Men	1
PE1470	Lifeguard Swimming	1
PE2010	Varsity Football	1
PE2020	Varsity Basketball	1
PE2030	Varsity Hockey	1
PE2040	Varsity Nordic Skiing	1
PE2050	Varsity Soccer	1
PE2080	Varsity Track	1
PE2090	Varsity Tennis	1
PE2130	Varsity Volleyball	1
PE2140	Varsity Cross Country	1
PE2150	Cross Training	1
PE0XXX	Co-Curricular Activities *(transfer credit only)*	.5
PE1XXX	Co-Curricular Activities *(transfer credit only)*	1

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Tips for Success in the Michigan Tech BSME program

- ✓ Attend class *and* participate.
- ✓ Take advantage of instructors' office hours.
- ✓ Use the Learning Centers. Make weekly appts (recommended where they are available, see course numbers below as applicable) or walk-in at any time.

  http://www.mtu.edu/compass/mentoring/academic-support/

Math	MA 0010	234 Fisher
Physics	PH 0010	128 Fisher
Chemistry	CH 0100	208 ChemSci
Materials Science & Engineering		U204 M&M
Writing (Multiliteracies)		107 Walker

  For **any class** with writing, report, presentation assignments, etc.

  HU 0122 (Global Issues Study Team for UN 1025)
  HU 0123 (Composition Coaching for UN 1015)

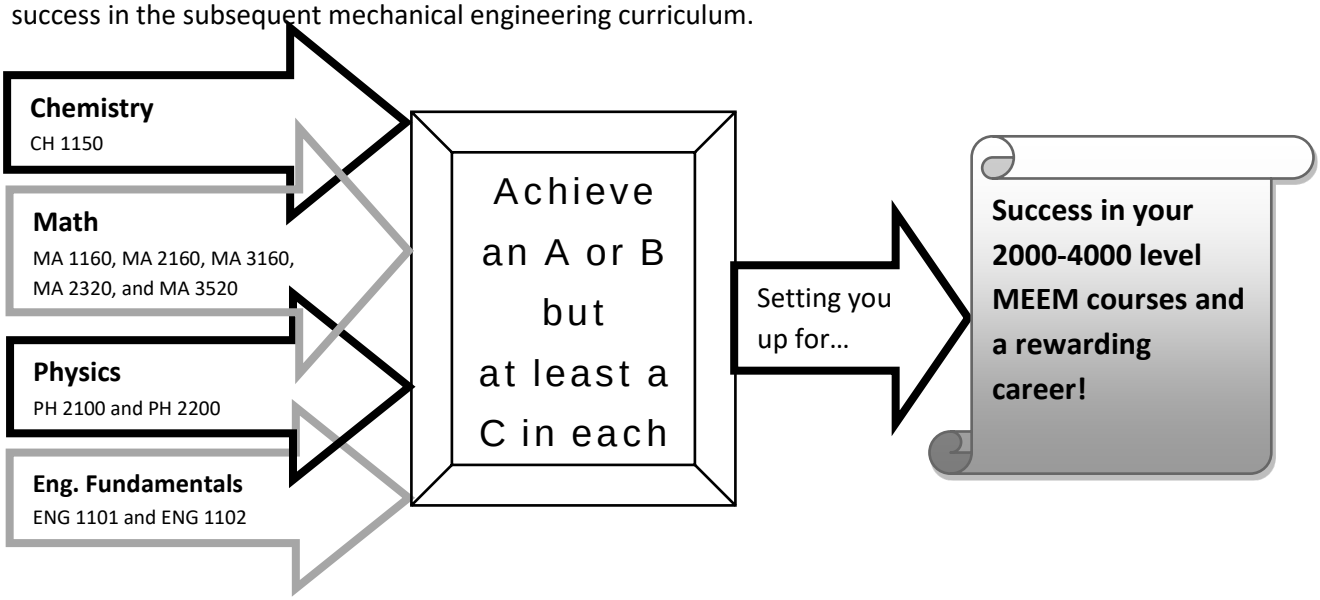
Engineering Fundamentals	208 Dillman (ENG 1001/1100/1101/1102)
Open Hours: Monday-Wednesday 7:00 – 9:00pm (walk-in)	
Engineering Learning Center	203 MEEM (MEEM 2110/2150/2201/2700/MEP Matlab)
Electrical Engineering	123 EERC
Economics	G004 Academic Office Building
Wahtera Center for Student Success	130 Admin

  Peer coaches who can help you with, time management, study skills, social interaction, campus resources.

