Northcentral TECHNICAL COLLEGE

2022-2023 Dual Credit Courses

NTC

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WITH NORTHCENTRAL TECHNICAL COLLEGE.

School of Agriculture Science, Utilities & Transportation

Diesel Brake Systems 1 10-412-119 (1 credit)
Focuses on the air brake system's component operation and brake maintenance for trucks and tractor/trailer combinations. In this course, learners will learn to perform overhaul procedures for cam style brake systems.

Diesel Electrical Systems 1 10-412-118 (1 credit)
Analyzes the fundamentals of electricity and electrical safety. Explores Ohm's Law, use of a digital multimeter, wiring and components.

Diesel Engines 1 10-412-121 (1 credit)
Explores diesel engine theory and operation. Also provides the learner with a diesel engine component overview.

Diesel Preventative Maintenance 1 10-412-120 (1 credit)
Discusses the importance of vehicle maintenance and inspections on commercial motor vehicles. Also introduces the techniques for performing proper maintenance and inspections.

Heavy Duty Suspension and Steering 10-412-126 (1 credit)
Introduces fastener identification and torque as it relates to equipment repairs. In the lab setting, proper torque techniques and concerns are discussed and practiced.

Introduction to Animal Science 10-091-104 (3 credits)
Introduces the basics of livestock management. Examines management of the dairy herd with concentration on nutrition, feedstuff's classification, reproduction, genetics, animal behavior, animal health and sustainable agriculture practices. Students explore basic husbandry and care procedures for animals. This is offered in an online format.

Intro to Soils 10-093-102 (2 credits)
Examines basic soil and plant relationships. Soil fertility is important in considering the role that the soil plays with regard to the availability of nutrients to plants. Students will study nutrients such as nitrogen, phosphorus, potassium, sulfur, calcium and magnesium as it relates to soil condition. Students will practice appropriate sampling, analyzing and interpretation of soil sample results.

Orientation to Agronomy 10-093-101 (1 credit)
Familiarizes learners with the Agriculture Center of Excellence and standard operating procedures. Learners will begin to develop a strategic college plan. Learners will be exposed to the various opportunities available throughout their program of study. This course will acquaint students with basic agronomy practices and learners will begin the process of managing 100 acres of cropland that will continue throughout the program.

Veterinary Medical Terminology 10-091-172 (1 credit)
Develop an understanding of acceptable veterinary medical terminology for common clinically recognizable diseases, operations, systems and procedures. Further, learners will distinguish common medical signs, abbreviations and colloquial vocabulary. Medical terms and language is covered as it relates to the animal's body as a whole.

School of Engineering & Advanced Manufacturing

AutoCAD 2D for Architectural Design 10-614-139 (2 credits)
Explores the latest version of AutoDesk's AutoCAD program as a 2D design, drafting and visualization tool. Provides learners with skill development starting at an introductory level and progressing to a level in which authentic architectural construction graphics and working drawings including annotations can be developed.

Autocad for Technicians 10-620-171 (1 credit)
Introduce drafting software Autocad. Learn to measure equipment, parts and rooms using various measurement devices including: tape measurers, laser distance measurement devices and dial calipers. Create drawings or layouts based on their measurements. Lab activities will include measuring various electrical components and creating an electrical panel layout, as well as measuring classrooms and creating a classroom layout.

Autodesk Inventor 3D CAD Software 10-606-130 (2 credits)
Introduces the 3-dimensional modeling software Inventor to create solid part models, sheet metal and assemblies. The learner will create parts and assemblies as well as related 2D working drawings, bills of materials and animations. Learners will practice their skills on a variety of projects with various levels of difficulty.

Auto Service Fundamentals 10-602-107 (2 credits)
Introduction to the automotive service facility. Safety and the use of basic hand and power tools helps the prospective automobile technician work safely and efficiently. Students learn to use both comprehensive and manufacturer's shop manuals to perform basic under-hood and under-car services.

Fluid Power Systems 2: Fundamental of Pneumatic 10-612-121 (1 credit)
Introduces Pneumatic fluid power systems. The characteristics and dangers of using air as a fluid power force are explored. Pneumatic system components are studied including: compressors, linear actuators, rotary actuators and pneumatic tubing. Hands-on activities using various pneumatic components are assembled in the lab.

