

Updated 11-4-2024				
NWTC Course	Course Description	NWTC and Higher Learning Commission (HLC) Teacher Training Requirements	Required Face to Face Instruction	Career Cluster
Accounting I Credit Value 4 Grade Level 9-12	10-101-110 ACCOUNTING 1 ...accounting principles, financial statements, business transactions, accounting cycles/systems, specialized journals, accounting for cash and receivables for sole proprietorships in service or merchandising businesses.	DPI License 250 Business Education, 281 Business and Office-Voc	60	Finance
Agribusiness Economics Credit Value 3 Grade Level 11-12	10-090-303 AGRIBUSINESS ECONOMICS ...basic knowledge of macro and micro economics will be taught, proficiency in developing basic cash flows, cost benefit analysis, enterprise analysis, budget development, profit loss statements and developing cost of production. Student should be able to develop adequate information for farm manager to analyze business proposals.	DPI License 200 Agriculture	45	Agriculture, Food and Natural Resources
Aquaculture/Aquaponics Credit Value 2 Grade Level 9-12	10-090-115 AQUACULTURE/AQUAPONICS ...investigate hydroponic plant growing and fish farming operations; designs, suitable species, maintenance, costs efficiencies and yields. Plan a system, develop a budget, explore markets, trends, and analyze benefits and obstacles in this business.	DPI License 200 Agriculture, Completion of Train the Trainer prior to teaching.	30	Agriculture, Food and Natural Resources
Automation 1 : Control Logic Credit Value 1 Grade Level 10-12	10-664-100 AUTOMATION 1 - CONTROL LOGIC ...Electric motor control components such as switches, relays, starters, transformers; and safely mount and install motor and motor control components and perform related wiring and troubleshooting of motor control circuits.	DPI License 220 Technical Education or 292 Technical Occ-Mfg, Completion of Train the Trainer prior to teaching.	30	Manufacturing
Automation 2: Motor Control Credit Value 1 Grade Level 10-12	10-664-101 AUTOMATION 2 - MOTOR CONTROL ...Electric motor control components such as sensors, timers and counters.	DPI License 220 Technical Education or 292 Technical Occ-Mfg, Completion of Train the Trainer prior to teaching.	30	Manufacturing
Automotive Service Fundamentals Credit Value 2 Grade Level 11-12	10-602-107 AUTOMOTIVE SERVICE FUNDAMENTALS ...safety and the use of basic hand/power tools in accordance with industry standards. Introduced to the automotive service industry and learn to use both comprehensive and manufacturer's service information to perform basic under-hood and under-car services.	DPI License 220 Technical Education, Completion of Train the Trainer prior to teaching. Prior experience working in an automotive shop is required.	30	Transportation, Distribution, and Logistics
Basic Anatomy Credit Value 3 Grade Level 11-12	10-806-189 BASIC ANATOMY ...examines concepts of anatomy and physiology as they relate to health careers. Learners correlate anatomical and physiological terminology to all body systems.	Science related DPI License and Master's degree in Anatomy & Physiology or a master's degree with at least 18 graduate credits in a combination of the qualifying subfields that provide a foundation in the specific subject matter being taught. If the Master's Degree is in in a related subfield, the transcripts must identify at least 9 graduate credits in Anatomy & Physiology (i.e., the instructional discipline) and another 9 graduate credits in the related discipline.	45	Science, Technology, Engineering and Math
Basic Mechanics Credit Value 1 Grade Level 9-12	10-620-144 BASIC MECHANICS ...Introduction to basic mechanical devices and tools used for assembly, disassembly and adjustment.	licensures will be allowable for Michigan schools.		r each course.

