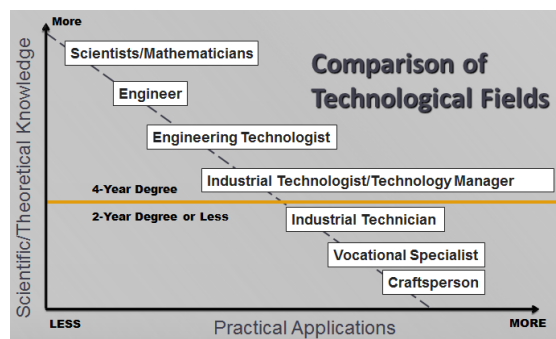




Careers in STEM and Technology Notes

Careers in Technology

- Scientists/ Mathematicians
- Engineers
- Engineering Technologist (BSET Professionals)
- Technologists/Technology Manager (BST Professionals)
- Technology/Technical Educator
- Technicians (AAS or Certificate, Technical)
- Craftsperson– Trade and Industrial



Scientist - research **natural** phenomena and make new discoveries related to it. Examples include: chemist, physicist, biologist, etc.

Engineer—one who inter-weaves knowledge of advanced mathematics, natural and engineering sciences, and engineering principles and practices with consideration of economics, social, environmental, and ethical issues to create new systems and products. They *develop new procedures to advance state-of-the-art*. Engineer is more theoretical than engineering technologist, and takes more upper-level support courses in math and science.

Engineering Technologist - one who *applies* knowledge of mathematics, natural and engineering sciences, current engineering practices, and the understanding of economic principles to test engineering operations or solve a design problem. They *apply established procedures which utilize current state-of-the-art*. Typical job titles include: field engineer, product engineer, systems engineer, process engineer, quality control engineer. Engineering technologist is more hands-on and applied than Engineer. **Support courses are in math and science**, but less than an engineer. They take more applied, hands-on technology courses instead of advanced math and science, etc. For more information, see Department of Engineering Technology, and Construction Engineering Technology in School of Construction.

Industrial Technologist/Technology Manager - technical and/or technical **management-oriented professionals** in business, industry and government. Usually supervise and **manage** complex technical systems which include both human and technical resources. **Take less math and science than engineering technologist, but more business and management support courses.** For more information contact Department of Automotive Technology, Department of Graphics and Imaging Technologies, Department of Technology and Workforce Learning, and School of Construction.

Technician or Technical Specialist - specially trained and skillfully developed people in a particular technical area (i.e., electronics, automotive, welding, HVAC/R, CAD, etc.). Technicians install, maintain, and service systems and equipment. Education involves one or two-year certificate degrees or two-year associate degrees.

Craftsman (trade or professional) – this includes careers in a wide range of trades and crafts (e.g. carpentry, metalworking, pressman, etc.). They typically produce products—manufactured goods, etc. or construct structures and structural components.

Sample Continuum of Careers: Plastics Co.

▪ Scientist:	Chemist
▪ Engineer:	Chemical Engineer Mechanical Engineer
▪ Engineering Technologist:	Process Engineer
▪ Industrial Technologist Technology/Manager:	Production Manager
▪ Technician:	Quality Control Technician (Materials/ Product Testing) or Industrial Electrician
▪ T&I Craftsperson	Tool and Die Maker
▪ Semi-Skilled Laborer:	Injection Molding Machine Operator

Technology and Engineering Educators - Teach broad-based technology in elementary schools, middle schools, high schools, colleges. This is part of STEM (Science, Technology, Engineering and Mathematics) general education and addresses technology and engineering-based subject matter applicable to all students

Career and Technical [Vocational] Educators – teach primarily in area vocational technical schools, high school vocational programs and technical colleges. They provide vocational preparation for those seeking gainful employment after graduation.

College of Technology Degree Options

Certificate – two-year with no general education requirement; technical electives (e.g., Automotive Service; Electrical Tech)

Associate (AAS) degree – two-year with 15 credit hours of general education. (e.g., Automotive Service; Electrical Technology; Architectural Manufacturing Technology)

Bachelor Degrees: - These are four –year degrees 120-124 credit hours with majors in engineering technology (BSET), technology (BST), education (BSE), career and technical education (BSCTE). The Bachelor of Applied Science (BAS-T) is a special 2+2 completion degree for AAS degree recipients; typically 60 hours beyond associate degree.

Graduate Degrees – The College of Technology offers both online and on-campus degrees. Masters are available in: Engineering Technology (MET); Technology (MST); Career and Technical Education (MS-CTE), and Human Resource Development (MS in HRD). There is also an Educational Specialist in Workforce Development and Education (Ed.S.) for those that have completed a Master's degree.

Employment and Salary Data and Career Resources

The College of Technology typically has the highest placement level and highest starting salaries of all PSU colleges. For further information, please contact Career Services.

Phone: (620)235-4140

Web: <https://www.pittstate.edu/careers/index.html>

Career Services also has an extensive Career Resource Center and many services to assist students in obtaining internships and graduates obtaining jobs.

More College of Technology Career Information

For more career information regarding specific career fields in technology by program area, view website or contact:

- Architectural Manufacturing Management and Technology (formerly Wood Technology) 620-235-4942
- Automotive Service (2-Year) 620-235-4973
- Automotive Technology 620-235-4973
- Construction Engineering Technology 620-235-6555
- Construction Management 620-235-6555
- Electrical Technology (2-Year) 620-235-6555
- Electronics Engineering Technology 620-235-4345
- Human Resource Development 620-235-4371
- Environmental Safety Management 620-235-6555
- Interior Design 620-235-6555
- Manufacturing Engineering Technology 620-235-4345
- Mechanical Engineering Technology 620-235-4345
- Plastics Engineering Technology 620-235-4345
- Graphic Communication Management 620-235-4399
- Technology and Engineering Education 620-235-4371
- Technology Management 620-235-4371
- Technical Teacher Education–CTE (4-Year) 620-235-4361
- Wood Technology (Now AMMT) 620-235-4371
- Workforce Development (2+2) 620-234-4179

Why Choose Pittsburg State's College of Technology?

- Unique and nationally recognized programs
- Programs develop sought after graduates
- Facilities and equipment—Kansas Technology Center
- Award-winning, industry-experienced dedicated faculty
- Special events (e.g. Company Day; Baja Kansas, etc.)
- Active student organizations
- High level of real-world engagement
- Flat-rate tuition – allows for minor at no additional costs

Seeking a Career—Do Not Forget Supply and Demand

Keep this in mind . . .

- **Large** Supply + Smaller Demand = **Competitive Market**
- If there is an abundance of programs producing a large supply, one must hope it doesn't exceed demand.
- Small Supply + Great **Demand** = Great Job **Prospects**
- If there are a limited number of programs (e.g., Architectural Manufacturing Management (Formerly Wood Tech), Automotive Technology, Technology and Engineering Education, Plastics Engineering Technology; Polymer Chemistry; Environmental Safety Management, Packaging; etc.) there is a limited supply that does not meet the greater demand.
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The Kansas Technology Center



- Size—Gross Floor Area - 278,000 square feet (1st & 2nd floor)
- Overall Dimensions - 735' X 525' (includes outdoor labs)
- Overall Dimensions - 665' X 500' (main structure only)
- Dozens of unique labs provide real-world experience
- Millions of dollars in equipment

For more information about the College of Technology, visit:

<https://www.pittstate.edu/technology/>