

OAKTON DUAL CREDIT COURSES

MAINE EAST

OAKTON COURSE	COURSE NAME	SEMESTER HOUR OF CREDIT	COURSE DESCRIPTION
ART 115	Beginning Photography	3	Course explains basic photography. Student, using their own cameras, explore basics of film exposure, development and printing. Focus is on realizing camera's ability to record fine delineation of tone and detail using black and white materials. Content includes use of studio cameras, studio lighting, brief history and basic aesthetics of photography. Studio work outside of regular class time required.
ATA 102	Intro to Automotive Technology	4	The students will learn the back ground of the automobile and history of transportation. Students will discuss basic service shop organizational skills. This course will teach, light vehicle maintenance, fluids and lubricating principles. Also, the proper usage of hand and power tools to meet entry level job requirements.
BIO 114	Basic Human Anatomy & Physiology	3	Non-laboratory survey course covers the structure and function of each body system. Content includes body planes, directional terms, quadrants, body cavities, and the major organs in each body system. Prerequisite: One year of high school biology within last five years.
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. The 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.
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 105	Industrial Design Engineering	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.
CAD 210	Industrial Design Engineering Techniques	4	Course continues CAD 105, to increase skills for creating prototypes of computer models using 3-D modeling software. Hands-on lab course involves critical thinking skills related to industrial design and manufacturing. Content includes industrial techniques such as extrusions, laser cutting, fasteners, welding, sheet metal production, injection molding, and stereo lithography; production process utilizing computer controlled machining centers and prototyping equipment.
CAD 220	Intro to Building Systems	4	Revit enables students to create full 3D architectural project models and place them in working drawings. Class focuses on the basic tools that the majority of users will need to work with. Topics include creating floor plans, adding views, adding various building components, and creating sheets for plotting.
CNS 105	Networking Essentials	3	Course introduces the technologies, terminology, and skills used in the world of data networking. Emphasis is on practical applications of networking and computer technology to real-world problems. Students gain the knowledge necessary to design and install a local area network. Topics include network hardware and software requirements, and network architecture.
CNS 170	Principles of Information Security	3	Course presents balance between security management and technical components of security. Focus is on Security Systems Development Life Cycle (SecSDLC). Topics include structured methodology as supportive framework to guide students through examination of components of information domain of Information Security Network; preparation for appropriate Network or Information Security Certification examinations. Prerequisite: CNS 105 or consent of instructor, coordinator or program chair

EAS 101	Physical Geology	4	Course introduces earth materials and the physical and chemical processes that sculpt earth's surface. Content includes rocks, minerals, earthquakes, volcanoes, glaciers, groundwater, coastal processes, geologic time, structural geology, and topographic maps. IAI General Education: P1 907L
EGL 101	Composition I	3	Course introduces strategies for planning, writing, and revising expository essays based on experience and reading. Content includes purpose, context, genre, and the rhetorical situation as elements in the writing process, as well as critical reading and analysis as the basis for essay writing. The first course in a two-course sequence with EGL 102. IAI General Education: C1 900
EGL 102	Composition II	3	Course introduces strategies for planning, writing, and revising advanced expository essays and the college research paper. Content includes critical reading and analysis, the structure of argument, and the use of sources. Prerequisite: EGL 101 with a minimum grade of C. IAI General Education: C1 901R
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.
MAT 252	Calculus III	4	Course surveys topics of calculus for multivariable functions. Content focus is on vectors, functions of several variables, curves and surfaces, differentiation, partial derivatives, multiple integrals, and line integrals. Technology is integrated throughout. IAI General Education: M1 900-3
MAT 262	Ordinary Differential Equations	3	Course presents the solution of ordinary differential equations with applications, power series, Laplace transformations, systems of linear differential equations and numerical methods. Technology will be used when appropriate. Prerequisite: MAT 252 with minimum grade of C.
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	Intro to Manufacturing Automation Systems	3	Course introduces students to the basic control systems used to automate manufacturing processes. Content includes: hydraulics and pneumatics used for motion control, PLCs programmable controllers, sensors and vision systems, robotics, and designing a computer integrated manufacturing (CIM) cell. This is a hands-on, team based, class to give students the basic concepts needed to design manufacturing automation systems using both hard automation and robots used in a CIM cell high-end automation system.
MGT 160	Small Business Management	3	Course presents the principles and problems of organizing a small business. Content includes analysis of entrepreneurial qualifications and skills; capital resources and requirements; forms of ownership; and financial analysis and planning. Focus is on tax and legal considerations; staffing and learning to identify profit opportunities using market analysis; bringing products to market through effective advertising, personal selling and distribution methods and practices. Includes franchises, availability of government assistance through the Small Business Administration (SBA), evaluation of an existing business for purchase and special opportunities granted to small businesses in selling to government agencies.