Grafton High School

Academic & Career Planning Course Guide

2020-2021
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This Academic and Career Planning Guide is designed to provide students and parents the information needed to plan for student success in high school and prepare for life. As students design their four year plan, they should use this guide as a resource to:

- Explore your interests through your classes. In addition to taking your core curriculum, consider taking additional classes such as those listed in Family & Consumer, Fine Arts, Technology Education and Business Education – to demonstrate a well-balanced academic background.
- Master the basics. Strengthen your reading, writing, math and vocabulary skills for college and scholarship essays, as well as the standardized tests.
- Plan your high school curriculum early. Early planning will ensure you are preparing for college and career requirements.

The initiative should be taken by the student, as the student must shape the direction of his or her life and determine where and how to apply his or her effort and talents. Students need to answer the following questions:

1. Am I working each year to meet graduation requirements?
2. Am I selecting courses consistent with my interests and abilities?
3. Am I anticipating and preparing for a productive future?

Good planning begins with a thorough understanding of personal strengths, aptitudes and goals. It is imperative that all options are reviewed and considered. This resource is designed to be used in conjunction with the Academic and Career Planning opportunities provided by the Grafton High School Counseling Department.

**Course Selection Information**

Once a student requests a course, a series of commitments on the part of the school is made. Courses offered will depend on enrollment requests. A minimum number of students must request a course before the course will be offered. When a course is cancelled, the student may select another course in its place. Course selection, therefore, is extremely important and should be considered as much a commitment on the part of the student as the school.

The array of courses offered at Grafton High School are designed to prepare students with differing interests and abilities for a variety of post high school options.

Some English, Social Studies, Mathematics, or Science courses which meet graduation requirements do not meet academic credit requirements for admission to the University of Wisconsin system and other colleges and universities.

The University of Wisconsin System admission requires 34 “college-preparatory units” including four years of English, three years of Social Studies, three years of Mathematics (algebra and higher), three years of Science, and four years of additional college preparatory electives. All colleges and universities highly recommend four years of core classes: English, Math, Science, and Social Studies. Two years of a World Language may be required at some colleges, but three to four years of a single world language is highly recommended by UW-Madison. All universities view world language as strong college preparation.

There is a general agreement between the universities and high schools regarding acceptable college preparatory credits. However, this may vary between one institution of higher education and another. It is the responsibility of the student to confirm this information with the university/college admissions office.
GRAFTON HIGH SCHOOL GRADUATION REQUIREMENTS

Classes 2021, 2022*

22 Credits Required

- 4 credits of English
- 3 credits of Social Studies
  - Freshman Year
    - American Government (1.0 credit) or AP Human Geography (1.0 credit)
    - Note: Students selecting AP Human Geography are required to take American Government (.5 credit) prior to graduation
  - Sophomore Year
    - United States History or AP US History (1.0 credit)
- 3 credits of Mathematics
- 3 credits of Science
  - Biology (1.0 credit)
- 1.5 credits of Physical Education
- 0.5 credits of Health
- 7 additional credits

Class of 2023

24 Credits Required

- 4 credits of English
- 3 credits of Social Studies
  - American Government or AP Human Geography (1.0 credit)
  - United States History or AP US History (1.0 credit)
  - Note: Students selecting AP Human Geography are required to take American Government (.5 credit) prior to graduation
- 3 credits of Mathematics
- 3 credits of Science
  - Biology (1.0 credit)
- 1.5 credits of Physical Education
- 0.5 credits of Health
- 9 additional credits

Class of 2024

24 Credits Required

- 4 credits of English
- 3 credits of Social Studies
  - Global Studies or AP Human Geography (1.0 credit)
  - United States History or AP US History (1.0 credit)
  - American Government (.5)
- 3 credits of Mathematics
- 3 credits of Science
  - Biology (1.0 credit)
- 1.5 credits of Physical Education
- 0.5 credits of Health
- 9 additional credits

*Financial Literacy Requirement

Starting with the class of 2022 and all classes thereafter will need to meet the district’s financial literacy requirement for graduation. Students will continue to receive department specific credit for these courses and the financial literacy requirement will be recorded for completion by the counseling office. Specific course requirements and descriptions are listed in each subject area within the GHS Career Planning and Course Guide. Students must select one of the following .5 credit courses:

- Personal Finance (Business)
- College Personal Finance (Business)
- AP Macroeconomics (Social Studies)
- AP Microeconomics (Social Studies)
- Independent Living (FACE)
- Civics Exam

Per Wis. Stat. s. 118.33(1m)(a)1. All students are required to pass the WI Civics Exam. Visit the Department of Public Instruction website for more information.
# REFLECTIVE QUESTIONS FOR STUDENTS

Throughout the Academic & Career Planning process, students are encouraged to reflect on four main questions to help develop their ACP.

<table>
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<th>EXPLORE</th>
<th>PLAN</th>
<th>GO</th>
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<tr>
<td><strong>WHO AM I?</strong></td>
<td><strong>WHAT DO I WANT TO DO?</strong></td>
<td><strong>HOW DO I GET THERE?</strong></td>
<td><strong>Students are an active participant in their Academic &amp; Career Planning Process. Students are encouraged to reflect often on their choices and update their plans, sometimes more than yearly. This will include:</strong></td>
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<td>What interests me?</td>
<td>What are the Career Clusters I am most interested in and why?</td>
<td>What schools offer a related degree/major?</td>
<td>Reviewing, adapting, or modifying course selections and personal goals</td>
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<td>• What are my strongest skills?</td>
<td>• What type of degree or certificate do I need to support my goals?</td>
<td>• What will I need to provide a competitive admissions application for the schools/majors I might be interested in? For example:</td>
<td>• Conferencing with counselors and/or parents</td>
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<td>• What academic, career, and/or life skills would I like to develop before I graduate?</td>
<td>• Will this career choice support what I want for my financial future?</td>
<td>o What level of math must I complete?</td>
<td></td>
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<tr>
<td>• What are the Career Clusters I am most interested in and why?</td>
<td>• Which internal and external courses can I take to explore my interests?</td>
<td>o Do I need to complete a portfolio?</td>
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<tr>
<td>• What type of degree or certificate do I need to support my goals?</td>
<td>• What jobs would I like to shadow and when will I do that?</td>
<td>o What ACT scores are required for admissions?</td>
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<td>• Will this career choice support what I want for my financial future?</td>
<td></td>
<td>• In what areas will I pursue more rigorous coursework to support my strengths and/or areas of interest? Will I take AP courses etc.?</td>
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<td>• Which internal and external courses can I take to explore my interests?</td>
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<td>• Will my credits transfer to the school(s) I want to attend?</td>
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<tr>
<td>• What jobs would I like to shadow and when will I do that?</td>
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<td>• How much do I anticipate that my post-secondary education might cost?</td>
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<td>• Will I qualify for Financial Aid and Scholarships?</td>
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<td>• Will I have the dispositions needed to find employment following high school?</td>
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CAREER CLUSTER FRAMEWORK
The Career Cluster framework provides a sequential path for students to take a career interest and develop it into job potential. The 16 broad Career Clusters are broken down into 79 specific pathways. Students will be able to learn about multiple careers within each pathway and choose one program of study available in their school, which will be developed through the process laid out in this manual. The program of study will be tied to community needs, specific partnerships, and a sequence of courses which will provide a channel for students to move seamlessly from high school to postsecondary institution. The program of study becomes a foundation for each students’ individual learning plan, which is a portfolio of student accomplishment in preparation for postsecondary education or the workforce.

CAREER CLUSTERS (see next page) are broad occupational groupings based on a set of common knowledge and skills required for a broad group of careers. Wisconsin has adopted the national 16 career clusters that also serve as a tool for organizing curriculum and instruction. Career clusters provide opportunities for all students regardless of their career goals and interests. They are a tool for a seamless educational system that blends rigorous academic/technical preparation, provides career development, offers options for students to experience all aspects of a business or industry, and facilitates/assists students and educators with ongoing transition.

CAREER PATHWAYS are a sub-grouping of careers used as an organizing tool for curriculum design and instruction. Similar to career clusters, career pathways are grouped based on their requirements for a set of core and similar knowledge and skills for career success. Each pathway highlights a specific part of each cluster. An easy example of this can be seen in the Agriculture, Food and Natural Resource cluster. Seven different pathways, from animal to plant systems highlight the variety of interests that each cluster holds for students.

A PROGRAM OF STUDY is a specific career pathway, defined by a local school/district partnership, which is a sequence of instruction based on recommended standards and knowledge and skills, consisting of coursework, co-curricular activities, worksite learning, service learning and other learning experiences including career and technical student organizations (CTSO). The sequence of instruction provides preparation for a career.

AN ACADEMIC CAREER PLAN (ACP) includes a program of study and learning that represents a fluid, living, breathing, mapped academic plan reflecting a student’s unique set of interests, needs, learning goals, and graduation requirements, it goes beyond the “Four-Year Plan” by recording the student’s connections to the larger community including examples of community service and volunteerism; membership in community organizations; participation in leadership activities outside of school; involvement in job shadowing, mentorships, and/or apprenticeships; and the pursuit of skill development through hobbies, athletics, and fine arts.

Grafton High School/Regional Career Pathways (see next 6 pages)
Pathways Wisconsin is a regional approach to deliver high-quality state-endorsed regional career pathways in the state. Pathways Wisconsin has had tremendous success in bringing key partners together to create regional career pathways.

What are Career Pathways?
Career pathways are a series of connected education, training, and support strategies aimed at helping students achieve their own definition of success. To be considered a Wisconsin Regional Career Pathway completer, a student must participate in 3 of 4 possible career exploration elements below:

ELEMENT 1 -
Complete a Sequence of 3 Pathway Courses
ELEMENT 2 -
Obtain an Industry-Recognized Certification
ELEMENT 3 -
Participate in a Work-Based Learning Experience
ELEMENT 4 -
Participate in a College Credit Opportunity

Nursing Pathway       Advanced Manufacturing Pathway       Construction Pathway
Pathways Wisconsin - Milwaukee
Regional High School Pathway
Grafton School District

High School

Pathway Courses
- Intro to Health Occupations
- AP Biology
- AP Chemistry
- AP Psychology
- PLTW: Biomedical Innovation
- PLTW: Medical Interventions
- PLTW: Human Body Systems
- PLTW: Principles of Biomedical Science
- AP Statistics
- Physics
- AP Physics

Industry-Recognized Certifications
- Certified Nursing Assistant
  (Taken at MATC & coordinated with Ozaukee Youth Apprenticeship)

Work-Based Learning (only show the option(s) you offer)
- Youth Apprenticeship - Health
- Local work-based experience

Postsecondary Options

Entry Level Work
Rehabilitation Centers, Community Based Residential Facilities (CBRF)

Military
- Army 6BC Practical Nursing Specialist (ASVAB Score: 101 ST and 107 GT)
- Air Force BMTCPC 4N051 (5 Skill Level) (ASVAB Score: General 50)

Technical College
Milwaukee Area Technical College (MATC)
- Technical Diploma: Nursing Assistant
- Technical Diploma: Practical Nursing LPN
- Associate Degree: LPN to RN Progression
- Associate Degree: Registered Nurse (ADN)

Gateway Technical College (GTC)
- Technical Diploma: Nursing Assistant
- Associate Degree: LPN to RN Progression
- Associate Degree: Registered Nurse (ADN)

Waukesha County Technical College (WCTC)
- Medication Assistant Course
- Technical Diploma: Nursing Assistant
- Associate Degree: LPN to RN Progression
- Associate Degree: Registered Nurse (ADN)

University
Licensed Practical Nurse
- Herzing University

Bachelor of Science - Nursing
- Alverno College
- Cardinal Stritch University
- Carroll University
- Carthage College
- Concordia University
- Herzing University
- Marquette University
- MSOE University
- UW-Milwaukee
- Wisconsin Lutheran College

Careers Possible

Entry Level
- Home Health Aide
- Personal Care Aide/Resident Aide
- Housekeeper
- Transporter or Orderly
  Regional Median Wage: $22,326-$23,396

Semi-Skilled
- CNA Certificate
  - Certified Nursing Assistant (CNA)
  Regional Median Wage: $25,906-$26,968

Skilled
- LPN Technical Diploma (NCLEX Exam)
  - Licensed Practical Nurse (LPN)
  Regional Median Wage: $44,846-$46,450

Technical
RN (Associate Degree-Nursing) (NCLEX exam)
- Registered Nurse (ADN)
  Regional Median Wage: $65,424-$68,916

Professional
RN (Bachelor of Science-Nursing) (NCLEX exam)
- Registered Nurse (BSN)
  Regional Median Wage: $65,424-$68,916

Graduate
- Certified Registered Nurse Anesthetist
- Nurse Practitioner
- Certified Nurse Midwife
- Clinical Nurse Specialist
- Informatics Nurse Specialist
- Nurse Manager or Leader
- Professor or Nurse Educator
- Nurse Researcher
  Regional Median Wage: $66,430-$173,512

State-Endorsed
College Credit Opportunities
Certified Nursing Assistant
MATC, GTC, WCTC (NR2A-300)
Anatomy & Physiology
MATC, GTC (NATSCI-177)
Carroll University (ANT 130 & 140)
Concordia University (BIO 191)
Herzing University (SC146 & SC246)
Marquette University (BISC 1015)
WI Lutheran College (BIO 225)
Biology
UW-Parkside (BIO 105 & 106)
WI Lutheran College (BIO 202)
Chemistry
Carroll University (CHE 201 & 202)
Herzing University (SC186)
UW-Parkside (CHEM 115 & 215)
WI Lutheran College (CHE 161)
Microbiology
Herzing University (SC166)
Psychology
Carroll University (PSY 221)
WI Lutheran College (PSY 101 & 120)
Statistics
Carroll University (CMP 112)
Herzing University (MA320)
WI Lutheran College (MAT 117)
Dual Enrollment Academies
MATC (LPN), GTC (Nursing Skills)
Advanced Placement (AP) (Score needed)
AP- Biology
Alverno (4), Carthage College (3), Herzing (3),
Mount Mary University (3), WLC (4)
AP- Chemistry
Alverno (3), Carthage College (3), Concordia University (4), Herzing (3), Mount Mary University (3), MSOE University (4), UWM (4), WLC (4)
AP- Psychology
Herzing (3), MSOE University (4), UWM (4), WLC (3)
AP Statistics/ AP Calculus
Concordia University (4), Herzing (3), WLC (3)

Regional Articulation Agreements
RN Collaborative Programs
- Mount Mary University/MATC/WCTC
- Cardinal Stritch/WCTC
- UW- Parkside/UW-Milwaukee
- UW-Milwaukee/MATC
Statewide ADN-BSN Articulation Agreements from all Wisconsin Technical College System Schools to: Alverno, Bryant & Stratton, Cardinal Stritch, Mt. Mary University
Additional ADN-BSN Articulation Agreements:
- MATC to UW-Milwaukee, Carroll University, Herzing University
- WCTC to UW-Milwaukee, Concordia University, Herzing University
- GTC to UW-Milwaukee, Carroll University, Carthage College, Herzing University
RN to BSN Completion Programs:
Alverno College, UW-Milwaukee, Cardinal Stritch University, Columbia College of Nursing, Concordia University, Herzing University, Mount Mary University
Paramedic to LPN or ADN Progression:
Herzing University, WCTC

Regional Industry-Related Career Awareness and Exploration Experiences
- Wisconsin HOSA-Future Health Professionals
- Milwaukee Area Health Education Center
- WCBA’s Many Futures in Health Care Career Expo
- MATC Career Exploration Camp: Healthcare (for educators)
- Center for Healthcare Careers of Southeastern Wisconsin (web resource)
- Medical College of Wisconsin High School Programs
- Medical College of Wisconsin Middle School Program
- Medical College of Wisconsin Summer Enrichment Programs
- Froedtert & the Medical College of Wisconsin High School Experience in the Simulation Center
- Medical College of Wisconsin DRIVE Program
- Marquette University Health Careers Opportunities Program

Summer Exploration Camps
- UW-M College for Kids Medical Camp (gr 6-8)
- UW-M College for Kids Anatomy & Physiology (gr 6-8)
- MSOE Focus on Nursing (HS)
- MSOE Discover the possibilities - Medical Innovations (HS)

Regional businesses that support this Career Pathway [found on Inspire Southeast Wisconsin]
Aurora Health Care
Cedar Community
My Choice Family Care
Froedtert South
Lutheran Home and Harwood Place
Proven Home of Oconomowoc
Seasons Hospice and Palliative Care
Wheaton Franciscan Healthcare
Ascension
Heritage Senior Living
Forbis Management
Oak Ridge Care Center
OccuCare
Racine County
St. Camillus
Children’s Hospital of Wisconsin
Home Helpers of Southeast Wisconsin
Froedtert & the Medical College of Wisconsin
Lakeview Specialty Hospital and Rehab
Easter Seals of Southeast Wisconsin
Society’s Assets
Sunrise Care Center

JULY 2018
CAREERS POSSIBLE
There are many exciting career options in Advanced Manufacturing Technology. Is this the pathway for you? Go to page two to learn how you can get started NOW!