Fluid Power Systems 3: Design and Maintenance 10-612-122 (1 credit)
Involves the design, construction, maintenance, troubleshooting and repair of advanced fluid power circuits and systems. Mechanical, electrical and electronic position sensing and control devices are applied to sequential operation of fluid power systems. Fluid power system maintenance, troubleshooting and repair methods and materials are introduced and applied. Integrated electrical and fluid power control systems and circuits are developed using computer aided design and simulation software and then connected and tested in the lab.

Fundamentals of Furniture Manufacturing 10-465-119 (2 credits)
This course is designed to provide the foundational knowledge and skills to manufacture furniture. Topics covered include: furniture design styles, sourcing raw material for projects, tool selection, machine operation, joinery and furniture construction.

Industrial Electronics Tech 1 Direct Current Electrical Characteristics 10-660-123 (1 credit)
Introduces the fundamental principles of direct current (DC) and the effects of resistance, capacitance and inductance operating within the DC electrical and magnetic fields. Circuit analysis utilizes project based labs where students experience the practical application of Ohm's, Watt's, Kirchhoff's and Lenz's laws. Learning experiences in IET 1 will be continued and expanded upon in IET 2.

Industrial Electronics Tech 2 Alternating Current Electrical Characteristics 10-660-124 (1 credit)
Introduces the fundamental principles of alternating current (AC) and the effects of resistance, capacitance and inductance operating at 60 Hertz (Hz) single phase within the AC electrical and magnetic fields. Circuit analysis uses project based labs where students experience the practical application of Ohm's, Watt's, and Faraday's laws. Learning experiences in IET 2 build upon those in IET 1 and will be continued and expanded upon in IET 3.

Industrial Electronics Tech 3 Electronics Circuits and Devices 10-660-125 (1 credit)
Introduces the fundamentals associated with the properties of silicon controlled devices used in industry. Both DC and AC operating characteristics will be explored as well as the application of silicon controlled devices used in industrial circuit controls. Circuit analysis utilizes project based labs where students experience the practical application of skills learned in IET 1 and 2.

Industry Workplace Safety 10-620-172 (1 credit)
Introduces General Industry Safety Practices and is intended to provide an entry level worker's general awareness on recognizing and preventing hazards in a general industry setting. An OSHA 10 General Industry certification will be obtained with completion of the course. In addition, lab specific safety will be covered. OSHA has some very specific rules for receiving the certification card for OSHA 10. OSHA 10 Cards can only be issued to students in the face-to-face classes who attend every class. OSHA will not allow anyone taking this course in an online/flex format to receive a certification card. If you need the OSHA 10 card upon completion of this course, please be sure you are enrolled in
the face-to-face section.

Interpreting Engineering Drawings 10-623-179 (2 credits)
Explores the foundational skills needed to read and interpret industrial prints. Beginning with the basics, the student progresses in a logical order through orthographic, pictorial, assembly, section and auxiliary views of products. In addition, you will learn how to interpret part dimensions and tolerances. Emphasis is also placed on title blocks, change blocks and shop notes and symbols. The symbols of geometric dimensioning and tolerancing are introduced.

Introduction to Microcontrollers 10-660-121 (1 credit)

Introduces the microcontroller, a tiny computer which uses digital inputs and outputs to control electrical/electronic circuits. A Basic Stamp microcontroller will be programmed via a USB port to a PC using a PBASIC editor program. It will then be connected to digital inputs such as switches and sensors and used to control output circuits such as LED displays, DC motors, relays, buzzers and servo motors.

Introduction to Welding 10-442-101 (2 credits)

Compares equipment and techniques used in the major arc welding and thermal cutting processes. Students perform introductory level welds in the SMAW, GMAW, FCAW and GTAW processes. Students also perform material preparation skills including shearing, grinding and thermal cutting.