Business Law Credit Value 3 Grade Level 9-12	10-102-150 BUSINESS LAW...common law contracts and sales contracts: formation, interpretation, performance, and discharge; the law of agency; corporations; and introduction to the American legal system: criminal and tort law, and global business issues.	DPI License 250 Business Education or 281 Business and Office-Voc	45	Business, Management and Administration
CAD Intro Credit Value 1 Grade Level 11-12	10-606-116 CAD (COMPUTER AIDED DRAFTING)-INTRODUCTION ...CAD terminology, drawing preliminaries, basic inquiry and setting commands, layer setting and manipulation, basic drawing and display commands, basic edit commands, and plotting, using AutoCAD software.	DPI License 220 Technical Education or 292 Technical Occ-Mfg, Completion of Train the Trainer prior to teaching.	30	Architecture and Construction
Career Planning Credit Value 1 Grade Level 9-12	10-105-101 CAREER PLANNING ...experiential learning introduction. Learn how personal branding allows candidates to			

ECE: Health Safety & Nutrition Course Credit Value 3 Grade Level 11-12	10-307-167 ECE: HEALTH/SAFETY/NUTRITION ...health, safety, and nutrition in early childhood settings. Anti-bias perspectives; governmental regulations and professional standards; safe, healthy, and nutritionally sound early childhood programs; child abuse/neglect mandates; SIDS risk reduction; Shaken Baby Syndrome.	DPI License 210 Family and Consumer Education, WTCS Certification for Early Childhood Education preferred, and completion of NWTC course with "B" grade or better.	45	Education and Training
ECE: Infant & Toddler Development Credit Value 3 Grade Level 11-12	10-307-151 ECE: INFANT/TODDLER DEVELOPMENT ...infant and toddler development in an early childhood education setting. Development of infants/toddlers; prenatal conditions and development; child development theories; heredity and the environment; culturally and developmentally appropriate environments.	DPI License 210 Family and Consumer Education, WTCS Certification for Early Childhood Education preferred, and completion of NWTC course with "B" grade or better.	45	Education and Training
ECE: Social Studies, Art & Muisce Credit Value 3 Grade Level 11-12	10-307-110 ECE: SOCIAL STUDIES, ART & MUSIC ...This 3-credit course will focus on beginning level curriculum development in the specific integrated content areas of social studies, art, music, & movement (SSAMM).	DPI License 210 Family and Consumer Education, WTCS Certification for Early Childhood Education preferred, and completion of NWTC course with "B" grade or better.	45	Education and Training
EDU: Child and Adolescent Development Credit Value 3 Grade Level 9-12	10-522-106 EDU: CHILD & ADOLESCENT DEVELOPMENT ...growth and development birth through adolescence. Acquaints the learner with the fundamental tasks of physical, motor, perceptual, cognitive social/emotional and language development.	DPI License 210 Family and Consumer Education	45	Education and Training
EDU: Intro to Educational Practices Credit Value 3 Grade Level 9-12	10-522-103 EDU: INTRODUCTION TO EDUCATIONAL PRACTICES ...fundamentals of teaching methodologies, history of education, issues in trends, learning styles, instructional cycle, characteristics of diverse classroom, questioning techniques and assessment practices.	DPI License 210 Family and Consumer Education	45	Education and Training
EDU: Technology in Education Credit Value 3 Grade Level 9-12	10-522-104 EDU: TECHNOLOGY IN EDUCATION ...students develop the knowledge and skills to use trending classroom technologies and gain experience creating and using web tools including portfolios. Students create presentations for educational environments and identify ISTE Standards.	DPI License 210 Family and Consumer Education	45	Education and Training
English Composition 1 Credit Value 3 Grade Level 11-12	10-801-136 ENGLISH COMPOSITION 1 ...learners develop knowledge/skills in planning, organizing, writing, editing. Students will also analyze audience/purpose, use elements of research, format documents using standard guidelines, and develop critical reading skills.	Related DPI License and Master's degree in English or master's degree with at least 18 graduate credits in a combination of the qualifying fields that provide a foundation in the specific subject matter being taught.	45	Liberal Arts and Sciences
