

CAREER TECHNICAL EDUCATION

PROGRAM OFFERINGS



SOUTHEAST MACOMB CONSORTIUM
SOUTHWEST MACOMB CONSORTIUM
GOLIGHTLY CAREER & TECHNICAL CENTER

Grosse Pointe High Schools

Important notices:

Grosse Pointe Public Schools Mission Statement

Our Mission statement defines why we are here. It is a present-oriented statement of what we do.

The Grosse Pointe Public Schools, in partnership with students, staff, parents and community, will be at the forefront of education. An evolving curriculum and the highest standards of instruction and learning in every class, every day, will ensure that each student is challenged to fully develop individual abilities, skills and character to succeed in life.

We are committed to creating an environment that cultivates knowledgeable, responsible, and caring citizens who embrace life's possibilities with a passion for continuous learning.

Attention students, parents and counselors, new guidelines require an alignment between the career pathway and the requested vocational program. If the identified career pathway in the students' EDP does not align with the requested vocational program, the student is NOT eligible to enroll in the vocational program. Please be sure EDP's are updated and reflect the students' current interest.

Please note that course numbers are now assigned by category, i.e.) building trades, culinary arts, cosmetology, etc. It is necessary to list the location of the specific program the student is/will be applying for. Counselors, be sure to refer students to the Transition Services Department for the required vocational program applications. Consortium meetings take place in early spring, and at that time we request "slots" for students to attend out-of-district vocational programs.

Program offerings are dependent on enrollment and funding. Operating districts may cancel or add programs between book printings. Please check with your counselor or the transition services coordinator for program confirmation.

NONDISCRIMINATION STATEMENT

The Grosse Pointe Public Schools complies with all Federal laws and regulations of the U.S. Department of Education. It is the policy of Grosse Pointe Public Schools that no person on the basis of race, color, religion, national origin or ancestry, age, gender, marital status, disability, or limited English proficiency shall be discriminated against, exclude from participation in, denied the benefits of, or otherwise be subjected to, discrimination in any program or activity to which it is responsible of for which it receives financial assistance from the U.S. Department of Education. Furthermore, the Grosse Pointe Public Schools will encourage participation by all of the above.

Compiled by the Grosse Pointe Public Schools

Transition Services Department

Updated 2010-2011

Career Technical Education Program Offerings

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* Special dual enrollment program at Macomb Community College. Class size requirement to run.

Introduction

To Students and Parents,

The purpose of this booklet is to answer questions that students, parents, and others may have about the various Career/Technical Education courses offered through the Southeast and Southwest Macomb Technical Consortium and Golightly Career & Technical Center. There are many Career/Technical programs available to you. Courses listed will include the following information: course location, program length, credits earned, grade level offered and a brief course description.

The Vocational programs are open to all 11th and 12th* graders. Some 2 year programs, such as those offered at Golightly, must be started in 11th grade and completed as a senior.

Students can select a career vocational/technical program regardless of where it is located in the Consortium. Academic technical support and transportation services may be available to special education students. General education students must provide their own transportation.

For additional information or for assistance with regard to the content of this booklet, please contact your high school counseling center or the Grosse Pointe Public Schools' Transition Services Department located at Grosse Pointe North High School, 313-432-3298 or 313-432-3301.

We encourage students to take advantage of the tremendous opportunities available to them during their high school years.

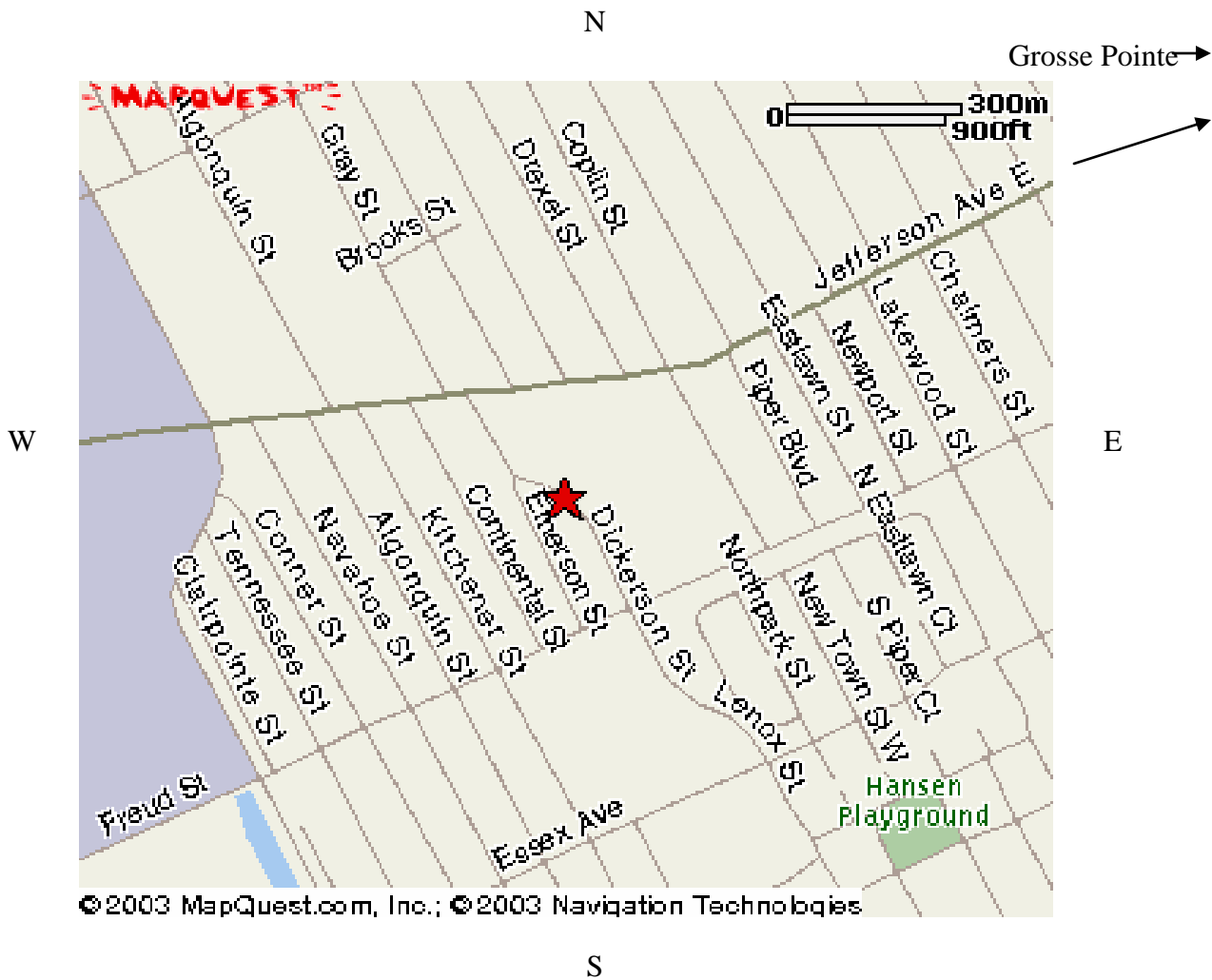
Students interested in applying to a consortium vocational program should contact their counselor or pick up an application from the counseling center or the Transition Services Department. Completed applications are also to be submitted to the student's counselor or the Transition Services Department located at Grosse Pointe North High School.

Enrollment preference is given to students from the resident district first. Grosse Pointe School District students will then be considered for any remaining positions. If a program reaches enrollment capacity, counselors will decide which students will be enrolled. The decision will be based on the following:

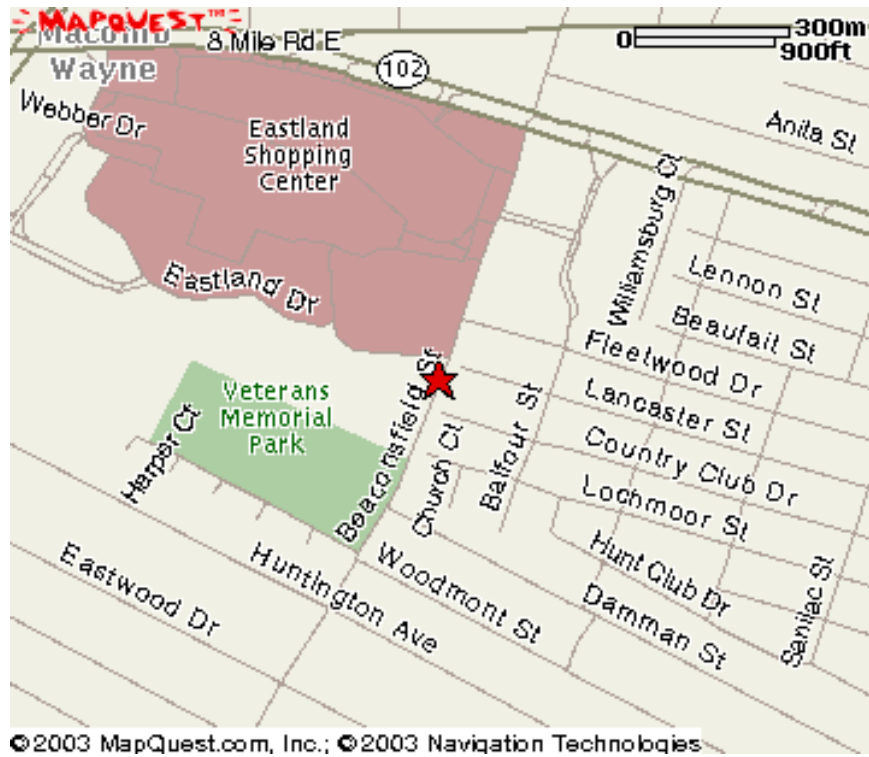
- a) Career/Technical occupational goals
- b) Attendance record
- c) Application Essay
- d) Performance in pre-career technical courses, when applicable
- e) Overall grade-point average
- f) General academic, physical and personal requirements of the occupation being considered

A student's Grosse Pointe high school class schedule may need to be adjusted to accommodate the vocational program hours. Students are expected to follow the vocational school calendar, as well as their high school calendar. This means that if Grosse Pointe schools has a day off, but the vocational school does not, Grosse Pointe students are expected to attend their vocational class. Also, if the vocational school has a day off, but Grosse Pointe does not, students are expected to attend their classes in Grosse Pointe. If you have any questions, please contact us at the numbers listed above.