Lean Manufacturing Fundamentals 10-623-147 (2 credits)

Analyzes the eight wastes of manufacturing. The student will then explore concepts such as 5S, Total Productive Maintenance, Kanban, Value Stream Mapping. The student will be given activities to implement concepts in their work setting.

Intro to Machine Shop 10-420-101 (2 credits)

Apply and learn operation of mills, lathes, drilling, grinding and general metal fabrication. This course is designed to give the learner the theory and hands-on training leading to the ability to work safely in a shop. Individual part fabricating and precision measurement are covered.

Machine Tool Calculation 32-420-305 (2 credits)

Provides competency for common machine shop mathematics. An emphasis will be placed on problem solving skills using the metric system, common machining formulas from the machinery handbook and right triangle trigonometry. This course will focus on calculations that are common and unique in the machine trades.

Manufacturing Processes Fabrication 10-606-162 (1 credit)

Examines manufacturing processes, raw materials and their properties before and after processing. The learner will take an in-depth look at the various materials and processes considered "hot-working" manufacturing processes - primarily casting, forging, stamping, powder metal and welding.

Revit Residential for Architectural Design 10-614-127 (2 credits)

Introduces the student to Building Information Modeling (BIM) by using the latest version of AutoDesk's Revit. Revit is a computer modeling program that allows for intelligent, 3D and parametric object-based design. The course introduces the student to the program by the use of tutorials and exercises that start at an introductory level proceeding throughout the semester to create a complete set of residential construction documents.

Robotic Applications 1: Fundamentals of Robotic Control 10-620-154 (1 Credit)

Introduces a basic understanding of a robot system. Topics studied include robot safety, controls and basic programming. The students will learn robotic program development.

Sketchup for Architectural Design 10-614-129 (2 credits)

Explores Trimble's Sketchup as a design and visualization tool. Develops students' skills in creating realistic computer models that can be used to create full color renderings, animations, exported/imported AutoCAD files for construction drawings and Layout as a construction documentation tool.

Solidworks 1 10-606-133 (1 credit)

Introduces the student to basic SolidWorks commands to produce 3-dimentsional parts, assemblies and engineering drawings. The student will master beginner level commands and have a thorough understanding of the basic operation of the software

Solidworks 2 10-606-134 (1 credit)

Introduces the student to intermediate SolidWorks commands to produce 3- dimensional parts, assemblies and engineering drawings. The student will utilize and practice their existing beginner level commands and skills while mastering intermediate level skills with an emphasis on mechanical engineering drafting and design. Upon completion the student will have an opportunity to take the SolidWorks Certified Associate Exam (CSWA) to obtain a highly recognized credential known worldwide. Pre/Corequisite: 10-606-133 SOLIDWORKS 1.

Technical Drafting/CAD 10-606-105 (2 credits)

Introduces basic knowledge and skill development of technical drawing with emphases on freehand sketching and introductory CAD drawing.

Thermal Cutting 10-442-173 (1 credit)

Develops skill in thermal cutting and gouging processes. Students practice manual and machine oxy-fuel cutting, plasma cutting and gouging and air carbon arc gouging.

Weld Inspection & Testing 10-442-163 (1 credit)

Emphasizes measurement of weld defects and assessment of weld quality conformance to common welding codes. Learners conduct etch tests, bend tests and break tests on welds. The process of procedure and welder qualification is explored through group activities.

School of Business & Community Services

Accounting 1 10-101-111 (4 credits)

Introduces accounting concepts and financial statements for sole proprietorships. Students analyze and record routine transactions, adjusting entries, and closing entries. Students prepare the Income Statement, Statement of Owner's Equity, and the Balance Sheet from the financial records they create for service and merchandising businesses. Covers accounting for sales, inventory, cash, and receivables.

Accounting 2 10-101-113 (4 credits)
Expands on the accounting concepts presented in Accounting 1. Introduces the student to fixed assets, intangible assets, current and payroll liabilities, Partnerships, Corporations, bonds, the Statement of Cash Flows, and financial statement analysis. Demonstrate achievement by completion of various projects.

