2019-2020

Undergraduate Catalog Program Template for Transfer Single Articulation Pathways (TSAP) Programs

Program: Mechanical Engineering

Degree: B.S.M.E.

I. Introduction

a. Department of Civil Mechanical Engineering

b. Student Learning Outcomes: The graduates from the Mechanical Engineering Program will demonstrate that they have:

   i. The ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.

   ii. The ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.

   iii. The ability to communicate effectively with a range of audiences.

   iv. The ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.

   v. The ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.

   vi. The ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.

   vii. The ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

c. The mechanical engineering program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

d. TSAP information

II. Program Delivery

a. This program is available on-campus

III. Declaring This Major

a. Declare this major within the Department of Civil and Mechanical Engineering

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. Must have minimum GPA of 2.0

b. Required courses for admission

i. (3) CHEM 105 - General Chemistry I
ii. (2) CHEM 105L - General Chemistry/Quantitative Analysis Laboratory
iii. (3) COMM 143 – Speech
iv. (2) CSCI 126 - Introduction to Computer Tools for Scientists and Engineers
v. (3) CSCI 159 - C Programming for Scientists and Engineers
vi. (3) ENGL 101 - English Composition I
vii. (3) ENGL 102 - English Composition II
viii. (2) ENGR 105 - Engineering Graphics
ix. (2) ENGR 131 - Introduction to Engineering
x. (3) ENGR 205 - Statics
xi. (3) ENGR 206 - Dynamics
xii. (3) ENGR 217 - Linear Circuits
xiii. (1) ENGR 217L - Electronic Measurement Techniques
xiv. (3) ENGR 235 - Thermodynamics
xv. (3) ENGR 270 - Introductory Structural Mechanics
xvi. (1) ENGR 270L - Introductory Structural Mechanics Laboratory
xvii. (5) MATH 118 - Calculus with Analytic Geometry I
xviii. (5) MATH 119 - Calculus with Analytic Geometry II
xix. (4) MATH 220 - Intermediate Calculus
xx. (4) MATH 223 - Differential Equations with Linear Algebra
xxi. (3) PHYS 205 - Physics for Scientists and Engineers I
xxii. (2) PHYS 205L - Physics for Scientists and Engineers I Lab
xxiii. (4) PHYS 206 - Physics for Scientists and Engineers II
xxiv. (1) PHYS 206L - Laboratory for Physics for Scientists and Engineers II
xxv. (3) Humanities Elective
xxvi. (3) Social Science 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. A grade of C- or higher is required in each course used to satisfy the Purdue Fort Wayne General Education Requirements.

d. Listing of Major courses and supporting courses required at PFW. All PFW engineering and technical elective courses must have a combined minimum GPA of 2.0

i. (2) ME 16000 Solid Modeling
ii. (2) ME 29300 Measurement & Instrumentation
iii. (3) ME 30100 Thermodynamics II
iv. (2) ME 30300 Materials Science and Engineering
v. (1) ME 30400 Mechanics & Materials Lab
vi. (3) ME 31800 Fluid Mechanics
vii. (1) ME 31900 Fluid Mechanics Lab
viii. (3) ME 32100 Heat Transfer
ix. (1) ME 32200 Heat Transfer Lab
x. (3) ME 33100 System Dynamics
xi. (3) ME 33300 Automatic Control Systems
xii. (3) ME 36100 Kinematics & Dynamics of Machinery
xiii. (3) ME 36900 Design of Machine Elements
xiv. (3) ME 48700 Senior Design I
xv. (3) ME 48800 Senior Design II
xvi. (15) Mechanical Engineering Electives (5 courses)
xvii. (3) General Education Course

e. Minor in Mathematics and Minor in Physics

f. Special academic regulations specific to the program: The required courses (ENGR, ME, and ECE) and technical elective courses must have a combined minimum GPA of 2.0.

g. 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.

h. Program Transfer credit limitations: 74 credits

i. Total credits for degree: 120 credits