Golightly Career & Technical Center
900 Dickerson
Detroit, MI 48215
(313) 822-8820



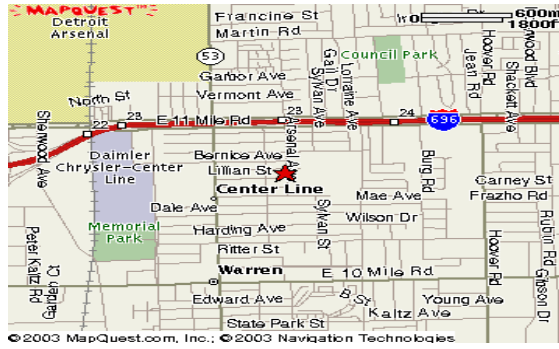
Harper Woods High School
20225 Beaconsfield
Harper Woods, MI 48225
(313) 839-7404



Building Locations

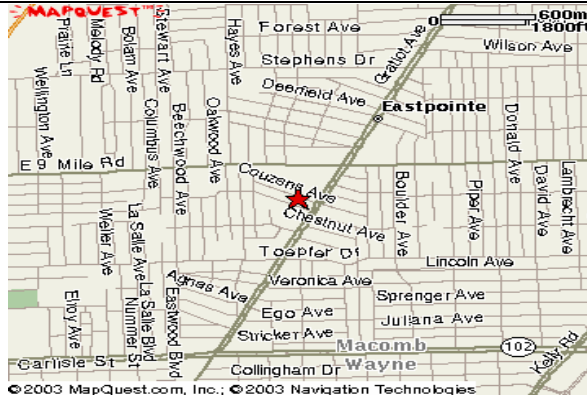


Center Line High School
 26300 Arsenal Avenue
 Center Line, MI 48015
 (586) 757-6660



Located ½ mile south of I-696 and ½ mile east of Van Dyke

East Detroit High School
 15501 Couzens
 East Pointe, MI 48021
 (586) 445-4455



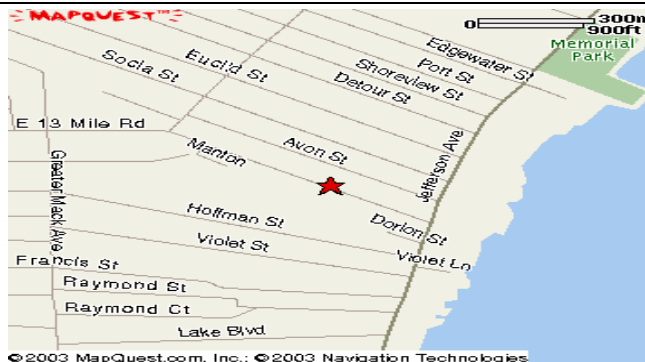
Located south of Nine Mile Road, west of Gratiot

Fitzgerald High School
 23200 Ryan Road
 Warren, MI 48091
 (586) 757-7070



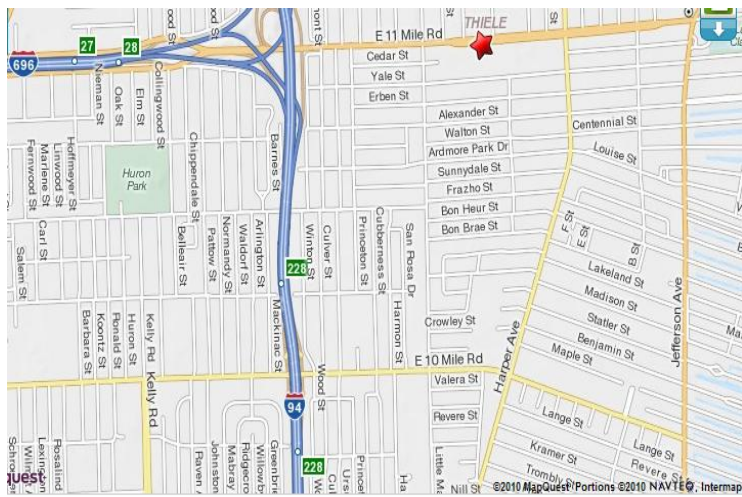
Located north of Nine Mile Road on the east side of Ryan Road

Lake Shore High School
 22980 Thirteen Mile road
 St. Clair Shores, MI 48082
 (586) 296-8240



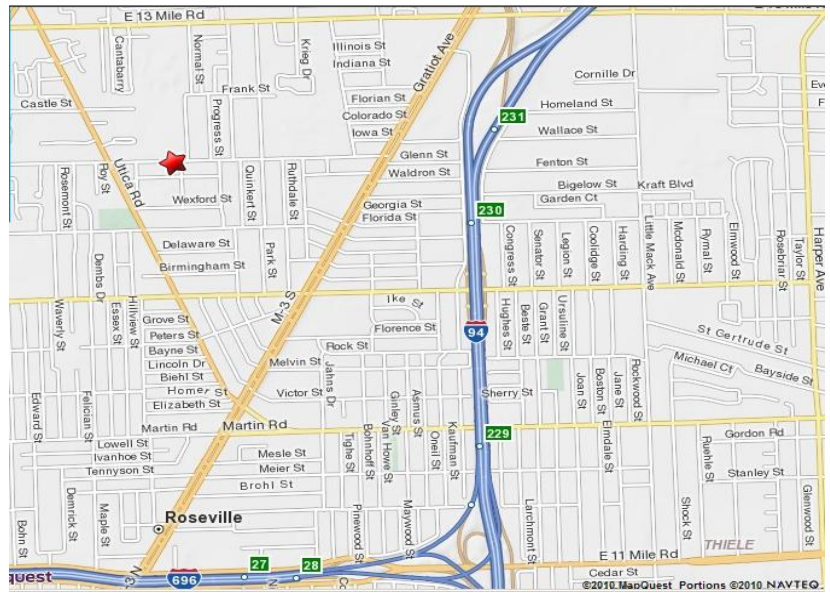
Located on Thirteen Mile Road between Greater Mack and Jefferson

Lakeview High School
 21100 Eleven Mile Road
 St. Clair Shores, MI
 (586) 445-4040



Located on Eleven Mile Road between Little Mack and Harper

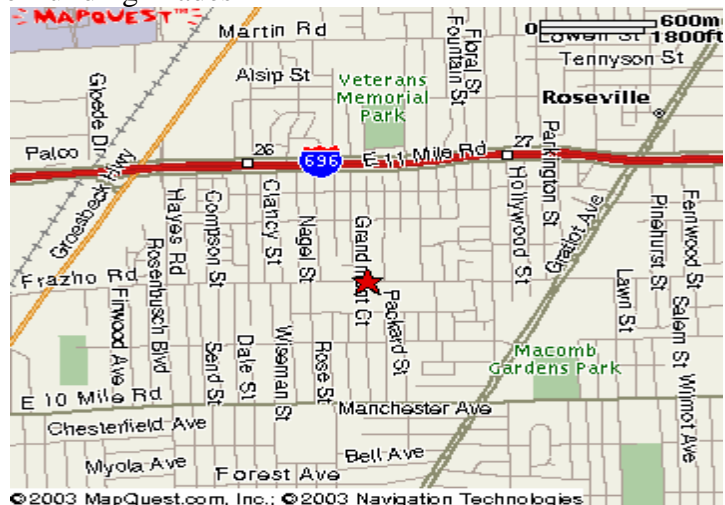
Roseville High School
 17855 Common
 Roseville, MI 48066
 (586) 445-5500



Located between Twelve and Thirteen Mile Roads, east of Utica Rd

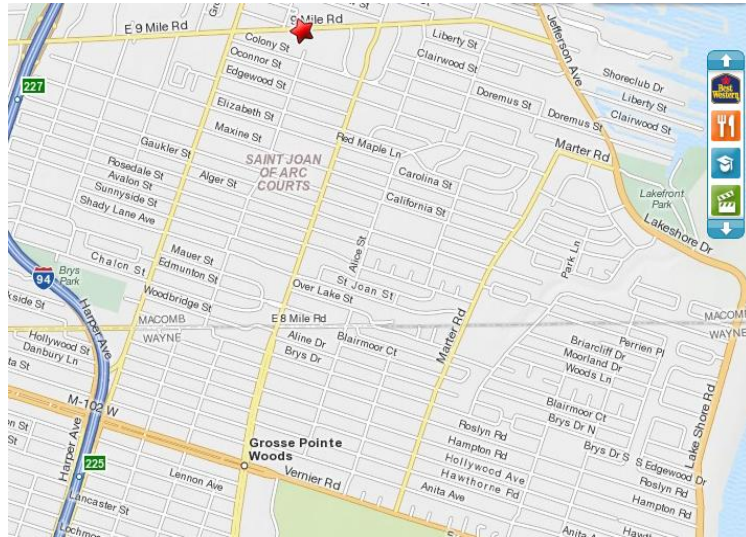
*Building trades meets at Guest Community Center – See map and directions below.