ENTRY LEVEL POSITIONS
- Assembler
- Data Entry
- Laborer
- Material Handler
- Operator
- Packager

CREDENTIALS NEEDED
- Some positions require High School Diploma or GED

Median Salary: $19,400-$28,920

MILITARY POSITIONS
- Communications Equipment Repairers
- Computer Repairers
- Electrical Instrument and Equipment Repairers
- Machinists
- Non-Destructive Testers
- Power Plant Electricians
- Power Plant Operators
- Powerhouse Mechanics
- Precision Instrument and Equipment Repairers
- Preventive Maintenance Analysts
- Radar and Sonar System Repairers
- Survival Equipment Specialists
- Tactical Data System Repairers
- Weapons Maintenance Technicians
- Welders and Metal Workers

SKILLED POSITIONS
- Mechatronics Technician
- CNC Operator
- CNC Programmer
- Chemical Operator
- Chemical Technician
- Electrical/Electronics Drafter
- Electromechanical Industrial Control Technician
- Finishing Technician
- Industrial Electrician
- Industrial Engineering Technician
- Industrial Machinery Mechanic
- Manufacturing Technician
- Mechanical Designer (CAD)
- Mechanical Engineering Technician
- Metrologist
- Millwright
- Network Specialist
- Operation Technologist (OT)
- Product Lifecycle Management (PLM) Analyst

CREDENTIALS NEEDED
- Completion of Industrial Apprenticeship Program, Technical Diploma or Associate Degree
- Click here for college options
- Some positions may also require industry certifications, field training or experience

Median Salary: $35,580-$33,870

PROFESSIONAL POSITIONS
- Engineer
- Advanced Manufacturing Engineer
- Automation/Mechatronics Engineer
- Electrical Engineer
- Electromechanical Engineering Technician
- Industrial Engineer
- Industrial Software Engineer
- Metallurgist/Materials Engineer
- Mechanical Engineer
- Network or Cybersecurity Engineer
- Process Engineer
- Quality/Reliability Engineer

CREDENTIALS NEEDED
- Completion of Associate Degree or Bachelor Degree
- Click here for college options
- Some positions may require an additional Graduate Level Degree

Median Salary: $51,940-$77,080

TOP MANUFACTURING EMPLOYMENT CATEGORIES IN WI
- Computer and Electronic Products
- Consumer Products
- Paper
- Electrical Equipment
- Plastics and Rubber Products
- Fabricated Metal Products
- Printing
- Food and Beverage
- Transportation Equipment
- Machinery
- Wood Products


HIGH DEMAND, HIGH SKILL IN WI, DWD PROJECTIONS 2016-2026

STATE ENDORSED

NEW V1: OCT2019
HIGH SCHOOL OPTIONS

High schools offering a Regional Career Pathway need to include one option from each of the four elements. Students can get a head start in high school by completing 3 of the 4 pathway elements as a Regional Career Pathway.

To see all the POST SECONDARY OPTIONS for this pathway, click HERE.

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**Career Awareness and Exploration Experiences**
- First Robotics
- Ozaukee Co MFG Career Fair
- Wisconsin Manufacturing Month (October)
- Wisconsin SkillsUSA
- Ozaukee County Career Fest
- Ozaukee County Career Cluster Nights
  - STEM

**Pro-College Programs**
(Check the college website for specific programs and events)
- Concordia University - STEAM Camps
- GTC - Explore Gateway, Fab Lab, KIDS Lab, Manufacturing Expo, Middle School Expo, SUMO Bot, Summer Camps
- MATC - Summer Camp: Silly Boys, Manufacturing is for Girls
- Marquette University - Engineering Leadership Academies & Engineering Institutes
- MSOE - Catalyst for Future Success Summer Program, Discover the Possibilities, Engineering Impossible, Explore Summer Programs, FIRST Robotics Immersion Programs, LIME, Focus Summer Programs, STEM Fair with Boy Scouts of America Three Harbors Council, Girl Scout STEM Day, NFPA Fluid Power Challenge
- UW-Milwaukee - EnQuest, FIRST Tech Challenge, Planning for the Future, Saturday Academy
- UW-Parkside - Lego Robotics
- UW-Waukesha - Youth Learning
- WCTC - Machining for Women: Masters of Metal, Electronics and Engineering for Women

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**ELEMENT 1: Sequence of Courses**
- Tech & Engineering 9
- Mechanical Design 1 & 2
- Architectural Design 1 & 2
- Welding Tech 1 & 2
- PLTW Computer Integrated Manufacturing (CIM)

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**ELEMENT 2: State Certified Work-Based Learning Program**
- Youth Apprenticeship (450-900 hrs/1-2 yrs)
  - Manufacturing Production
  - Production Operations Management
  - Maintenance
  - Installation and Repair

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**ELEMENT 3: College Credit Opportunities**
- Technical College Options: Advanced Standing (AS), Start College Now (SCN), Transcripted Credit (TC), Vanguard
- University Options: Early College Credit Program (ECCP)
- Advanced Placement (AP) and International Baccalaureate (IB) Options

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**ELEMENT 4: Industry Recognized Certifications**
- Certified Solidworks Associate
- OSHA 10-General Industry Version

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State-Endorsed

NEW V1: OCT2019
Pathways Wisconsin - Milwaukee Region
Regional High School Pathway
Grafton High School

High School

Pathway Courses
- Technology & Engineering I
- Wood Machine Processes 1
- Wood Machine Processes 2
- Residential Construction I
- Residential Construction II
- Independent Seminar-Cabinetmaking
- Independent Seminar-Construction

Industry Recognized Certifications
- National Center for Construction Education & Research (NCER)*
- Career Connections/Level 3*
- Woodwork Career Alliance: Sawblade*
- North American Technician Excellence (NATE): HVAC Support Technician*
- Multi-Craft Core Curriculum
- Commercial Driver’s License*
- Standard Driver’s License
- OSHA 10 for Construction

Work Experiences
- Youth Apprenticeship - Architecture and Construction
- Wisconsin Cooperative Education
- Skill Standards: Construction
- Employability Skills Certificate
- Local Work-based Learning

College Credit Opportunities
WCTC
- Carpentry 1 (475-316), Carpentry 2 (475-318)

GTC
- Advanced Placement (AP) (Score Needed)

AP - Chemistry
- MSOE (4), Marquette (3), UWM (4)

AP - Calculus BC
- MSOE (4), Marquette (3), UWM (3)

AP - Statistics
- MSOE (4)

AP - Physics C
- MSOE (4, one year calculus), Marquette (4), UWM (4)

Dual Enrollment Academies
- WCTC (Building Construction Trades)

Postsecondary Options

Entry Level Work
Many entry level positions are available in both residential and commercial settings.

Military
- Army options
- Coast Guard options
- Navy options
- Air Force HVAC
- Air Force Construction

Registered Apprenticeship: Construction
- Bricklayer
- Carpenter
- Cement Mason
- Construction Craft Laborer
- Electrician (Construction) (Residential)
- Environmental Service Technician/ HVAC
- Installer-Technician
- Glazier
- Heat and Frost Insulator
- Ironworker
- Laborer (Construction Craft Laborer)
- Operating Engineer/Heavy Equipment Operator
- Painter and Decorator
- Plasterer
- Plumber
- Roofer & Waterproofer
- Sheet Metal Worker
- Sprinklerfitter
- Steamfitter (Construction) (Refrigeration/Service)
- Taper & Finisher
- Tile Setter

From: https://dwd.wisconsin.gov/apprenticeship/construction_trades.htm

Technical College

Milwaukee Area Technical College (MATC)
- Certification: Boiler Operator
- Technical Diplomas: Plumbing, Appliance, Technician, Carpenter, Bricklaying, Electricity, Architectural Woodworking/Cabinetmaking, Power Engineering and Boiler Operator, Refrigeration, Air Conditioning and Heating Service Technician
- Associate Degree: Air Conditioning and Refrigeration Technology

Waukesha County Technical College (WCTC)
- Certification: Refrigeration Service
- Technical Diplomas: Building Trades-Carpentry, Refrigeration, Air Conditioning and Heating Service Technician

Gateway Technical College (GTC)
- Technical Diploma: Building Trades-Carpentry
- Associate Degree: Air Conditioning, Heating, and Refrigeration Technology

University - see back

Careers Possible

Entry Level
- Pre-Apprentice or General Laborer
- Credential: None
- Median Wages: $27,788 - $37,731

Semi-Skilled
- Registered Apprentice
- Credential: Acceptance into an Registered Apprenticeship Program
- Median Wages: $28,329 - $42,536

Skilled
- Journeyworker/Master
- Credential: Completion of Apprenticeship Program
- Median Wages: $60,257 - $90,521

Technical
- Crew Leader or Foreman
- Other titles: Project Manager
- Credential: Associate Degree and in the field training or experience
- Median Wages: $66,289 - $99,569

Professional
- Construction Manager or Superintendent
- Other titles: Safety Director, Construction Engineer, Mechanical Engineer, Chief Executive Officer
- Credential: Bachelor Degree and in the field training or experience
- Median Wages: $80,780 - $103,826

Salary Information based on 2018 Milwaukee Wage Rates-Building Trades
Detailed Wage Chart

State-Endorsed
# Pathways Wisconsin - Region
## Regional High School Pathway

### School Districts that offer this Pathway

<table>
<thead>
<tr>
<th>2018-2019</th>
<th>2019-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown Deer</td>
<td>Germantown</td>
</tr>
<tr>
<td>Grafton</td>
<td>Kettle Moraine</td>
</tr>
<tr>
<td>Franklin</td>
<td>Nicolet</td>
</tr>
<tr>
<td>Hamilton</td>
<td>Northern Ozaukee</td>
</tr>
<tr>
<td>Kenosha Unified</td>
<td>Pewaukee</td>
</tr>
<tr>
<td>Menomonee Falls</td>
<td>South Milwaukee</td>
</tr>
<tr>
<td>Muskego Norway</td>
<td>Wauwatosa</td>
</tr>
<tr>
<td>New Berlin</td>
<td>Waukesha</td>
</tr>
<tr>
<td>Oak Creek</td>
<td></td>
</tr>
<tr>
<td>Racine Unified</td>
<td></td>
</tr>
<tr>
<td>St. Francis</td>
<td></td>
</tr>
</tbody>
</table>

### Regional Industry-Related Career Awareness and Exploration Experiences
- Wisconsin SkillsUSA
- Building2Learn
- WRTP-Big Step Youth Programs
- WCBA Schools2Skills Tours and MADE Career Pathways Expo
- Plumbing Mechanical Sheet Metal Youth Apprenticeship
- Building Advantage Career Fair
- Metropolitan Builders Association: Building Trades Career Day

**Summer Exploration Programs:**
- MSOE Future Builders
- MSOE Focus on the Possibilities: Construction Management (HS)
- MSOE Discover on the Possibilities: Build and Design (HS)

**Learn More:**
- [https://buildyourcareerwi.org/](https://buildyourcareerwi.org/)
- [https://www.choosebigger.com/wisconsin/](https://www.choosebigger.com/wisconsin/)
- [http://www.buildingadvantage.org/tradesrecruitment/](http://www.buildingadvantage.org/tradesrecruitment/)

### University
- **Regional Programs**
  - MSOE
    - Construction Management
    - Mechanical Engineering and Electrical Engineering
  - Marquette University
    - Construction Engineering
    - Mechanical Engineering
  - UW-Milwaukee
    - Mechanical Engineering and Electrical Engineering
  - UW-Parkside (Consortial Program with UWM)
    - Engineering
  - UW-Madison
    - Construction Engineering and Management
  - UW-Platteville
    - Building Construction Management
    - Building Construction Safety Management
  - UW-Stout
    - Construction
  - UW-Whitewater
    - Occupational Safety - Construction Safety

### Regional Bridge Programs Articulation Agreements
- **Veterans in Piping (Military Bridge Program)**
- **Technical Studies Bridge Programs (Apprenticeship to Associate Degree)**
  - MATC: Associate Degree: Technical Studies - Apprentice
  - WCTC: Associate Degree: Technical Studies - Journeyworker