Accounting Fundamentals 10-101-147 (3 Credits) NEW
Examines the basic accounting principles and procedures for those individuals who will work with accounting information, accountants, and in a business related setting. The learner will identify the accounting cycles, prepaid expenses, accruals, merchandise inventory, uncollectible accounts, and depreciation. The course is not intended as an in-depth study of accounting.

Business Law 10-102-160 (3 credits) NEW
Develop an understanding of business organizations, contracts, and sales contracts by reviewing relevant court cases. Emphasizes the importance, meaning, and value of law in everyday lives. Special emphasis is placed on contemporary legal problems that challenge today's society.

Business Proofreading and Editing 10-106-104 (3 credits)
Develop proper use of punctuation, number usage, capitalization, grammar, word choice and spelling to communicate effective writing and proofreading in a business environment. General Windows and MS Word experience strongly suggested.

Computer Fundamentals 1 10-154-100 (3 credits)
Introduces learner to terms, concepts and functions of personal computers. Demonstrate knowledge of proper function and use of computer internal and external components, system configuration, data backup and peripherals. Helps learner prepare for CompTIA's A+ Certification exams.

Computer Fundamentals 2 10-154-102 (3 credits)
Learn advanced PC operating system structure, features and use. Explore in depth hard drive management, file sharing and command line. Helps learner prepare for CompTIA's A+ Certification exams.

Computer Keyboarding 10-106-129 (1 credit)
Applies keyboarding techniques (proper finger usage and body position) through hands-on touch typing on a QWERTY keyboard (alphabet, number and symbol keys). Learners are expected to enter this course with a minimum of 27 wpm. Learners will develop an increased rate of touch-typing at a minimum of 40 words per minute (wpm) and 26 npm (numbers) by the end of the course.

Computer Page Layout 10-204-123 (2 credits)
Introduces learners to the basics of page layout including the use of InDesign in the design and presentation of print collateral. Learners will build skills in Adobe InDesign as they create a variety of basic and intermediate layouts for press, web and digital media.

Data Concepts A 10-152-531 (1 credit)
Pre/Corequisites: 10-152-500 IT DEVELOPMENT AND DESIGN FUNDAMENTALS or 10-154-104 INTRODUCTION TO COMPUTER SUPPORT or Accepted into the Business Analyst Associate Degree program or Data Analysis Specialist certificate.

Data Concepts B 10-152-532 (1 credit)
Pre/Corequisite: 10-152-531 DATA CONCEPTS A.

Data Concepts C 10-152-533 (1 credit)
Pre/Corequisite: 10-152-532 DATA CONCEPTS B.

Digital Photography 10-204-135 (3 credits)
Explores digital photography. The course will cover digital image basics, digital camera features, using digital cameras, photographic techniques, studio photography, basic digital image editing and using and printing digital images.

Desktop Publishing 10-106-188 (3 credits)
Explore foundational concepts of desktop publishing, analyze components of planning a document, apply design techniques, and explore safety, ethical and legal concepts of desktop publishing. Design and create professional-quality documents for personal and business use including flyers, newsletters, brochures, logos, calendars and webpages.

Document Management 10-106-157 (3 credits)
Pre-req.-Business Proofreading & Editing
Prepare and manage specialized business documentation. Students will refine proofreading, business writing and formatting skills (both print and electronic mediums) in industry-specific business documents (medical, legal, insurance, travel, real estate, education, advertising and government) environments.

ECE: Child Development 10-307-179 (3 credits)
This three-credit course examines child development within the context of the early childhood education setting. Course competencies include: analyze social, cultural and economic influences on child development; summarize child development theories; analyze development of children age three through age eight, summarize the methods and designs of child development research, analyze the role of heredity and the environment and examine the role of brain development in early learning (ages three through eight).

ECE: Foundations of ECE 10-307-148 (3 credits)
Introduces the student to the early childhood profession. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, investigate the history of early childhood education, examine regulatory requirements for early childhood education programs in WI, summarize types of early childhood education settings, identify the components of a quality early childhood education program, summarize responsibilities of early childhood education professionals and explore early childhood curriculum models.

ECE: Guiding Child Behavior 10-307-188 (3 credits)
This three-credit course examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; summarize early childhood guidance principles; analyze factors that affect the behavior of children; practice positive guidance strategies; develop guidance strategies to meet individual needs; create a guidance philosophy. This course meets the requirements for the Pyramid Model training.

