



Master of Education Program - Concentration in Technology Education (Tech Ed)

Valley City State University (VCSU) has designed this concentration for primary and secondary level educators wishing to pursue a master's degree in Technology Education or Career and Technical Education. Curriculum in the courses is set up to be consistent with the Standards for Technological Literacy defined by the International Technology and Engineering Educators Association (ITEEA) as well as the North Dakota Department of Career and Technical Education.

Concentration Requirements

The Master of Education in Technology Education requires 36 hours of coursework, an action research report and an oral defense of a comprehensive portfolio. The curriculum is structured around a set of core requirements that provide a broad foundation in education, research, and technology. All M. Ed students are required to complete 12 hours of core courses and three hours of Special Program Courses.

Code	Title	Credits
Core Required Courses		
EDUC 610	Research in Education	3
EDUC 625	Issues in School, Community, and Family	3
EDUC 640	Supervision and Assessment of Teachers and Learners	3
EDUC 657	Exceptionality, Diversity, and Differences	3
These courses are designed to support the student in completing graduation requirements culminating in the program's core values as outcomes.		
Special Program Requirements		
TECH 689	Research Application	1
TECH 698	Capstone	2
Select one of the following options:		21
Secondary STEM Education		
Elementary STEM Education		
Career and Technical Education		
Total Credits		36

Student must select one of the options to complete the concentration in Technology Education.

Option 1: Secondary STEM Education Required Courses

Code	Title	Credits
STEM ED 650	STEM Curriculum and Methods	3
STEM ED 660	Design for Engineering	3
STEM ED 665	Invention and Innovation	3

STEM ED 670	Design, Technology, and Engineering for Elementary	3
STEM ED 680	Building Math	3
or STEM ED 682	Engineering the Future	
TECH 675	Research and Assessment in Technology Education	3
Elective Courses		
TECH 688	Safety and Management in the Technology Laboratory	3
or EDUC 635	Technology for Learning	

Option 2: Elementary STEM Education Required Courses

Code	Title	Credits
STEM ED 655	STEM Curriculum and Methods in Elementary	3
STEM ED 670	Design, Technology, and Engineering for Elementary	3
STEM ED 671	Inquiry Based Thematic Instruction	3
STEM ED 680	Building Math	3
TECH 675	Research and Assessment in Technology Education	3

Elective Courses

Select six hours from the following:		6
STEM ED 665	Invention and Innovation	
TECH 688	Safety and Management in the Technology Laboratory	
EDUC 635	Technology for Learning	

Option 3: Career and Technical Education Required Courses

Code	Title	Credits
TECH 651	Curriculum Development in Career and Technical Education	3
TECH 652	Instructional Strategies in Training and Occupational Education	3
TECH 653	Trends and Issues in Occupational Education	3
TECH 654	Administration and Management in Career and Technical Education	3
TECH 675	Research and Assessment in Technology Education	3

Elective Courses

Select six hours from the following:		6
STEM ED 680	Building Math	
STEM ED 682	Engineering the Future	
TECH 688	Safety and Management in the Technology Laboratory	
EDUC 635	Technology for Learning	



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STEM ED 660 Design for Engineering
STEM ED 665 Invention and Innovation

rich and diverse collection of opportunities for assessment of student knowledge and understanding by the professor.

Total Core 12 Credits
Total Required 15-18 Credits
Total Electives 3-6 Credits
Total Special Program Requirements 3 Credits
Total Credits Needed to Graduate 36 Credits

Course Rotation Option 1

TECHNOLOGY EDUCATION

OPTION 1	SECONDARY STEM EDUCATION			
CORE	12 hours		Fall	Spring Summer
EDUC 610	Research in Education (3)		Fall	Spring Summer
EDUC 625	Issues in School, Community, and Family (3)		Fall	Spring Summer
EDUC 640	Supervision and Assessment of Teachers & Learners (3)		Fall	Spring Summer
EDUC 657	Exceptionality, Diversity, and Difference (3)		Fall	Spring
REQUIRED	18 hours			
TECH 675	Research and Assessment in Tech Ed (3)			Spring
STEMED 650	Standards-Based Curriculum and Methods (3)		Fall	
STEMED 660	Design for Engineering (3)		Fall	
STEM ED 665	Invention and Innovation (3)			Summer
STEMED 670	Design, Technology and Engineering for Elem (3)			Spring
STEMED 680	Building Math (3)			Summer
or				
STEMED 682	Engineering the Future (3)			Spring
ELECTIVES	3 hours			
TECH 688	Safety and Management in the Tech Lab (3)			Summer
EDUC 635	Technology for Learning (3)			Spring
SPECIAL PROGRAM	3 hours			
TECH 689	Research Application (1)		Fall	Spring Summer
TECH 698	Capstone (2)		Fall	Spring Summer

Secondary STEM Education Option

FALL Program of Study					
FALL	SPRING	SUMMER	FALL	SPRING	SUMMER
EDUC 610	EDUC 657	STEMED 680	EDUC 625	EDUC 640	TECH 698
STEMED 650	TECH 675	STEMED 665	STEMED 660	STEMED 670	TECH 689
	STEMED 682	EDUC 625	EDUC 657		TECH 688

*The fall program of study has the option to take STEMED 682 or 680, but use the courses grouped by color.

SPRING Program of Study					
SPRING	SUMMER	FALL	SPRING	SUMMER	FALL
EDUC 610	EDUC 625	EDUC 657	EDUC 640	STEMED 680	TECH 698
STEM ED 670	STEMED 665	STEMED 650	TECH 675	TECH 688	TECH 689
					STEMED 660

SUMMER Program of Study					
SUMMER	FALL	SPRING	SUMMER	FALL	SPRING
EDUC 610	EDUC 657	TECH 675	STEMED 680	EDUC 625	TECH 698
STEMED 665	STEMED 650	EDUC 640	TECH 688	STEMED 660	TECH 689
		or			STEMED 670 or
		STEMED 670			EDUC 640

Core Values/Learning Outcomes

1. Effective use of Instructional Technologies
2. Expertise in Research, particularly Action Research
3. Expertise in Assessment
4. Supervisor/Leader/Coach
5. Expertise in Curriculum/Instruction
6. Diversity/Global Awareness

The program's Core Values and National Board of Professional Teaching Standards lay the broad foundation for the overall program design. Specific objectives are then addressed in each course, based on its curriculum. At the course level, the required projects and activities provide a