Technology Education

Technology Education is an integrated discipline designed to develop students' technological literacy. Through the study of technological systems, and associated resources, processes, and societal impacts, students will gain understanding of technology's roles in past, present and future society. The Technology Education Broadfield Teaching program at MSU is for individuals wishing to teach industrial technology at the middle or high school level or to work within an industry where a broad understanding of industrial technological concepts is important. The option is designed for in-depth study of Technology Education and prepares completers for careers as teachers in 5-12 settings.

The Technology Education Program is sequenced into three phases to develop a progression of interrelated information. The foundation phase constitutes the introduction to technology. This introduction forms the base for future study and an understanding of basic technological concepts. The synthesis phase begins the in-depth study of the primary technology education components of communication, construction, manufacturing, and power/energy. During this phase students in the teaching option are involved in professional education coursework, while students in the industrial technology option begin selecting coursework that is tailored to meet specific career goals. The capstone phase is structured to integrate the information and experiences of the preceding phases through applied learning activities. Teaching option students will complete a semester-long teaching candidacy program at the middle/high school level. Students in 5-12 and K-12 teaching majors are required to take courses in certain areas of professional education. A grade of "C" or better is required in all professional education courses; a "C-" is not acceptable. See the Teacher Education Program website for entrance requirements.

Technology Education Broadfield Teaching Option

Program Sequence

Freshman Year	Credits	
	Fall	Spring
AGED 140US - Leadership Development for Agriculture	3	
HDFS 101IS - Indiv and Fam Dev: Lifespan	3	
M 151Q - Precalculus or M 161Q - Survey of Calculus or M 171Q - Calculus I	4	
TE 207 - Materials and Processes	4	
WRIT 101W - College Writing I	3	
DDSN 114 - Introduction to CAD		3
CHMY 121IN - Introduction to General Chemistry		4
& CHMY 122IN - Introduction to General Chemistry Lab		
WLDG 110 - Welding Theory I		1
WLDG 111 - Welding Theory I Practical		3
(University Core Arts or Humanities)		
University Core (Arts or Humanities)		3
AGED 105 - Microcomputers in Agriculture		3
Year Total:	17	17

Sophomore Year	Credits	
	Fall	Spring
EDU 223IS - Educ Psych and Adolescent Dev or EDU 222IS - Educ Psych & Child Development	3	
PHSX 205 - College Physics I	4	
WLDG 121 - Welding Theory II Practical	3	
Directed Elective	3	
University Core (Arts or Humanities)	3	
EDU 370 - Integrating Tech into Educ		3
TE 250CS - Technology and Society		3
AGTE 330 - Alternative Power & Energy Technology		3
WLDG 120 - Welding Theory II		2
WLDG 122 - Welding Theory III Practical		3
Year Total:	16	14

Junior Year	Credits	
	Fall	Spring
AGED 312R - Communicating Agriculture	3	
AGED 333 - Construction Technology	3	
EDU 382 - Assessmt, Curric, Instructn	3	
GPHY 284 - Intro to GIS Science & Cartog or TE 332 - Remote and Autonomous Aircraft Systems	3	
EDU 211D - Multicultural Education	3	
EDU 347 - Managing the Learning Environment for K-12/Secondary	2	
AGED 253 - Ag Ed in Public Schools		3
AGED 315 - Electrical and Power Systems Operation		3
TE 410 - Computer Aided and Industrial Machining and Manufacturing		4
Directed Elective		4
Year Total:	17	14

Senior Year	Credits	
	Fall	Spring
AGED 397 - Educational Methods in CTE	1	
AGED 485 - Laboratory Management and Teaching in CTE	3	
EDSP 306 - Exceptional Learners	3	
AGTE 417 - Manufacturing Technology	3	
EDM 411 - Methods: 5-12 Ag & Tech Ed	3	
EDU 495R - Student Teaching		12
Year Total:	13	12
Total Program Credits:		**120**

A minimum of 120 credits is required for graduation; 42 of these credits must be in courses numbered 300 and above.

Directed Technology Electives

CS 145RA	Web Design	3
CSCI 107	Joy and Beauty of Computing	3
CSCI 109	C for Engineers and Scientists	3
CSCI 112	Programming with C I	3
CSCI 132	Basic Data Structures and Algorithms	4
DDSN 131	Introduction to Drafting and Design	3
DDSN 135	SolidWorks I	3
DDSN 166	Revit I	3
DDSN 186	Intermediate Drafting & Design	3
DDSN 235	SolidWorks II	3
DDSN 276	Presentation & Animation	3
EGEN 105	Introduction to General Engineering	2
EGEN 125CS	Tech, Innovation, and Society	3

EGEN 203	Applied Mechanics	3
EMAT 251	Materials Structures and Prop	3
EMAT 252	Materials Struct and Prop Lab	1
EMAT 350	Engineering Materials	3
ETEC 106	AC Circuit Analysis	3
ETEC 113	Circuits Lab	1
ETEC 245	Digital Electronics	4
ETEC 250	Solid State Electronics I	4
ETME 100	Introduction to Mechanical Engineering Technology	1
ETME 202	Mechanical Engineering Technology Computer Applications	3
ETME 203	Mechanical Design Graphics	3
ETME 215	Manufacturing Processes	3
ETME 310	Machining and Industrial Safety	3
GPHY 284	Intro to GIS Science & Cartog	3
GPHY 357	GPS Fund/App in Mapping	3
HSTA 482	Technology and the Fate of Humanity	3
PHSX 305RN	Art and Science of Holography	3
STAT 216Q	Introduction to Statistics	3
or STAT 332	Statistics for Scientists and Engineers	
or STAT 337	Intermediate Statistics with Introduction to Statistical Computing	
TE 490R	Undergraduate Research	1-6
TE 492	Independent Study	1-3
WLDG 145	Fabrication Basics	3
WLDG 185	Qualification Test Prep	2
WLDG 205	Applied Metallurgy	2