### Regional businesses that support this Career Pathway (found on Inspire Southeast Wisconsin)

- Abacus Architects, Inc.
- AMI Construction Services, Inc.
- Aries Industries
- BSI
- Building Advantage
- CC&N
- CG Schmidt
- Drexel Building Supply
- Faith Technologies
- First Call Heating & Cooling, Inc
- Hunzinger Construction
- Human Capital Development Corp.
- J.H. F indorff & Son Inc
- Joe Wilde Company LLC
- J P Cullen
- Kurk Concrete, Inc.
- Lakeview Construction
- Milwaukee Plumbing & Piping
- Miron Construction Co., Inc.
- Northstar Landscape
- Peiper Electric
- Scherrer Construction Co., Inc.
- Southport Heating, Plumbing & Geothermal
- Square One Heating and Cooling
- Tim O'Brien Homes, Inc.
- Stevens Construction Corporation
- Walbec Group
- Western Building Products
- Wolf Paving
- Zuern Building Products
<table>
<thead>
<tr>
<th><strong>THE 16 CAREER CLUSTERS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agriculture, Food &amp; Natural Resources</strong></td>
</tr>
<tr>
<td>The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.</td>
</tr>
<tr>
<td><strong>Architecture &amp; Construction</strong></td>
</tr>
<tr>
<td>Careers in designing, planning, managing, building and maintaining the built environment.</td>
</tr>
<tr>
<td><strong>Arts, A/V Technology &amp; Communications</strong></td>
</tr>
<tr>
<td>Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.</td>
</tr>
<tr>
<td><strong>Business Management &amp; Administration</strong></td>
</tr>
<tr>
<td>Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy.</td>
</tr>
<tr>
<td><strong>Education &amp; Training</strong></td>
</tr>
<tr>
<td>Planning, managing and providing education and training services, and related learning support services.</td>
</tr>
<tr>
<td><strong>Finance</strong></td>
</tr>
<tr>
<td>Planning, services for financial and investment planning, banking, insurance, and business financial management.</td>
</tr>
<tr>
<td><strong>Government &amp; Public Administration</strong></td>
</tr>
<tr>
<td>Executing governmental functions to include Governance; National Security; Foreign Service; Planning; Revenue and Taxation; Regulation; and Management and Administration at the local, state, and federal levels.</td>
</tr>
<tr>
<td><strong>Health Science</strong></td>
</tr>
<tr>
<td>Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.</td>
</tr>
<tr>
<td>Hospitality &amp; Tourism</td>
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<td>-----------------------</td>
</tr>
<tr>
<td>Human Services</td>
</tr>
<tr>
<td>Manufacturing</td>
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<tr>
<td>Law, Public Safety, Corrections &amp; Security</td>
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<tr>
<td>Marketing, Sales &amp; Service</td>
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<tr>
<td>Science &amp; Mathematics</td>
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<tr>
<td>Transportation, Distribution &amp; Logistics</td>
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Click [here](#) for additional information on Career Pathways
<table>
<thead>
<tr>
<th>Subject</th>
<th>Grafton HS</th>
<th>Minimum College Prep</th>
<th>University of WI System</th>
<th>Selective Universities</th>
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<tbody>
<tr>
<td>English</td>
<td>4 credits</td>
<td>4 credits</td>
<td>4 credits</td>
<td>4 + credits including honors and/or AP</td>
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<tr>
<td>Mathematics</td>
<td>3 credits</td>
<td>3 credits (at least Algebra, Geometry, Advanced Algebra)</td>
<td>3 credits (at least Algebra, Geometry, Advanced Algebra)</td>
<td>4 credits (including honors and/or AP)</td>
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<tr>
<td>Science</td>
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<td>3 credits</td>
<td>3 credits</td>
<td>4 credits (including honors and/or AP)</td>
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<tr>
<td>Social Studies</td>
<td>3 credits</td>
<td>3 credits</td>
<td>3 credits</td>
<td>4 credits (including honors and/or AP)</td>
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<tr>
<td>World Language</td>
<td>Not required</td>
<td>0-2 credits</td>
<td>2 credits at UW Madison (min)</td>
<td>3-4 credits including AP</td>
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<tr>
<td>Computers</td>
<td>Not required</td>
<td>Computer proficiency recommended</td>
<td>Will count toward academic preparation</td>
<td>Computer proficiency recommended</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>Not required</td>
<td>Recommended</td>
<td>Will count toward academic preparation</td>
<td>1 or more credits recommended</td>
</tr>
<tr>
<td>Physical Education</td>
<td>1.5 credits</td>
<td>Not required</td>
<td>Not required</td>
<td>Not required</td>
</tr>
<tr>
<td>Health</td>
<td>0.5 credit</td>
<td>Not required</td>
<td>Not required</td>
<td>Not required</td>
</tr>
<tr>
<td>Electives</td>
<td>7 credits (2020, 2021, 2022)</td>
<td>Academic electives</td>
<td>4 academic electives from above areas</td>
<td>Academic electives recommended</td>
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<tr>
<td></td>
<td>9 credits (2023 and beyond)</td>
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<td></td>
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</tr>
<tr>
<td>Total</td>
<td>22 credits (2021, 2022), 24 credits (2023 and beyond)</td>
<td>16-17 academic credits</td>
<td>17 or more academic credits</td>
<td>23 academic credits (average)</td>
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### 9th Grade

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<tr>
<td>Required:</td>
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<tr>
<td>Literature/Composition 9</td>
<td>1</td>
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<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>Literature/Composition 9 Honors</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics:_______________</td>
<td>1</td>
</tr>
<tr>
<td>Biology</td>
<td>1</td>
</tr>
<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>Biology Honors</td>
<td>1</td>
</tr>
<tr>
<td>Global Studies</td>
<td>1</td>
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<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>AP Human Geography</td>
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</tr>
<tr>
<td>Physical Education 9</td>
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<tr>
<td>Health</td>
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#### Career Exploratory Electives:

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<tr>
<th>Course</th>
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### 10th Grade

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<tbody>
<tr>
<td>Required:</td>
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<tr>
<td>American Lit/Comp 10</td>
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<tr>
<td>or</td>
<td></td>
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<tr>
<td>American Lit/Comp 10 Honors</td>
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<tr>
<td>Mathematics:_______________</td>
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</tr>
<tr>
<td>Science:__________________</td>
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<tr>
<td>US History</td>
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<td>or</td>
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<tr>
<td>AP US History</td>
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<td>Phy Ed:__________________</td>
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#### Career Exploratory Electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
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<tbody>
<tr>
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<tr>
<td>__________________________</td>
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<td>__________________________</td>
<td>__________</td>
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<tr>
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### 11th Grade

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Required:</td>
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</tr>
<tr>
<td>World Literature/Composition</td>
<td>1</td>
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<tr>
<td>or</td>
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<tr>
<td>A.P. Language and Composition</td>
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<tr>
<td>Mathematics:_______________</td>
<td>1</td>
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<tr>
<td>Science:__________________</td>
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<tr>
<td>Physical Education (either in 11 or 12 grade)</td>
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#### Career Exploratory Electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
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<tbody>
<tr>
<td>__________________________</td>
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<tr>
<td>__________________________</td>
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<tr>
<td>__________________________</td>
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### 12th Grade

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<tbody>
<tr>
<td>Required:</td>
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<tr>
<td>English:__________________</td>
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#### Career Exploratory Electives:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit</th>
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<tbody>
<tr>
<td>__________________________</td>
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<tr>
<td>__________________________</td>
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<tr>
<td>__________________________</td>
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<tr>
<td>Prerequisite</td>
<td>Credit</td>
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<td>* ART METALS 3</td>
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<td>* AP STUDIO ART</td>
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<td>* CERAMICS 2</td>
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<td>* CERAMICS 3</td>
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<td>* DRAWING 1</td>
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<td>* DRAWING 2</td>
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<tr>
<td>* GRAPHIC DESIGN 2</td>
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<tr>
<td>* PAINTING 1</td>
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<tr>
<td>* PAINTING 2</td>
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<td>* PHOTOGRAPHY 1</td>
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</tr>
<tr>
<td>* PHOTOGRAPHY 2</td>
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</table>

**JR/SR PREREQUISITES VARY - CHECK COURSE BOOK FOR DETAILS**

### BUSINESS

<table>
<thead>
<tr>
<th>Credit</th>
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<th>10</th>
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<tbody>
<tr>
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<td>ADV ACCOUNTING</td>
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<tr>
<td>BUS &amp; PERS LAW</td>
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<tr>
<td>COMPUTER APPL FOR COLLEGE &amp; CAREERS</td>
<td>0.5</td>
<td>x</td>
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<tr>
<td>DESKTOP PUBLISH</td>
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<tr>
<td>GAME/APP DESIGN</td>
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<tr>
<td>INTL BUSINESS</td>
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<td>x</td>
<td>x</td>
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<tr>
<td>DIGITAL VIDEO DESIGN</td>
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<td>PERSONAL FINANCE</td>
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<tr>
<td>PERSONAL FINANCE - WEALTH BUILDING</td>
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<tr>
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### COMPUTER SCIENCE

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<td>* AP COMP SCIENCE PRIN</td>
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### COMMUNICATION ARTS

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### FAMILY CONSUMER SCIENCE

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### WORLD LANGUAGE

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**OUTDOOR ADVENTURE** | 0.5 | x | x | x |

**HEALTH** | **Credit** | 9 | 10 | 11 | 12 |
| HEALTH | 0.5 | x |    |    |    |

**SCIENCE** | **Credit** | 9 | 10 | 11 | 12 |
| * AP BIOLOGY | 1.5 | x | x |    |    |
| * AP CHEMISTRY | 1.5 | x | x |    |    |
| * AP ENVIRON SCIENCE | 1 | x | x |    |    |
| * AP PHYSICS 1 | 1 | x | x |    |    |
| BIOLOGY | 1 | x |    |    |    |
| BIOLOGY HONORS | 1 | x |    |    |    |
| * INTRODUCTION TO MATERIALS SCIENCE | 0.5 | x | x |    |    |
| * CHEMISTRY HONORS | 1 | x | x | x |    |
| * CHEMISTRY | 1 | x | x | x |    |
| ENVIRON SCIENCE | 0.5 | x | x | x |    |
| GEOLOGY/Earth SYST | 0.5 | x | x | x |    |
| PLTW:HUMAN BODY | 1 | x | x | x |    |
| PLTW:BIOMED INNO | 1 | x | x |    |    |
| PLTW:MED INTERV | 1 | x | x |    |    |
| PLTW:BIOMED SCI | 1 | x | x | x |    |
| PHYSICS | 1 | x | x | x |    |
| SPACE SCIENCES | 0.5 | x | x | x |    |
| * ZOOLOGY/BOTANY | 0.5 | x | x | x |    |

**SOCIAL STUDIES** | **Credit** | 9 | 10 | 11 | 12 |
| AMERICAN GOV | 0.5 | x | x | x |    |
| * AP HUMAN GEOG | 1 | x |    |    |    |
| GLOBAL STUDIES | 1 | x |    |    |    |
| AMERICAN ISSUES | 0.5 | x | x | x |    |
| ANCIENT HISTORY | 0.5 | x | x |    |    |
| AP PSYCHOLOGY | 1 | x | x |    |    |
| * AP U.S. HISTORY | 1 | x |    |    |    |
| WORLD ISSUES | 0.5 | x | x |    |    |
| AP MACROECON | 0.5 | x | x |    |    |
| * AP MICROECON | 0.5 | x | x |    |    |
| GEOGRAPHY | 0.5 | x | x | x |    |
| MEDIEVAL HIST | 0.5 | x | x |    |    |
| REVOLUTIONS | 0.5 | x | x | x |    |
| SOCIOLOGY | 0.5 | x | x | x |    |
| U.S. HISTORY | 1 | x |    |    |    |

**YOUTH APPRENTICESHIP** | **Credit** | 9 | 10 | 11 | 12 |
| AUTO APPRENTICE | 1 | x | x |    |    |
| COMPUTER APPREN | 1 | x | x |    |    |
| ENG/DESIGN APPR | 1 | x | x |    |    |
| BANK APPRENTICE | 1 | x | x |    |    |
| HEALTH APPRENTI | 1 | x | x |    |    |
| HOSP/TOUR APPR | 1 | x | x |    |    |
| MFG INDUST APPR | 1 | x | x |    |    |
| STEM APPRENTICE | 1 | x | x |    |    |

*Prerequisite-Refer to the individual departments in the Academic & Career Planning Course Guide
ADVANCED PLACEMENT COURSES
Advanced Placement is a program of college level courses and exams that give high school students the opportunity to receive advanced placement and/or credit in college. The curriculum will give students the opportunity to sharpen their academic skills, allowing them to enter college with confidence. Advanced Placement courses are taught by GHS staff and are weighted 1 extra grade point. In May, the student has the option to take the Advanced Placement test in that subject area. The cost of the test varies according to the College Board. The criteria for college admission varies; and, it is the responsibility of the student to make sure the college that he/she plans to attend accepts the AP test scores. Note: Students may also take the AP exam without taking the related GHS AP course.

For more information on AP Courses visit: https://apstudent.collegeboard.org/home.

Grafton High School offers the following AP courses:

- AP Art History
- AP Studio Art
- AP Biology
- AP Calculus AB
- AP Calculus BC
- AP Chemistry
- AP Computer Science A
- AP Computer Science Principles
- AP English Language & Composition
- AP English Literature & Composition
- AP Environmental Science
- AP German Language & Culture
- AP Human Geography
- AP Macroeconomics
- AP Microeconomics
- AP Music Theory
- AP Physics I: Algebra Based
- AP Psychology
- AP Seminar
- AP Statistics
- AP Spanish Language & Culture
- AP U.S. History

YOUTH APPRENTICESHIPS
Youth Apprenticeships are unique opportunities for juniors and seniors to start preparing for a career while still in high school. One-year and two-year programs combine academic education, occupational instruction and work-based learning with an employer. Apprenticeships are offered in the following areas and are 1 credit for the year and can be taken one or two years:

- Agriculture
- Architecture & Construction
- Finance
- Hospitality, Lodging & Tourism
- Manufacturing
- Science, Tech, Engineering & Mathematics (STEM)
- Food & Natural Resources
- Art, A/V Technology & Communications
- Health Science
- Information Technology
- Marketing
- Transportation, Distribution & Logistics

For more information, please check with your GHS School Counselor or contact John Higgins, Ozaukee Youth Apprenticeship Coordinator at: 262-268-6074 or john.higgins@pwssd.k12.wi.us. For more information on Youth Apprenticeship visit: https://dwd.wisconsin.gov/youthapprenticeship/, or http://www.pwssd.k12.wi.us/ozaukeeyouthapprenticeship
DUAL CREDIT COURSES

Many Grafton High School departments have articulated agreements with various post-secondary institutions around the state, allowing our students the opportunity to earn college credit. For a student to gain college-level credit, certain requirements must be met by the student. Students should contact the instructor of the GHS course to learn more about how these credits can be earned. Below is a list of the courses with current agreements.

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<td>UW Oshkosh (CAPP)</td>
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<td>multiple courses</td>
<td>6-8</td>
<td>T.C.</td>
</tr>
<tr>
<td>AP Spanish Lang. &amp; Culture</td>
<td>UW Green Bay</td>
<td>Spanish 202</td>
<td>14</td>
<td>T.C.</td>
</tr>
<tr>
<td>and 1 of the 2 culture classes</td>
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<tr>
<td>AP German Lang. &amp; Culture</td>
<td>UW Green Bay</td>
<td>German 202</td>
<td>14</td>
<td>T.C.</td>
</tr>
</tbody>
</table>

*Students can work with multiple universities which issue college credit for PLTW courses taken in high school. See the GHS PLTW teachers for more information.

**This course is part of a 3 semester articulation agreement with MATC.

A.S. (Advanced Standing) = Upon enrollment in a relevant Milwaukee Area Technical College program, students will receive advanced standing or credit toward their MATC diploma.

T.C. (Transcripted Credit) = Upon completion of their GHS course, students will receive credit for a college equivalent course that will be placed on a respective college transcript for that student.

Upon completion of the dual credit courses, students will need to contact the issuing college to obtain a copy of post-secondary transcript.

CAPP-The Cooperative Academic Partnership Program at the University of WI Oshkosh provides academically eligible high school students the opportunity to earn college credits while still in high school. Students may earn dual credit at UW Oshkosh, providing they meet one of the following requirements: Be in upper 25% of their class, have a cumulative GPA of at least 3.25, have an ACT score of at least 24 AND in the upper 50% of their class. For more information about the program, go to the UW Oshkosh CAPP website. Click here to see which colleges have accepted CAPP credit.
EARLY COLLEGE CREDIT PROGRAM/START COLLEGE NOW
These two programs allow high school students the opportunity to take college courses at a WI four-year college or at a WI technical college. Students who have questions about the program should see their school counselor or visit the GHS Counseling website.

TEACHER ASSISTANT/INDEPENDENT STUDY
Teacher Assistant position - There are times when teachers in the building need and appreciate assistance from upperclassmen (juniors and seniors) in preparing for lessons, laboratories, and/or helping peers one on one. TA positions need to be discussed with the teacher and requires administrative approval. Applications are available in the GHS Counseling Office. Teacher Assistant positions are graded on a pass/fail basis and awarded .5 credit per semester. Students can not have a study hall in addition to a Teacher Assistant position.