Floor Framing Systems - requires project Credit Value 3 Grade Level 11-12	10-410-104 FLOOR FRAMING SYSTEMS ...this course teaches all aspects of floor construction and flooring system construction.	DPI License 220 Technical Education,Completion of Train the Trainer prior to teaching., and meeting NWTC FQAS Carpentry instructor qualifications required (contact NWTC Associate Dean, Construction, for details).	90	Architecture and Construction
Fluids 1: Basic Pneumatics Credit Value 1 Grade Level 10-12	10-620-100 FLUIDS 1: BASIC PNEUMATICS ...what fluid power is, differentiate between hydraulics and pneumatics, implement basic pneumatic circuits, utilize schematics, apply Pascal's Law, define properties of fluids, implement airflow control and hydraulics cylinder circuits.	DPI License 220 Technical Education or 292 Technical Occ-Mfg, Completion of Train the Trainer prior to teaching.	30	Manufacturing
Flux Cored Arc Welding 1 Credit Value 1 Grade Level 11-12	31-442-329 FLUX CORED ARC WELDING 1...Course provides the opportunity for the learner to develop the knowledge, skills, process and understanding of surfacing welds in the flat position as well as fillet and groove welds in the flat, horizontal position using gas shielded flux cored arc welding.	DPI License 220 Technical Education or 292 Technical Occ-Mfg, Completion of Train the Trainer prior to teaching.	30	Manufacturing
Gas Metal Arc Welding 1 Credit Value 1 Grade Level 11-12	31-442-348 GAS METAL ARC WELDING ...course provides the opportunity for the learner to develop the knowledge, skills, process and understanding of welding in the flat and horizontal positions, fillet, pipe to plate and groove welds on plain carbon steel.	DPI License 220 Technical Education or 292 Technical Occ-Mfg, Completion of Train the Trainer prior to teaching.	30	Manufacturing
Gas Tungsten Arc Welding 1 Credit Value 1 Grade Level 11-12	31-442-359 GAS TUNGSTEN ARC WELDING 1...Course provides the opportunity for the learner to develop the knowledge, skills, process and understanding of GTAW equipment set-up as well as the basic skills needed to make welds on plain carbon steel. Weld quality will be discussed but this course is only used to understand the basics of the GTAW process.	DPI License 220 Technical Education or 292 Technical Occ-Mfg, Completion of Train the Trainer prior to teaching.	30	Manufacturing
G-Code and Cam Credit Value 2 Grade Level 11-12	31-420-364 G-CODE AND CAM ...learn basic programming with computer-aided manufacturing (CAM) software, along with G-and M-code programming of computer numerically controlled (CNC) milling and turning machines.	DPI License 220 Technical Education or 292 Technical Occ-Mfg, Completion of Train the Trainer prior to teaching.	60	Manufacturing
General Anatomy & Physiology Credit Value 4 Grade Level 11-12	10-806-177 GENERAL ANATOMY & PHYSIOLOGY ...overview of the human anatomy/physiology using a body-systems approach, emphasizing the interrelationships between form/function at the gross and microscopic levels.(Prerequisite: 10-806-134, Chemistry-Basic, OR High School Lab Chemistry with a "C" or better).	Science related DPI License and Master's degree in Anatomy & Physiology or a master's degree with at least 18 graduate credits in a combination of the qualifying subfields that provide a foundation in the specific subject matter being taught. If the Master's Degree is in in a related subfield, the transcripts must identify at least 9 graduate credits in Anatomy & Physiology (i.e., the instructional discipline) and another 9 graduate credits in the related discipline. NWTC course completion with a "B" grade or better.	75	Science, Technology, Engineering and Math
General Chemistry Credit Value 4 Grade Level 10-12	10-806-134 GENERAL CHEMISTRY ...covers chemistry fundamentals. Topics: metric system, problem-solving, periodic relationships, chemical reactions, chemical equilibrium, properties of water; acids, bases, and salts; and gas laws.	Science related DPI License and Master's degree in Chemistry or master's degree with at least 18 graduate credits in a combination of the qualifying fields that provide a foundation in the specific subject matter being taught.	75	Science, Technology, Engineering and Math

