TECHNOLOGY (TECN)

TECN 111, TECHNICAL PROBLEM SOLVING 3 (5)
An introduction to the concepts of technical problem solving using the microcomputer. Familiarization with the problem solving technique as it relates to problems in engineering technology will be emphasized. The problem solving technique is based on the application of current microcomputer related tools and software packages. Laboratory required. (A special fee will be assessed.)
General Education: IN1, IN2
Typically Offered: Summer, Fall and Spring Semesters

TECN 115, INDUSTRIAL BLUEPRINT READING 2 (3)
This course is an introduction to the skills required to read and understand industrial blueprints. The reading of blueprints is emphasized rather than the drawing of blueprints. Freehand sketching is included. Laboratory required. (A special fee will be assessed.)
General Education: IN1
Typically Offered: Summer, Fall and Spring Semesters

TECN 121, FLUID POWER 3 (4)
This course is designed for Applied Science majors and focuses on the principles of hydraulics and pneumatics. Includes fluid mechanics/dynamics, conventional fluid circuits and fluid power components. Emphasis on applications, component selection and related mathematics computations. Laboratory required. (A special fee will be assessed.)
General Education: IN1
Course Entry Requirement(s): Course placement policy: Grade of C or higher in MTHM 033 or satisfactory placement assessment in mathematics
Typically Offered: Fall and Spring Semesters

TECN 125, INDUSTRIAL SAFETY AND PRACTICES 2 (2)
This course covers the principles and techniques of industrial safety. Topics include: OSHA standards, fire prevention, personal protection and first aid, accident prevention, accident investigation and reporting, machine guarding, ergonomics, types of hazards, and hazardous material.
General Education: IN1

TECN 126, PRINCIPLES OF TECHNOLOGY 3 (3)
Basic principles and applications of force, work, rate, resistance, energy and power in simple mechanical, electrical, thermal and hydraulic systems are taught through hands-on demonstrations.
General Education: IN1
Course Entry Requirement(s): Course placement policy: Grade of C or higher in MTHM 061 or satisfactory placement assessment in mathematics

TECN 127, MAINTENANCE MACHINING 2 (4)
This course covers the principles and techniques of maintenance machining in an industrial production environment. Topics include: use of lathes, milling machines, drill presses, grinders, threads and thread cutting tools, power tools, commonly used hand tools, and measurement instruments for maintenance operations. Laboratory required. (A special fee will be assessed.)
General Education: IN1

TECN 131, MANUFACTURING PROCESSES I 3 (6)
This course is an introduction to the use and understanding of commonly used machine tools, lathes, mills, drill presses, and surface grinders will be studied and used. Common fabrication processes will be studied. Laboratory required. (A special fee will be assessed.)
General Education: IN1, IN5
Course Entry Requirement(s): Concurrent: CADD 111 or TECN 115.
Typically Offered: Fall and Spring Semesters

TECN 132, MANUFACTURING PROCESSES II 3 (6)
This course covers advanced techniques of manufacturing processes using lathes, mills, surface grinders and electro-discharge machines (EDM). Fixture and tool design will be studied. Laboratory required (A special fee will be assessed.)
General Education: IN1, IN5
Course Entry Requirement(s): Prerequisite: TECN 115 and TECN 131.
Typically Offered: Spring Semester

TECN 133, MECHANICAL SYSTEMS 3 (5)
This course, designed for the Applied Science majors, examines the different mechanical systems and tooling used in an industrial environment. Included are discussion of safety, precision measurement, blueprints, hand and powers tools, fasteners, torque and tension, mechanical drives, shaft alignment, bearings lubrication, rigging and ladder safety. Laboratory required. (A special fee will be assessed.)
General Education: IN1
Course Entry Requirement(s): Course placement policy: Grade of C or higher in MTHM 033 or satisfactory placement assessment in mathematics
Typically Offered: Fall and Spring Semesters

TECN 211, FLUID POWER CONTROL SYSTEMS 2 (3)
This course covers the basic design, construction and operation of electric and electronic controls of hydraulic and pneumatic systems. Topics discussed include sensors, programmable controllers, servo valves, and proportional solenoid valves in fluid circuits. The laboratory exercises are directly related to industrial applications. Laboratory required. (A special fee will be assessed.)
General Education: IN1
Course Entry Requirement(s): Prerequisite: ELCT 111 and TECN 121.

TECN 220, INDUSTRIAL PIPING & TUBING 3 (4)
This course is an introduction to the concepts and principles of industrial piping, pipefitting, and tubing installation, materials, routing and layout specifications. Also covered are: simple pipe calculations, selection of materials, appropriate tools, cutting, threading, fittings, bending and offsets. Laboratory required. (A special fee will be assessed).
General Education: IN1
Course Entry Requirement(s): Prerequisite: TECN 115
Typically Offered: Spring Semester

TECN 245, GEOMETRIC DIMENSIONING AND TOLERANCING 2 (2)
This course is an introduction to the ASME Y14.5 - 2009 Geometric Dimensioning and Tolerancing (GD&T) standard. General tolerancing methods will be reviewed. Geometric characteristic symbols and terms, and datums will be defined. Material condition modifiers will be identified and discussed. The geometric tolerances of form, orientation, profile, runout and location will be studied.
General Education: IN1
Course Entry Requirement(s): Prerequisite: TECN 115
Typically Offered: Fall and Spring Semesters

TECN 287, WORK BASED LEARNING I - TECN 1-3 (1)
This course provides supervised work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating classroom learning with work experience. Students will be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. Activities are coordinated and evaluated by college personnel. Course will be graded on S/U basis. Prerequisite: Student must be pursuing an approved program at LCCC, have completed 15 semester hours with a minimum of six semester hours in the discipline of placement; have a minimum GPA of 2.5 in the discipline and a 2.0 overall GPA; and have divisional approval.
Course Entry Requirement(s): Must be pursuing an approved program at LCCC, have completed 15 semester hours with a min of 6 semester hours in the discipline of placement; have a min GPA of 2.5 in the discipline a 2.0 overall GPA; and divisional approval.
Typically Offered: Offer as required

TECN 288, WORK BASED LEARNING II - TECN 1-3 (1)
This course provides supervised work experience building on experience in Work-Based Learning I with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating classroom learning with work experience. Students will be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. Activities are coordinated and evaluated by college personnel. Course will be graded on the S/U basis.
Course Entry Requirement(s): Prerequisite: TECN 287
Typically Offered: Offer as required

TECN 289, WORK BASED LEARNING III - TECN 1-3 (1)
This course provides supervised work experience in work-based learning II with approved employer(s) in an area related to Computer Maintenance and Networking. Emphasis is placed on integrating classroom learning with work experience. Students will be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies. Activities are coordinated and evaluated by college personnel. Course will be graded on the S/U basis.
Course Entry Requirement(s): Prerequisite: TECN 288
Typically Offered: Offer as required

TECN 299, INDIVIDUALIZED STUDIES IN TECN 1-2 (1)
An in-depth study in areas of technology presented by discussions and/or individual research and reading. Topics will vary. Repeatable up to a total of four (4) credit hours. Prerequisites: Second-year standing and divisional approval.
Course Entry Requirement(s): Prerequisite: Second-year standing and divisional approval
Typically Offered: Offer as required