Independent Study - Students who are in 11th or 12th grade wishing to pursue study beyond established curricular offerings may apply for permission to engage in Independent Study for elective credit to replace a study hall. The process involves completion of the Independent Study Plan form available in the GHS Counseling Office which requires parent, supervising teacher, counselor, and principal approval. Planning for an Independent Study should take place prior to the start of the semester in which the Independent Study will occur. It is expected that the Independent Study student will give a presentation at the end of the semester. Independent Study courses are graded on a pass/fail basis and awarded a .5 credit per semester.

GLOBAL SCHOLARS (GLOBAL EDUCATION ACHIEVEMENT CERTIFICATE)
Grafton High School offers a Global Education Achievement Certificate to high school students who have demonstrated a strong interest in global citizenship by successfully completing a global education curriculum and engaging in cocurricular activities and experiences that foster the development of global competencies. It encourages students to enroll in classes with global content in the arts, sciences, and humanities, and prepares globally competent students who are career ready.

Students may earn a Global Education Achievement Certificate by meeting the following criteria:
- take 4 credits of world language in high school, earning a grade of B or better
- take additional 4 credits from courses that have a global emphasis (see list below)
- participate in service or international extracurricular activities
- complete 8 reflections on international/cultural media (books, movies, lectures, art, and literature)
- provide a minimum of 20 hours of community service with a global emphasis.

In addition to world language, students must take 4 additional credits from the following list:

<table>
<thead>
<tr>
<th>Ancient History</th>
<th>Art Exploration</th>
<th>Drawing 1</th>
<th>Painting 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Art History</td>
<td>Camerata</td>
<td>Environmental Science</td>
<td>Photography 1&amp;2</td>
</tr>
<tr>
<td>AP Environmental Science</td>
<td>Chorale</td>
<td>Geography</td>
<td>Revolutions</td>
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<tr>
<td>AP Literature &amp; Comp.</td>
<td>Concert Band</td>
<td>Global Studies</td>
<td>International Business</td>
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<tr>
<td>AP Macro/Micro Econ</td>
<td>Concert Choir</td>
<td>Medieval History</td>
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</tr>
<tr>
<td>World Lit/Comp</td>
<td>AP Music Theory</td>
<td>World Issues</td>
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</tbody>
</table>

Students must also participate in 4 of the following clubs or trips/exchanges:

| Amnesty International | German Club | Spanish Club | Personal Trip Abroad |
| Chamber Singers | GHOST | GHS Art Trip | Exchange Program |
| FBLA | Leo Club | GHS Costa Rica Trip | (hosting or living abroad) |
| Jazz Ensemble | Military Hist Book Club | GHS German Exchange |

Please see your World Language instructor or school counselor if you have any questions. For more information - http://cal.dpi.wi.gov/sites/default/files/imce/cal/pdf/globaled-certificate.pdf

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REQUIRED COURSE LOAD
Each student shall be enrolled in a minimum of seven credits per year. Exceptions to this include:
1. Seniors enrolled in a Work Study Program
2. Students enrolled in a Youth Apprenticeship Program
3. Students with an IEP or a 504 Plan
4. Students identified as At-Risk

CHANGES IN COURSE SELECTION
Students are expected to choose their courses carefully while considering their Academic and Career Plan. Below are the timelines if a schedule change is deemed necessary:
- Students requesting to add or drop a class for a legitimate reason, it must be done within the first ten school days of the semester.
- Students who do not have a study hall (8 courses) will have through the first four weeks of each semester to drop a course for a study hall.

GRADUATION PARTICIPATION
Students must meet all graduation requirements to participate in the graduation ceremony.

EARLY GRADUATION
1. A student may graduate after seven semesters by earning a minimum of 22 or 24 (classes of 2023 and beyond) total credits, earn all 13 required course credits, and receive the permission of the Principal before the end of the 15th school day of the fall semester.
2. A student may graduate after three years of high school by earning 22 or 24 (classes of 2023 and beyond) earn all 13 required course credits, and receive the permission of the Board of Education prior to December 31 of the year prior to the completion of the sixth semester.

NCAA COLLEGE STUDENT ATHLETES
Student-athletes wishing to compete in athletics at division 1 or 2 institutions, (athletic scholarship schools) need to register with the National Collegiate Athletic Association Clearinghouse. Registration forms and information describing regulations and eligibility can be obtained by visiting the Clearinghouse website www.ncaa.org/student-athletes/future/eligibility-center . Eligible students must check to see whether the high school courses that are being requested are NCAA approved courses. See your coach or school counselor for additional information.

All students wishing to be a student-athlete in college should also be familiar with this website: http://www.ncaa.org/student-athletes/future.
Naviance Student

Naviance Student is a comprehensive web-based platform that is accessible to all students and parents for college and career planning. Naviance Student is where your Academic & Career Plan (ACP) is created, stored and monitored. You may access Naviance Student by selecting the Naviance Student link on Grafton High School's main webpage. For questions about Naviance Student or ACP, please consult your school counselor, who is able to assist you.

Additionally, Naviance Student allows you to:

- Create plans for the future – goal setting, four-year planning, learning style inventories, résumé building and career and interest inventories. In Naviance Student, you will complete various assessments as part of your ACP assigned tasks to better prepare you for your future college and career goals.

- Research colleges – compare entrance requirements like GPA and standardized test scores, explore majors, student activities, athletic offerings and much more. Research summer enrichment opportunities.

New Courses

Course offerings at Grafton High School are annually reviewed for consideration of new courses to increase learning opportunities for our students. In addition, courses are also reviewed through the curriculum cycle.

Below are new courses for the 2020-2021 school year:

- Communication Arts – AP Seminar
- Mathematics – Geometry Support, Geometry Honors
- Physical Education – Outdoor Adventure
- Science – Biology Honors, Introduction to Materials Science
- Social Studies – Global Studies, American Government (semester course)
- Technology and Engineering – PLTW Introduction to Engineering Design, PLTW Computer Integrated Manufacturing

The following courses will no longer be offered at GHS:

- FCS Survey
- Textile Arts
- Concepts in Algebra/Geometry
- Principles in Geometry
- Biology B

Revised Course Changes:

- AP Biology will be 1.5 credits
- Accelerated Chemistry new name is Chemistry Honors
- American Government will be a .5 credit required course starting with the class of 2024 and offered in grades 10-12
- Culinary Arts new name is Baking Principles
Art Exploration  
Credit: ½  
Level: 9, 10, 11, 12  
Fees: $6.50 sketchbook

Students creatively and visually solve specific problems based on a set of criteria while experimenting and engaging both traditional and nontraditional art techniques. Students also research contemporary and historical artists and genres and share research, and articulate their analysis of visual issues through their evolution of artistic ideas and concepts. Students build a creative toolbox of concepts, skills and techniques that will continue to grow as applied to visual communication and problem solving for future art courses.

Note: This class is a prerequisite for most other art courses at GHS.

Drawing I  
Credit: ½  
Level: 9, 10, 11, 12  
Prerequisite: Art Exploration (9 & 10 only)  
Fees: $6.50 sketchbook

Students will develop a better understanding of drawing techniques as well as experiment with a variety of drawing mediums such as: pencils, charcoal, pastels, oil pastels, pen & ink and markers. Students will expand on drawing techniques studied in foundations and be encouraged to think creatively and build observational skills to improve hyper-perceptive observation and drawing skills.

Drawing II  
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Art Exploration, Drawing I  
Fees: $6.50 sketchbook

Study will focus on drawing the human form while exploring new styles of drawing. Student will be expected to combine well crafted drawings with creative thinking skills to solve challenging visual problems. Some of the media used may include pen and ink, charcoal, graphite, colored pencil, pastel and marker. Students will further advance their understanding and ability to draw using various techniques, media, and creative thinking skills.

Drawing III  
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Drawing II  
Fees: $6.50 sketchbook

This course is for a mature student with a strong interest in art and drawing. Work will require self-motivation and strong creative thinking skills. In this course the student will be exploring new types of drawing as well as further developing craftsmanship and personal drawing style. Student will develop a masterful understanding of drawing with any media and a strong ability to think creatively and apply ideas in a meaningful way.

Painting I  
Credit: ½  
Level: 9, 10, 11, 12  
Prerequisite: Art Exploration (9 & 10 only)  
Fees: $13.00 set of brushes

Students will focus on developing a basic understanding of painting techniques, color and how to use tools such as a pallet knife and various types of bristle brushes. The course investigates historical and contemporary color techniques and theory, using Tempera, acrylic and watercolor paints.

Painting II  
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Art Exploration, Painting I  
Fees: $13.00 set of brushes

In this course the student will continue to explore different types of painting techniques for creating dynamic compositions. Students may work with tempera, acrylic, latex, oil, watercolor, spray paint or mixed media. Painting subjects will include abstraction, landscape, still life, and portraiture.

Painting III  
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Painting II  
Fees: $13.00 set of brushes

This course is for students with a strong interest in art and painting. Work will require self-motivation and strong creative thinking skills. Painting subjects will vary depending on students’ interests and will be tailored by the teacher for each project. The student will develop a masterful understanding of painting in various styles along with strong ability to think creatively and apply ideas in a meaningful way.

Ceramics I  
Credit: ½  
Level: 9, 10, 11, 12  
Prerequisite: Art Exploration (9 & 10 only)  
Fees: $14.00 clay

This course will focus on hand-building techniques and the proper use of tools and equipment specific to ceramics. The student will further the development of personal ideas and artistic themes, skills as applied to
clay while creating 3D structures with a variety of techniques exercising creative thinking skills.

**Ceramics II**
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Art Exploration, Ceramics I  
Fees: $14.00 clay

This course will focus on learning to throw pots on the potter's wheel. Students will create a series of vessels with different themes and functions. The student will further the development of personal ideas and artistic themes, develop knowledge, skills, and understanding of clay as it is formed on a potter's wheel.

**Ceramics III**
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Ceramics II  
Fees: $14.00 clay

This course is for a mature student with a strong interest in art and ceramics. Work will require self-motivation and strong creative thinking skills. Student will specialize in specific body of work and design projects to meet the instructor’s criteria. The student will develop a masterful understanding and in-depth knowledge of ceramics and 3D forms. Students will broaden ability to effectively use art history, analysis, creative thinking, and evaluation to improve and create works of sophistication.

**Art Metals I**
Credit: ½  
Level: 9, 10, 11, 12  
Prerequisite: Art Exploration (9 & 10 only)  
Fees: $2.40 saw blades

Students will investigate skills and techniques using brass, copper, nickel metals, hard soldering, texturing and patinas as well as the proper use of tools and equipment. The student will further the development of personal ideas and artistic themes, applying creative thinking skills.

**Art Metals II**
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Art Exploration, Art Metals I  
Fees: $2.40 saw blades

Students will focus on metal forming and finishing techniques such as forging, welding using an oxy-acetylene live fire torch, acid etching, raising sheet metal, building structures with sheet metal and advanced hammering techniques. The student will further the development of personal ideas and artistic themes, skills, and understanding of metal techniques and 3D media.

**Art Metals III**
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Art Metals II  
Fees: $2.40 saw blades

This course is designed for a mature student with a strong interest in art and metals. Work will require self-motivation and strong creative thinking skills. Student will focus on metal forming and finishing techniques such as casting, stone setting, forging, acid etching, welding using a live fire oxy-acetylene torch, raising and constructing sheet metal and the advanced use of art metal technologies.

**Photography I**
Credit: ½  
Level: 9, 10, 11, 12  
Prerequisite: Art Exploration (9 & 10 only)  
Fees: Students must purchase a camera card of 16G or larger, and a card reader. Available at Costco, Best Buy, Walgreens or CVS. Any photos printed must be paid for by the student. Photo costs range from $1 (4x6in) - $15 (20x30in).

Students will be taking black and white and color photos using a digital camera. You will learn about basic digital camera control, flash, and the relationship between shutter speed, aperture & ISO. Class will also discuss the elements of photographic composition and learn to edit, organize and publish digital photos using Adobe Photoshop. The student will build an understanding of photography as an art form and the ability to take, organize and edit digital photographs using numerous techniques and creative thinking skills.

**Photography II**
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Photography I  
Fees: same as Photography I

This course is for a mature student with a strong interest in art and photography. Work will require self-motivation.
and strong creative thinking skills. Class will focus on advanced digital camera and computer editing techniques. Digital tinting, double digital exposures, bulb setting, tilt shift photography, digital photo “transfers”, digital collages and other techniques may be explored. Advanced Adobe Photoshop training will be covered. The student will further the understanding of photography and a strong ability to think creatively and apply ideas in a meaningful way.

**Graphic Design I**
Credit: ½  
Level: 9, 10, 11, 12  
Prerequisite: Art Exploration (9 & 10 only)

Students will be exploring the tools, techniques, terms, and projects that designers work with every day. Class will learn the basics of Adobe Photoshop, as well as how to develop a concept from sketches to a polished design. Projects may include the design of things such as logos, posters, book jackets, albums, business cards, letterhead, billboards, T-shirts, illustration, digital photo editing and advertisements. The design industry as a whole and be able to effectively use Adobe Photoshop for a variety of purposes.

**Graphic Design II**
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Graphic Design I

This course is for a student with a strong interest in art and graphic design. Work will require self-motivation, teamwork and strong creative thinking skills. The student will build upon the knowledge and skills that were learned in Graphic Design I. The student will develop a masterful understanding of Adobe Photoshop and its processes and techniques used by the design industry. The class will use this knowledge to develop products from ideation through customer service and creative problem solving.

**Exploration of 2-Dimensional Media**
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Art Exploration & Drawing I

Students will be exploring traditional and non-traditional 2D media and materials, primarily not covered in other art classes. Class will explore alternative processes such as fibers, collage, image transfer, mixed media and printmaking. The student will build upon the understanding of 2D media techniques learned in Art Exploration and Drawing I and be encouraged to experiment with new materials and techniques to expand skill set with 2D media.

**Exploration of 3-Dimensional Media**
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Art Exploration & Ceramics I or Art Metals I

This course is for a mature student with a strong interest in art. Work will require self-motivation and strong creative thinking skills. The specific projects will be designed by the teacher for the student and will focus on 3D art forms not covered in other art classes. Investigations may include wood carving, stained glass, mixed media sculpture, fiber sculpture, metal sculpture, installation art and other contemporary art forms. The care, safety, and proper use of tools and equipment to be used in the creation of 3D media will be addressed. The student will build upon the understanding of 3D media techniques learned in ceramics or art metals and will be encouraged to experiment with new materials and techniques to expand skill set with 3D media.

**AP Art History**
Credit: 1  
Level: 9, 10, 11, 12  
Fees: AP test (optional)

This course is for a mature student with a strong interest in the history of art. They will study works from Greek and Roman times through contemporary artists. A variety of different types of art will be discussed including architecture, sculpture, painting, and other media. Students will analyze and identify art from different perspectives and ultimately have the option to take the AP Art History test. Students will develop a deep understanding of art from the past and the present, and use this knowledge to earn AP credit in Art History.

**AP Studio Art**
Credit: 1  
Level: 11, 12  
Prerequisite: Art Exploration & minimum of 3 additional art classes. Teacher recommendation required.  
Fees: AP test (optional)

This course is for a mature student who has maintained a strong interest in art throughout high school. Work will require a high level of self motivation and a level of dedication beyond that of previous art classes. AP Studio Art will guide you to develop and refine your personal esthetic as well explore new media and techniques. During this process you will develop a portfolio of work that fulfills the AP Board requirements in the areas of quality, concentration and breadth. The portfolios may be in 2D, 3D or Drawing. Prompts, resources, critiques and weekly reviews of your work will be structured into the course, allowing creative freedom to explore, while having benchmarks and deadlines to keep you on task, keeping in mind artistic pursuits toward a sophisticated portfolio of work, worthy of Advanced Placement college credit.
Web Design
Credit: ½
Level: 9, 10, 11, 12

In Web Design, you will learn how to create and maintain effective web sites as you build web pages using HTML coding. Professional design software, Adobe Dreamweaver, will also be utilized to help maintain and manage web pages. You will apply design principles that affect web page construction.

