

Technology and Science Education

Introduction

UW-Stout is the only university or college in the state of Wisconsin offering a Bachelor of Science degree combining Technology and Science Education, offering students a unique opportunity. Students will participate in a collaborative, interdisciplinary degree program that prepares them as teachers in the overlapping fields of science and technology. Coursework in the program leads to a dual teaching certification in technology education with a major or minor certification in biology, chemistry, or physics. To fulfill the requirements of the program, students will complete general education, technology, science, and education courses. Students will also complete required pedagogical courses specifically in technology and science education. Pre-student teaching experiences in both middle and high school classrooms as well as a semester-long student teaching experience will be required.

General Requirements

Bachelor of Science Degree

Total for graduation.....	137 credits
General Education	41 credits
Major Studies	96 credits

Program Requirements

General Education

41 credits required

A. Communication Skills 8 credits

ENGL-101 Freshman English – Composition or	
ENGL-111 Freshman English – Honors I	3
ENGL-102 Freshman English – Reading and Related Writing or	
ENGL-112 Freshman English – Honors II or	
ENGL-113 Honors Seminar I	3
SPCOM-100 Fundamentals of Speech	2

B. Analytic Reasoning 7 credits

MATH-153 Calculus I	4
STAT-320 Statistical Methods	3

C. Health and Physical Education 2 credits

Courses must be from areas of health, physical education or nutrition.

D. Humanities and the Arts* 9 Credits

LIT-XXX Any Literature	3
XXX-XXX Any Creative/Performing Arts	3

Remaining course must be from areas including art history, creative arts, history, literature, music appreciation, performing arts or philosophy. * Either HIST-210 Modern World must be taken under this category or ANTH-220 Cultural Anthropology must be taken under Category E.

E. Social and Behavioral Sciences * 9 Credits

POLS-210 American Government	3
PSYC-110 General Psychology	3

Remaining course must be from areas of anthropology, economics, geography, political science, psychology or sociology. * See previous note under Category D.

Teacher Education Requirements

Students proceed through a series of three benchmarks as they move toward licensure.

Benchmark I: Acceptance into Teacher Education

Teacher education students will begin fulfilling their requirements for Benchmark I as they complete their first 40 credits. Detailed information is online at: www.uwstout.edu/soe/students/requirements-benchl.shtml.

- ▶ Pass the Pre-Professional Skills Test (PPST)
- ▶ Attain a 2.75 cumulative grade point average
- ▶ Pass the required teacher background check
- ▶ Earn a grade of at least 2.00 (C) in ENGL-101 and ENGL-102 or ENGL-111 and ENGL-112.
- ▶ Earn a minimum grade of 2.00 (C) in SPCOM-100 Fundamentals of Speech.
- ▶ Earn a minimum grade of 2.00 (C) in STMED-160 Introduction to Technology and Science Education
- ▶ Complete EDUC-326 Foundations of Education
- ▶ Complete General Education Technology requirement
- ▶ Satisfactory rating on Benchmark I Portfolio Assessment rubric
- ▶ Satisfactory rating on Benchmark I Student Interview

Benchmark II: Application for Student Teaching

Benchmark II must be completed prior to student teaching. Detailed information is online at: www.uwstout.edu/soe/students/requirements-benchl.shtml.

- ▶ Complete Application for Student Teaching form
- ▶ Maintain a 2.75 grade point average
- ▶ Pass Content Knowledge Exam (Praxis II)
- ▶ Receive clearance through an updated background check
- ▶ Complete a satisfactory tuberculosis (TB) test
- ▶ Receive satisfactory portfolio assessment by faculty
- ▶ Receive satisfactory rating on Benchmark II Student Interview
- ▶ Submit copies of resume to the School of Education prior to student teaching

Benchmark III: Program Completion

Benchmark III must be completed before you can be recommended for licensure. Detailed information is online at: www.uwstout.edu/soe/students/requirements-benchl.shtml.