ECE: Health, Safety & Nutrition 10-307-167 (3 credits)
This three-credit course examines the topics of health, safety and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, follow governmental regulations and professional standards as they apply to health, safety and nutrition, plan a safe early childhood environment, plan a healthy early childhood environment, plan nutritionally sound menus, examine Child Abuse and Neglect (CAN) issues and mandates, apply Sudden Infant Death Syndrome (SIDS) risk reduction strategies and apply strategies to prevent to occurrence of Shaken Baby Syndrome (SBS) and incorporate health, safety and nutrition concepts into the children's curriculum.

ECE: Infant and Toddler 10-307-151 (3 credits)
In this three-credit course, you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives, analyze development of infants and toddlers (conception to three years), correlate prenatal and postnatal conditions with development, summarize child development theories, analyze the role of heredity and the environment, examine culturally and developmentally appropriate environments for infants and toddlers, examine the role of brain development in early learning (conception through age three) and examine caregiving routines as curriculum.

EDU: Child & Adolescent Dev 10-522-106 (3 credits) NEW
Provides an overview of physical, motor, perceptual, cognitive, social/emotional and growth and development birth through adolescence. Analyzes social, parental, cultural, brain, and economic influences on development.

EDU: Introduction to Ed Practices 10-522-103 (3 credits)
Analyzes preK-12 education in the United States, determine roles and responsibilities of school personnel, and explore current trends and best practices. Learners identify how students learn and the foundations of lesson planning. Analyze assessment strategies, classroom management, and techniques for supporting learners.

EDU: Technology in Education 10-522-104 (3 credits)
Develops the knowledge and skills to use trending classroom technologies and gain experience creating and using web tools including portfolios. Learners create presentations for educational environments and identify ISTE Standards.

Essential Skills for the Business Professional 10-196-164 (2 credits)
Explores skills that are essential for business professionals to succeed in a variety of organizational environments. Learners develop skills related to time management, goal setting, delegation, stress management, assertive communication, emotional intelligence, and training and development.

Excel Level 1 10-103-242 (1 credit)
Introduces learners to introductory topics using Microsoft Excel using real-world activities. Learner topics include entering, editing, and formatting entries; selecting cells and ranges, and creating and modifying basic formulas.

Excel Level 2 10-103-247 (1 credit)
Expands the basic Excel skills with advanced formatting features and utilization of functions. Formatting topics include: themes, cells styles, custom page setup and more. Function topics include: date, time, IF criteria, lookup functions, troubleshooting formulas and more

Exploring Hospitality & Recreation Law 10-109-100 (2 Credits) NEW
Introduces new students to the broad spectrum of the leisure services industry. Learners will have the opportunity to explore career options in the hospitality and recreation industries. They will delve into operational perspectives of a variety of organizations.

Hospitality & Recreation 10-109-101 (3 credits) NEW
A preventive approach to the laws and liabilities, as well as responsibilities of owners/operators of hotels, restaurants, travel, and recreational facilities. Reviews precedent-setting court decisions, legal fundamentals, negligence doctrines, civil rights issues and the relationship between providers and the guests/clients.

Introduction to Business 10-102-124 (3 credits)
Introduces students to the evolution of business and entrepreneurship. Students analyze global, ethical and legal environments of business, explore the human side of business and examine the functional approach to information technology, marketing, human resource management, operations management and finance.

Introduction to Graphic Software and Design 10-204-121 (2 credits)
Introduces the concepts and techniques involved in typography and design. Learners explore the principles of design to create layouts that are organized, attract the intended audience and work in producing the intended results. The learners will do this while also learning about various graphic design software programs.

Introduction to Printing 10-204-112 (2 credits)
Explores the basics of printing and the printing industry. Students will learn about the demand for printed products, the printing industry and all steps involved in the printing process. Actual printing projects will be produced by each student.