Guest Community Center – Roseville Building Trades
 16221 Frazho Rd
 Roseville, MI 48066-5048



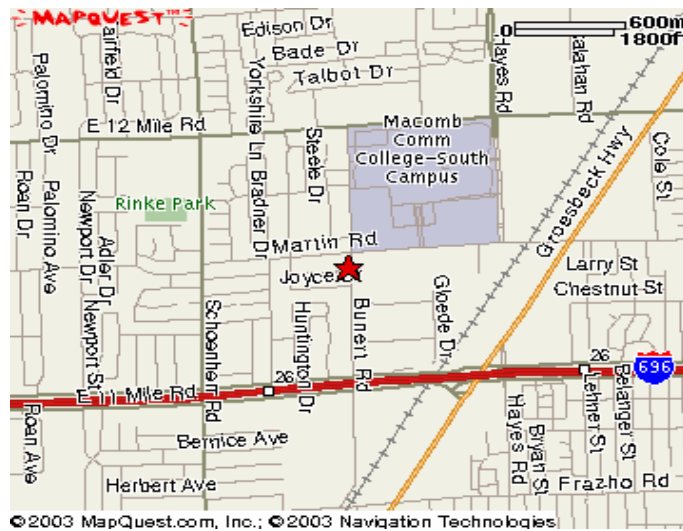
Located on Frazho (10 1/2 Mile) about 1/2 mile west of Gratiot.

South Lake High School
 21900 Nine Mile Road
 St. Clair Shores, MI 48080
 (586) 445-4240



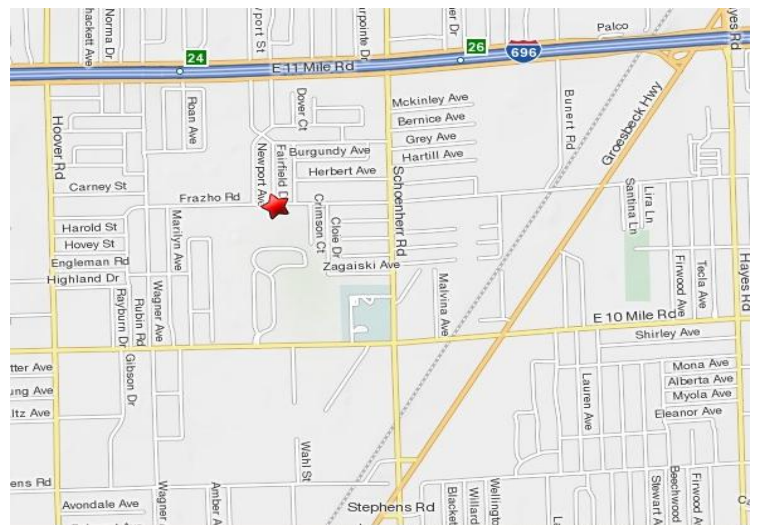
Located on Nine Mile Road between Harper and Greater Mack

Warren Woods Tower High School
 27900 Bunert
 Warren, MI 48093
 (586) 439-4402



Located 1/2 mile south of Twelve Mile Road on Bunert at Martin Road

Warren Woods Education Center
 12900 Frazho
 Warren, MI 48089
 586-439-4472
 Cosmetology, Medical



Located on Frazho (10 1/2 Mile) Just 1/2 mile South of I-696 and 1/3 mile West of Schoenherr Rd

Southeast Macomb – Technical Education Consortium

The following programs are available to students:

PROGRAM	Sponsoring School Districts					
	East Detroit	Harper Woods	Lake Shore	Lake View	South Lake	Rose ville
Accounting and Computing (Non-CTE)	X		X	X		
Auto Body Repair						X
Auto Tech I, II, III	X			X	X	
Building Trades/Construction						X
Cosmetology – Warren Woods 2-5:30 PM class time						
Dental Assisting/Dental Assistant II			X			
Design Studio I & II			X			
Drafting / CAD I, II, Advanced Engineering/Architectural		X		X		X Drafting
Electronics - Basic				X		
Electrical – Vocational I & II				X		
Hospitality Services/Culinary Arts South Lake – *Experience required	X				X*	X
Law Enforcement	X					
Medical Careers I	X		X			
Marketing	X		X		X	
Mfg. Technology/Machine Trades Machine Tool Operations	X					X Machine Shop
Retail Merchandising I & II	X				X	
Sports /Entertainment Marketing		X				
Television Production I & II			X			

For these programs, students must provide their own transportation.

Enrollment space is limited. Please contact your counselor or the Grosse Pointe Public Schools Transition Services Department located at North High School for additional information.

Southwest Macomb – Technical Education Consortium

The following programs are available to students:

PROGRAM	Sponsoring School Districts				
	Center Line	Fitzgerald	Lincoln High Van Dyke	Warren Woods	Warren Edu. Ctr
Accounting & Computer Training	X		X	X	
Automotive Technology		X	X		
Building Construction Technology		X	X		
Cosmetology 2-5:30 Class time				X SMTEC	X decides
Drafting / CAD	X		X		
Emergency Medical Technician *Recommendations required	X				
Foods / Hospitality			X	X	
Health Information Services				X	
Landscape/Floral Design				X	
Law Enforcement *Recommendations required	X				
Manufacturing Technology	X			X	
Medical Office Assistant				X	
Nursing				X	
Pharmacy Tech		X			
3-D Animation	X				
Transportation & Small Engine Technology	X				
Visual Imaging / Graphics	X				

For these programs, students must provide their own transportation.

Enrollment space is limited. Please contact your counselor or the Grosse Pointe Public Schools or Transition Services Department located at North High School for additional information.
Phone: (313-432-3298)

Classes may be added or dropped by the operating district, be sure to inquire about programs of interest and availability.

Detroit Public Schools

Golightly Career & Technical Center
900 Dickerson
Detroit, MI 48215
(313) 822-8820

Trade & Industry

- Agriscience (Horticulture / Floriculture)
- Automotive Body Repair
- Automotive Service Technology
- Engineering Technology
- Computer Aided Drafting
- Law Enforcement
- Mass Communications (Radio & Television)
- Welding & Cutting

Business Services & Technology

- Academy of Finance
- Academy of Travel & Tourism
- Call Center
- Computer Graphics and Publishing Technology (COMPUTEC)
- Academy of Information Technology (AOIT)

Hospitality & Food Services

- Baking and Pastry Arts
- Hospitality and Food Services
- Meat Cutting and Charcuterie

* Golightly requires an overall GPA of 2.0 or better with a good attendance record as part of its admission requirements. All students must follow the Detroit Public Schools dress code.

For these programs, students must provide their own transportation.

Enrollment space is limited. Please contact your counselor or the Grosse Pointe Public Schools Transition Services Department located at North High School for additional information.

BUSINESS MANAGEMENT/MARKETING

Call Center (Customer Service Specialist)
Computerized Graphics and Publishing Technology (COMPUTEC)
Academy of Finance
Academy of Information & Technology
Marketing
Sports & Entertainment Marketing
Retail Merchandising I, II, co-op
Academy of Travel & Tourism

~~Course Title: **Business Management Technology (BMT) I & II** **Not currently offered**~~

~~Location: Lake Shore High School~~

~~Length of Course: 1 year, 2 hour block~~

~~Grade Level: 11, 12 — BMT II Grade 12 only.~~

~~Prerequisites: Knowledge of keyboard and Microsoft Office components, completion of previous business course.~~

~~Topics/Key Points I~~

- ~~● Beginning, intermediate, and advanced concepts of Microsoft Office~~
- ~~● Introduction to concepts of Microsoft Publisher and other business software applications~~
- ~~● Office / career communication skills~~
- ~~● MOS skills (Microsoft Office Specialist)~~

~~Upon completion of the two year program, students will be prepared to take the Microsoft Office Specialist certification exam. Special/advanced projects, job shadowing opportunities, web page development, community workplace partnerships, career development projects, and articulation agreements are available.~~

~~Topics/Key Points II Prerequisites: BMT I~~

- ~~● Beginning, intermediate, and advanced concepts of Microsoft Office~~
- ~~● Introduction to concepts of Microsoft Publisher and other business software applications~~
- ~~● Office / career communication skills~~
- ~~● MOS skills (Microsoft Office Specialists)~~

~~— Selected students may enter a cooperative education placement, job shadowing or job partnerships. Articulation agreement aligned with Baker College.~~

Course Title: **Call Center (Customer Service Specialist)**

Location: Golightly Career & Technical Center

Length of Course: 1 year (2 year program), 2 ½ hour block

Grade Level: 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

Students in the two year Call Center program are trained for entry-level positions as customer service specialists. Computer and basic business skills are retaught the first year. The second year students utilize an Automatic Call Distributor (ACD) to handle incoming calls, learn stress management, conflict resolution and other skills necessary to work in a call center. Students are qualified to work in areas of customer service, telemarketing, help desk, accounts receivable, market research and product support.

