



# LIVONIA CAREER TECHNICAL CENTER

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## 0938/2938 graphic design

This course will teach students basic skills that will prepare students for a career in art and design. Using industry standard software, students learn basic technical skills in Adobe Illustrator, Photoshop, and InDesign. Topics include fundamental principles of design, typography, document design, project management and career exploration in design. This is a project-based course where students produce a digital portfolio and may receive college credit upon completion of the course. Basic computer skills required.

## 0939/2939 digital illustration

*Prerequisite: Graphic Design or instructor permission.* This course teaches the digital fundamentals in layout, design and illustration through a project-based learning approach. Current industry-standard software is used and applied to assess student proficiency and skills. Coursework focuses on enhancing skills in visual literacy, color theory and use of design elements, techniques in digital illustration and advertising. All students will develop a portfolio and will learn about careers in illustration, Advertising, Graphic Design, Animation and Web Design.



## business, management, marketing & technology

### 0920/2920 fashion merchandising 1

This introductory course includes the study of textiles, clothing design, visual merchandising, advertising, and marketing, with a stronger emphasis placed on store promotion, leadership and designers. Real-World applications include a trip to Chicago to visit designer showrooms and post-secondary fashion schools, as well as participation with planning the annual charity fashion show that the class puts together each year. Along with the marketing, design and merchandising taught in the class, students will also learn about the sewing machine and basic sewing techniques to accompany the design portion of the class. This class is a hands-on, project-based class.

### 0921/2921 fashion merchandising 2

*Prerequisite: Successful completion of Fashion Merchandising 1.* This second-year course is a continuation of the study of textiles, clothing design, visual merchandising, advertising, and marketing, with a stronger emphasis placed on leadership, marketing and fashion show planning. This class plans the entire spring charity fashion show. Real-World applications include a trip to Chicago to visit designer showrooms and post-secondary fashion schools, as well as the opportunity to direct the annual charity fashion show that the class puts together each year. Along with the marketing, design and merchandising taught in the class, students will also learn more complex sewing techniques to accompany the design portion of the class. This class is a hands-on, project-based class.

### 0902/2902 management business administration 1

MBA is designed to introduce students to the exciting and challenging world of business. Through the information and activities covered in class, students will increase their preparation be a knowledgeable consumer, a well-prepared employee, and an effective citizen in today's economy. Topics will focus on economic environment, global competition, entrepreneurship, human resources, marketing, accounting, finance, and information systems.

### 0903/2903 management business administration 2

*Prerequisite: Successful completion of MBA 1.* MBA 2 is a continuation of MBA 1 where students create and operate a simulated business to prepare them to work in a real business environment. Students determine the nature of their business, its products and/or services, its management and structure, finances, and engage in daily business operations.

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## engineering, manufacturing & industrial technology

### 0936/2936 automotive technology 1

This is a year-long course designed to prepare students for a career in the automotive technology field. All instructional material meets the ASE Education Foundation standards for Maintenance and Light Repair (MLR). Students will be introduced to all eight NATEF areas with concentrations in safe practices, tools, shop equipment, light repair and maintenance skills.

### 0937/2937 automotive technology 2

*Prerequisite: Successful completion of Automotive Technology 1.* This is a year-long course designed to prepare students for a career in the automotive technology field. All instructional material meets the ASE Education Foundation standards for Maintenance and Light Repair (MLR). This course advances the basic skills learned in Automotive Technology 1 with concentration on brakes, advanced suspension and steering, and advanced HVAC.

### 0946/3946 constructions trades 1

This is a one-year, two-hour block course in which students are introduced to the many different skills involved in construction. This course will involve classroom and laboratory work as well as practical job site experience on construction projects.

### 0914/2914 construction trades 2

*Prerequisite: Successful completion of Construction Trades 1 or instructor permission.* This three-hour block course builds on the foundational skills developed in Construction Trades 1. Students participate in an authentic residential remodeling project every year. Acting as contractors, students will complete various tasks in the construction and remodeling process.

### 0942/2942 engineering design 1

Students will be introduced to drafting and design concepts, including principles of mechanical, civil and bio-mechanical engineering, as well as product and transportation design. Students will create 3D model design projects and take field trips to tour advanced manufacturing facilities. Students will learn how to use AutoCad, SolidWorks and Bio-Mechanical software.

### 0944/2944 engineering design 2

The students will be introduced to Advance Engineering Design concepts of Transportation, Architecture, Bio-Mechanical, Civil and Product Design. Students will produce scale models and sketches of their ideas and concepts. The goal of this class is to learn more design concepts using Revit, Alias, Solid Works, Mimics, AutoCad, Sketchbook designer, Power Draft software. Students will also be trained to use the 3D-Parametric machine for their projects.



## hospitality & tourism

### 0928/2928 hospitality management 1

In this introductory course, students gain practical, hands-on knowledge and skills within a relevant and industry-driven curriculum. This course not only covers the basics of food preparation and food safety, but also crucial food service concepts such as customer relations, cost accounting, controlling food costs, and marketing. Students will participate in the operation of the Patriot Inn restaurant, housed at Franklin High School, which will mimic the same table service skills found in the food service industry.

### 0929/2929 hospitality management 2

*Prerequisite: Successful completion of Hospitality Management 1 or instructor permission.* In this second-year course, students will expand on their food service and marketing skills, while also learning how to prepare menus and create new foods. Instruction is student-driven, as second-year students explore a certain cooking or baking skill.



## law, public safety, corrections & security

### 0934/2934 criminal justice technology

Criminal Justice is a one-year, two-hour instructional program designed for students interested in investigating careers as criminal lawyers, federal agents, police officers, civilian police personnel, firefighters and EMT, corrections officers, or private security. This course will introduce students to various public safety agencies and provide the students with the recommended path to pursue their desired career choice. Students will learn technical and academic standards used in the public safety careers.