- ▶ Complete electronic portfolio and receive a basic or higher proficiency level of assessment
- ▶ Complete all program coursework
- ▶ Meet all program-specific requirements
- ▶ Student teach at two levels: Middle School and High School.
- ▶ Receive a satisfactory student teaching assessment

F. Natural Sciences (with Lab) 4 credits

BIO-111 Science, Society and Environment 4

Note: Students must also complete a physical science course.

G. Technology 2 credits

Major Requirements

96 credits required

Education 13 credits

Grade of "C" or better required for all courses.

Table with 2 columns: Course ID and Credits. Rows include EDUC-303 Education Psychology (3), EDUC-326 Foundations of Education (2), EDUC-336 Multiculturalism: Issues and Perspective (2), EDUC-376 Field Experience: Cross-cultural (1), EDUC-382 Secondary Reading and Language (2), and SPED-430 Inclusion of Students with Exceptional Needs (3).

Technology Teacher Education Courses 33 credits

Grade of "C" or better required for all courses.

Table with 2 columns: Course ID and Credits. Rows include STMED-160 Introduction to Technology and Science Education (3), STMED-260 Curriculum, Methods and Assessment for Science and Technology Education (3), STMED-XXX Pre-Student Teaching (1), STMED-390 Laboratory and Classroom Management in Science and Technology (3), STMED-409 Student Teaching (16), STMED-XXX Advanced Curriculum Methods and Assessment for Technology Education (3), TECED-325 Technology for Elementary School Children (2), and STMED-340 Middle School Technology Education (2).

The Designed World 32 credits

Table with 2 columns: Course ID and Credits. Rows include AEC-172 Construction Technology (3), ELEC-204 Electricity/Electronics Fundamentals (3), GCM-141 Graphic Communications (3), INMGT-314 Industrial Enterprise Practicum (3), MFGT-110 Materials and Manufacturing Processes (3), MFGT-204 Polymer Processes (3), RD-205 Design for Industry (3), TRANS-XXX Trans and Energy (3), and XXX-XXX Mechatronics (2).

Take one of the following courses:

Table with 2 columns: Course ID and Credits. Rows include MFGT-202 Welding and Casting Processes (3) and MFGT-203 Machining Metal Forming Processes (3).

Take one of the following courses:

Table with 2 columns: Course ID and Credits. Rows include AEC-131 Architectural Graphics (3) and CADD-112 Principles Engineering Drawing (3).

Science Courses 18 credit minimum

Choose at least one major or one minor science certification from the list below:

Biology Major Certification (28 credits)

Table with 2 columns: Course ID and Credits. Rows include BIO-135 Organismal Biology (4), BIO-136 College Molecular Cell Biology I (5), BIO-332 Genetics (3), and BIO-350 Ecology (3).

Choose 13 additional credits of approved biology selectives above the introductory level.

Chemistry Major Certification (28 credits)

Table with 2 columns: Course ID and Credits. Rows include CHEM-135 College Chemistry I (5), CHEM-136 College Chemistry II (5), CHEM-201 Organic Chemistry (4), and CHEM-331 Quantitative Analysis (3).

Choose 11 additional credits of approved chemistry selectives above the introductory level.

Physics Major Certification (28 credits)

Table with 2 columns: Course ID and Credits. Rows include PHYS-241 College Physics I (5), PHYS-242 College Physics II (5), PHYS-250 The Physics of Light and Color (3), and ELEC-260 Electrical Circuits (3).

Choose 12 additional credits of approved physics selectives above the introductory level.

Biology Minor Certification (18 credits)

Table with 2 columns: Course ID and Credits. Rows include BIO-135 Organismal Biology (4) and BIO-136 College Molecular Cell Biology I (5).

Choose 9 additional credits of approved biology selectives above the introductory level.

Chemistry Minor Certification (18 credits)

Table with 2 columns: Course ID and Credits. Rows include CHEM-135 College Chemistry I (5) and CHEM-136 College Chemistry II (5).

Choose 8 additional credits of approved chemistry selectives above the introductory level.

Physics Minor Certification (18 credits)

Table with 2 columns: Course ID and Credits. Rows include PHYS-241 College Physics I (5) and PHYS-242 College Physics II (5).

Choose 8 additional credits of approved physics selectives above the introductory level.