Course Title: **Computerized Graphics and Publishing Technology (COMPUTEC)**

Location: Golightly Career & Technical Center

Length of Course: 1 year (2 year program), 2 ½ hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

Students will be exposed to the Macintosh and IBM computer systems during this two year program. The students will become familiar with the computer applications associated with desktop software programs such as, Microsoft Word, Pagemaker, QuarkXpress, Photoshop, Paint and Typestyler. Second year students are exposed to customer services skills in the Computer Customer Service Lab.

Course Title: **Academy of Information Technology**

Location: Golightly Career & Technical Center

Length of Course: 1 year, (2 year program) 2 ½ hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

The demand for high-tech workers has increased rapidly and will continue to grow. This program, sponsored by the National Academy Foundation (NAF), will equip students with skills that will enhance their marketability in today's workplace. It is strongly supported by a business and industry advisory board to ensure student's readiness for the job market. Students will train in the following areas with an emphasis on the development of math, science, and technology skills, coupled with a paid summer internship after the first year: Computer Networking, computer Applications, A + and Microsoft Pre-Certification Training, Database Management, Web Mastering, Digital Media, Computer Information Systems.

Course Title: **Academy of Finance**

Location: Golightly Career & Technical Center

Length of Course: 1 year (2 year program), 2 ½ hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

The Academy of Finance, the first in the Detroit Public School System and in the State of Michigan, provides students with an opportunity to develop a background in economics and the world of finance. The students perform basic office skills, manual and automated accounting functions to keep / prepare financial records of a business; use applied economic principles to make / solve everyday financial business decisions; prepare basic business documents using WordPerfect 6.0, Dbase and Lotus. The Academy of Finance Advisory Board, through their resources, gives students the opportunity to participate in a paid internship before graduation.

Course Title: **Marketing**

Location: South Lake High School, Lake Shore, East Detroit, Harper Woods

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: None.

The classroom hour includes a study of the many areas of marketing such as buying, selling, distribution, advertising, displays, inventory control, organization of a store and personal qualities for success. The laboratory hour includes all the operations necessary to run the school store.

Course Title: **Sports/Entertainment Marketing A and B**

Location: Harper Woods

Length of Course: ½ year, 2 hour block

Grade Level: 11, 12

Prerequisites: Computer Applications 1

Entertainment and Sports Marketing are important parts of our modern economy. Entertainment is one of the largest exports from the U.S. Students will take a journey through the world of marketing and learn how the marketing functions are applied to sports and entertainment in this course. Students will research the latest and greatest in sports and entertainment; including Music; Concert Venues, Television; Movies/ Hollywood, Video Games, Sports: NBA, NFL, Extreme Sports, and more. While exploring careers in entertainment and sports marketing, students will engage in hands-on activities and projects, participate in field trips, and interact in sessions with guest speakers.

Course Title: **Retail Merchandising I**

Location: East Detroit

Length of Course: 1 year, 2 hour block

Grade Level: 11

Prerequisites: None.

Retail Merchandising I is a yearlong class in marketing and retail store operations. Students participate in the operation of the Husky Store for one period and in a classroom setting for one period in preparation for possible retail cooperation training (Co-op in the senior year.)

Course Title: **Retail Merchandising II**

Location: East Detroit

Length of Course: 1 year, 2 hour block

Grade Level: 12

Prerequisites: Retail Merchandising I or Recommendation of instructor

This year long class is a continuation of Retail Merchandising I. It includes various combinations of subject matter and learning experience related to the functions of marketing, salesmanship, merchandising, advertising, and management.

Course Title: **Academy of Travel and Tourism**

Location: Golightly Career & Technical Center

Length of Course: 1 year (2 year program), 2 ½ hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

The Academy of Travel and Tourism Program offers students “a gateway to the travel industry.” The curriculum is complemented in its design by professionals in the industry who have diverse experiences in travel and tourism. This allows students to acquire immense information in the travel industry. The curriculum explores the areas of tour operator, cruise lines and airline careers.

After completion of this two year program, students are able to obtain an entry level career within the travel industry. Students’ skills are enhanced in the areas of customer service, computers, communication and geography. Through partnerships with NAF and local business industry, the program strives to build toward student success.

HUMAN SERVICES

Cosmetology I, II
Early Childhood Education
Law Enforcement

Baking and Pastry
Hospitality/Food Services I, II
Foods / Hospitality I, II, III
Meat Cutting/Charcuterie

Course Title: Law Enforcement

Location: Centerline {East Detroit – Law Enforcement I & II}

Length of Course: 2 year

Grade Level: 11, 12

Prerequisites: Letters of recommendation.

Law enforcement is one of three equally valuable components of the criminal justice system. The other two important parts are represented by the judicial system (courts) and the correctional system (jails and prisons). This course provides an introduction to a career in law enforcement, or possibly in another criminal justice related areas. During the course of the year, students will explore career opportunities in this important and vast system that provides for the public's safety. Students will learn what is required to become a law enforcement officer in the State of Michigan. Students will gain an understanding of criminal law, procedure, interviewing, arrest and investigative techniques. They will learn the history of law enforcement, patrol functions, community policing and various related topics. This class is not a police academy, but an introduction that will give students a realistic look at career options that are reinforced by academics guest speakers, hands-on "training days" and field trips. Partnership with our local law enforcement, courts, and police agencies will support interaction in many areas of the program.

Course Outline Includes:

Due Process	Crime Causation	Criminal Law
Legal Aspects	Corrections	Juvenile Justice
Drugs and crime	CPR/First Aid	Report writing
Investigations	Court Testimony	Patrol car operations
Courts and sentencing	Media relations	Defensive tactics
Arrest procedure	Traffic Stops	Critical Incidents
Homeland Security	Careers in Law Enforcement	Pre-Employment Prep.

Course Title: Law Enforcement I, II, III, IV

Location: Golightly Career & Technical Center

Length of Course: 2 year, 2 ½ hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

Students learn public and private enforcement and services related to protection of life and property which include fire fighting, first aid / CPR and police and security skills.

Course Title: **Early Childhood Education**

Location: Lakeview Public Schools, (Greenwood Elementary)

Length of Course: 1 Year, 2 hour block

Grade Level: 11, 12

Prerequisites: Tuberculin Test, Physical Examination

Approximately one half of the class time is spent observing and working with young children. Students will be trained in giving direct care for groups of children ages 1 ½ through 7 years. They will:

- Study the physical, intellectual, social, and emotional development of children
- Observe and work with young children under the supervision of a child care program director or elementary school teacher
- Plan, prepare, and direct activities suitable for young children
- Develop skills necessary for today's job market

Qualified students will earn their Vocational Certificate for the area of Child Care Services and may be eligible for articulation credits with Macomb Community College and Bake College.

Course Title: **Cosmetology I**

Location: Warren Woods Tower High School or Warren Woods Education Center

Length of Course: 1 year, 2:00 – 5:30 PM (TWO YEAR PROGRAM)

Grade Level: 11

(Seniors considered: but must complete Cosmetology II at own expense after graduation).

Prerequisites: None. Additional requirements of program listed below.

Cosmetology is a State certified program that covers 2 years of comprehensive and involved instruction. The curriculum is set up by the Michigan State Licensing Board of Cosmetology and covers all areas of Cosmetology, theory and skill training. Upon completion of this course of instruction, the student is eligible to take the State Cosmetology examination for licensing (must be 17 years old). Once the student is licensed, they will be able to work in an established salon in the State of Michigan.

The Cosmetology program covers a two-year period and requires the completion of 1500 clock hours of training. During the regular school year, students will attend 3 ½ hours per day, Monday-Friday either the morning session from 6:45-10:30 a.m. or the afternoon session from 11:45-3:15 p.m. (Grosse Pointe students are usually assigned the 6:45 a.m. session based on availability).

Students will be required to spend an additional seven (7) hours a day for twenty (20) days before the school year begins in August and seven (7) hours a day for eight (8) days at the end of the school year in June. This is required in the student's junior and senior year to complete the required 1500 clock hours of training in the two-year program. Days/Times will be determined on a year to year basis according to the Warren Woods Public School Calendar.