Game and Mobile App Design
Credit: ½
Level: 9, 10, 11, 12

Game and Mobile App Design is an introductory course to coding and app development that will engage you in project-based learning. You will build your games in Construct and publish to a variety of platforms like Android, iOS, Windows, Mac, and the Web. Mobile apps will be built using App Inventor, a cloud-based tool, on an Android platform which is used in smartphones, tablets, and other personal electronics.
**Digital Video Design**
Credit: ½
Level: 9, 10, 11, 12

Digital Video Design offers a comprehensive introduction to the key elements of design principles and management skills needed to develop dynamic, interactive multimedia products. Communication, collaboration, and publishing via elements of video such as sound, animation, video, text, and graphics will be explored. A variety of software programs and multimedia management issues will be discussed and investigated through hands-on approaches. You will have opportunities to enhance your ability to communicate with clarity and precision in visual and oral form.

**Computer Applications for College and Careers**
MATC Transcribed Course COMPSW-106 (3 credits)
Credit: ½
Level: 9, 10, 11, 12

Computer Applications is a computer literacy course in which you will become skilled in Microsoft Office software applications for college, career, and personal applications. Multidisciplinary projects will involve using Word, Excel, Access, PowerPoint and Publisher. You will have the opportunity to become industry certified in the MS Office applications. These certifications will give you added value for college and future work.

**Desktop Publishing**
Credit: ½
Level: 9, 10, 11, 12

Do you like working with technology and computers? Desktop Publishing might be for you! Digital cameras, scanners, business graphics, and desktop publishing software are utilized in this class. You will create and design brochures, flyers and newsletters enhancing your business skills for later in life. Improved productivity of electronically produced newsletters, flyers, brochures, reports, advertising materials, and other publications is emphasized. Proofreading, document composition, and communication competencies are essential elements.

**College Personal Finance**
Credit: ½
Level: 11, 12

Fees: If taken for college credit, approximately $300 for 3 college credits. College credit is available through UW-Oshkosh Cooperative Academic Partnership Program (CAPP) for students who meet program requirements. More information can be found here.

**Note:** This course fulfills the Financial Literacy graduation requirement

This college level course studies the major financial decisions encountered by individuals. Topics covered are budgeting, use of credit, automobile and consumer durables, insurance, housing decisions, taxes, retirement planning, estate transfer and investments. Each subject is analyzed within the context of a comprehensive framework of personal financial planning.

**Personal Finance**
Math Credit: This course may be used as .5 math credit for graduation.
Credit: ½
Level: 10, 11, 12

**Note:** This course fulfills the Financial Literacy graduation requirement

Personal Finance will provide fundamental coverage in money management (paychecks, taxes, and checking accounts), financial security (savings accounts, stocks, bonds, and mutual funds), credit management, and risk management (personal risk and auto, home, and health insurance).

**Personal Finance-Wealth Management**
Math Credit: This course may be used as .5 math credit for graduation.
Credit: ½
Level: 10, 11, 12
Prerequisite: Personal Finance or College Personal Finance.

This course will continue where Personal Finance leaves off. A focus on managing money for economic self-sufficiency and building wealth will be the primary objective. Investing with stocks, bonds, and mutual funds are major topics. Advanced levels of credit, debt, and budgeting will also be included. Investing and budgeting simulation.
Accounting

Math Credit: This course may be used as the 3rd math credit for graduation. MATC Transcribed Course ACCTG102 (3 credits)
Credit: 1
Level: 10, 11, 12
Fees: $45.00 online workbooks & practice sets

Accounting will teach students how to plan, keep, summarize, and interpret financial records of a business. Accounting theory and principles based around three basic systems will be introduced: 1) cash journal, 2) five journal system, and 3) the combination journal. Units on state and federal tax preparation, automated accounting, and simulated practice sets relating to all aspects of accounting play an integral part of this course. The goal of Accounting is to prepare you to use accounting concepts for personal use and/or future employment. You will develop an appreciation for how sound accounting records help businesses operate efficiently and profitably by keeping track of how much is earned and how much is spent. Accounting is an ideal course for any student planning to study business or marketing or run your own business someday.

Advanced Accounting

MATC Transcribed Course ACCTG111 (4 credits)
Credit: 1
Level: 11, 12
Prerequisite: Accounting
Fees: $40.00 online workbooks & practice sets

Advanced Accounting is structured to offer accounting concepts that go beyond the introductory level and to prepare students for college accounting and/or entry-level accounting positions. Advanced levels studied will be in the areas of Cash and Accrual Accounting; Partnership Accounting; Departmentalized Accounting; General Accounting Adjustments; and Corporate, Cost and Managerial Accounting. Practice sets, computerized accounting software, and job shadowing play an important part in this course to give a more realistic understanding of what the field of accounting is and the many job opportunities available in the world of work.

Sports & Entertainment Management

Credit: ½
Level: 10, 11, 12

This course is for students interested in learning how the sports and entertainment industries implement management and marketing strategies to promote, sponsor, and operate events. Topics covered will include sponsorship development, event management, licensing and merchandising, promotion, endorsements, in-game promotions, and ticket sales. Classroom projects, guest speakers, and a VIP experience with a professional sports team (i.e. Green Bay Packers, Milwaukee Bucks, etc.) will be included.

Business Communication

Credit: ½
Level: 10, 11, 12

In this course you will gain a comprehensive view of communication, its scope and importance in business, and the role of communication in establishing a favorable outside-the-firm environment, as well as an effective internal communications program. Competency will be developed in the areas of oral and written communication, interpersonal skills, and the use of current technology to communicate. You will also develop sensitivity in communicating with a diverse workforce (both domestically and globally). Team projects, class/small group discussions, case studies, community-based projects, technology, and business experiences will be included.

International Business

Credit: ½
Level: 10, 11, 12

International business and the global economy will be explored in this course. Topics include but are not limited to passports/visas, travel tips, time zones, currency, trade opportunities, negotiating styles, business procedures, cultural tips, advertising, and marketing around the world. Project-based learning activities and projects in this course will be used to strengthen awareness of the value of diversity in the workforce and society. Speakers and videos are an integral part of this course. International Business can be applied to the Global Education Achievement Certificate

Business and Personal Law

Credit: ½
Level: 10, 11, 12

This course is designed to develop a knowledge and understanding of the responsibilities, rules, and regulations within the legal system. Court procedures and how law relates to a minor, an adult, and a consumer in everyday life will be reviewed. Possible courthouse field trips, videos, and role-playing situations all play an integral part of this essential course. Business Law students will play a fundamental role in the Shoplifting Prevention Program, educating elementary students about the dangers of shoplifting. Students develop a new respect for the dignity of the individual, the rationale of law, and the necessity for law and order in a civilized society.
**Literature & Composition 9**
Credit: 1  
Level: 9  
Prerequisite: none

Freshmen in Literature and Composition 9 will use fiction, nonfiction, poetry, and drama as vehicles for developing critical reading and literacy skills. Students will improve their language and writing skills, analytical abilities, and creative capacity while writing paragraphs and expository essays, conducting research, and presenting oral projects based on the study of literature. Course goals are to increase students’ ability to appreciate and understand the major genres of literature; to study various literary techniques, vocabulary, and characteristics of the major genres; to practice group discussion and oral presentation techniques; to continue to refine their craft of writing; to introduce necessary research skills.

**Literature & Composition 9 Honors**
Credit: 1  
Level: 9  
Prerequisite: teacher recommendation

A student in Literature and Composition 9 Honors will explore the Literature and Composition 9 curriculum in greater depth and, in some cases, at a faster pace. A learner in the Honors course thinks critically and creatively, completes tasks independently, produces quality work consistently and in a timely manner, and demonstrates a command of English literacy skills. In addition to the skills practiced in Literature and Composition 9, the Honors course emphasizes literary analysis, logic and reasoning, argumentation, on-demand writing, and discussion. Honors level students enter freshman year having displayed strong reading, writing, and analytical skills.
**American Literature & Composition**
Credit: 1  
Level: 10  
Prerequisite: none

American Literature continues to develop a student’s critical and creative thinking skills through reading, writing and speaking. Students will read novels, drama, poetry and non-fiction texts with focus on Native Americans, Puritans, Transcendentalists, the Jazz Age, the Harlem Renaissance, and modern literature. Major assessments include a research essay, literary analysis, on-demand writing and presentations.

**American Literature & Composition Honors**
Credit: 1  
Level: 10  
Prerequisite: teacher recommendation

American Literature Honors is designed for students who have displayed strong reading, writing and critical thinking skills. Students will read novels, drama, poetry and non-fiction texts with focus on Native Americans, Puritans, Transcendentalists, the Jazz Age, the Harlem Renaissance, and modern literature. Major assessments include research essay, literary analysis, on-demand writing and presentations. Students in Honors will also take part in a semester-long project based learning Justice Project.

**World Literature & Composition**
Credit: 1  
Level: 11

World Literature & Composition is a survey course for juniors to explore their individual relationship to culture and human civilization through the study of ancient, classic, and modern texts. While embarking on a heroic journey through the historical and social influences of cultures throughout the world, students will think critically about literary techniques, perspectives, and major themes of the shared human experience. Students will continue to reinforce previously learned grammar, composition, oral communication, and research skills.

**AP Seminar**
Credit: 1  
Level: 10, 11, 12  
Prerequisite: Previous or concurrent enrollment in an AP course is recommended  
**Note:** This course can count toward the senior English requirement

The AP Seminar course is an inquiry-based course that aims to engage students in cross-curricular conversations that explore real-world topics and issues from multiple lenses and perspectives. Students are empowered to collect and analyze information with accuracy and precision in order to craft and communicate evidence-based arguments, both written and orally. The skills practiced and refined in this class are required in the AP Research course, the second course in the AP Capstone program.

**AP Language and Composition**
Credit: 1  
Level: 11, 12  
Prerequisite: teacher recommendation  
Fulfills 11/12 college prep writing requirement

This is a college level course. This class is designed to meet the intellectual challenges and workload consistent with the possible curriculums described in entry-level courses in universities and colleges. The course focuses on rhetorical analysis of non-fiction texts and the development and revision of well-reasoned, evidence-centered analytic and argumentative writing. This course directly prepares those students who choose to take an Advanced Placement Test of Language and Composition at the end of the year.

**AP Literature and Composition**
Credit: 1  
Level: 12  
Prerequisite: teacher recommendation, students that did not take AP Lang must submit a writing sample  
Fulfills 11/12 college prep writing requirement

This is a college level course. This class is designed to meet the intellectual challenges and workload consistent with the possible curriculums described as “Freshman English” in universities and colleges. Students will read and analyze, in discussion and writing, poetry, short story, drama, and the novel. Students will study argument, including logic and rhetoric. This course directly prepares those students who choose to take an Advanced Placement Test of Literature and Composition at the end of the year.

**Contemporary Literature**
Credit: ½  
Level: 11, 12  
Prerequisite: teacher recommendation

Contemporary Literature focuses on internal conflict and the search for an identity, in a complex, changing society. Students will review trends in modern literature and acquaint themselves with the different forms of media used to translate those forms into everyday experiences.
Communications
Credit: ½
Level: 11, 12
Prerequisite: teacher recommendation

Students will engage in speaking and listening activities: intrapersonal, interpersonal, group, and public communication. Throughout the course, students will practice listening and speaking, as well as conversational and advanced questioning skills through games and activities designed to strengthen confidence and understanding. The course is designed to be a practical approach to learning a wide range of skills that will be needed for a university/work environment. By the end of the semester, students will have created tangible products that prove mastery over a range of professional communication skills.

Creative Writing
Credit: ½
Level: 11, 12
Prerequisite: teacher recommendation

Within a performance-based and workshop setting, students will generate various types of artistic writing including poetry, the short story, the screenplay, sensory writing, nonfiction, and a variety of pieces expressing voice. Students will critique others' writing and share their own. From the critiques, students will refine their individual pieces of writing for a performance-based semester portfolio. Throughout the course, they will develop and/or improve artistic writing skills and integrate all facets of language arts: listening, speaking, reading, and writing.

Essentials of College Writing
Credit: ½
Level: 12
Prerequisite: teacher recommendation
Fulfills 11/12 college prep writing requirement

Emphasis will be on expository writing, using critical thinking skills in paragraph and essay writing. The student will be challenged to demonstrate his/her writing skills using more complex content material and sophisticated writing styles in order to refine the forms of expository expression for the college-bound student.

Foundations of College Writing
Credit: ½
Level: 12
Prerequisite: teacher recommendation

The intent of this course is to introduce students to the principles of college level writing, critical reading, and critical thinking. Written work for this course consists of essays that are expository and analytical in nature. Major attention is given to the preparation and writing of a research essay through writing assignments. Individual improvement will be stressed.

Literature as Social Reflection
Credit: ½
Level: 11, 12
Prerequisite: teacher recommendation

Both historically and today, authors and filmmakers use their literary or cinematic works (novels, plays, poems, documentaries, films, etc.) to reflect the world around them and comment on, critique, or expose the issues facing society. Through a variety of challenging texts, this course explores social issues such as race, gender, and equity. Performance-based class discussions, group projects, and presentations are the foundation for student learning and assessment. Along with exploring texts together as a class or in a group, students will also develop an independent project expressing their own social reflection, to be presented during the final exam period. Ultimately, students will continue to build on literary analysis, writing, and discussion skills introduced in previous classes while exploring issues in modern literature.

Professional Writing
Credit: 1
Level: 10, 11, 12
Prerequisite: teacher recommendation

The course focuses on the development of published, nonfiction journalistic works for the yearbook and other school and community publications. This includes writing, interviewing, researching, editing and revising skills in workshop format. In addition, students will study design and photography principles while learning Adobe CS as extensions of their written work. Students will also write, produce, edit and publish video announcements in teams throughout the year using professional video equipment and Final Cut Pro.
**Tech Communication & Composition**
Credit: ½  
Level: 12  
Prerequisite: teacher recommendation

Since the course is designed for students who plan to attend technical school or to seek immediate employment, life skills are emphasized. Projects/assignments include: group discussion, research, both oral and written reports on research, task analysis and demonstration, analysis of technical articles and work-related materials, business letters, resumes, and job applications. Students will reinforce reading, writing, research, and critical thinking skills taught during the first three years of high school.

**Writing for Publication**
Credit: 1  
Level: 11, 12  
Prerequisite: Professional Writing

This is an elective class, which does not replace any required English class.

This course is taken by students who have already completed a year of Professional Writing. The course focuses on the advanced development of published, nonfiction journalistic works for the yearbook and other school and community publications. This includes writing, interviewing, researching, editing and revising skills in workshop format. In addition, students will study design and photography principles while learning Adobe CS as extensions of their written work. Students will also write, produce, edit and publish video announcements in teams throughout the year using professional video equipment and Final Cut Pro.
**Introduction to Programming**

Math Credit: This course may be used as the 3rd math credit for graduation.
Credit: 1
Level: 9, 10, 11, 12

Prerequisite: B- or higher in Algebra and concurrent enrollment in Geometry OR have completed a full year of Geometry.

