

OAKTON DUAL CREDIT COURSES

MAINE EAST HIGH SCHOOL

OAKTON COURSE	COURSE NAME	SEMESTER HOUR OF CREDIT	COURSE DESCRIPTION
ACC 153	Principles of Finacial Accounting	4	Course covers preparation and analysis of financial information using generally accepted accounting principles. Content includes the accounting cycle, financial statement preparation, merchandise accounting, internal controls, cash, receivables, inventory, payables, property, plant and equipment, intangible assets, liabilities, stockholders' equity, cash flow statement, and financial statement analysis. IAI Major: BUS 903
ART 115	Begining 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.
ART 218	Advanced Black and White Photography	3	Course refines darkroom technique of ART 115. Content includes issues of film exposure and development in order to produce "perfect" negatives, various films, developers, chemicals, papers and toners, and advanced studio lighting; medium and large format photography introduced. Focus is on student assignments and personal projects. Prerequisite: ART 115 or consent of instructor.
ATA 102	Intro to Automotive Technology	4	Introductory course to familiarize students with the history of the automobile. Students will learn basic service shop organizational skills, basic vehicle inspection, multi-meter use, light duty vehicle maintenance, proper vehicle lifting, proper use of hand and power tools required for entry level automotive positions, and how to navigate online service manual information. Students will also learn about career options within the automotive industry and how to write a resume.
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.
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 three-dimensional (3D) computer-generated models in today's manufacturing, communication, and publishing industries; creating a 3D computer model component design from original idea, pencil sketching, concept analysis and use of surface and solid modeling software.
CAD 210	Industrial Design Techniques	4	Course teaches skills for creating prototypes of computer models using 3D modeling and prototyping software. Hands-on lab course involves critical thinking skills related to industrial design, digital prototyping and manufacturing. Content includes industrial design techniques using computer models for laser cutting, fasteners, 3D printing and production processes that employ computer-controlled machines and prototyping equipment.
CAD 220	Introduction to Building Information Modeling - Revit	4	Revit is a Building Information Modeling (BIM) software widely used by architects, engineers and contractors to create a unified model that all disciplines and trades can use to complete their work. Revit enables students to create full 3D architectural project models and place them in working drawings. 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. IAI Major: MTH 912
MFG 110	Introduction to Machining	3	Intended for students with no experience in precision metalworking, the course starts with industrial safety and OSHA policies. The main content examines principles and operations of a drill press, a lathe, and a mill. Students will learn about common machining operations along with related tooling and fixtures. Additional topics include an overview of precision measurements and basic technical math including speeds and feeds calculations. The course concludes with an introduction to Computer Numerical Control (CNC).
MFG 111	Introduction to Computer Integrated Manufacturing (CIM)	3	Directed towards new students interested in careers in Manufacturing and CNC, the course introduces students to Computer Integrated Manufacturing (CIM). The main content introduces advanced manufacturing, industrial safety, print reading, ferrous and non-ferrous materials, precision measurements, fundamentals of CNC, and welding. Additional topics include an overview of fluid power principles, automation fundamentals, robotics and vision systems, and basics of logic controllers (PLC).
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.
SPE 103	Effective Speech	3	Course offers opportunities to develop and improve effective oral communication skills. Content includes rhetorical theory, organization and structure of ideas, techniques for general speaking and listening effectiveness, practical experience in individual and group presentations. IAI General Education: C2 900

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