General Physics 1	10-806-154 GENERAL PHYSICS I . . . Applications/theory of basic physics principles: problem solving, laboratory investigation, and applications including unit conversion and analysis, vectors, translational and rotational kinematics/dynamics, heat/temperatie, and harmonic motion and waves.	i.e., ry einstrucal
Credit Value 4		
Grade Level 11-12		

Mathematical Reasoning Credit Value 3 Grade Level 11-12	10-804-134 MATHEMATICAL REASONING ...This course provides an alternative pathway to earning credit for a college level liberal arts mathematics course. All college students, regardless of their college major, need to be able to make reasonable decisions about fiscal, environmental, and health issues that require quantitative reasoning skills. An activity based approach is used to explore numerical relationships, graphs, proportional relationships, algebraic reasoning, and problem solving using linear, exponential and other mathematical models. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. This course is not designed for Science, Technology, Engineering, or Math (STEM) students and/or others who require calculus.	DPI License 400 and Master's degree in Mathematics or master's degree with at least 18 graduate credits in a combination of the qualifying fields that provide a foundation in the specific subject matter being taught.	45	Science, Technology, Engineering and Math
Mechanical Design-Exploring Credit Value 1 Grade Level 9-12	10-606-111 MECHANICAL DESIGN EXPLORING ...philosophy/organization/procedure of the Mechanical Design Technology Program, brief overview of the engineering profession by involvement in a design project to illustrate basic concepts/methods of machine design.	DPI License 220 Technical Education.	30	Science, Technology, Engineering and Math
Medical Terminology Credit Value 3 Grade Level 11-12	10-501-101 MEDICAL TERMINOLOGY ...focuses on the component parts of medical terms: Prefixes, suffixes, and root words. 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.	DPI License 605 Biology/Life Science; 210,211,213 or 214 F/CS (with biology and/or anatomy/physiology) - transcript review and completion of NWTC course with a "B" grade or better	45	Health Sciences
MS Excel Intro Credit Value 1 Grade Level 9-12	10-103-131 MS EXCEL INTRO ...creating worksheets, enhancing worksheet appearance, moving data between worksheets and workbooks, using formulas and functions, creating charts and using clip art. Windows experience improves success.	DPI License 250 Business Education, 281 Business and Office-Voc, 275 Basic Business Ed	30	Business, Management and Administration
MS Excel Part 2 Credit Value 1 Grade Level 9-12	10-103-132 MS EXCEL PART 2 ...covers advanced formatting techniques and functions, working with templates, collaborating with multiple Excel users, creating macros, Excel's database features and analysis tools. (Corequisite: 10-103-131, MS Excel Intro)	DPI License 250 Business Education, 281 Business and Office-Voc, 275 Basic Business Ed	30	Business, Management and Administration
MS Outlook Credit Value 1 Grade Level 9-12	10-103-161 MS OUTLOOK ...create and organize E-mail, schedule meetings, create tasks, and manage contacts.	DPI License 250 Business Education, 281 Business and Office-Voc, 275 Basic Business Ed	30	Business, Management and Administration
MS PowerPoint Credit Value 1 Grade Level 9-12	10-103-151 MS POWERPOINT ...presentation skills using: graphics, diagrams, design themes, sounds, animations, slide transitions, and integration with other software. Windows experience improves success. (Corequisite: 10-103-121, MS Word Intro)	DPI License 250 Business Education, 281 Business and Office-Voc, 275 Basic Business Ed	30	Business, Management and Administration