Students will learn about:

Professional Image	Hair Loss	Hair Structure	Shampooing
Bacteriology	Decontamination	Hair Disorders	Haircutting
Patron Protection	Scalp Disorders	Draping	Hairstyling
Cosmetology Laws & Rules	Scalp & Hair Treatments	Theory of Color	Manicuring
Clinic Procedures	Semi Permanent Color	Artistic Principles	etc.

Course Title: **Cosmetology II**

Location: Warren Woods Tower High School or Warren Woods Education Center

Grade Level: 12

Prerequisites: Successful completion of Cosmetology I

Length of course: 1 year 2:00-5:30 PM

Cosmetology II is the second year of the two year Cosmetology program.

Students will be required to spend an additional fourteen (14) days before the school year begins and fourteen (14) days at the end of the school year. This is required in the junior and senior year to complete the required 1500 clock hours of training in the two-year program. Days/Times will be determined on a year-to-year basis according to the school year calendar

Students will learn:

Review chapters learned in 1 st year	Fingerwaving	Advance Nail Technique
Pedicuring	Skin & Disorders	Electricity & Light Therapy
Theory of Massage	Chemistry	Facials
Facial Makeup	Wiggery	Chemical Hair Relaxing
The Salon Business	Review for State Board	Theory and Practical Exams

Course Title: **Hospitality Services**

Location: Roseville High School, East Detroit High School, South Lake High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: South Lake – Some experience needed.

This course is designed to acquaint students with the career opportunities in the food service industry. Actual work experience is provided in many facets of the food services industry. Students operate a cafeteria and teachers' dining room at South Lake High School. This "learn by doing" experience covers areas dealing with sanitation, safety, use of commercial equipment, light food production (salads, sandwiches, bake shop) and techniques of food services. Emphasis is placed on the importance of developing good work habits and skills.

Course Title: **Hospitality Services II**

Location: Roseville High School, South Lake High School, East Detroit High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: Hospitality Services I

This is a two hour, two semester course designed to advance the skills of students in commercial food preparation. The student gains an understanding of his/her abilities in relation to various restaurant jobs and knowledge of work and personal qualifications which are required at work stations. Awareness of procedures used in compiling orders, receiving and storing food supplies, planning menus, and costing of foods and expenses are experiences students will receive. Stress is placed on the importance of being dependable and of working efficiently.

Course Title: **Foods / Hospitality**

Location: Lincoln High School, Warren Woods Tower High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: None.

The first year Foods / Hospitality program is structured such that students will examine and gain competence in the common skills and knowledge of the travel, hotel / motel, and food service areas that comprise the hospitality industry. The program is taught at three locations in the school: classroom, commercial foods kitchen laboratory, and the Titan Terrace (Warren Woods Tower High School) or The Abe & I (Lincoln High School) Restaurants.

The objective of the course is for learners to take what they study in the classroom and apply it to both practical experiences and real life situations. The quantity food production component is practiced by running a luncheon restaurant in the Titan Terrace (Warren Woods Tower High School) or The Abe & I (Lincoln High School) and catering various inside and outside of school activities during the year. The travel segment involves planning a one week travel itinerary using the hotel / motel computer simulations and complete the foods / hospitality industry study.

A student successfully completing this class will be ready to go on to the advanced Foods / Hospitality II course and a co-op job placement in their senior year.

Course Title: **Foods / Hospitality II, Advanced**

Location: Lincoln High School, Warren Woods Tower High School

Length of Course: 1 year, 2 hour block

Grade Level: 12

Prerequisites: Foods / Hospitality I.

The Foods / Hospitality II, advanced course will review and build on the skills learned in the beginning course. In addition to learning and practicing more advanced skills in the three areas of this industry, the student will be planning and supervising the running of the food service in the Titan Terrace Restaurant (Warren Woods Tower High School) or The Abe & I Restaurant (Lincoln High School) and the catering operations.

Course Title: **Foods / Hospitality III, Advanced**

Location: Warren Woods Tower High School

Length of Course: 1 year, 2 hour block

Grade Level: 12

Prerequisites: Foods / Hospitality I & II.

The Foods / Hospitality III course will review and build on the skills learned in the beginning courses. In addition to learning and practicing more advanced skills in the three areas of this industry, the student will be planning and supervising the running of the food service in the Titan Terrace Restaurant (Warren Woods Tower High School) and the catering operations.

Course Title: **Hospitality and Food Services**

Location: Golightly Career & Technical Center

Length of Course: 1 year (2 year program), 2 ½ hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

Students gain actual knowledge in the Glass House Restaurant for entry-level positions in waiter / waitress, host / hostess, table bussing, cashier and table-side preparation.

Students prepare soups, sauces, hot hors d'oeuvres and garnishes; learn meat carving and ice sculpting; serve gourmet buffets, daily a la carte / table side cooking and plate presentations.

Course Title: **Meat Cutting & Charcuterie**

Location: Golightly Career & Technical Center

Length of Course: 1 year (2 year program), 2 ½ hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

Students learn to operate commercial equipment, cut / bone meat, prepare and package meat, seafood, and poultry, prepare cold meat trays and handle customer concerns.

Course Title: **Baking and Pastry**

Location: Golightly Career & Technical Center

Length of Course: 1 year (2 year program), 2 ½ hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

Students learn safety and sanitation prepare basic baked goods, breads and pastries, decorate special occasion cakes.

HEALTH SCIENCES

Health Information Services	Allied Health Technology	Emergency Medical Technician
Pre-Medical/Advanced Careers	AHT Unit Coordinator	Pharmacy Tech
Nursing Health Occupations	AHT Skills (nurse assistant)	Dental Assisting I and II

Course Title: **Health Occupations / Allied Health Tech / Medical Careers I** Prerequisites: None

Location: Lake Shore High School, East Detroit (+Advanced)

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Medical Careers is designed for students who will be pursuing a career in the medical field and planning on continuing education after graduation from high school. Core skills include CPR, First Aid, Asepsis, Disinfection, and Sterilization techniques, Vital Signs (blood pressure, pulse, temperature, respiration), Safety, Basic Human Anatomy (as they relate to above topics, not all body systems are covered). Exposure to some job specific skills for Physical Therapy Aide, Medical Assistant, Nursing Assistant, Dental Assistant, and Occupational Therapy Aide are learned. Guest speakers enhance knowledge of other medical professions. This course is also called Allied Health Technologies in other areas.

Course Title: **Allied Health Technology Introduction** Prerequisites: None.

Location: Warren Woods Tower High School

Length of Course: 1 year, 1 hour block

Grade Level: 10, 11, 12

The Allied Health Technology (AHT) Introduction course introduces the student to a variety of medical careers. The student will have a basic understanding of the health care delivery system. The course will utilize speakers from various careers such as: Holistic Health, Governmental Health, Optical, Dental, Radiology and Dialysis. Students will learn basic medical terminology and abbreviations. CPR and First Aid Certification are offered.

Course Title: **AHT Skills (Nurse Assistant)**

Location: Warren Woods High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: Students must have good communication skills, be adaptable to change, and be able to apply problem solving techniques. A good attendance record with responsible and mature conduct is required. The student must like working with people.

Allied Health Technology (AHT) Skills (Nurse Assistant) is a comprehensive study of the medical careers. The program covers all aspects of patient care from newborn to geriatrics. Basic human anatomy and pathophysiology are included. Upon completion of this course, a student of senior status is eligible to take the **Nurse Assistant Certification** examination. At the completion of this program, the student will be ready to assume a full time position. Students will be CPR/First Aid certified.

Course Title: **AHT, Advanced**

Location: Warren Woods Tower High School

Length of Course: 1 year, 1 hour block

Grade Level: 11, 12

Prerequisites: Completion of two (2) semesters of any Allied Health Technology course.

An Allied Health Technology (AHT) Advanced study of terminology. Includes advanced comprehensive study of anatomy and physiology. Students will perform special procedures such as Asepsis, Phlebotomy, CPR/First Aid and EKG. Students can choose to explore one or more careers with a professional mentor. Seniors can be on co-op.

Course Title: **Health Services Co-op**
Location: Warren Woods Tower High School
Length of Course: 1 year, 2 hour block
Grade Level: 12
Prerequisites: Teacher permission.

Students with the desire can elect Health Services Co-op and work in various Allied Health Technology (AHT) areas.

Course Title: **AHT Unit Coordinator / Medical Billing**
Location: Warren Woods Tower High School
Length of Course: 1 year, 1 hour block
Grade Level: 11, 12 (Seniors can choose to be on co-op, but they must take the class for the entire year.)

Prerequisites: Students must possess good communication skills, like working with people, have a good attendance record, and be mature and reliable. Computer / keyboarding skills are a plus. Student must have legible handwriting and good spelling skills.

The Allied Health Technology (AHT) Unit Coordinator / Medical Billing program will prepare the student to be a Hospital Unit Coordinator or to work in medical offices / clinics. Activities will include transcription of physician's orders, receptionist and clerical duties, record keeping, filing, and other office procedures. Students will learn medical technology and abbreviations.

