

2019-2020

## Undergraduate Catalog Program Transfer Single Articulation Pathways (TSAP) Programs

Program: \_Mechanical Engineering Technology

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Degree: \_\_\_ B.S. \_\_\_\_\_

### I. Introduction

- a. [Department of Polytechnic](#)
- b. Student Learning Outcomes
  - i. Upon completion of the Mechanical Engineering Technology B.S. degree students will be able to:
    1. Apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
    2. Design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
    3. Apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
    4. Conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
    5. Function effectively as a member as well as a leader on technical teams.
- c. The mechanical engineering technology program is accredited by the Engineering Accreditation Commission of ABET, [www.abet.org](http://www.abet.org).
- d. [TSAP information](#)

### II. Program Delivery

- a. Program is on-campus

### III. Declaring This Major

- a. Declare this major within the [School of Polytechnic](#)

### IV. General Requirements

- a. [Degree Requirements](#)
- b. [General Education Requirements\\* \(some programs require specific courses that also meet general education requirements\)](#)
- c. [Overlapping Course Content](#)
- d. [College Graduation Requirements](#)

e. [Academic Regulations](#)

**V. Program Requirements**

- a. Students admitted to the program must have completed the Transfer Single Articulation Pathway (TSAP) Mechanical Engineering Technology A.S. program at Ivy Tech Community College. The Ivy Tech transcript must clearly state that the student was enrolled in the TSAP program.
- b. Required Ivy Tech courses for admission to program are:
  - i. CHEM 111 – Chemistry I
  - ii. ENGL 111 – English Composition
  - iii. IVYT 111 – Student Success in University Transfer
  - iv. MATH 137 – Trigonometry
  - v. METC 105 – Introduction to Engineering Technology
  - vi. COMM 101 – Fundamentals of Public Speaking
  - vii. EECT 111 – Introduction to Circuit Analysis
  - viii. MATH 136 – College Algebra
  - ix. METC 107 – Mechanical Design & Documentation
  - x. PHYS 101 – Physics I
  - xi. MATH 221 – Calculus for Technology I
  - xii. METC 111 – Statics
  - xiii. METC 143 – Materials & Processes
  - xiv. METC 220 – CAD for Mechanical Design
  - xv. PHIL 102 – Introduction to Ethics
  - xvi. MATH 222 – Calculus for Technology II
  - xvii. METC 230 – Fluid Power
  - xviii. METC 237 – System Automation & Control
  - xix. METC 279 – Portfolio & Professional Preparation
  - xx. Social & Behavioral General Education Elective
- c. General Education Requirements: The Indiana Statewide General Education Core is satisfied as part of the TSAP program. The Purdue Fort Wayne General Education Capstone Course (Category C8) is included in your major requirements.
- d. Listing of Major courses and supporting courses required at PFW
  - i. PHYS 21900 – General Physics II – 4 cr.
  - ii. ET 20000 – Strength of Materials – 3 cr.
  - iii. IET 20500 – Statistics for Engineering Technology (or STAT 30100) – 3 cr.
  - iv. ECET 11400 – Introduction to Visual Basic (or ITC 13000) – 3 cr.
  - v. ECET 21100 – Electrical Machines & Controls – 3 cr.
  - vi. MET 21600 – Machine Elements – 4 cr.
  - vii. ENGL 23401 – Technical Report Writing – 3 cr.
  - viii. MET 31200 – Dynamics & Mechanisms – 3 cr.
  - ix. MET 33500 – Basic Machining – 3 cr.

- x. MET Technical Selective (MET 24700, MET 34700, MET 44000, ET 22000, ET 23000, ET 24000, ET 31000, ET 32000, or ET 34000) – 3 cr.
- xi. MET 30000 – Applied Thermodynamics – 3 cr.
- xii. MET 35000 – Applied Fluid Mechanics – 3 cr.
- xiii. MET 37000 – Introduction to Heat Transfer – 3 cr.
- xiv. MET 38100 – Engineering Materials – 3 cr.
- xv. IET 35000 – Engineering Economy – 3 cr.
- xvi. ENGL 42101 – Technical Writing Projects – 3 cr.
- xvii. MET 49900 – Special 4-credit version of Senior Design – 4 cr.
- xviii. Computer Programming Elective (recommended: CPET 19000, ECET 26400, ECET 36100, CS 20300, or CS 16000) – 3 cr.
- xix. IET 20400 – Techniques for Maintaining Quality – 3 cr.
- e. Special academic regulations specific to the program: Students must complete all PFW courses earning grades of C- or better.
- f. Student Responsibilities: You are responsible for satisfying the graduation requirements specified for your selected program. Thus, it is essential that you develop a thorough understanding of the required courses, academic policies, and procedures governing your academic career. All requests for exceptions to specific requirements must be made in writing and may be granted only by written approval from the appropriate chair or dean.
- g. Time Limit – none.
- h. Credit by Self-Acquired Competency is allowed
- i. Repeat Limits – none.
- j. Program Transfer credit limitations – only the TSAP courses can be transferred from Ivy Tech. Final two years of courses must be taken at Purdue University.
- k. Other program requirements
  - i. Credit by Examination
  - ii. Self-Paced Courses
- l. Total credits for degree: 120 (including TSAP transfer credits)