The focus of this course is to introduce computer programming using the language of Visual Basic. Major topics covered are: Graphical User Interface, Event Driven Programming, Variables, Formatting, Selection Statements, Functions, Loops, String Manipulation, Arrays, RAM, ROM, CPU, and Saving and Opening Sequential Files.

**Advanced Computer Programming & Virtual Reality**

Credit: 1
Level: 10, 11, 12
Prerequisite: Introduction to Programming (formerly Computer Science I) or Teacher Approval

During the first semester students will learn how to program using the language C++. The following topics will be covered: history of computers, variable types, selection structures, loops, functions, arrays, and object oriented programming. By the end of the first semester, students will have created multiple C++ applications. During the second semester, students will learn about the principles of VR technology, including optics, displays, stereopsis, and tracking. By the end of the course, students will have created and deployed a comfortable, high performance VR application using Unity. Not recommended to take concurrently with AP CSA.

**AP Computer Science Principles**

Credit: 1
Level: 10, 11, 12
Prerequisite: Introduction to Programming (formerly Computer Science I) or Teacher Approval
Fees: AP practice book and AP exam (optional)

AP Computer Science Principles introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. There are seven big ideas in the course framework: Creativity, Abstraction, Data and Information, Algorithms, Programming, The Internet, and Global Impact. Students will use computation tools to analyze and study large data sets, develop effective communication and collaboration skills, be a well-educated citizen who understand how computer science impacts people and society, and design creative artifacts with practical, personal or societal intent.
**AP Computer Science A**
Credit: 1
Level: 10, 11, 12
Prerequisite: AP Computer Science Principles or Teacher Approval
Fees: AP practice book and AP exam (optional)

AP Computer Science A introduces students to the computer programming language of JAVA. The topics covered include Object-Oriented Program Design, Program Implementation, Program Analysis, Standard Algorithms, Standard Data Structures, Computing in Context, and 3 larger scale programs recommended from the College Board (AP). Students will analyze code to find mistakes and output, think creativity to solve real world applications, and construct algorithms to solve a problem. Not recommended to take concurrently with Advanced Programming and Virtual Reality.
Baking Principles
Credit: ½
Level: 9, 10, 11, 12
Fees: $15.00

This course will consist of basic baking fundamentals. The study of how ingredients work together and the ratios will give anyone the freedom of developing their own creative recipes. Preparation of food will include: quick breads, pies, yeast breads, cake decorating, cookies, specialty desserts, and candy making. This course will also concentrate on safety techniques, precise measurement, standardized recipes and formulas. The goal is also to introduce food service and food service careers together with fostering creativity in food preparation and decoration.

Food Concepts
Credit: ½
Level: 9, 10, 11, 12
Fees: $15.00

Students will be introduced to basic cooking techniques used in the preparation of food. Cooking labs involve group activities in the organization, preparation, tasting, and evaluation of food. Nutrition, safety and sanitation, basic measurement skills and the principles of food preparation is incorporated into each unit. Units include: Pasta and Rice, Grains, Eggs and Dairy, Soups, Combination Foods, Meat and Poultry.

Food Science
Credit: ½
Level: 10, 11, 12
Prerequisite: Food Concepts or Baking Principles (formerly Culinary Arts). Must have either course prior to taking Food Science.
Fees: $15.00
Note: Science Credit: This course may be used as ½ credit elective science for graduation.

Food science benefits consumers every day with healthier diets, better tasting affordable foods, and increased food safety. Food Science is an exciting area that applies a blend of basic sciences such as biology, chemistry and physics with biochemistry and mathematics to improve the taste, nutrition and value of the world’s food supply. The curriculum includes hands-on experiences that support classroom instruction with practical applications and creative opportunities for product development.

Advanced Foods & Restaurant Management
Credit: 1
Level: 11, 12
Prerequisite: Food Concepts and/or Baking Principles (former Culinary Arts)
Fees: $30.00 (includes ServSafe Certification test)
MATC transcribed course CULMGT-112 (2 credits)

This course will equip students with the advanced skills necessary to enter the food service industry. Students will learn about food service operations including health and safety, workstations, plating and design, and many other roles of the professional chef. Successful chefs must be able to do more than simply prepare delicious recipes; they need to be able to determine costs, manage resources, and be a team player with other departments. Throughout first semester, students will work on skills necessary to take the ServSafe Food Handler online certification exam. Students who pass the exam will also receive advanced standing from MATC and will be exempt from taking the MATC Food Service Sanitation course. Students will have the opportunity to participate in culinary competitions. Second semester will include implementing a carry out restaurant while using cost analysis /profit data.

Child Development I
MATC transcribed course CHILDD-148 (3 credits)
Credit: ½
Level: 11, 12

This course provides students with an understanding of the physical, social, emotional, and cognitive development of children from birth to age 5. Areas of study include positive guidance techniques, shaken baby syndrome, birth defects, SIDS, and careers in childcare. A lab experience in the form of a preschool is the culminating activity providing an opportunity for the students to plan and implement themed lesson plans. The goal is for students to gain knowledge of children through study and observation of developmental milestones and provide insight and opportunity for students interested in child-related careers or their own future parenting roles.
Introductions to Health Occupations
Credit: ½
Level: 10, 11, 12

This course will provide an orientation to the healthcare field. Areas of study include the history and trends of the healthcare field, legal and ethical responsibilities, personal and professional qualities of a healthcare worker, medical terminology, cultural diversity, geriatric care and employability skills. A blend of guest speakers, field trips and opportunities for job shadowing will provide a well-rounded view of the healthcare field.

Fashion and Fabrics I
Credit: ½
Level: 9, 10, 11, 12
Fees: $10.00. Additional costs depending on projects chosen

Fashion and Fabrics I is designed for students who have an interest in sewing and designing their own clothes. Students will learn construction principles, reading patterns and directions and use sewing machines properly. Students will make pajama pants as their first project and then they can choose their next projects with instructor approval. Students will also learn how to upcycle used clothing and perform basic skills such as hemming and sewing on buttons.

Child Development II
MATC transcripted course CHILDD-178
(3 credits)
Credit: ½
Level: 11, 12
Prerequisite: Child Development I

Students will continue their study and observations of children with particular emphasis on health and safety, parenting skills, special needs children and the vast area of careers open to those who wish to work with or for children. Students will develop themed lesson plans for the preschool experience which will include math every day and science. After successful completion of Child Development II, students will have a grasp of what occurs in the professional Child Care setting.

Fashion and Fabrics II
Credit: ½
Level: 9, 10, 11, 12
Prerequisite: Fashion and Fabrics I
Fees: $10.00. Additional costs depending on projects chosen

This class is a continuation of Fashion and Fabrics I. This course is designed for students who wish to expand their skills in clothing construction. Students should have some experience with basic sewing skills and pattern use.

Housing and Interior Design
Credit: ½
Level: 10, 11, 12

Students will learn about the elements and principles of design, the role of color, recognizing furniture styles and selecting furniture. Students will develop a design plan for a fictitious client using presentation boards, samples and scale drawings. Elements of style, color scheme, space plan, backgrounds and furniture placement are considered for their client. This is a project based class that uses a variety of activities that foster learning. Careers in interior design and related occupations are also explored.

Independent Living
Credit: ½
Level: 11, 12
Note: This course fulfills the Financial Literacy graduation requirement

A comprehensive course designed to help students explore all aspects of life: personal development, decision-making, relationships, communication and conflict resolution, managing family and dealing with crisis situations and stress. There is an emphasis on budgeting, finance, insurance, and investing. The course prepares students for future life responsibilities. The course provides practical applications to a variety of skills for living on your own.
The following courses will meet GHS math graduation requirements:
1. Accounting
2. Personal Finance
3. Applied Interdisciplinary Math (AIM)
4. Intro to Programming
**Algebra**
Credit: 1  
Level: 9, 10, 11, 12  
Prerequisite: teacher recommendation  
*Scientific Calculator (preferably TI-30X IIS) is required*

Algebra is the foundation for all upper level mathematics. The purpose of this course is to provide students with a basis for advanced mathematics and aid them in solving mathematical problems. Basic algebraic properties are developed in which the student solves equations, manipulates formulas, and learns graphing techniques. Numerous efforts are made to show meaningful relationships to the areas of science, technology, other math related areas.

**Algebra Support**
Credit: ½ per semester  
Level: 9  
Prerequisite: MAP score performance and recommendation of 8th grade teacher.  
*Scientific calculator (preferably TI-30X IIS) is required.*

Algebra Support is a course taken concurrently with an Algebra class. Students review and work on prerequisite math skills while also exploring/reinforcing algebra concepts in greater depth than a typical Algebra class would allow.

**Geometry**
Credit: 1  
Level: 9, 10, 11, 12  
Prerequisite: 70% or higher in Algebra or 70% or higher in Concepts in Algebra/Geometry and consent of previous instructor  
*Ruler and protractor, Scientific Calculator (preferably TI-30X IIS) required*

Geometry deals with an in-depth understanding of shapes, reading and writing proofs, and the applications and use for postulates and theorems. Items we will focus on are: unique properties of specific shapes in 2D and 3D; lines, planes, angles, congruency, and similarity; writing and understanding proofs; perimeter, area, surface area and volume.

**Geometry Support**
Credit: 1  
Level: 10, 11, 12  
Prerequisite: Algebra Teacher recommendation  
*Ruler and protractor, Scientific Calculator (preferably TI-30X IIS) required*

Geometry Support is a course that will be taken concurrently with a Geometry class. Students will work on prerequisite basic math skills, as determined by the teacher of the Geometry class. Students will be exploring and reinforcing Algebra concepts that are identified as necessary in the Geometry curriculum.

**Geometry Honors**
Credit: 1  
Level: 9, 10, 11, 12  
Prerequisite: Completion of Algebra with a grade of A or B along with relevant scores on the 8th grade MAPS and Forward tests.  
*Ruler and protractor, Scientific Calculator (preferably TI-30X IIS) required*

Geometry Honors is an accelerated version of Geometry. The greater depth, breadth and rigor of the course is intended to prepare students for success in future math courses and eventually Calculus and AP Statistics. The course is designed for students with a strong mathematics background and who have a willingness to work hard and be ready to accept a challenge.

**Advanced Algebra**
Credit: 1  
Level: 9, 10, 11, 12  
Prerequisite: Algebra and consent of previous instructor.  
*Graphing calculator (TI-83 or TI-84, preferably not a Casio model) is required*

This course begins with a review of linear equations (solving and graphing) and then transitions to higher degree equations such as parabolas and hyperbolas. Some advanced topics are: solving systems of equations by several methods, functions and their inverse, radicals, complex numbers, and conic sections (parabolas, ellipses and hyperbolas). This course allows the student to broaden algebraic principles developed in Algebra and prepares the student for advanced and college preparatory classes.
Functions, Statistics & Trigonometry
Credit: 1
Level: 11, 12
Prerequisite: 75% or higher in Advanced Algebra and consent of previous instructor
Graphing calculator (TI-83 or TI-84, preferably not a Casio model) is required

The purpose of this course is to provide students with a strong mathematical foundation in preparation for college or upper level high school mathematics. It is primarily intended to be a 4th year math class. The first part of this course will cover functions and their graphs: polynomial, rational, logarithmic, and exponential. The second phase will focus on Trigonometry/Analytic Geometry: right triangle properties, trigonometric functions and graphs, inverse trig functions, conics and polar equations. In the Probability/Statistics portion of the course, the following topics will be covered: counting principles, permutations, combinations, data collection and analysis.

AP Statistics
Credit: 1
Level: 11, 12
Prerequisite: completion of Pre-Calculus and consent of previous instructor
Graphing calculator (TI-83 or TI-84, preferably not a Casio Model) is required and AP test (optional)

This class is highly recommended for college-bound students planning to enter into the health science, social science or business fields. The course covers the language and methods of probability and statistics in the areas of sociology, business, ecology, economics, education, medicine, psychology and mathematics. Several different methods for describing sample data are presented. Measures of central tendency and variation are included. Rules of probability and probability distributions lead into the normal distribution and properties of the normal curve. Sampling techniques, which include simulation and experiment design, and hypothesis testing are stressed in the second half of the course. Students are exposed to many different methods for analyzing data for causation and strength of relationship between two variables.

Pre-Calculus
Credit: 1
Level: 10, 11, 12
Prerequisite: Completion of Advanced Algebra and consent of previous instructor
Graphing calculator (TI-83 or TI-84, preferably not a Casio model) is required

This course covers advanced mathematical topics such as: basic functions, trigonometry, exponential & logarithmic functions, vectors, matrices, sequences/series, statistics, and limits. This course prepares the student for AP Stats and/or AP Calculus AB. Some high-achieving students may take AP Calculus BC upon completion of this course.

AP Calculus AB
Credit: 1
Level: 11, 12
Prerequisite: Satisfactory completion of Pre-Calculus and consent of previous instructor.
Fees: $25.00 for a workbook and solution key. A graphing calculator is required (TI-83 or TI-84, preferably not a Casio model) AP test fee (optional)

This course is designed to work with functions and understand the connections geometrically, numerically, analytically, and verbally. Topics include limits, derivatives and integrals. Upon completion, students will be prepared to perform adequately on the AP exam in May.

AP Calculus BC
Credit: 1
Level: 11, 12
Prerequisite: Satisfactory completion of Pre-Calculus or AP Calculus (AB) and consent of previous instructor
Fees: $25.00 for a workbook and solution key. A graphing calculator is required (TI-83 or TI-84, preferably not a Casio model), AP test fee (optional)

Units covered include a complete review of material taught in the AP Calculus (AB) course, an introduction to the basic concepts of series, sequences, parametric, vector, and polar functions. The course emphasizes a multi-representational approach to calculus, with concepts, results, and problems being expressed geometrically, numerically, analytically, and verbally. AP Calculus (BC) is concerned with continuing the students' understanding of the concepts of calculus and providing experience with its methods and applications.
**MUSIC**

**Concert Band**
Credit: 1  
Level: 9, 10, 11, 12

Concert Band is open to band students that are freshman and older. Students who have some experience in music but not band specifically or who have not been in band for a while are also welcome but should plan to schedule a conference with the instructor to schedule a few private lessons before the first band class. Concert Band is a year-long course which focuses on the development of music fundamentals and concepts of musicianship. Students in Concert Band come together with the members of Symphonic Band to form our Pep Band and Marching Band. Students perform in concerts, solo and ensemble activities, music festivals, assemblies, parades, at athletic events, musicals and special events. In addition, the band will be offered the opportunity to travel and perform in other parts of the country (or internationally!) about every other year participating in various festivals, contests, and exploring new cultures and performance opportunities. Each student will take regular private and/or small group lessons with the band director.

**Symphonic Band**
Credit: 1  
Level: 10, 11, 12

Sophomores and older are allowed into our Symphonic Band by audition. This is a year-long course which builds on the skills and musicianship developed in Concert Band. Students in Symphonic Band come together with the members of Concert Band to form our Pep Band and Marching Band. Students perform in concerts, solo and ensemble activities, chamber groups, music festivals, assemblies, parades, athletic events, musicals and special events. In addition, the band will be offered the opportunity to travel and perform in other parts of the country (or internationally!) about every other year participating in various festivals, contests, and exploring new cultures and performance opportunities. It is expected that each student will continue his/her individual progress by participating in a regular private and/or school small group lesson program offered throughout the year. The music literature studied in this advanced ensemble demands a high level of technical skill, musicianship and leadership from every member.