Course Title: **Dental Assisting**
Location: Lake Shore High School
Length of Course: 1 year, 2 hour block
Prerequisites: None.
Grade Level: 11, 12

This course prepares students for employment as a dental assistant. Skills learned will include dental terminology, dental anatomy, instrumentalization, sterilization of instruments, charting oral conditions, and mixing dental materials.

Course Title: **Dental Assistant II**
Location: Lake Shore High School
Length of Course: 1 year, 2 hour block
Grade Level: 12
Prerequisites: Dental Assisting.

Second year students will learn dental receptionist skills, first aid, CPR, dental laboratory skills, and working with stone, wax, and mouth guard material.

This program requires successful completion of Dental Assisting 9040 and instructor approval of this class as **it is not offered each year**. Counselors are advised to take note of this.

Course Title: **Dental Assistant Co-op**
Location: Varies
Length of Course: 1 year, 2 hour block
Grade Level: 12
Prerequisites: Dental Assisting I, II.

This offers work-site experience in a dental office. Approval granted by instructor after successful classroom performance, good attendance, and professional behavior is mandatory.

Course Title: **EMERGENCY MEDICAL SERVICES – A, B, C**
(SMTEC: Center Line High School)
Grade 11, 12

This class is designed for students seriously interested in medicine – specifically emergency medicine. Students enrolled in this program will receive instruction in the fields of pre-hospital and emergency medical training. This program is an intense study of the human body and the treatment required outside the hospital setting. Students will receive intensive hands-on instruction in anatomy and physiology, emergency first aid, bleeding control, shock, cardiac arrest management, airway management, and patient treatment at accident scenes. Classroom study and hands-on practicals will challenge the student both academically and physically. Upon successful completion of the program through written, practical, and clinical performance objectives established by the Michigan Department of Consumer & Industry Services, students (at age 18) will be able to take the EMT-Basic state-licensing exam to become an Emergency Medical Technician (EMT). Students will be required to do clinical training in a hospital emergency room and an ambulance service.

Prerequisite: “B” average in Biology is recommended.

Students must submit an application and be accepted to take the class.

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NATURAL RESOURCES AND AGRISCIENCE

Agriscience I, II, III, IV

Course Title: **Agriscience I, II, III, IV**

Location: Golightly Career & Technical Center

Length of Course: 2 years, 2 ½ hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

Students are introduced to the various fields of ornamental horticulture with an emphasis on plant growth and development; floral designs are created.

Program is offered through Golightly Career & Technical Center and housed at Belle Isle. Transportation is provided by Golightly from Golightly to Belle Isle and back.

Application must be submitted by early Spring, for Fall enrollment.

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ARTS AND COMMUNICATION

Visual Imaging I, II

Mass Media Communications I, II, III, IV (TV and/or Radio Production/Broadcasting)

3-D Animation

Course Title: **Visual Imaging I**

Location: Centerline High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: None.

Suggested co-requirement: Typing and math.

Students will learn the six (6) basic printing processes which include relief, gravure, stencil, planography, photo chemical, and electrostatic printing. Safe operations of all tools and equipment in the graphics industry will be taught. Students will learn to operate the following equipment: offset presses, horizontal camera, paper folder, paper cutter, and 35 mm camera. Students will create business cards, slide shows, a line negative calendar, and a four page brochure. Desktop publishing technology will also be taught.

Course Title: **Visual Imaging II**

Location: Centerline High School

Length of Course: 1 year, 2 hour block

Grade Level: 12

Prerequisites: Passes Visual Imaging I with a "C" average or better.

Suggested co-requirement: Typing and math.

Students will learn the advanced operation of the horizontal camera, offset press, and electronic publishing software. Safe operation of all tools and equipment in the graphics industry will be emphasized. Students will make: two-color business cards, an electronic slide show, halftone negatives, electronic forms generation, and four-color offset printing. Advanced photography techniques will be taught.

Course Title: **Television and Radio Broadcasting I**

Location: Lake Shore High School

Length of Course: 1 year, 1 hour

Grade Level: 11,12

Prerequisites: None

Topics/Key points:

- Script Writing, story boarding, edit shot list
- Styles of video
- Pre-production, production, post-production phases
- Camera operations
- Editing techniques
- Studio productions
- Special effects
- Graphic designs

Students will study and develop techniques and disciplines of television productions, as well as improve communication skills. Students will have the opportunity to produce videos for the school and community. The focus will be on performance, script writing and technical skills as they relate to news broadcasting. Students will investigate research, write and report news stories.

Course Title: **Television and Radio Broadcasting II**

Location: Lake Shore High School

Length of Course: 1 year, 2 hour

Grade Level: 12

Prerequisites: Successful completion of Television and Radio Broadcasting I

Recommendation: B or better in Television and Radio Broadcasting II

Topics/Key points:

- Script Writing, story boarding, edit shot list
- Styles of video
- Pre-production, production, post-production phases
- Camera operations
- Editing techniques
- Studio productions
- Special effects
- Graphic designs

This course is a continuation of Television and Radio Broadcasting I

Course Title: **Mass Media Communications I, II, III, IV**

Location: Golightly Career & Technical Center

Length of Course: 2 years, 2 ½ hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

The Mass Media course is a two year program that offers student hands on experience in television and radio production. Instructional areas include: camera operation, lighting techniques, editing, directing and radio engineering.

Course Title: **3-D Animation**

Location: Center Line High School

Length of Course: 1 year (77 min class)

Grade Level: 11, 12

Prerequisites: None

If you are interested in Hollywood animation, crime scene reconstruction, architectural fly through, developing training videos, and commercials, or you just like to be creative on a computer, this is the course for you. Learn on one of the industry's best computer imaging and animation software. Make drawings and presentations that come to life and communicate your ideas. You will create animation of models using skills learned in this class.

ENGINEERING/MANUFACTURING/TECHNOLOGY

Auto Body I, II, III, IV	Computer Aided Drafting I, II, III, IV
Auto Mechanics I, II, III, IV, V, VI	Drafting CAD I, II, Advanced
Auto Service Tech II, III	Drafting & Design I, II
Advanced Auto Service Tech I, II	Electronics I, II
Automotive Service Tech I, II, III, IV, V	Manufacturing Career & Technology Ed.
Transportation and Small Engine Repair	Manufacturing Technology I, II, Advanced
Biomedical Engineering Technology	Machine Trades
Building Trades/Advanced Building Trades	Welding and Cutting
**Macomb Community College	
** Heating I	and **Fundamentals of Air Cond. and Refrigeration

Course Title: Automotive Tech I

Prerequisites: None.

Location: South Lake High School

Length of Course: 1 year, 2 hour block

Grade Level: 10, 11, 12

This class is an introductory course to the automotive services field. The course content is divided into five major areas of instruction: hand tools, chassis, engines, engine support systems and automotive electrical systems. These areas will be covered by using textbooks, movies, teacher demonstrations, and overhead projections. (Students for the Advanced Vocational Course will be selected from these courses.)

Course Title: Auto Tech II

Prerequisites: None.

Location: South Lake High School, East Detroit High School & Lakeview High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

This class can be for the vocationally-oriented student who is hoping to go into the automotive field or the student who is looking to become less dependent on others and learn how to save money and service his/her own car. This class gives an in-depth look at safety, tools, brakes, fuels and carburetion, ignition systems, tires, wheels, and suspension. This class will provide a time block to give students the needed experience for possible state licensing in some areas. It is presented in a hands-on manner with classroom discussion in related areas.

Course Title: Auto Tech III

Location: Lakeview High School, East Detroit High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: Auto Tech II.

This class is a vocationally-oriented course and begins where the Auto Technology II class ended. It gives an in-depth look at electronic and computerized ignition, air-conditioning fundamentals, clutches, basics of transmission, front end suspension, and engine overhaul. The student will work on all aspects of automotive repair. It is 60% hands-on and 40% classroom discussion. Students will be requested to try state licensing tests in related areas. Students can also use this as an avenue to the cooperative education program where the student works, gets high school credit, and earns money.

Course Title: **Advanced Automotive Technology I**

Location: Roseville High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: Successful completion of Basic Auto Technology and instructor's approval.

This course is designed to train persons interested in becoming an automotive technician. Experience will be gained by completing performance objectives and performing various service repairs on customer cars. Additional experience through on-the-job training, with pay, can be obtained by enrolling in the Applied Technology Co-op Program.

Course A: The first semester covers shop safety and tool usage, automotive brakes and service, tire service and alignment.

Course B: The second semester covers basic electronics, ignition systems, batteries, alternators and starters and related service procedures.

Course Title: **Advanced Automotive Technology II**

Location: Roseville High School

Length of Course: 1 year, 2 hour block

Grade Level: 12

Prerequisites: Successful completion of Advanced Auto Technology I and instructor's approval.

This course is a comprehensive auto service training program designed for the student interested in a career in the automotive service trade. Advanced auto service and repair techniques are taught. Additional experience through on-the-job training, with pay, can be obtained by enrolling in the Applied Technology Co-op Program.