**0904/2903 animation and web design 1**

*Prerequisite: Must have a basic knowledge of Windows (i.e. how to create, save and locate files, and create folders.) Basic keyboard and mouse skills: copy/paste, right click/left click.* Students will create, design and produce interactive multi-media products and services. Students will be provided a broad-based foundation for beginning a career in areas such as Animation, Web Design, and Motion Graphics.

**0905/2905 animation and web design 2**

*Prerequisite: Successful completion of Animation, Motion Graphics and Web Design 1.* Students will expand their web authoring/interactive media skills with an increased focus on producing graphics, animations, and applications using HTML5, Cascading Style Sheets, JavaScript, and Web standards. Students will recognize and analyze potential security threats to develop and maintain web applications.

**0911/2911 mobile applications and game development**

*Prerequisite: Must have a basic knowledge of Windows (i.e. how to create, save and locate files, and create folders). Basic keyboard and mouse skills: copy/paste, right click/left click.* This is a project-based course and will cover fundamentals of game design and coding by following a real-world design and engineering process. Students will create socially useful games and applications for mobile devices and the web. The course emphasizes communication, collaboration, creativity and problem solving.

**0906/2906 internet engineering**

This course introduces the architecture, structure, functions, components, and models of the Internet and computer networks. The principles of IP addressing and fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LAN's, perform basic configurations for routers and switches, and implement IP addressing schemes.

**0907/2907 computer repair/computer security**

The curriculum covers the fundamentals of PC technology, networking, and security. Students will learn hands-on technical aspects of the microcomputer, including hardware and software system setup, and troubleshooting with the use of tools, hardware components, as well as hardware and software interfacing. Students will install, configure, upgrade, optimize, and perform preventive maintenance with respect to security using appropriate tools, diagnostic procedures, and troubleshooting techniques.

**career internship and skilled trades internship**

**1857/2857—3 hr ~ career internship program**

**1859/2859—2 hr ~ career internship program**

The Career Intern Program is work-based career exploration experience for high achieving, college-bound seniors. This course is by invitation only. Letters of Invitation to all juniors with a 3.0 or higher GPA are mailed in January.

**1856/2861—2 hr ~ skilled trades intern program**

Students who have vocational goals that cannot be met through existing programs may apply for participation in the Skilled Trades Internship Program. Through non-paid internships, students experience careers by working with personnel in business and industry. At the conclusion of one semester, or a full year's training, the student may be qualified for employment in an entry-level job. This is a full year course.



[www.livoniapublicschools.org/lctc](http://www.livoniapublicschools.org/lctc)

2021—2022

**0930/2930 pre-nursing/pre-medicine**

In this course students will learn and apply the knowledge and skills related to careers in nursing and medicine. It will focus on anatomy and physiology, disease processes, medical terminology, professionalism, infection control and safety, vital signs, CPR and first aid, introduction to medications and administration, laboratory testing, physical assessment, and electrical conduction system of the heart. Students will learn and practice patient care skills, gaining a competitive edge in preparation for college and training in health care fields.

**0933/2933 healthcare foundations**

In this course students will explore the knowledge and skills associated with a variety of health care careers. This will include classroom focus on medical terminology and physiology, safety and professionalism while also allowing for specific hands-on skills training, including CPR and vital signs.

**0941/2941 sports medicine**

In this course students will explore the fields of athletic training and physical therapy. Knowledge and skills will focus on anatomy and physiology, injury prevention, exercise techniques, application of protective equipment, wrapping of body joints and structures and emergency treatment of injuries and rehabilitation.

**0916/2916 advanced medicine**

*Prerequisite: Successful completion of any first-year LCTC health science course and recommendation from medical sciences teacher.* Upon recommendation of the first-year health science teacher, students may return for a second year of advanced medical curriculum. Instruction is student-driven and will be flexible to meet the needs of the individual. Curriculum may include advanced anatomy and physiology with dissection, physical examination and assessment skills, geriatrics, pediatrics, pharmacology, athletic taping and injury rehabilitation, alternative and complementary medicine, mental health issues and pathophysiology. Students will participate in Health Occupations Students of America (HOSA), an organization that promotes academic excellence for health science students. Field trips and hands-on experiences are an essential part of the course.

academics

**0924 leadership & literature (first semester only)**

*Prerequisite: Senior status.* Students will examine leadership issues past and present through managed literature choices. Students will explore their own leadership qualities and enhance their leadership potential by reading, writing, discussing, and interacting with texts and each other. *Note: Students must be enrolled at LCTC in either 1-2 or 5-6 hour block.*

**2925 media literacy (second semester only)**

*Prerequisite: Senior status.* Students will engage in a critical examination of the media in forms such as television, internet, advertising, radio and periodicals to understand how each is constructed. Students will analyze and evaluate message design strategies, the effects of media consumption, information fatigue, and the influences of bias and economic forces. *Note: Students must be enrolled at LCTC in either 1-2 or 5-6 hour block.*

**0926/2926 algebra 2**

*Prerequisite: Junior status. Successful completion of Geometry and credit issued for Algebra 1.* Algebra 2 expands the study of numbers to include complex numbers and includes the study of exponents and radicals; rational expressions; relations and function, primarily quadratic, polynomial, exponential, logarithmic, and trigonometric; and data collection and analysis. *Note: Students must be enrolled at LCTC in either 1-2 or 5-6 hour block.*

**embedded credit**

All LCTC courses earn these additional academic credits:



Senior Math

Visual Performing & Applied Arts

2nd year World Language credit

Health (Health Science classes only)

*In addition to the embedded credits, LCTC also satisfies the Physics/Physical Science graduation requirements.*