2022-2023 Academic Catalog Addendums

ZANE STATE COLLEGE

ZSC

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LESS THAN ONE-YEAR CERTIFICATES FOR CAREER ENHANCEMENT

Integrated Manufacturing Technology (IMTC)

ISET	1100	Industrial Electricity	3
ISET	2400	Motor Controls	3
MECH	1000	Engineering Graphics	3
MECH	1150	Tools, Measurement, and Layout	2
MECH	1200	Manufacturing Processes	3
MECH	2500	Hydraulics and Pneumatics	3
			17

Phlebotomy (PBTC)

COMM	1220	Interpersonal Communication	3
HLTH	1210	Medical Terminology	2
HLTH	1730	Disease and the Disease Process	2
PBTC	1100	Phlebotomy Theory and Practice	3
PBTC	1200	Phlebotomy Lab Experience	1
PBTC	1300	Phlebotomy Directed Practice	2
			13

COURSE DESCRIPTIONS

MATH 0341-College Algebra Lab
(1 credit hour - 0 lecture 2 lab - V)
This course provides students enrolled in MATH 1340 the support and supplemental instruction needed to ensure their success in MATH 1340. Co-requisite: MATH 1340.

MECH 1200-Manufacturing Processes
(3 credit hours - 2 lecture 2 lab - T) TAG – OET010; CTAG – CTMET004
MECH 1200 introduces students to the industrial processes of manufacturing. Typical industrial processes for metals and plastics are studied. Relationships among materials, processes, and design are established. Labs consist of hands-on projects in manufacturing as well as industry visits to local manufacturing facilities. Prerequisite: None.

MECH 2100-Engineering Economy
(3 credit hours - 3 lecture 0 lab - T) TAG – OES005
Economic analysis of engineering projects and methods of operation, introduction to the analysis of engineering economic decisions. Topics include time value of money, cost estimation, equipment comparison, break-even analysis, replacement and risk analysis. Prerequisite: None.

MECH 2500-Hydraulics and Pneumatics
(3 credit hours - 2 lecture 2 lab - T) TAG – OET009
A study of the principles of fluid and air power and how to use the power in a manufacturing setting and on mobile or portable equipment. Includes how to utilize cylinders and motors to perform work as required, how to size fluid power circuit components, connect them together, and control them to form a functional system. Prerequisite: None.

MECH 2550-Computer-Aided Machining
(3 credit hours - 2 lecture 2 lab - T)
This course builds on the 3D modeling skills learned in previous MECH classes. Students create 3D CAD models, generate toolpaths using computer-aided manufacturing (CAM) software, and operate CNC machines. Topics include 3D modeling, 2D and 3D toolpath generation, stock setup, machining simulations, tool selection, speed/feed selection, part setup, work holding basics, and CNC machine operation. Prerequisite: MECH 1150.

MECH 2700-Project Management
(3 credit hours - 3 lecture 0 lab - T)
This course emphasizes the study of project management as it relates to construction and industry, including the background knowledge and application of the project management process from concept and selection to completion and closure. Prerequisite: None.

PBTC 1100-Phlebotomy Theory and Practice
(3 credit hours – 3 lecture 0 lab – T)
PBTC 1100 is an introduction to the basic principles and knowledge of laboratory techniques used in phlebotomy, drawing blood via both venipuncture and skin puncture. Knowledge of anatomy and physiology of the circulatory system, specimen collection (including venipuncture and skin punctures), specimen processing and handling, laboratory operations (e.g., safety, quality control, etc.), handling non-blood specimens (e.g., urine), and professionalism are covered. Prerequisite: None.

PBTC 1200-Phlebotomy Lab Experience
(1 credit hours – 0 lecture 3 lab – T)
This 8-week course provides supervised experience in the performance of venipuncture and micro collection techniques in a classroom setting. Emphasis is placed on universal precautions compliance, proper collection and preservation techniques for various specimens, special procedures performed by phlebotomists, specimen handling, and data management/storage. Upon completion, students should be able to safely perform procedures necessary for specimen collections on human subjects in various health care settings. Co-requisite: PBTC 1100.

PBTC 1300-Phlebotomy Directed Practice
(2 credit hour – 0 lecture 150 directed practice – T)
PBTC 1300 consists of 150 clinical experience hours in phlebotomy, drawing blood via both venipuncture and skin puncture, in an accredited laboratory. Students will practice phlebotomy skills and techniques in an outpatient setting for 4 weeks, followed by an inpatient setting for 4 weeks. A successful affective evaluation, filled out by their clinical instructor(s), along with performing 100 successful, unaided venipunctures will demonstrate that the student is ready for an entry-level position as a phlebotomist. Prerequisite: PBTC 1200.