Course A: The first semester covers shop safety, and equipment usage, front end alignment, computer scanners and engine tune-up.

Course B: The second semester covers clutch and transmission service, auto transmissions theory and service, rear and transaxles, as well as air conditioning service.

Course Title: **Automotive Service Technology I**

Location: Fitzgerald High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: None.

Introduction to Automotive Technology: A course designed to introduce the field of Automotive Service Technology. Upon completion of this course, students will demonstrate an understanding of automobile service careers, safety, tools, materials, supplies, and minor services. Employability and communication skills will also be included in this introductory course.

Automotive Brakes: A course designed to introduce the principle operation and servicing of brake systems. Upon completion of this course, students will demonstrate an understanding and service knowledge of disc brakes, drum brakes, hydraulic systems and electrical components relating to ABS brake systems. Special emphasis will be given to safety procedures, specialty tools and equipment used in this service area.

Engine Repair: A course designed to teach the principles and procedures required to completely rebuild an automotive engine. Students will gain practical experience in engine diagnosis, disassembly, inspection techniques, and assembly start-up and adjustment procedures. Special emphasis will be placed on safety procedures, specialty tools, fasteners and equipment used during engine repair.

The above courses are in accordance with the ASE NATEF Certification Standards.

Course Title: Automotive Service Technology II

Prerequisites: None.

Grade Level: 11, 12

Location: Fitzgerald High School

Length of Course: 1 year, 2 hour block

Suspension and Steering: A course designed to teach the operating principles and repair of steering and suspension systems, wheel alignment, and balance. Topics for this course include: wheel alignment, suspension systems, steering systems, specialty tools, equipment and supplies used to service steering and suspension systems.

Manual Transmission and Axles: A course designed to teach the principles and operation of clutch assemblies, propeller shafts, differentials, drive axles, manual transmissions and transfer cases. Students will gain hands-on skills associated with the basic servicing of these manual drive line components. Students will also use specialty tools, equipment and supplies required in this service area.

The above courses are in accordance with the ASE NATEF Certification Standards.

Course Title: Automotive Service Technology III

Prerequisites: None.

Grade Level: 11, 12

Location: Fitzgerald High School

Length of Course: 1 year, 2 hour block

Electrical and Electronic Automotive Systems: A course designed to teach the principles and operation of basic automotive electrical systems. Students will gain practical experience in the diagnosis, repair, and service of electrical circuits. Topics in this course include: electrical test equipment schematics, test procedures, batteries, starters, alternators, ignition systems, lighting, accessory circuits, and electronic test procedures.

Engine Performance: A course designed to teach the operating principles and service procedures of engine tune-up, emission controls and basic drive ability. Students will gain hands-on skills with specialty tools, equipment and supplies used in servicing these systems.

The above courses are in accordance with the ASE NATEF Certification Standards.

*****Students that successfully complete the Automotive Technology program can earn up to six (6) credits through the Macomb Community College Articulation Agreement. Students will have the opportunity to become involved in VICA, Apprenticeship programs, and Co-op programs. See your counselor or Automotive Technology teacher for further details.**

Course Title: Automotive Service Technology IV

Location: Lincoln High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12 **Prerequisites: None.**

Engine Repair: A course designed to teach the principles and procedures required to completely rebuild an automotive engine. Students will gain practical experience in engine diagnosis, disassembly, inspection techniques, assembly, start-up and adjustment procedures. Special emphasis will be placed on safety procedures, specialty tools, fasteners and equipment used during engine repair.

Course Title: **Automotive Service Technology V**

Location: Lincoln High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12 **Prerequisites: None.**

Suspension and Steering: A course designed to teach the operating principles and repair of steering and suspension systems, wheel alignment, and balance. Topics for this course include: wheel alignment, suspension systems, steering systems, specialty tools, equipment and supplies used to service steering and suspension systems.

Automotive Brakes: A course designed to introduce the principle operation and servicing of brake systems. Upon completion of this course, students will demonstrate an understanding and service knowledge of disc brakes, drum brakes, hydraulic systems and electrical components relating to ABS brake systems. Special emphasis will be given to safety procedures, specialty tools and equipment used in this service area.

- Students that complete the course and pass the State of Michigan's licensing exam for these
- areas will be awarded their automotive mechanic's license in Suspension and Steering and/or automotive Brakes.

Course Title: **Automotive Service Technology I, II, III, IV**

Location: Golightly Career & Technical Center

Length of Course: 2 year, 2 ½ hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

Students rotate between four shops over a two year period.

- 1) **Engine Drive Line Diagnosis:** maintain & repair automotive engine & powertrain components.
- 2) **Electrical / Diagnostics / Tune-up:** conduct tests & make diagnosis of engines & components in order to perform specific repairs & adjustments.
- 3) **Brakes / Steering:** learn the construction, operation, maintenance & servicing of brakes and the front-end system.
- 4) **Automotive Service Bay:** practice and refine skills and learn customer service techniques.

Course Title: **Auto Body A, B, C**

Location: Roseville High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Course A: Introduction to painting. This course covers personal and shop safety. Equipment design and purpose. Selection and adjustments and maintenance of equipment including, but not limited to rebuilding high volume low-pressure spray guns. Introduction to surface preparation for painting. Designed for students to gain knowledge of Undercoats (primers, self-etching primers, epoxy primers, primer surfacers, sealers and primer sealers) and Top Coat (Single Stage and Base Coat/Clear coats paints).

Course B: Introduction to metal finishing and fabrication. This course covers personal and shop safety. Students will be using body hammers and body dollies, body files, picks, resistance welder stud guns, and light pulling equipment for repairing single and double wall construction. Steel brake, air hammers, shrinking and stretching equipment, bead rollers and English wheel are used for fabrication of projects.

Course C: Introduction to automotive welding, heating and cutting. This course covers personal and shop safety. Students will learn to set up and adjustment and maintenance of equipment; oxygen acetylene welders (Cutting and Welding), M.I.G./G.M.A.W. (Gas Metal Arc Wire Welder) and Plasma torch. Students will do welding, heating and cutting using the equipment. Heat control and heat monitoring will also be covered in the course.

Course Title: **Auto Body I, II, III, IV**

Location: Golightly Career & Technical Center

Length of Course: 2 year, 2 hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

Students learn basic procedures in sheet metal finishing, welding operations, replacement of component parts, body and frame alignment and refinishing procedures.

Course Title: **Auto Body**

Location: Roseville

Length of Course: 1 year

Grade Level: 11, 12

Course A = Introduction to painting. Personal and shop safety. Equipment design and purpose. Selection and adjustments and maintenance of equipment including, but not limited to rebuilding high volume low-pressure spray guns. Introduction to surface preparation for painting. Designed for students to gain knowledge of Undercoats (primers, self-etching primers, epoxy primers, primer surfaces, sealers and primer sealers) and Top Coat (Single Stage and Base Coat/Clear coats paints).

Course B = Introduction to metal finishing and fabrication. Personal and shop safety. Students will be using body hammers and body dollies, body files, picks, resistance welder study guns, and light pulling equipment for repairing single and double wall construction. Steel brake, air hammers, shrinking and stretching equipment, bead rollers and English wheel are used for fabrication of projects.

Course C = Introduction to automotive welding, heating and cutting. Personal and shop safety. Students will learn to set up, adjust and maintain equipment; oxygen acetylene welders (Cutting and Welding), M.I.G./G.M.A.W. (Gas Metal Arc Wire Welder) and Plasma torch. Students will do welding, heating and cutting using the equipment. Heat control and heat monitoring will also be covered in the course.

Course Title: Biomedical Engineering Technology – Electronics Engineering Technology

Location: Golightly Career & Technical Center

Length of Course: 2 year, 2 ½ hour block

Grade Level: 11, 12 Prerequisites: None.

Learn to maintain medical electronic equipment. Students learn to repair basic medical electronic equipment, principles of Robotics and principles of telecommunications. Students learn to design and build various electronic kits while perfecting such skills as soldering techniques.

Course Title: Building Trades

Location: Roseville High School

Length of Course: 1 year, 2 hour block (2 year program, but may enroll for one).

Grade Level: 11, 12 Prerequisites: None.

Vocational building trades classes are designed to give students on the job experience of many trades through the construction of a house. The students learn all aspects of construction from foundation to the finished house. The trades include masonry, carpentry, electrical, plumbing, drywall, and roofing. The student will work in groups with assigned tools, and through this group, they will learn responsibility and how to work with others.

Course Title: Advanced Building Trades

Location: Roseville High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12 Prerequisites: Building Trades

Building trades classes are designed to give students on the job experiences in many skilled trades through the actual construction of a house. The students should learn all aspects of construction from foundation to the finished house. Trades include masonry, carpentry, electrical, plumbing, drywall, and roofing. Students will work in small groups with assigned tools and through this group they will learn responsibility, cooperation, and how to work with others.

Course Title: Drafting I / CAD

Location: Centerline High School, Lincoln High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: Completion of Drafting I and or Drafting II with a “C” average per semester and drafting teacher’s recommendation.

