

Southeast Tech
Engineering Technology Program Overview
EXECUTIVE SUMMARY

Purpose:

To provide the School Board information about the Mechanical Engineering Technology, Civil Engineering Technology and Land Surveying Science programs at Southeast Tech.

The presentation will provide the School Board information about the Mechanical Engineering Technology, Civil Engineering Technology and Land Surveying Science programs at Southeast Tech, and introduce the instructors involved. The information shared will include data on the faculty, students and graduates of Southeast Tech, program details, student demographics and career/employer information. These programs are all two year AAS Degrees and are part of the Engineering Technology Department.

Administrative Recommendation to School Board:

To acknowledge the Southeast Tech programs Overview Report.

This is Our Story:

**Mechanical Engineering Technology
Civil Engineering Technology
Land Surveying Science Technology**

**Report to Sioux Falls School Board
June 6, 2018**

Our Programs

- **Mechanical Engineering Technology**
 - 2 year AAS degree
- **Civil Engineering Technology**
 - 2 year AAS degree
- **Land Surveying Science Technology**
 - 2 year AAS degree



Mechanical Engineering Technology

Our Faculty

- ***Johnnie Schroeder, AAS, BS***
 - 13 years educator
 - 30 years of industry experience



Who are Our Students?

- Traditional Students: NW Iowa, SW Minnesota, Eastern South Dakota
- Transfer Students: from 4 year schools looking for a better fit
- Non-Traditional: seeking new careers, advancement or retraining

What Mechanical Engineering Technology students learn?

How the manufacturing environment works

How to draw working drawings, 3D models, and assemblies

How to reverse engineer

How to design parts for manufacturing

How things are made and what they are made of



**SOUTHEAST
TECH**

ENGINEERING TECHNOLOGY

What MET students do?

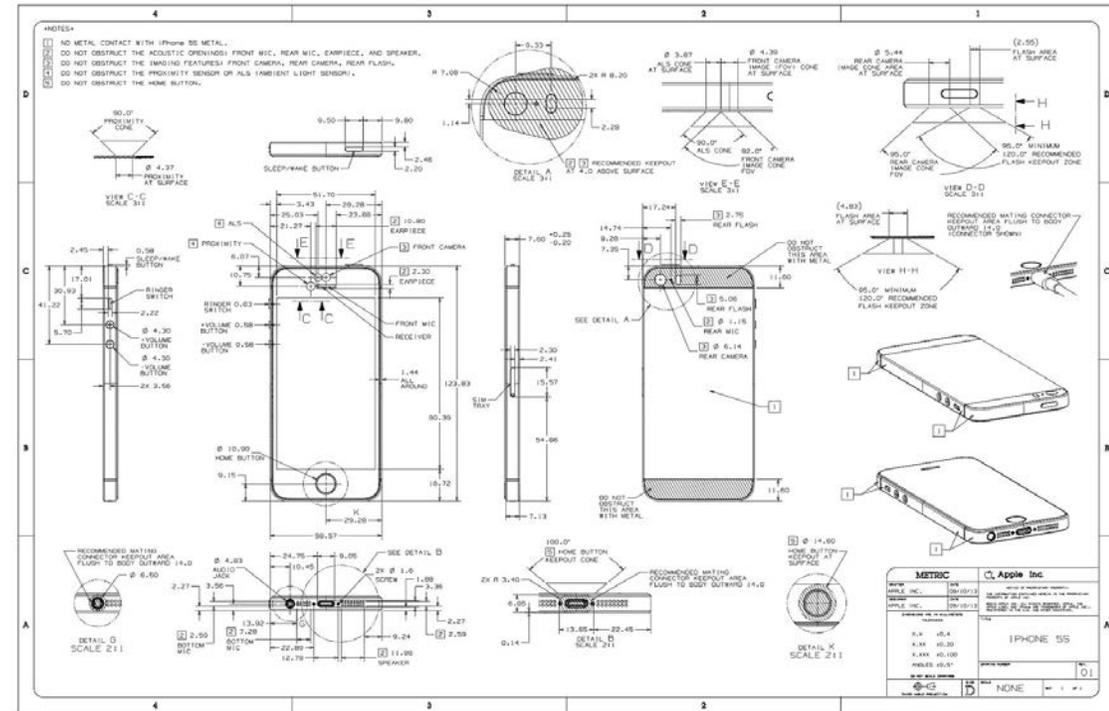
Formal Working Drawings

3D Modeling

Reverse Engineering

Proof of Concept/
Prototyping

Manufacturing Engineering



**SOUTHEAST
TECH**

ENGINEERING TECHNOLOGY

Where MET students are Employed?

Spartan ERV

Rosenbauer

Daktronics

Amesbury Truth

Dakotaland

Wilson Trailers

Interstate Electric

Malloy Electric

Raven

Kolberg Pioneer

Masaba

3M

Trail King

Twin City Fan

Caterpillar

Heiman Fire

Poet

Alcoda

Adams

Thermal

Design Tanks

Creative

Surfaces

Truxedo

We also have students in Minnesota, Iowa, Nebraska, North Dakota, and Colorado.