- ✓ Begin studying on the first day of class. Minimum of 2-3 hours study/prep time per hour of class per week.
- ✓ Keep a regular, consistent personal/sleep schedule.
- ✓ Manage your time wisely. Use a log/planner.
- ✓ Eat well (good, balanced nutrition).
- ✓ Study in an area with minimal distractions. This is likely not in your dorm room/hall.
- ✓ Get involved but not over involved with student organizations.
- ✓ Keep a positive attitude. Relieve stress with exercise.
- ✓ Seek help from your academic advisors and other campus resources as needed. We can refer you to the correct departments if you are having issues.
- ✓ Understand your schedule each semester and why each course is important to your continued progress. Ask questions if you don't understand. That is why we are here as your academic advisors.

More tips to prepare you to succeed in the B.S.M.E. program at Michigan Tech

Success in your freshmen and sophomore math, science and engineering courses is **CRITICAL** to your continued success in the subsequent mechanical engineering curriculum.



If you receive a CD or D in any courses (especially those listed above), we strongly encourage you to retake the class BEFORE continuing on to the next class in the sequence. However, students with financial aid should consult with that office regarding possible impacts of repeating courses on their financial aid eligibility (this includes work-study hours).

Information on Retaking Classes

You may – and should – retake any class in which you receive a CD, D, or F; at any point in the curriculum.

The latest grade always replaces the previous grade(s). If you retake a class and receive a better grade this will improve your overall GPA and the Engineering or departmental GPAs where applicable. However, you can retake a class and get a worse grade and decrease your GPAs. For example if you have a D (a passing grade) and retake a course and receive an F (a failing grade), you now have a failing grade in the course – and no credit for that course – and would have to retake the class a third time. You may only take a class three times. You must receive permission from the Dean of Students office, Financial Aid, and your academic advisor to register for a class the third time. If the class that you are retaking is a required class for your program, and you do not pass the class during the third attempt then you may no longer continue in the program.

For more information, please reference the Registrar's Office policy on retaking courses:
http://www.mtu.edu/registrar/students/registration/policies/repeat-course/

Questions? Contact the Mechanical Engineering Advising Center:
MEEM 204A/B (203) ** 487-2564 **

Ryan Towles (ratowles@mtu.edu) Tricia Stein (pmstein@mtu.edu)

MICHIGAN TECH MECHANICAL ENGINEERING SEMESTER PLANNING SHEET NAME:_____ SEM: _____

WEEK BEGINNING	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	COMMENTS

MICHIGAN TECH MECHANICAL ENGINEERING SEMESTER PLANNING SHEET

WEEK BEGINNING	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY	COMMENTS

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Tests/Quizzes: _____ **Name:** _____

Study Schedule

Projects Due: _____ **Week of:** _____

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
12 am - 1							
1 - 2							
2 - 3							
3 - 4							
4 - 5							
5 - 6							
6 - 7							
7 - 8							
8 - 9							
9 - 10							
10 - 11							
11 - 12							
12 pm - 1							
1 - 2							
2 - 3							
3 - 4							
4 - 5							
5 - 6							
6 - 7							
7 - 8							
8 - 9							
9 - 10							
10 - 11							
11 - 12							

Term GPA Goal: _____ **Weekly Study Hours Goal:** _____ **Actual Study Hours:** _____

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Directions on how to use the Study Schedule

Philosophy: We all have only 24 hours in a day, seven days in a week. It isn't the amount of time you have that makes a difference between success and failure, but how you use the time you have. Time management can help you keep control of one of your most valuable assets so that you can achieve your most important goals while you are here at Michigan Tech.

Steps in using the Study Schedule:

1. Make out a new schedule for each week (ideally on Sunday night), keeping your completed schedules in a three ring binder. This way you can keep a paper trail of your activities throughout the semester and better analyze the reasons for your accomplishments or disappointments after finals as you prepare for the next semester.
2. Determine a realistic GPA to strive for this semester. This should be a "stretch goal," one that you can attain if you really commit yourself to achieve it, but not one that is either unattainably high or one that is so easy to achieve that you feel no challenge in making it. Document your semester GPA goal in the lower left corner of your Study Schedule each week.
3. Determine your study goals for each class. On average plan to devote two hours of study time per academic credit hour you are taking. For example, if you're taking 15 hours, plan to study 30. This works out to a 45 hour "work week," which is no more than most professionals spend at their jobs per week. You might have to modify your study goals per class as you familiarize yourself with the study demands for each class. For example, a class that is a "no-brainer" might only require a half hour per credit hour to study for, while a really difficult class might require four hours per credit hour to study for. Document your weekly study hours goal on the bottom of your Study Schedule each week.
4. Mark off all of your classes and solid commitments (like a job) in ink. This reminds you to go to class and go to work. You cannot erase ink. Don't skip a class to catch up in another. Research done at the University of Michigan revealed the most important factor for success in college is class attendance.
5. Pencil in your sleeping, eating and planned open times. Do as much as you can to plan for 7-8 hours of sleep per night.
6. Pencil in the number of hours you plan to study. You will use a pencil because "things come up" that might cause a change in your study plans. If you erase four study hours on Monday, for example, then pencil in four hours elsewhere in your Study Schedule into the rest of your week. Try to schedule all of your study time so you can be done by Friday night. That way, if you don't make it by Friday night, you have Saturday and Sunday as "buffer time" to catch up. If you do make it, you then have the weekend to catch up on housework, have fun, and possibly engage in "Review-Preview."
7. Pencil in a certain amount of "fun time" during the week as well as on the weekend. Time away from studying is essential for maintaining your study efficiency. Include at least 2 – 3 hours per week for aerobic or strength training exercise. Planning for fun time and exercise reduces the temptation to "skip out" of planned study time to go have fun. It also reduces the tendency to feel guilty during the week when you are engaged in recreation, and additionally improves your concentration when you *are* engaged in study or project time.
8. If you do attain your study hours goal by Friday night, consider practicing Review-Preview.
    a. On Saturday, get all of your books, assignments and readings all together. Do not plan to write or highlight anything down. Keep it as casual and as relaxed as possible. For 30 minutes to an hour and a half, go over all of the materials you covered the week before and casually note the areas you comprehended and the areas you still need to work on. By reviewing the materials one last time in a casual setting, you are helping further establish it in your long term memory.
    b. For Sunday, gather up the materials you anticipate covering in the upcoming week. For 30 minutes to an hour and a half, look the materials over and note the areas that look as though you will comprehend right away, as well as the areas you anticipate having some trouble in. By previewing the materials in a casual setting, you will go through the cognitive "shock of the new" ahead of time, so that when the materials are formally presented in class the following week, you will be mentally ready to ask relevant questions at the moment the professor will be best able to answer them—rather than have the questions come to you ten minutes after class is over.
9. At the end of the week, add up the number of hours you actually studied and document them in the lower right corner of the Study Schedule. If you don't make your goal, don't try to "piggy back" them onto the next week's schedule. Make up a new Study Schedule and begin again.
10. Try not to study a given subject more than two hours at a time, as study efficiency goes down dramatically after that. Also, if you have two very similar subjects, try not to study them back to back. Instead, "sandwich" a subject that is very different from the two classes in between the two classes whose subjects are very close to each other. This improves study efficiency for all three subjects.

Tips for Thriving Academically in College

1. ***Know Your Strengths and Weaknesses***. One of the most important elements of success in college is truly understanding your strengths and weaknesses. Take some time to review your strengths -- things like creativity, communications skills, computer skills, work ethic -- as well as your weaknesses -- things like time management, procrastination, perfectionism. It will probably be really easy to develop a list of your strengths, but much harder to really examine your weaknesses. The key with this tip is to find a way to maximize your strengths while overcoming or minimizing your weaknesses.

2. ***Establish Academic Goals***. You should start each semester of college with certain academic goals you want to achieve -- perhaps a certain grade point average or achieving honor roll or dean's list. But your goals do not need to solely be about grades; you might set an academic goal of deciding on a major or minor -- or tackling that Spanish class you've been avoiding. The important thing is to have some goals -- goals that are a bit of a stretch for you so that you can strive toward achieving them and then celebrate accomplishing them once the semester is over. Without any type of goals, you'll find it easy to skip classes, miss assignments, and eventually find yourself in a place you don't want to be.

3. ***Develop a Time Management System***. Of all the things high-achieving college students say, the one thing repeated over and over again is the importance of managing your time. Whether you use an electronic gadget or an old-fashioned planner or calendar, you need to not only have a system of keeping track of important dates and deadlines, but also a system for prioritizing your time. Having a strong sense of your time needs also gives you the ability to better see if you can handle additional responsibilities -- and the power to decline offers that are going to seriously hurt your academic performance.

4. ***Stay on Top of Your Assignments***. Even students with great time management systems talk about the importance of keeping important dates in the top of your mind. Because you do not have teachers and parents on your back reminding you of assignments and tests, it's much easier to procrastinate in college, putting off what you could have accomplished today until tomorrow, or the day after, or the day after that. Professors have very little leniency or empathy for students who attempt to hand in late assignments -- especially ones that have been on the course calendar all semester.

5. ***Establish a Study Routine***. One of the best ways to improve your academic performance is to establish a study routine -- a time everyday that you set aside to read your textbooks, review your notes, and work on homework assignments. Not only will you get more accomplished, you'll be better prepared for your classes, and actually have more free time to do other things. Most experts say that for every hour in class, you should devote at least two to three hours outside of class for studying. Besides just setting aside time each day, you should also find the best environment for you to study, which for some people is their dorm rooms while for others it's the library.