MS Word Intro Credit Value 1 Grade Level 9-12	10-103-121 MS WORD INTRO ... word processing basics including creating, revising, formatting, printing; sections, tabs, multiple-page numbering; manipulating text; creating headers/footers; creating/formatting tables, graphics; and merging documents.	DPI License 250 Business Education, 281 Business and Office-Voc, 275 Basic Business Ed	30	Business, Management and Administration
Nutrition Credit Value 1 Grade Level 9-12	10-316-128 NUTRITION ...focuses on the major nutrients (carbohydrates, proteins, fats, minerals, vitamins and water) in the planning of well-balanced diets and the nutritional analysis of well-balanced diets.	DPI License 210, 211 in F/CS and completion of NWTC Course with a "B" or better.	15	Hospitality & Tourism
Oral/Interpersonal Communications Credit Value 3 Grade Level 10-12	10-801-196 ORAL/INTERPERSONAL COMMUNICATION ...the communication process, perception and self-concept, language, listening, nonverbal communication, interpersonal relationships, communication in groups and public communication; prepare and deliver an oral presentation.	Related DPI License and Master's degree in English/Communications or master's degree with at least 18 graduate credits in a combination of the qualifying fields that provide a foundation in the specific subject matter being taught.	45	Liberal Arts and Sciences
Organic Livestock Practices Credit Value 2 Grade Level 11-12	10-090-120 ORGANIC LIVESTOCK PRACTICES ... How do organic farmers manage livestock successfully? Principles covered include organic health care, strategies for reproduction, feeding, housing, and young stock. Review rules and organic certification standards.	DPI License 200 Agriculture, Completion of Train the Trainer prior to teaching.	30	Agriculture, Food and Natural Resources
Personal Wellness & Fitness Credit Value 3 Grade Level 11-12	10-546-101 PERSONAL WELLNESS & FITNESS ... This course introduces the seven-dimension model of wellness. Learners will apply the seven dimensions of wellness to develop and implement a personal wellness plan.	DPI License 910 Health or 530 Physical Education with a minimum of a bachelor's degree in Wellness, Exercise Science, or Physical Education	60	Education and Training
Photography- Digital Credit Value 3 Grade Level 9-12	10-203-104 PHOTOGRAPHY-DIGITAL ...capturing digital images, exposure, shutter speed, aperture, composition, camera operations, lenses, lighting, camera accessories, types of photography, photo challenges, importing, editing and storing images. Access to a digital camera required.	DPI License 250 Business Education, 285 Marketing Education , 550 Art Education, 220 Technical Education and Adobe Creative Suite Experience.	60	Arts, Audiovisual Technology and Communication
Photoshop Fundamentals Credit Value 3 Grade Level 9-12	10-111-101 PHOTOSHOP FUNDAMENTALS ...perform raster Image Editing. Course content covers functions of Adobe Photoshop. Create image selections, extractions and composite files using Adobe software, and apply common photo adjustments using fundamental design solutions, creating composite images.	DPI License 250 Business Education, 285 Marketing Education , 550 Art Education, 220 Technical Education and Adobe Creative Suite Experience.	60	Arts, Audiovisual Technology and Communication
Principles of Civil Engineering Credit Value 3 Grade Level 11-12	10-607-103 PRINCIPLES OF CIVIL ENGINEERING ...provides fundamentals of Civil Engineering from concept to completion. Civil Engineering ethics, resume and portfolio creation, and Microsoft Word and Excel will also be introduced.	DPI License 220 Technical Education, Completion of Train the Trainer prior to teaching.	60	Science, Technology, Engineering and Math

Principles of Sanitation Credit Value 1 Grade Level 9-12	10-316-118 PRINCIPLES OF SANITATION ...food service sanitation principles of contamination/food borne illness with National Restaurant Association ServSafe Certification upon successful completion.	DPI License 210, 211 in F/CS and completion of NWTC Course with a "B" or better.	15	Hospitality & Tourism
Renewable Energy and Sustainability Credit Value 4 Grade Level 10-12	10-480-101 RENEWABLE ENERGY AND SUSTAINABILITY ...an overview of various renewable energy technologies and sustainable design practices and their current applications. Emphasis will be placed on energy consumption,			