Civil Engineering Technology

Land Surveying Science



Our Faculty

Civil Engineering Technology

Elizabeth Kassing, BS, PE & LSIT

- 8 years educator



Land Surveying Science

• *Rod Breitling, MED, PLS*

- 32 years educator



What the students learn?

Civil Engineering Tech

Transportation

Geotechnical

Environmental

Structural

Water Resources

Land Surveying Science

Fundamental and High Tech
Surveying Equipment

Advanced Civil3D CAD

Geodesy & GPS

Boundary Law

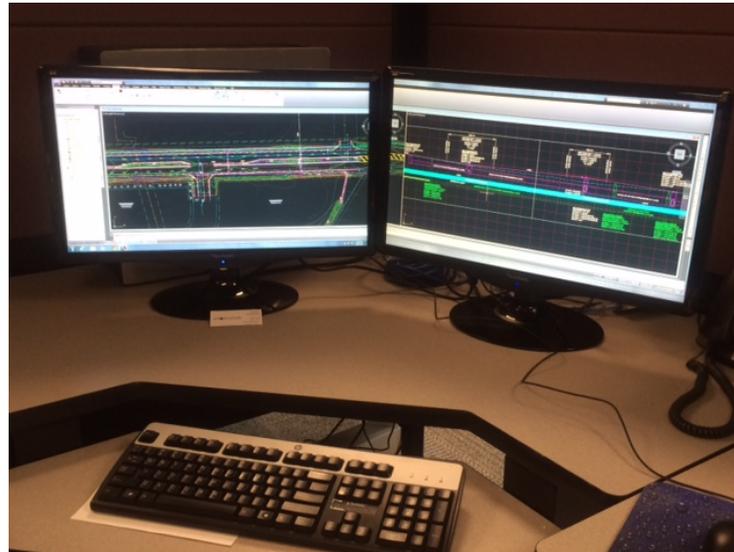
Route Layout and Design

Staking engineered projects

What do our students learn?

4 semesters of Surveying → 4 semesters of CAD

Field Trip → 3rd Semester



**SOUTHEAST
TECH**

ENGINEERING TECHNOLOGY

Two Degrees in Two Years

Civil

Construction
Materials Testing

Statics

Water /
Wastewater

Land Surveying

Intro To Geodetics

Research &
Platting

Boundary Law

• Land Surveying Science wins National Award

NCEES Surveying Education Award



The NCEES Surveying Education Award recognizes surveying/geomatics programs that have a broad and robust curriculum and best reflect NCEES' mission to advance licensure for surveyors in order to safeguard the health, safety, and welfare of the public. The award is intended to encourage programs to engage their students with other professionals, introduce them to both historical and new technology, and promote licensure.

2016 winners

NCEES awarded a \$10,000 prize to ten qualifying programs to assist with each program's continued efforts to promote the importance and value of licensure. The award jury considered criteria such as student outcomes, student involvement, outreach, and recruitment.

\$10,000 winners

Ferris State University
College of Engineering Technology
Surveying Engineering program

Michigan Technological University
School of Technology
Surveying Engineering program

Nicholls State University
Department of Applied Sciences
Geomatics program

Oregon Institute of Technology
College of Engineering, Technology, and Management
Geomatics program

Parkland College
Department of Engineering Science and Technologies
Construction Design and Management: Land Surveying program

Southeast Technical Institute
Department of Engineering Technology
Land Surveying Science Technology program

The University of Akron
College of Applied Science and Technology
Surveying and Mapping program

Troy University
College of Arts and Sciences
Surveying and Geomatics Sciences program

University of Florida
School of Forest Resources and Conservation
Geomatics program

University of Maine
College of Engineering
Surveying Engineering Technology program

DATA

- Only Land Survey Science Program in the region (SD, Neb, Iowa, Kansas)
- EMPLOYMENT within 6 months of graduation
 - 100% employed; all employed in field
- Where are our Grads working: (2018 Data Only)
 - SD 75%
 - IA 0%
 - MN 0%
 - CO 17%
 - Continuing Education 8%



What the students do?

- Civil Engineering Tech

- Construction Inspection
- Soils/Materials Testing
- CAD Technician
- Survey Technician
- Contractor (Estimating, GPS/CAD specialist)



- Land Surveying Science

- Surveys
 - Boundary
 - Topographic
 - Easements
 - Alta
- Legal Documents (Plats)
- Research properties



Where do they work?

- Contractors
 - Double H Paving, BX Civil & Construction, Bowes Construction
- City, County, State, Federal Agencies
- Private Consulting Firms
 - Banner & Associates, HRGreen, HDR, Midwest Land Surveying
- Geotechnical Firms
 - GeoTek, American Engineering Testing
- Land Surveying Science
- If they want to continue to obtain their Professional Land Surveying License
 - 24 semester credit hours
 - 6 hour national exam
 - 7 years under a Registered Land Surveyor
 - 8 hour exam



Educational Field Trip

Thank you

Administrative Recommendation to School Board:

To acknowledge the Southeast Tech : This is Our Story Report

Questions?