6. ***Get to Know Your Professors***. Knowing your professors -- and being known by them -- is a true key to academic success. The vast majority of professors teach because they want to

empower students, and the more you get to know them on a personal level, the many more ways they can help you with your current academic success -- and future career success. You won't get to know all your professors, but at least try to get to know the ones in your majors and minors -- they can become mentors for you, helping you choose classes, obtain internships, and find graduate schools or future employers.

7. ***Find a Study Partner in Each Class***. Your goal should be to have a "study buddy" in each of your classes. These partners can help you -- and you help them -- in many different ways, including sharing class notes (in case you have to miss a class or simply to make certain you captured all the key elements of class lectures), conducting review sessions together, studying for tests, and working as partners on homework or lab assignments. Just remember that your study partner does not necessarily have to be your best friend or fraternity brother (or sorority sister) -- especially if s/he is not the best student; pick a study buddy who is going to be a mutually beneficial partner.

8. ***Take Advantage of Campus Resources***. Every college has a plethora of resources to help students succeed, and since you're paying for them with your tuition dollars, you should take advantage of whichever ones you need. There are academic resource centers, such as tutoring labs. Don't forget the library -- and especially the reference librarians who will help you hunt down the information or resources you need. Typically, there's also an academic support center that often offers workshops on study skill topics (such as note-taking, study skills, etc.). If you're feeling physically or mentally overwhelmed, use the resources of the college's health services or counseling center. Finally, for major and career advice, turn to the college's career services office.

9. ***Schedule Studying, Study Breaks***. Another common theme among high-achieving college students is that the best studying comes not from massively long cramming sessions, but from many (daily) study sessions spread over a long period of time, with short breaks taken between assignments or subjects. Study for an hour, then take a 10-minue break. Study for another hour, and take another break. By following a system of studying and taking short breaks, you'll not only learn the material, but actually retain it much longer than cramming the day before a big test. One option that many top-performing students talk about for the study breaks is doing something physical; many belief in the connection between a healthy body and a healthy mind.

10. ***Work Hard, Play Hard***. College is certainly not just about going to classes, completing the work, and getting good grades. College is also about new life experiences and making the transition from teenager to adult. High-achieving college students talk about this motto -- work hard to achieve the academic success you want to achieve and then reward yourself by playing just as hard. This motto is about seeking a balance -- if you work too hard without any kind of personal rewards, you risk burning yourself out; but if you play too hard without doing the work, you risk dropping out or being thrown out. So, find a balance that helps you grow and mature in multiple ways while still achieving the academic goals and success you seek.

11. ***Identify Optimal Study Times***. You are probably your own best judge as to when you perform best. However, it's likely that you're still wrong. Most people do not proactively test what works for them. They study when they "feel like it", but that's not necessarily their most effective time. In order to know confidently what truly works best for you, it's important to try something consistently for an extended length of time, then try something else, and afterwards compare the results. Still, you should make an informed decision in choosing which times to test in the first place. Some considerations: different qualities of memory and alertness seem to be generally better at different times of day (e.g. visual memory in the morning, critical thinking around noon); whether innately or by conditioning, some people operate better in the early morning, whereas others work best in the evening. Most people suffer a "slump" in the early afternoon (between 1pm and 4pm); in addition to daily patterns, some hormonal cycles of longer durations have an impact on alertness.

12. ***Study Environment***. A lot of people make the mistake of studying in a place that really isn't conducive to concentrating. A place with a lot of distractions makes for a poor study area. If you try and study in your dorm room, for instance, you may find the computer, TV, or a roommate more interesting than the reading material you're trying to digest. The library, a nook in a student lounge or study hall, or a quiet coffee house are good places to check out. Make sure to choose the quiet areas in these places, not the loud, central gathering areas. Investigate multiple places on-campus and off-campus, don't just pick the first one your find as "good enough" for your needs and habits. Finding an ideal study place is important, because it's one you can reliably count on for the next few years.

13. ***Learn to Prioritize***. As a college student, you'll always have something that has to get done immediately. Managing your time and working on a limited time schedule is a large portion of what college is all about. When completing reading assignments, find the most important sections of the material and read those first. You know yourself better, so judging whether to start with the hard or easy material first is important in learning how to prioritize based on your homework and studying style.

*Retrieved from http://www.mycollegesuccessstory.com/academic-success-tools/academically-thriving.html

*Retrieved from http://masterofmemory.com/the-best-time-to-study/

*Retrieved from http://psychcentral.com/lib/top-10-most-effective-study-habits/

*Retrieved from http://www.thecollegehelper.com/7-tips-for-surviving-college-homework-assignments/

Extra-Curricular Activities

Enterprise Teams