Intro to Professional Baking (Nutrition) 10-316-107 (2 credits)
Focuses on the six major nutrients (carbohydrates, proteins, fats, minerals, vitamins and water) and how each is used by the body. The planning of well-balanced diets and nutritional analysis of diets are emphasized.

Intro to Professional Cooking (Sanitation for Food Service) 10-316-100 (2 credits)
Development of skills to follow sanitation and hygiene provisions in state codes. Focuses on the challenges to food safety, developing a food safety system, Hazard Analysis Critical Control Point, working in a safe environment and maintaining sanitary facilities and equipment. Certification through the National Restaurant Associate is a requirement for completion and can be used to apply for state certification.

IT Development and Design Fundamentals 10-152-500 (1 credit)
Introduces the field of IT software development and design. Students will explore degree and career paths, IT tools and processes and begin to demonstrate professional communication. Students will create or modify a simple computer program using an integrated development environment.

Keyboarding 2 10-106-129 (1 credit)
Applies keyboarding techniques (proper finger usage and body position) through hands-on touch typing on a QWERTY keyboard (alphabet, number and symbol keys). Students are expected to enter this course with a minimum of 27 wpm. Students will develop an increased rate of touch-typing at a minimum of 40 words per minute (wpm) and 26 npm (numbers) by the end of the course.

Marketing Principles 10-104-172 (3 credits)
Introduces an understanding of basic marketing fundamentals. The student will explore consumer demographics, lifestyles and decision making; evaluate product distribution; promotions and price planning. The student will create a Strategic Marketing Plan combining the components listed and develop a presentation.

Microsoft Word Applications 10-106-142 (2 credits)
Develop intermediate and advanced Microsoft Word features with an emphasis in business writing and formatting techniques based on a business standard style guide. Design, create and modify a variety of business documents.

Photoshop Image Manipulations 10-204-126 (2 credits)
Explores Adobe Photoshop as a tool to create, adjust and manipulate images for print and web. Special attention is given to image manipulation techniques, color/tonal correction, resolution and output issues. Familiarity with Macintosh operating system suggested.

Powerpoint Level 1 10-103-241 (1 credit)
Introduces learners to introductory Microsoft PowerPoint skills including creating a new presentation, adding and formatting slides, navigating a slide show, inserting images and backgrounds, and adding transitions and animations.

Powerpoint Level 2 10-103-248 (1 credit)
Introduces intermediate level of PowerPoint which will expand a learner's skill-set by incorporating SmartArt, charts, and tables into presentations as well as preparing a presentation for final delivery.

Principles of Sales 10-104-154 (3 credits)
Introduces the learner to a blend of fundamentals and new practices to prepare them to build quality partnerships by creating customer value. Today's salespeople need to live by a new set of selling principles. Customers want sales people who are their partners; people who will add value to their business, not just communicate it.

Programming Concepts A 10-152-501 (1 credit)
Pre/Corequisite: 10-152-500 IT DEV & DESIGN FUNDAMENTALS.
Introduces programming concepts and terminology using an object-oriented approach, with a focus on iterative development and testing. This course uses C# .NET, the Unified Modeling Language (UML) and other tools to present concepts from a variety of perspectives. Learners will create UML diagrams and write/debug C# .NET applications that incorporate classes, fields, methods and variables. Additional topics include: utilization of an Integrated Development Environment (IDE), value and reference types, object instantiation/lifetime/scope and mathematical/conditional/logical expressions.

Programming Concepts B 10-152-502 (1 credit)
Reinforces programming concepts and standards, building on the object-oriented approach introduced in 10-152-501 Programming Concepts A, with a focus on iterative development and testing. This course uses C# .NET, the Unified Modeling Language (UML) and other tools to present concepts from a variety of perspectives. Learners will create UML diagrams and write/debug C# .NET applications, applying the object-oriented basics of abstraction and encapsulation. Additional topics include: utilization of a debugger, object multiplicity and constructors. Pre/Corequisite: 10-152-501 PROGRAMMING CONCEPTS A.

