



TECHNOLOGICAL STUDIES

UNDERGRADUATE SEQUENCES

32 UNITS (4 CREDITS / UNIT) Technology/Pre-Engineering Education and M/S/T Majors

TECHNOLOGY/PRE-ENGINEERING EDUCATION

FIRST YEAR

ETE 261 Multimedia Design
 FSP First Seminar Program
 MAT 127 Calculus A
 TST 161 Creative Design

ETE 111 Engineering Design
 ETE 131 Engineering Math
 PHY 201 General Physics I
 Academic Writing (as needed)
 Liberal Learning Elective

SECOND YEAR

ETE 271 Structures and Mechanics
 ETE 275 Mechanics and Materials Laboratory
 TED 280 Introduction to Teaching Technology Education
 General Science Elective
 Liberal Learning Elective

ETE 281 Analog Circuits and Devices
 ETE 341 Environmental/Biotechnology Systems
 ETE 361 Architectural and Civil Engineering Design
 SPE 203 Psychological Development of Children and Adolescents*

THIRD YEAR

ETE 365 Prototyping Laboratory*
 ETE 371 Mechanical Systems Design
 ETE 381 Digital Electronics
 ETE 395 Senior Design Proposal*
 SPE 323 Content Area Literacy and Inclusion of Students with Disabilities*
 Liberal Learning Elective

ETE 385 Robotics and Controls Laboratory*
 ETE 461 Manufacturing Systems
 TED 380 Junior Professional Experience in Technology Education
 TED 460 Integrated M/S/T for Child/Adolescent Learners

FOURTH YEAR

TED 480 Content and Methods in Technology Education
 TED 481 Seminar in Technology Education
 TED 490 Student Teaching in Technology Education
 ETE 492 Facilities Design and Management
 ETE 495 Senior Design Project
 Liberal Learning Elective

*.5 unit course

MATH/SCIENCE/TECHNOLOGY (M/S/T) FOR ELEMENTARY EDUCATION

FIRST YEAR

ETE 261 Multimedia Design
 FSP First Seminar Program
 MAT 127 Calculus A
 TST 161 Creative Design

Academic Writing (as needed)
 Math Options #1 and #2
 Science Option #1

SECOND YEAR

ELE 201 Child and Adolescent Development
 ETE 271 Structures and Mechanics
 RAL 221 Literacy, Strategies, Assessment, and Instruction
 RAL 225 Children's Literature and Storytelling: A Multicultural Perspective

MST 202 Methods of Teaching Science, Health, and Technology
 MTT 202 Math Methods
 U.S. History
 Science Option #2

THIRD YEAR

ELE 301 Integrating and Differentiating Instruction for All Learners
 RAL 321 Literacy Learning Across the Curriculum
 SOM 203 Methods of Teaching Social Studies from a Multicultural Perspective
 TED 460 Integrated M/S/T for Child/Adolescent Learners
 Science Option #3
 Specializations I and II

FOURTH YEAR

ELE 490 Student Teaching
 ELE 498 Capstone: Inquiry Into Learning
 Liberal Learning Elective
 M/S/T Elective
 Specializations III and IV

The M/S/T major is also available for Early Childhood, Deaf/Hard of Hearing, Special, and Urban Education majors.

What is Technological Studies?

We are agents of change for technological literacy in K-12 education.

Technological literacy is the ability to use, manage, assess, and understand technology. It involves knowledge, abilities, and the application of both knowledge and abilities to real-world situations. Technologically literate citizens employ systems-oriented thinking as they interact with the technological world, cognizant of how such interaction affects individuals, our society, and the environment. (International Technical Education Association, 2009)



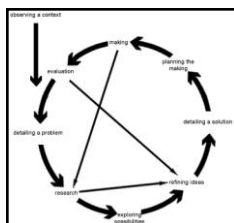
Tubing on the Delaware



Prototyping Lab



TECA East Virginia Beach



The Design Loop models the Department's philosophies of the design process and, in wider application, the learning process.

Why Study Technology/Pre-Engineering Education and M/S/T at TCNJ?

- Our graduates are critical actors in the development of a technologically literate population with an awareness of and appreciation for the world's human-designed domain and the need for it to co-exist well with the natural world
- Technology/Pre-Engineering majors prepare for a career in secondary education, and M/S/T majors for a career in K-8
- Graduates from both majors are in high demand!
- For example, a 2006 survey conducted by the New Jersey Technology Education Association (NJTEA) found that over 900 secondary technology/pre-engineering education positions in the state will need to be filled by 2015
- The M/S/T major is a unique multidisciplinary degree that instructs students in the technical and pedagogic skills needed by highly effective K-8 classroom teachers
- M/S/T majors can also qualify for middle school certification in the represented disciplines
- Join the fun: the M/S/T major is one of the fastest growing majors on campus, growing to approximately 25% of all K-5 candidates in the past 5 years
- Our graduates can also become pre-certified to teach Project Lead The Way pre-engineering courses
- Department faculty, staff, and students form a supportive community dedicated to everyone's professional development and success
- Learn from the best: our faculty hold terminal degrees in education and engineering from nationally recognized programs at Cornell, Drexel, Ohio State, and Virginia
- The Department is accredited by the National Council for Accreditation of Teacher Education (NCATE), and received national recognition in 2008 from NCATE during reaccreditation processes due to a successful portfolio review of program activities and outcomes

Come study in the top Technology/Pre-Engineering Education - M/S/T programs in the state at a college devoted to excellence in undergraduate education!

VISIT <http://www.tcnj.edu/~tstudies/> FOR MORE INFORMATION!