This course is designed to introduce students to AutoCAD software and expand the student’s understanding of Orthographic Projection. Skill emphasis is placed upon freehand sketching, use of work lines for projection, single and double auxiliary view development, section views dimensioning techniques, ISO symbols, threads & fasteners, basic detailing and introduction to descriptive geometry. Student competitions include: VICA, SME, and MITES. Students are expected to transfer instrument drawings to CAD format.

Course Title: Computer Aided Drafting I, II, III, IV

Location: Golightly Career & Technical Center

Length of Course: 2 year, 2 hour block

Grade Level: 11, 12

Prerequisites: Overall GPA of 2.0 or better with good attendance

Students learn lettering and sketching techniques, create multi-view orthographic drawings, construct auxiliary views, develop sectional views, learn dimensional techniques, perform basic and advanced computer operations, construct 3-D wireframe drawings, render solids-model parts and produce detail and assembly drawings of machine parts. The course includes all required manual drafting skills and computer aided drafting operations.

Course Title: Drafting, CAD I

Location: Harper Woods High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: One year of Drafting Technology.

This is a "hands on" course for individuals who enjoy creating things in their mind and then relating those ideas to paper. Areas of exploration include: basic and advanced design techniques in auto body, architecture, civil, computer aided, tool fixture and die design. The skills that are acquired here can be used to produce drawings that will eventually become blueprints used in industry.

Course Title: Drafting, CAD II

Location: Harper Woods High School

Length of Course: 1 year, 2 hour block

Grade Level: 12

Prerequisites: One year of Drafting, CAD I with a grade of "B" or higher.

This course is a continuation of Drafting, CAD I. It is primarily for the advanced drafting student that has a true and honest desire to continue in the drafting field. Student will explore many advanced drafting and design projects. Remember, "Nothing in the world can be built...until it is first designed."

Course Title: Advanced Drafting Design CAD

Location: Harper Woods High School

Length of Course: 1 year, 2 hour block

Grade Level: 12

Prerequisites: Minimum of one year of Drafting.

This course is for the advanced drafting and design student. Depending on your schedule, it can be either a one or two hour class. Major concentration will be to prepare you to test out of an 11 credit hour college class at Macomb Community College, in the following areas: Detailing, Intro to Auto CAD, Intro to Body Drafting and Descriptive Geometry.

Course Title: CTE T&I Drafting Tech I

Location: Lake Shore High School, Roseville High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: None.

This class meets two hours per day, five days per week and is designed for those students wishing to increase their competency in mechanical or architectural drafting and design and who plan on pursuing a career in engineering, design, or drafting.

For students concentrating in mechanical drafting, the course content will include a study of multiple-view drawings, dimensioning and geometric tolerance practices, auxiliary and section views, threads and fasteners, detail and assembly drawings, and introduction to auto body design and descriptive geometry. Each student will also have considerable exposure to the "AutoCAD" computer assisted drafting program.

Students who concentrate their studies in the architectural area also learn the "AutoCAD" CAD program as well as becoming familiar with the principle of single family and multiple-family residential dwellings. Depending on the student's level of experience, each student will design and draw a complete set of plans for either a single-family or multi-family structure. Satisfies the State of Michigan computer requirement.

Course Title: **CTE T & I Drafting Tech II**

Location: Lake Shore High School, Roseville High School

Length of Course: 1 year, 2 hour block

Grade Level: 12 Prerequisites: None.

CTE Drafting and Design II is a 2-hour block class that meets five days per week and further advances a student's knowledge of the drafting and engineering fields. Each student will have the opportunity to concentrate their studies in either the mechanical or architectural area. For those concentrating in the mechanical area, emphasis will be placed on advanced drafting practices as well as the "AutoCAD" computer aided drafting program, product design and development, and auto body design principles. Students who concentrate their studies in architecture will learn the principles of building design for small commercial structures. Each student will then design and draw a set of plans for such a structure. Architectural students will also have the opportunity to work with the "AutoCAD AEC" computer aided drafting program. Satisfies the State of Michigan computer requirement.

Electronics – See also Biomedical Engineering/Electronic Engineering Technology Page 31

Course Title: **Electronics I, II**

Location: Warren Woods Tower High School

Length of Course: 1 – 2 year(s), 2 hour block

Grade Level: 11, 12

Prerequisites: It is recommended that students have a minimum of one semester of Intro to Electronics. It is also recommended that the students have regular Algebra and Science.

This program is designed to prepare students interested in obtaining at least an Associate Degree in Electronics after graduation from high school. Students will be provided the right mix between theoretical concepts and “hands-on” experience. They will study power supplies, communication devices, amplifiers, digital electronics, microprocessors, and machine language programming.

Course Title: **Manufacturing Careers & Technology Education (CTE)**

Location: Lake Shore High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: None.

The purpose of this course is to provide students with transferable skill and knowledge which would apply to industrial manufacturing. The student will follow a basic training program of study leading to careers in: Die Making, Machine Building, Multiple Spindle Machining, Lathe Operating, Quality Control, Computer Numerical Control Operations, Tool Making, Mold Making, Inspection, Mill Machining, General Machining and Robotics Applications. The competencies taught during the mini apprenticeship program are: Measuring, Lathes, Milling, Grinders, Bench Work, Statistical Process Control Computer Numerical Programming, Shop Math, Blue Print Reading, CAD/CAM (computerized drafting/manufacturing), CNC Mill and Robotics Operations, CNC Lathe (98-99 years start). This course is for the technically minded student who likes hands-on experience to pursue any careers in the manufacturing field. It is expected that a student who completes this mini apprenticeship program will go on to enter an employment situation soon after graduation. During the course a student may be eligible to be placed in a cooperative employment position. This course satisfies State of Michigan first level Machinist, as well as computer requirements.

Course Title: **Manufacturing Technology I**

Location: Centerline High School, Lincoln High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: Student needs a good attitude towards work and good attendance.

Student will receive training in all aspects of metal machine operations and welding. Specific skills will be developed on the milling machine, lathe, drill press, surface and O.D. grinders, shaper, hand tools, and precision machining, followed by hands on training on the CNC lathe and milling machine.

Course Title: **Manufacturing Technology II**

Location: Centerline High School, Lincoln High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: Completion of Manufacturing Technology I, a good attitude towards work and good attendance.

This course is an extension of Manufacturing Technology I. The basic skills of the first course will be refined and more complex projects and problems will be covered. Co-op students may elect to enroll for one hour as a co-op related class.

Course Title: **Advanced Manufacturing Technology**

Location: East Detroit High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: None.

If interested in this course, contact the Work Study Department at Grosse Pointe North High School for additional information.

Course Title: **Machine Trades**

Location: Roseville High School

Length of Course: 1 year, 2 hour block

Grade Level: 11, 12

Prerequisites: None.

This course prepares students to do precision cutting and shaping of metal with machine tools. Course activities include laboratory experience using digital lathes, digital mills, precision grinders, and precision measuring instruments (micrometers, dial indicators, gauge blocks, and vernier gauges). Emphasis is placed on accuracy and planning machine operations. Students will be required to close tolerance while learning more complex setups and machine operations on standard tool room machinery.

Second year and advanced level students will experience manufacturing processes, which include computer-aided drafting and computer-aided manufacturing (CAD/CAM), computer numerical control, and basic robotics.

Course Title: **Welding and Cutting**
Location: Golightly Career and Technical Center
Length of Course: 2 year, 2 hour block
Grade Level: 11, 12
Prerequisites: Overall GPA of 2.0 or better with good attendance.

Students learn procedures of four major hand-held welding and cutting processes: oxyacetylene welding and brazing, shielded metal arc welding and gas tungsten arc welding. Students also learn design, layout, cut and test welds.

Macomb Community College
courses available through the Southeast Consortium

Details are pending at time of publication. We must have a minimum of 15 applicants for consideration. Check with your counselor or a Transition Services Coordinator (313-432-3298) for additional details and information.

ENGINEERING/MANUFACTURING/TECHNOLOGY

Course Title: **CLCT 1200 – Fundamentals of Air Conditioning and Refrigeration**
Location: Macomb Community College – South Campus
Length of Course: 1 Semester, 2 days per week, 2 hours per day
Credits Earned: 2
Grade Level: 11 or 12
Prerequisites: Alignment with Career Pathway

This course prepares students to gain skills and knowledge to repair, install, service and maintain air conditioning and refrigeration systems. It includes the study of cycles, systems, system components, accessories and refrigerants. It includes instruction in diagnostic techniques, the use of testing equipment and the principles of electricity, mechanics and electronics as they relate to the repair and maintenance of these systems.

Course Title: **CLCT 1500 – Heating I**
Location: Macomb Community College – South Campus
Length of Course: 1 Semester, 2 days per week, 2 hours per day
Grade Level: 11 or 12
Prerequisites: Alignment with Career Pathway

In this course, students will learn the fundamentals of warm air heating including function control, service and testing of major components for gas, oil and electric residential and light commercial systems. The principles of mechanics, electricity and electronics will be studied and applied as they relate to installing and servicing heating systems.