Programming Concepts C 10-152-503 (1 credit)
Emphasizes programming concepts and standards, building on the object-oriented approach of 10-152-502 Programming Concepts B, with a focus on iterative development and testing. This course uses C# .NET, the Unified Modeling Language (UML) and other tools to present concepts from a variety of perspectives. Learners will create UML diagrams and write/debug C# .NET applications, applying the object-oriented basics of abstraction, encapsulation, inheritance. Pre/Corequisite: 10-152-502 PROGRAMMING CONCEPTS B..

Quick Books 1 10-101-180 (1 credit)
Introduces basic accounting concepts, set up and management of QuickBooks company files. The learner will navigate through the software by setting up users, entering beginning balances, and creating non-inventory items. Introduces customers and vendors by entering and paying bills, writing checks, creating invoices and sales receipts. Demonstrates achievement by producing reports and graphs.

Quick Books 2 10-101-181 (1 credit)
Expands on the learner's ability to manage bank accounts, correct common mistakes, write-off bad debt, set up and manage balance sheet accounts, apply sales tax, create purchase orders and process sales discounts. The learner will set up and manage inventory items as well as set up employee information and process payroll. Applies the skills in a simulation project.

User Experience Design 10-152-223 (3 credits)
Examines the design, prototyping and evaluation of user interfaces. Students will apply user experience standards in the development of web and software interfaces to provide a quality user experience. Topics include: psychological and interaction principles, requirements analysis, designing for different devices, style guides, usability testing, and visual design principles.

Web Design 1A 10-152-551 (1 credit)
Introduces Hypertext Markup Language (HTML) and Cascading Style Sheet (CSS) coding techniques along with the development of textcontent to communicate clearly, concisely and effectively on the web.Learners will create/modify web pages using HTML tags and style theweb pages with CSS. Additionally, learners will create and edit text
content. For the final course project, learners will begin a personalwebsite portfolio. Additional topics include: copyright considerations,text editors, and browser tools. Prerequisite: 10-152-500 IT DEVELOPMENT & DESIGN FUNDAMENTALS

Web Design 1B 10-152-552 (1 credit)
Introduces Hypertext Markup Language (HTML), Cascading Style Sheet (CSS) coding techniques. Learners will create/modify web pages usingHTML tags and style the web pages with CSS. Additionally, learners will
create and edit text content. For the final course project, learners will create a personal website portfolio. Additional topics include: texteditors, FTP utilities and browser tools. Pre/Corequisite: 10-152-551 WEB DESIGN 1 A.

Web Design 1C 10-152-553 (1 credit)
Introduces Hypertext Markup Language (HTML), Cascading Style Sheet (CSS) coding techniques. Learners will create/modify web pages usingHTML tags and style the web pages with CSS. Additionally, learners willcreate and edit text content. For the final course project, learners willcreate a personal website portfolio. Additional topics include: texteditors, FTP utilities and browser tools. Pre/Corequisite: 10-152-552 WEB DESIGN 1 B.

Word Level 1 10-103-243 (1 credit)
Introduces learners to basic concepts using the Microsoft Word application through hands-on learning activities. Learners develop foundational skills by applying concepts explored to create business letters, brochures, resumes, newsletters and more.

Word Level 2 10-103-246 (1 credit)
Introduces learners to intermediate level skills that build on the basics to expand Word skills as they learn special text effects, mail merging and tools essential to long documents

School of Health Sciences

Medical Terminology 10-501-101 (3 credits)
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

Culture of Healthcare 10-501-104 (2 credits) NEW
Introduces the culture of healthcare for students interested in working in various healthcare settings. Learners examine professionalism, interpersonal and written communication skills, problem-solving skills and patient privacy and confidentiality issues as they relate to healthcare.

Digital Literacy for Healthcare 10-501-107 (2 credits) NEW
Focuses on the use of technology in healthcare. Learners use common business software applications, including word processing, presentation, spreadsheet, and databases. Communication methods using technology are addressed. Learners gain experience with using the electronic health record (EHR). Healthcare EHR security issues, social media use, and digital healthcare resources are examined.

School of Public Safety

Currents Events in Criminal Justice 10-504-173 (3 credits)
Students will explore nine current issues related to law enforcement of today. Students will be given scenarios that speak to those issues and will be expected to research, reflect and eventually respond to those scenarios in a manner that effectively addresses the issues being explored.