**Jazz Ensemble**
Credit: ½  
Level: 9, 10, 11, 12  
Prerequisite: Audition each Spring

Jazz Ensemble provides instruction in the idiom of jazz which includes, but is not limited to the study of: the blues, salsa, mambo, tango, bossa nova, bebop, hard bop, rhythm and blues, funk, funk-rock, ECM, the shuffle, big band dance, ballads, and swing. The goal is to give students an opportunity to study and perform high quality jazz ensemble literature and to teach students the basics of improvisation within the jazz idiom. The Jazz Ensemble employs traditional instrumentation including: trumpets, trombones, saxophones, and rhythm section (drums, aux/vibes, bass, guitar and piano). The group performs in community events, concerts, and at jazz festivals across the midwest.

**Chorale**
Credit: 1  
Level: 9, 10, 11, 12  
Fees: $8.00 workbook

Chorale is a non-auditioned, open mixed ensemble. This ensemble is ideal for students who have limited or no previous experience in a high school choral setting and want to learn about basic choral singing through performance. Introduction to correct vocal techniques, sight reading, and basic music theory are covered, in addition to singing a wide variety of music. Students perform 4 required concerts a year (Fall, Winter, Spring, and Chili Day). Students also have the opportunity to participate in the Wisconsin School Music Association Solo and Ensemble music festival in March.
Concert Choir
Credit: 1
Level: 10, 11, 12
Prerequisite: Audition and instructor placement is required
Fees: $9.00 workbook

Concert Choir is an audition based, advanced level mixed ensemble. This ensemble is ideal for students who have a minimum of one year high school choral experience and want to explore advanced choral singing through performance. Students perform 4 required concerts a year (Fall, Winter, Spring and Chili Day). Students also have the opportunity to participate in the Wisconsin School Music Association Solo/Ensemble music festival in March and audition for the state honors choir.

Camerata
Credit: 1
Level: 10, 11, 12
Prerequisite: Audition and instructor placement is required
Fees: $9.00 workbook

Camerata is an auditioned based, intermediate women's ensemble. This ensemble is ideal for students who have a minimum of one year high school choral experience and want to explore advanced choral singing through performance. Students perform 4 required concerts a year (Fall, Winter, Spring and Chili Day). Students also have the opportunity to participate in the Wisconsin School Music Association Solo/Ensemble music festival in March and audition for the state honors choir.

Music Theory
Credit: ½
Level: 11, 12

Students must also be enrolled in band or choir. In this class we will study the basics of music theory and notation. Activities will include written and aural examples of concepts. Content includes notation (pitch & rhythm), scales, keys, intervals, chords, melody, texture, and form. Students will learn to apply musical knowledge to become better at identifying and using the correct written and aural application of music within the western context.

AP Music Theory
Credit: ½
Level: 11, 12
Prerequisite: Music Theory
Fees: AP exam (optional)

Students must also be enrolled in band or choir. In this class we will study advanced topics of music theory and notation. Activities will include written and aural examples of concepts. Content includes composition, harmonic progression, seventh chords, and modulation. Students will complete the semester by writing their own music composition. This course is for any advanced music student but is strongly recommended for students who seek to complete a collegiate major or minor in music. Students will learn to apply musical knowledge to become better at identifying and using the correct written and aural application of music within the western context. The class also prepares students to take the Advanced Placement test in May. Receiving a passing grade on the test can earn a student up to 10 college credits.

Fundamentals of Theatre
Credit: ½
Level: 11, 12

Designed for students who have an interest in theatre. This class will provide an introduction to reading and writing scripts, directing, acting and theatre technology. Class members will be given hands on experience with many aspects of theatre tech including lights, sound, hair, makeup, set design and stage management. Students will also receive experience in writing, performing and directing scenes. Students will develop a well-rounded theatrical experience that will instill an appreciation for the theatre arts as well as prepare them for participation in theatrical experiences.
High School Requirements:
1.5 credits of Physical Education and .5 Credits Health

Students will participate in a variety of health-enhancing physical activities to promote a healthy and active lifestyle. They will demonstrate responsible personal and social behavior by exhibiting self control, cooperative skills, appropriate sports related behavior, and regard for safety.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Courses</th>
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<tbody>
<tr>
<td>9th Grade</td>
<td>Health, Phy Ed 9</td>
</tr>
<tr>
<td>10th Grade</td>
<td>Net Games, Officiating, Outdoor Adventure, Personal Fitness I, Personal Fitness II, Strength Training I, Strength Training II, Team Sports</td>
</tr>
<tr>
<td>11th Grade</td>
<td>Net Games, Officiating, Outdoor Adventure, Personal Fitness I, Personal Fitness II, Strength Training I, Strength Training II, Team Sports</td>
</tr>
<tr>
<td>12th Grade</td>
<td>Net Games, Officiating, Outdoor Adventure, Personal Fitness I, Personal Fitness II, Phy Ed 12, Strength Training I, Strength Training II, Team Sports</td>
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</tbody>
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Health
Credit: ½
Level: 9

This course is designed to have individuals successfully develop, establish, and achieve positive lifestyle goals. To develop health promotion and prevention of health problems. The topics discussed in this class include but are not limited to: Health Promotion, Substance use and Abuse, Nutrition and Eating Disorders, Mental Health and Wellness, as well as Human Growth and Development.

Physical Education 9
Credit: ½
Level: 9

This course is designed to develop fundamental skills in individual and team activities. An emphasis is placed on student understanding of the reason for and value of physical activities as well as current techniques. The activities in this class may include, but are not limited to: lacrosse, soccer, ultimate frisbee, volleyball, basketball, biking, tennis in-line skating, aquatics, CPR/AED training and fitness activities.
**Net Games**
Credit: ½
Level: 10, 11, 12

The emphasis of this class will focus on lifetime and recreation activities and the continued development of overall fitness. The activities in this class may include, but are not limited to: golf, tennis, badminton, pickleball, table tennis, archery, aquatics and personal fitness. Each unit will give instruction on skill, strategy and relevant fitness concepts.

**Team Sports**
Credit: ½
Level: 10, 11, 12
Fees: $25

This class will focus on lifetime and recreational activities and the continued development of overall fitness. The activities in this class may include, but are not limited to: softball, cooperative games, floor hockey, ultimate frisbee, basketball, lacrosse, bowling, curling, speedball, team handball, volleyball, flag football, soccer, aquatics and badminton.

**Personal Fitness 1 & 2**
Credit: ½
Level: 10, 11, 12

This course investigates personal fitness and wellness. Students will engage in a variety of activities that improve cardiovascular endurance, muscular strength, muscular endurance and flexibility. An emphasis is placed on students developing a basic understanding of a variety of exercise techniques. Activities in class include, but are not limited to: yoga, kettlebell workouts, fitness activities, weight training, and aquatics.

**Strength Training/Conditioning 1 & 2**
Credit: ½
Level: 10, 11, 12

Students will learn about human movement science while also participating in a wide variety of weight training, strength training and conditioning activities. Students will explore human muscle anatomy, various exercise tests, performance training and other alternative methods of training. The students will be in the fitness center and gymnasium training an average of four days per week, with one day of cross training.

**Physical Education 12**
Credit: ½
Level: 12
Fees: $25

Students will participate in a variety of team, individual and net sports. The emphasis in this class will focus on recreational activities. Activities in class include, but are not limited to: tennis, table tennis, badminton, basketball, floor hockey, curling, bowling, aquatic team games, volleyball, triball, softball and golf.

**Officiating**
Credit: ½
Level: 11, 12 (grade 10 with teacher approval)

This course will focus on teaching students how to officiate different sports. Throughout this course students will become a registered (WIAA) official in a sport of their choice along with learning how to officiate a variety of other sports. For each sport we learn how to officiate the students will be learning the rules to the game, proper positioning while the game is going on, how to handle situations with players, coaches, and parents, as well as other situations an official might encounter. The class will require active participation in simulated games in order to allow students to gain experience being an official. The sports that the course will focus on are, but not limited to: soccer, baseball, softball, basketball, football, and volleyball.

**Outdoor Adventure**
Credit: ½
Level: 10, 11, 12
Prerequisite: PE 9 and Health
Fees: $25

Students who have a passion for the outdoors will experience hiking, rock climbing, camping, fishing, orienteering, archery, biking, curling, kayaking, and much more. Winter lessons will include cross country skiing, snowshoeing and winter camping skills.
**Biology**
Credit: 1  
Level: 9  
Note: Biology is a required course for graduation.

Biology is the study of ecology, cell biology/microbiology, biochemistry, enzymes and metabolism, molecular biology and techniques, heredity, and evolution. Through an inquiry-based approach, students will learn to apply the concepts central to biology, while gathering and interpreting data during laboratory experiments.

**Biology Honors**
Credit: 1  
Level: 9  
Prerequisite: Teacher Recommendation

Biology Honors integrates the same topics as Biology but at an increased pace with greater depth and focus on science process (data gathering and analysis, experimental design). Students will also have increased exposure to inquiry based lab activities.

**Chemistry**
Credit: 1  
Level: 10, 11, 12  
Prerequisite: Students should have earned an A or B in Algebra and have passed Biology or obtained consensus approval by the Science Department Staff  
Fees: $20 goggles, lab book and consumables

Chemistry is the study of the structure of matter and the changes it undergoes. Some topics studied are atomic and molecular structure, chemical reactions, stoichiometry, solutions, periodic table, and gas laws. Special emphasis is placed on the chemical reactions, problem solving, periodic relationships, and the structure of the atom. Since analytical problem solving is an important part of this course, math proficiency is essential. This is a college-prep lab-intensive course.

**Chemistry Honors**
Credit: 1  
Level: 10, 11, 12  
Prerequisite: Students should have successful completion of Geometry with a B or better and have passed Biology or received consensus approval by the Science Department Staff.  
Fees: $20 goggles, lab book and consumables

Accelerated Chemistry integrates the same topics as Chemistry but at an increased pace with a greater depth and focus on mathematical applications, data analysis, and predictions. Accelerated Chemistry is highly recommended for students interested in taking AP Science courses.

**Introduction to Material Science**
Credit: ½  
Level: 10, 11  
Prerequisite: Biology  
Fees: $15 lab materials

Material Science is a lab intensive course that will focus on the fundamental relationships between the structure, properties, processing, and performance of materials. Students will engage in the study of solids, metals, polymers, ceramics/glass and composites. This course will prepare students for further physical science courses.

**Zoology/Botany**
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Minimum grade of B- each semester in Biology  
Fees: $25 (dissection materials)

Zoology/Botany will cover diversity of life, with an emphasis on zoology and botany. It will involve hands-on dissection of multiple organisms for the purpose of comparative studies of anatomical systems. Additionally, students will have access to the GHS greenhouse to grow many of their own plants for laboratory purposes. Although the focus will be on the plant and animal kingdoms, fungi and protists may also be covered.

**PLTW: Principles of Biomedical Science**
Credit: 1  
Level: 9, 10, 11, 12  
Prerequisite: Biology (or concurrent enrollment)  
Fees: $25 for consumable lab supplies and lab books.

Students investigate various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. They determine the factors that led to the death of a fictional person, and investigate lifestyle choices and medical treatments that might have prolonged the person’s life. The activities and projects introduce students to human physiology, medicine, and research processes. This course provides an overview of all the courses in the Biomedical Sciences program and lays the scientific foundation for subsequent courses. This course is designed for 9th or 10th grade students.
**PLTW: Human Body Systems**
Credit: 1
Level: 10, 11, 12
Prerequisite: Biology, Chemistry or concurrent enrollment in Chemistry. Priority will be given to students who have completed Principles of Biomedical Science
Fees: $25 for consumable lab supplies

Students examine the interactions of body systems as they explore identity, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal Manikin®, work through interesting real world cases and often play the role of biomedical professionals to solve medical mysteries.

**PLTW: Medical Intervention**
Credit: 1
Level: 10, 11, 12
Prerequisite: Biology, Chemistry or concurrent enrollment in Chemistry. Recommended completion of Principles of Biomedical Science and/or Human Body Systems and AP Biology
Fees: $25 for consumable lab supplies

Medical Intervention guides students through the life of a fictitious family as they investigate how to prevent, diagnose and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; conquer cancer; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

**PLTW: Biomedical Innovation**
Credit: 1
Level: 11, 12
Prerequisite: Successful completion of Biology, Chemistry and 2 additional PLTW courses. Highly motivated individuals who excel at project-based learning. Recommended completion of AP Biology and/or AP Chemistry
Fees: $25 for consumable lab supplies

This is the final course in the PLTW Biomedical Science sequence. Students will build on the knowledge and skills gained from previous courses to design innovative solutions for the most pressing health challenges of the 21st century. Students address topics ranging from public health and biomedical engineering to clinical medicine and physiology. They have the opportunity to work on an independent design project with a mentor or advisor from a university, medical facility, or research institution.

**NOTE FOR ALL PLTW COURSES:**
Transcribed credits are available to students from a variety of PLTW affiliated Universities throughout the United States. Most Universities require a grade of B or better as well as a proficient score on the end of course exam. Milwaukee School of Engineering (MSOE) is our regional PLTW university. The exact requirements for the score on the end of course exam vary by university. Check with individual colleges and universities for information on recognition opportunities they offer to PLTW students.

PLTW courses qualify as part of the PLTW/AP Recognition Award Program

**Environmental Science**
Credit: ½
Level: 10, 11, 12

Units are presented that include studies in the following areas: current environmental events, waste disposal, air quality, water quality, soil pollution, and endangered species. You will also help in the Testing the Waters activities at the Milwaukee River. Introductory concepts involving environmental science that go beyond biology, showing the interrelation between the student and the environment will also be included.

**Space Sciences**
Credit: ½
Level: 10, 11, 12
Prerequisite: Algebra

Space Sciences includes the study of the Earth-moon-sun system, the solar system, the galaxy and the universe. Students will learn how processes in space work, how scientists study space and how space technology affects our life on Earth. Students will be able to explain how phenomena such as phases of the moon, seasons and auroras are caused. Students will participate in hands on labs, which will at times involve the use of basic math, including ratios and other basic skills from algebra and pre-algebra. Students will learn about theoretical astronomical concepts like black holes and string theory. Students will also understand space technology, such as GPS and communications satellites, are used and how they can be affected by events in space such as solar flares. Additionally, there will be a field trip to the Planetarium for the study of space.
Geology and Earth Systems
Credit: ½
Level: 10, 11, 12
Prerequisite: None

Geology and Earth Systems is designed to interpret and understand the world around you. In order to do so, students will investigate and study the interactions between the four major Earth’s spheres, including the geosphere, atmosphere, hydrosphere and biosphere in order to explain Earth’s formation, processes, history, landscapes, how and why Earth changes over time. The course will also explore how current actions of man interact and affect Earth’s spheres leading to local and global changes. Topics to be addressed include, but are not limited to, the scientific method, mapping Earth’s surface, minerals, rocks, plate tectonics, earthquakes, volcanoes, and geologic time. Students will participate in laboratory exercises, small group activities, web based investigations, class discussions, projects, and research.

Physics
Credit: 1
Level: 10, 11, 12
Prerequisite: Advanced Algebra (or concurrent enrollment in Advanced Algebra)

Physics deals with scientific measurement, graphical analysis, the laws of motion, the effect of forces, work and energy, the properties of waves, sound, light, electricity, electrical circuits, and magnetism. This class requires almost daily use of algebra and occasional use of concepts from geometry and advanced algebra. Students will gain skills in problem solving and critical thinking. Students will work in small collaborative groups to design and complete experiments and engineering challenges. Students will frequently analyze data in a variety of graphical formats which will help prepare them for the science reasoning act test. Additionally, there will be a field trip to the Kalahari or other suitable entity for the study of motion.

