

OAKTON DUAL CREDIT COURSES

NILES NORTH HIGH SCHOOL

OAKTON COURSE	COURSE NAME	SEMESTER HOURS OF CREDIT	COURSE DESCRIPTION
BNA 100	Basic Nursing Assistant Training	7	Course offers a basic study of principles and procedures used by the nurse assistant in long term care, home health settings and hospitals. Content focus is on basic human needs and care of the elderly. Integration of skills and concepts is acquired through hands-on clinical experience at local health care facilities. This course is approved by the Illinois Department of Public Health (IDPH). Upon completion, students may apply to take the Illinois Nurse Assistant/Home Health Aide Competency Exam. Prerequisite: Successful completion of course admission procedures
BNA 105	Basic Nurse Assistant Job Training	1	Course expands understanding of today's health care workplace and the role of the CNA. Content focus is on gaining gain the job search techniques necessary to obtain employment in the health care field, e.g., hospitals, long term care and home health. Intended for those currently enrolled in BNA 100 Prerequisite: Concurrent enrollment in BNA 100
CAD 210	Industrial Design Engineering Techniques	4	Course introduces industrial design, and its place in the manufacturing process. Content includes design visualization, creation, and application of 3-D computer-generated models in today's manufacturing, communication, and publishing industries; creating a 3-D computer model component design from original idea, pencil sketching, and concept analysis, to use of surface and solid modeling software; use of Boolean operations in model construction and editing, display commands, detailing, geometric translation, rendering and presentation.
ECE 102	Child Growth & Development	3	Course provides an overview of the theory and principles of human development. Content includes in-depth study of physical, social, emotional and cognitive aspects, from conception to adolescence. Special emphasis placed on child development theories of Piaget, Erikson, Vygotsky, Skinner, etc., and significance of family, peers, culture and school. Field observations required. IAI Major: ECE 912
ELT 221	Digital Circuit Fundamentals	3	Course involves study of discrete devices and integrated circuits. Content includes application of inverters, AND, OR, NAND, and NOR gates, and all circuits necessary to operation of a computer including microprocessors. Focus is on analysis of functions from a systems and circuit standpoint.
HIT 104	Medical Terminology	3	Course presents medical terminology through study of medical word roots, prefixes and suffixes. Focus on relationships among symptomatic, disease, and procedural terms.
MFG 102	Industrial Drafting and Design	3	The course provides a thorough understanding of industrial drafting and design. It starts with outline of main differences between 2D and 3D design techniques. Main content covers examining the three major components of manufacturing drawings: geometry, dimensions, and drawing annotations required to machine a part or build an assembly according to the specifications. Additional topics include differences between metric (first angle) and standard (third angle) projections and dimensioning; interpreting advanced drawing views, and analyzing detail and assembly drawings. The course concludes with introduction to Geometric Dimensioning and Tolerancing (GD&T). Introduction to three-dimensional Computer Aided Design (CAD) software is integrated throughout the course.
MFG 110	Introduction to Manufacturing Processes	3	Designed for students with little or no experience in precision metal-working machine tools, the course starts with detail coverage of industrial safety and OSHA policies. Main content examines basic principles and operations of a drill press, lathe, and vertical milling machine. It provides students with understanding of common machining operations together with related tooling and fixtures. Additional topics include ferrous and nonferrous metals, introduction to precision measurements, and basic technical math including speeds and feeds calculations. The course provides an introduction to Computer Numerical Control (CNC) machining.
MFG 111	Introduction to Computer Integrated Manufacturing	3	Course introduces students to the concepts of Computer Integrated Manufacturing (CIM) systems used to automate manufacturing processes. The course starts with outline of main differences between hard and flexible automation. Main content provides introduction to basic electricity, electric motor types, hydraulics and pneumatics used for motion control, sensors and vision systems, industrial robotics, and programmable controllers. The course concludes with students composing an advanced manufacturing CIM cell.

MFG 120	Introduction to Welding	4	Course covers basic electric arc, oxy-fuel, gas metal arc, and gas tungsten arc welding processes, along with safety procedures required to set up and shut down welding equipment for the various processes. Hands-on experience includes practice with the four welding systems using various thickness materials. Industrial standards and American Welding Society (AWS) standards for quality are discussed.
MFG 125	Advanced Welding	4	Course teaches advanced electric arc, tungsten inert gas, gas metal arc welding processes. Safety procedures required to set up and shut down welding equipment for the various processes are enforced. Hands-on experience includes practice with the three welding systems using various thickness materials. Industrial standards and American Welding Society (AWS) standards for quality are discussed. Previous welding experience is recommended. Recommended: MFG120