School of General Studies

Applied Mathematics 31-804-305 (2 credits)
Review and application of basic arithmetic skills involving whole numbers, fractions and decimals. Introduction and application of percent's, area, volume, ratios and proportions will also be covered. The measurement system, angle, perimeter, square and board feet and formulas for geometric shapes as well as algebra will be taught.

Body, Structure & Function 10-806-110 (3 credits)
Introduces structures and functions of normal human anatomy using a body systems approach. Learners will have the opportunity to demonstrate competency of select course objectives with the online simulated laboratory software. Provides a flexible, online introduction to the concepts of General Anatomy and Physiology.

Calculus 1 10-804-198 (4 credits)
Analyze and graph algebraic expressions, especially conic sections. Develop an intuitive understanding of limits, derivatives and integrals. Apply the derivative and the integral to certain physical problems.

Cents and Sensibility 10-809-101 (1 credit)
Economic Skills is a practical study of consumer problems and consumer choice. This course is designed in an individualized, self-paced format with emphasis on developing the skill of consumer decision-making. Selected topics include: budgeting and family resource management, sources of consumer information, help in solving consumer problems and consumer decision-making in such areas as transportation, insurance, financial institutions, consumer goods and services, housing and credit.

College Algebra with Applications 10-804-195 (3 credits)
This course covers those skills needed for success in Calculus and many application areas on a baccalaureate level. Topics include the real and complex number systems, polynomials, exponents, radicals, solving equations and inequalities (linear and nonlinear), relations and functions, systems of equations and inequalities (linear and nonlinear), matrices, graphing, conic sections, sequences and series, combinatories and the binomial theorem.

Intermediate Algebra with Applications 10-804-118 (4 credits)
This course offers algebra content with applications. Topics include properties of real numbers, order of operations, algebraic solution for linear equations and inequalities, operations with polynomial and rational expressions, operations with rational exponents and radicals, algebra of inverse, logarithmic and exponential functions.

Introduction to Diversity Studies 10-809-172 (3 credits)
Introduces Students to the study of diversity from a local to a global environment using a holistic, interdisciplinary approach. Encourages self-exploration and prepares the student to work in a diverse environment. In addition to an analysis of majority/minority relationships in a multicultural context, the primary topics of race, ethnicity, age, gender, class, sexual orientation, disability and religion are explored

Intro to Psychology 10-809-198 (3 credits)
This introductory course in psychology is a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social and vocational settings.

Introduction to Sociology 10-809-196 (3 credits)
Introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism and the five institutions, including family, government, economics, religion and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization and workplace issues.

Introduction to Statistics 10-804-189 (3 credits)

Students taking Introductory Statistics display data with graphs, describe distributions with numbers, perform correlation and regression analyses and design experiments. They use probability and distributions to make predictions, estimate parameters and test hypotheses. They draw inferences about relationships including ANOVA.

Math with Business Apps 10-804-123 (3 credits)
This course covers real numbers, basic operations, linear equations, proportions with one variable, percent's, simple interest, compound interest, and annuity, apply math concepts to the purchasing/buying process, and apply math concepts to the selling process and basic statistics with business/consumer applications.

Oral Interpersonal Communication 10-801-196 (3 credits)
Focuses upon developing speaking, verbal and nonverbal communication and listening skills through individual presentations, group activities and other projects

Trigonometry with Applications 10-804-196 (3 credits)
Topics include circular functions, graphing of trigonometry functions, identities, equations, trigonometric functions of angles, inverse functions, solutions of triangles complex numbers, DeMoivre's Theorem, polar coordinates and vectors. Prerequisite: 10-804-118 INTERMEDIATE ALGEBRA W/APPS or 10-804-195 COLLEGE ALGEBRA W/APPS.

Written Communication 10-801-195 (3 credits)
Develops writing skills which include prewriting, drafting, revising and editing. A variety of writing assignments are designed to help the student analyze audience and purpose, research and organize ideas and format and design documents based on subject matter and content. Also develops critical reading and thinking skills through the analysis of a variety of written documents.

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