

# **MichiganTech** School of Technology

## Academic Planning Sheet

2009-10

## BS Surveying Engineering

For your planning convenience, this form is also available on-line at: <http://www.tech.mtu.edu/academic.htm>

### Math - Required

**Total: 17-18**

Course	Title	Prerequisites/Restrictions	Offered	Taken	Grade	Credits
MA 1160 <b>OR</b>	Calculus with Technology I <b>OR</b>	MA 1031 or MA 1032	f/s/su			4 (0-4-0) <b>OR</b>
MA 1161	Calculus Plus with Technology I	MA 1031 or MA 1032	f/s			5 (0-5-0)
MA 2160	Calculus with Technology II	MA 1160 or MA 1161	f/s/su			4 (0-4-0)
MA 2320	Elementary Linear Algebra	MA 1160 or MA 1161	f/s/su			2 (0-2-0)
MA 3160	Multivariable Calculus with Technology	MA 2160	f/s/su			4 (0-4-0)
MA 3710	Engineering Statistics	MA 2160	f/s/su			3 (0-3-0)

### Science - Required

**Total: 14**

Course	Title	Prerequisites/Restrictions	Offered	Taken	Grade	Credits
CH 1150	University Chemistry I		f/s/su			3 (3-0-0)
CH 1151	University Chemistry I Laboratory	CH 1150(C)	f/s/su			1 (0-0-3)
CS 1121	Introduction to Computer Science I	MA 1031(C) or MA 1032(C)	f/s/su			3 (0-2-2)
GE 2000	Understanding the Earth		f/s/su			3 (2-0-3)
PH 1100	Physics by Inquiry I	MA 1160(C) or MA 1161(C)	f/s/su			1 (0-0-2)
PH 2100	University Physics I – Mechanics	PH 1100(C) & (MA 1160 or MA 1161) & MA 2160(C)	f/s/su			3 (3-0-0)

### General Education - Required

**Total: 13**

Course	Title	Prerequisites/Restrictions	Offered	Taken	Grade	Credits
UN 1001	Perspectives on Inquiry	FR	f/s/su			3 (0-3-0)
UN 1002 <b>OR</b>	World Cultures <b>OR</b>	FR	f/s/su			4 (3-0-3) <b>OR</b>
(UN 1003 & HU ....)	(World Cultures Activities <b>AND</b> 1 yr Foreign Language)	FR	s f/s			1 (0-0-2) 3 (0-3-0)
UN 2001	Revisions: Oral, Written, and Visual Communication	UN 1001 & (UN 1002 or UN 1003) / FR,SO	f/s/su			3 (0-3-0)
UN 2002	Institutions	SO	f/s/su			3 (3-0-0)

### General Education - Distribution Courses (Choose from distribution list - Consult with your advisor)

View course choices: [http://www.admin.mtu.edu/em/students/plan/dist\\_courses.pdf](http://www.admin.mtu.edu/em/students/plan/dist_courses.pdf)

**Total: 15**

Course	Title	Prerequisites/Restrictions	Offered	Taken	Grade	Credits
HU 3120	Technical and Scientific Communication	UN 1002 or UN 1003 / JR,SR	f/s/su			3 (0-3-0)
						3
						3
						3
						3

**NOTE: This worksheet is for planning purposes and does not supersede university catalog requirements.**

**Surveying Engineering Major - Required**
**Total: 61**

Course	Title	Prerequisites/Restrictions	Offered	Taken	Grade	Credits
BA 2330	Accounting I	SO,JR,SR	f/s/su			3 (3-0-0)
BA 2500	Business Law I		f/s/su			3 (3-0-0)
CMG 3200	Site Planning and Development	SU 2000 or SU 2150 / JR,SR	s			4 (0-3-2)
EET 1411	Basic Electronics	MA 1030(C) or MA 1031(C) or MA 1032(C) or MA 1160(C) or MA 1161(C)	f/s			4 (0-3-2)
ENG 2120 OR	Statics—Strength of Materials OR	MA 2160 & PH 2100	s			4 (0-4-0) OR
ENG 3200	Thermodynamics/Fluid Mechanics	MA 2160 & (CH 1100 or CH 1110) & PH 2100	f,s			4 (0-4-0)
SU 1500	Data Collection Systems		f			1 (0-0-2)
SU 2000	Introduction to Surveying		f/s			2 (0-1-2)
SU 2150	Fundamentals of Surveying		f			4 (0-2-6)
SU 2220	Route and Construction Surveying	SU 2000 or SU 2150	s			3 (0-3-0)
SU 2260	Survey Computations	SU 2150	s			3 (0-3-0)
SU 3110	Surveying Field Practice	SU 2220 & SU 2260 / JR,SR	f			4 (0-2-6)
SU 3180	Boundary Surveying Principles	SU 2260 / JR,SR	f			3 (0-3-0)
SU 3250	Geodetic Adjustments Theory	MA 2320 & MA 3710 & MA 3160 & SU 2260 / JR,SR	f/s			3 (0-3-0)
SU 3540	Geospatial Information Technology with Elements of Field Cartography	MA 3710	s			4 (0-3-3)
SU 4060	Geodesy	SU 3250 / SR	f/s			3 (0-3-0)
SU 4100	Geodetic Positioning	SU 4060(C) / JR,SR	f			3 (0-2-3)
SU 4140	Photogrammetry	SU 2260 / JR,SR	f			3 (0-2-3)
SU 4180	Land Subdivision Design	CMG 3200 & SU 3180 / JR,SR	s			3 (0-2-1)
SU 4900	Capstone Design Project	Instructor Approval / SR	f/s			3 (0-2-2)
SU 4999	Professional Practice Seminar	JR,SR / <i>Pass/Fail</i>	f			1 (0-1-0)

**Surveying Engineering Major - Technical Electives**
**Total: 9-10**

Course	Title	Prerequisites/Restrictions	Offered	Taken	Grade	Credits
SU 3560	Geospatial Imaging Interpretation	PH 2200	s			3 (0-2-2)
SU 4010	Geospatial Concepts, Tech, & Data	Instructor Approval	demand			3 (3-0-0)

**Total Credits Required:**
**130**
**Current Credit Total:**
**Total Credits Needed:**
**Co-curricular Activities** (Courses may **NOT** be repeated)

 View course choices: [http://www.aux.mtu.edu/phys-ed/co-curricular\\_classes/co-curricular.htm](http://www.aux.mtu.edu/phys-ed/co-curricular_classes/co-curricular.htm)
**Unit Total: 3**

Course	Title	Prerequisites/Restrictions	Offered	Taken	Grade	Units
						0.5
						0.5
						0.5
						0.5
						0.5
						0.5

Revised 8/11/2009

**NOTE: This worksheet is for planning purposes and does not supersede university catalog requirements.**