AP Biology
Credit: 1.5
Level: 11, 12
Prerequisite: Biology and Chemistry; consensus approval by the Science Department staff
Fee: AP exam (optional)

AP Biology is a rigorous, year-long weighted course designed to be taught on a first-year college level. Upon completion of the course the student will be prepared to take the AP Biology Exam which, if passed, may give the student up to 10 hours college credit in Life Science. Student’s independent study of each unit is critical to their success as class time is devoted to discussion and lab activity. Units of study include:

- The process of evolution drives the diversity and unity of life
- Biological systems utilize energy and molecular building blocks to grow, reproduce, and maintain homeostasis
- Living systems retrieve, transmit, and respond to information essential to life processes
- Biological systems interact and these interactions possess complex properties

AP Chemistry
Credit: 1.5
Level: 11, 12
Prerequisite: Chemistry and consensus approval by the Science Department Staff. Physics recommended
Fees: $20 goggles, lab book and consumables; AP exam (optional)

AP Chemistry is a rigorous, year-long weighted course designed to be taught on a first-year college level. Upon completion of the course the student will be prepared to take the AP Chemistry Exam which, if passed, may give the student up to 10 hours college credit in Chemistry. Student’s independent study of each unit is critical to their success as class time is devoted to discussion and lab activity. Units of study include Stoichiometry, Thermochemistry, Electron Structure of Atoms, Chemical Equilibrium, Gases, Solubility Equilibria, Oxidation/Reduction, Electrochemistry, and Acids and Bases. This course qualifies as part of the PLTW/AP Recognition Award Program

AP Environmental Science
Credit: 1
Level: 11, 12
Prerequisite: Chemistry (or concurrent enrollment) and consensus approval by the Science Department Staff
Fees: AP exam (optional)

AP Environmental Science is a rigorous, year-long weighted course designed to be taught on a first-year college level. Upon completion of the course the student will be prepared to take the AP Environmental Science Exam which, if passed, may give the student up to 3 hours college credit in Environmental Studies. Student’s independent study of each unit is critical to their success as class time is devoted to discussion and lab activity. Units of study include Earth Systems, Biogeochemical Cycles, Soil Science, Agriculture, Ecology, Population Studies, Land Use, Energy Resources and Consumption, Global Climate Change, and Pollution. This course qualifies as part of the PLTW/AP Recognition Award Program
AP Physics I
Credit: 1
Level: 11, 12
Prerequisite: Chemistry and Pre-Calculus (or concurrent enrollment) and consensus approval by the Science Department Staff
Fees: AP exam (optional)

AP Physics I is a rigorous, year-long weighted course designed to be taught on a first year college level. Upon completion of the course, the successful student should be able to take and pass the AP Physics I Exam which, if passed, may give the student up to 5 college credits depending on the university. The course is divided into Newtonian mechanics and electricity. Extensive use of math is required. Students must be in a minimum of Advanced Math to enroll and concurrent enrollment in a calculus course is recommended. Additionally, there will be a field trip to the Kalahari or other suitable entity for the study of motion. This course qualifies as part of the PLTW/AP Recognition Award Program.
SOCIAL STUDIES

Global Studies*  
9  
1.0 credit  

US History**  
10  
1.0 credit  

Ancient History  
11, 12  
.5 credit

OR

AP Human  
Geography*  
9  
1.0 credit  

AP US History**  
10  
1.0 Credit  

Medieval History  
11, 12  
.5 credit

American Government***  
10, 11, 12  
.5 credit  

Contemporary  
World Issues  
11, 12  
.5 credit

Geography  
10, 11, 12  
.5 credit  

AP Macroeconomics  
11, 12  
.5 credit

Sociology  
10, 11, 12  
.5 credit  

AP Microeconomics  
11, 12  
.5 credit

Revolutions  
10, 11, 12  
.5 credit  

AP Psychology  
11, 12  
1.0 credit

American Issues  
10, 11, 12  
.5 credit

*Required 9th grade: Global Studies or AP Human Geography

**Required 10th grade: US History or AP US History

***Required to graduate 10th, 11th, or 12th grade: American Government
Global Studies
Credit: 1
Level: 9
Note: This course or AP Human Geography is required for graduation

Global Studies focuses on the study of physical geography, culture, history, economics and current events around the globe. The course will include studying those themes across North America, Europe, Africa, Asia and Oceania.

AP Human Geography
Credit: 1
Level: 9
Prerequisite: Recommendation from Middle School Social Studies Teacher and Parent Permission
Fees: AP exam (optional)

This course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth’s surface. Students employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. Students will learn about the methods and tools geographers use in their science and practice. On successful completion of the course the students should be able to: use and think about maps and spatial data, understand and interpret the implications of associations among phenomena in places, recognize and interpret at different scales the relationships among patterns and processes, define regions and evaluate the regionalization process, characterize and analyze changing interconnections among places. Interested students may take the Advanced Placement Human Geography examination in the spring.

American Government
Credit: .5
Level: 10-12
Note: This is a required course for graduation

This course focuses on the formation and purposes of governments as well as the creation, organization and powers of the Legislative and Executive Branches of the Federal Government. This course also focuses on the Federal Judiciary, rights and responsibilities as a citizen. The purpose of this class is to acquaint the student with an understanding of the institutions of democracy and the organizations of the Executive, Legislative, and Judicial branches.

U.S. History
Credit: 1
Level: 10
Note: U.S. History or AP U.S. History is required for graduation

A study of the major historical events from approximately 1861-1933 is presented in the first semester and a study of the major historical events from 1933 to the present is presented in the second semester. In both semesters a special effort is made to correlate the influences of the political, social, and economic factors to our world today. This final required social studies class is designed to give students a broad understanding of our nation’s history. It primarily deals with our history from the post Civil War/Reconstruction era to the present. This course focuses on the diversity of our history in the last century. The course will look at the various problems our country has faced and how we have solved them.

AP U.S. History
Credit: 1
Level: 10
Prerequisite: recommendation of Freshman Social Studies teacher
Fees: AP exam (optional)
Note: U.S. History or AP U.S. History is required for graduation

The AP U.S. History course is designed to provide students with the analytical skills and factual knowledge necessary to deal critically with the problems and materials in U.S. History. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full year college introductory courses. Students should learn to assess historical materials and their relevance to a particular historic problem. AP U.S. History will help students develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in essay format.

Note: There will be an additional expectation of summer reading and an assessment on the first week of class.
Sociology
Credit: ½
Level: 10, 11, 12

Basic Sociology including sociological technique and research, culture, groups, personality, social class and the family. Students will analyze social problems and issues to better understand behavior. Students will learn to factually and rationally discuss the problems and issues of human behavior. Students will learn through discussions, case studies, videos, simulations, etc. explore and seek to understand other people's points of view. Students will learn to listen to controversial issues, gather data, and factually not emotionally respond to issues.

Ancient History
Credit: ½
Level: 11, 12

Early Human development, Egyptian Society, Mesopotamian Society, Greek Society, and Roman Society are examined. Students will be able to develop a system of note taking that allows them to prepare for comprehensive single question essay question tests. Students will analyze various procedures for preparing and taking an essay test as a means of finding a system that will work for them in content oriented college courses. Students will be graded on not only the essay's content but on the form of the essay itself. A paper of 1200 - 1500 words, with three to four sources, and in appropriate college term paper style is also required. This course is recommended for the college-bound student.

Medieval History
Credit: ½
Level: 11, 12

A study of the political, social, and economic development of people and their society from the Fall of Rome up to the Renaissance. Requires research papers and a creative writing assignment. Students will analyze various medieval writings including biographies, essays, journals, etc.; comparing and contrasting the ideas found in those writings to modern day concepts. Students will be able to describe medieval life and thought in broad categories, supporting this with facts found in the readings. Students, ultimately, will be able to describe the Medieval World in the context of people and ideas noting, those ideas that were unique to that era and those that are common to humanity at any time.

Revolutions
Credit: ½
Level: 11, 12

This is a thematic global studies course. Major historical examples, such as the French and Russian Revolutions, will be used as case studies to learn the different signs and stages of revolution and examine political and social impacts on modern society. This course will focus on individualized student research, discussion, debate, essay writing, and various notetaking and study skills to prepare for college-level courses.

American Issues
Credit: ½
Level: 10, 11, 12

This course will help develop an ability to rationally discuss current issues in American policy from a factual and research base not an emotional base. Reading, debate, library research, and small group discussion are emphasized in this class. Students will use current event materials and will explore important trends in modern America. Students will analyze our country today focusing on current events.

Contemporary World Issues
Credit: ½
Level: 11, 12

Students will learn how to use current information and historical background to make reasoned judgments about current problems and issues in the world. Students will seek through research, discussion and lecture to understand others points of view concerning contemporary world issues. Students will have a greater awareness and appreciation for the global climate in which they live and be aware of current occurrences across the globe. The course provides background on U.S. foreign policy and the people and organizations which shape it. Students will have an understanding of problems facing the world today, as well as, a historical understanding for conflict in different regions of the world.

Geography
Credit: ½
A study of the history of the social, economic, and political structure of nations of several continents and countries of the World. Examples: Africa, U.S.A., South Asia, Australia, etc. In the process of studying these nations and their locations, the history of each culture is stressed. A special emphasis is given to the many cultures that have enriched the U.S. Students will review map-reading skills and be able to locate the major landforms and countries on a map and globe. Students will analyze through videos, films, articles, and projects the great diversity of cultures in the world today, determining those things that are similar in all cultures and those things that may differ from culture to culture.

**AP Macroeconomics**
Credit: ½
Level: 11, 12
Fees: $10, AP exam (optional)

The purpose of Macroeconomics is to provide students a thorough understanding of GDP, unemployment, inflation, the role of consumers, business, and government in the macro economy, international trade, taxes, the Federal Reserve, national debt, and the deficits. Students will focus on problem solving and critical thinking skills in this course. Serious economic problems such as national debt, inflation/stagflation, recession, depression, trade imbalance, taxing and savings rates, banking reform, etc. will be explored with potential solutions to the economic problems presented. Students will be tested based on their ability to logically apply various economic theories to real world problems.

**AP Microeconomics**
Credit: ½
Level: 11, 12
Prerequisite: AP Macroeconomics
Fees: $10, AP exam (optional)

In Microeconomics, the study of the laws of supply and demand are expanded and focused on, the role of business and markets, theory of the firm and factors of production, choices between Wages, Labor, and Capital, Externalities, Public v Private Goods, Tax Shifting. Students will focus on problem solving and critical thinking skills in this course. Various microeconomic concepts such as individual and business supply/demand, elasticity, and markets will be explored with potential solutions to economic problems presented using marginal analysis. Public and private goods as well as taxes and their impact will also be studied. Students will be tested based on their ability to logically apply various economic theories to real world problems. Students will have the opportunity to take two AP exams, Microeconomics and Macroeconomics, in May.

**AP Psychology**
Credit: 1
Level: 11, 12
Fees: AP exams (optional)

The goal of this course is to examine the mental processes and behaviors of individuals in society today. It is a college level course that students can earn 3 college credits if they take and pass the AP Psychology exam. Topics vary from the physiological workings of the brain and nervous system-to the abstract workings of the mind. Historical study will be included focusing on the works of a variety of early Psychologists. The course will also study development, motivation, emotion, consciousness, learning, and memory. Units dealing with abnormal psychology, treatment, and social psychology will tie many of the different ideas together. The course includes an emphasis on content knowledge and application, requiring high level thinking skills and an in depth approach to the material. This course is recommended for all college-bound students.
TECHNOLOGY AND ENGINEERING

AUTOMOTIVE

Tech & Engineering 9 1 credit*
- Air Cooled Engines .5 credit 10, 11, 12
- Auto Service .5 credit 10, 11, 12
- Auto Diagnosis .5 credit 11, 12
- Systems Repair 1 credit 12
- Adv. Auto Tech 1 credit 12

DESIGN

Tech & Engineering 9 1 credit*
- Architectural Design I .5 credit 10, 11, 12
- Architectural Design II .5 credit 10, 11, 12
- IS Architectural Design .5 credit 11, 12

CONSTRUCTION

Tech & Engineering 9 1 credit*
- Wood Machines 1 .5 credit 10, 11, 12
- Wood Machines 2 .5 credit 10, 11, 12
- Residential Construction I .5 credit 11, 12
- Residential Construction II .5 credit 11, 12
- IS Cabinetmaking .5 credit 12
- IS Construction .5 credit 12

PRODUCTION

Tech & Engineering 9 1 credit*
- Welding Tech. I .5 credit 10, 11, 12
- Welding Tech. II .5 credit 10, 11, 12
- Machine Tool Tech .5 credit 10, 11, 12
- Adv. Machine Tool Tech .5 credit 10, 11, 12
- Metal Forming .5 credit 10, 11, 12
- Vocational Metals .5 credit 12

ENGINEERING

PLTW: Introduction to Engineering Design 9, 10, 11, 12 1.0 credit
- PLTW: Principles of Engineering 1 credit 10, 11, 12
- PLTW: Computer Integrated Manufacturing 10, 11, 12 1.0 credit

*Tech & Engineering 9 is one year course which incorporates units in Automotives, Drafting, Woods & Metals.

Check course descriptions for pre-requisite exceptions for juniors and seniors.

Recommended Engineering Sequence:

PLTW: IED→PLTW: POE→PLTW: CIM
Technology & Engineering 9
Credit: 1 (four 9-week segments)
Level: 9
Fees: $35 lab materials

This course is a study of the technologies used in business and industry. Every nine weeks the students will experience a different area of technology. They will study metals and manufacturing, power and transportation, woodworking, and computer-aided drafting and design. They will learn by operating hand tools, machinery, equipment, and software in each area.

PLTW: Introduction to Engineering Design
Credit: 1
Level: 9, 10, 11, 12
Fee: $20 lab Materials

This is the first PLTW course in the Engineering career pathway. Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3-D modeling software, and use an engineering notebook to document their work. This course will provide students interested in an engineering pathway the opportunity to explore possible engineering careers.

PLTW: Principles of Engineering
Credit: 1
Level: 10, 11, 12
Fee: $20 lab Materials
Note: This course may be used as the 3rd science credit for graduation.

Principles of Engineering is a team-based advanced course providing opportunities for students to explore engineering content related to energy, Power, materials, Control systems, robotics and Statistics. Students will apply engineering related math and science while completing activities and projects. This course will provide students interested in an engineering pathway the opportunity to explore possible engineering careers.

PLTW: Computer Integrated Manufacturing
Credit: 1
Level: 10, 11, 12
Fees: $20

This course illuminates the opportunities related to understanding manufacturing. At the same time, it teaches students about manufacturing processes, product design, robotics, and automation. Students will explore how CNC machines and robots are utilized to produce a manufactured product. This course will provide students interested in an engineering pathway the opportunity to explore possible engineering careers.

Wood Machine Processes I
Credit: ½
Level: 10, 11, 12
Fees: approximately $35 for materials

The student will develop an understanding of the basic wood machine procedures and safety of machines. The student will become acquainted with the occupational requirements related to the woodworking field. The student will work on one assigned project and one self-designed project. Career Pathways in designing, planning, managing, building and maintaining the built environment will be emphasized.

Wood Machine Processes II
Credit: ½
Level: 10, 11, 12
Prerequisite: Wood Machine Processes I
Fees: approximately $35 for materials

The student will develop an understanding of the more advanced wood machine procedures and safety of the machines. The student will become acquainted with the occupational requirements related to the cabinetmaking field. The student will work on one self-designed project. Career Pathways in designing, planning, managing, building and maintaining the built environment will be emphasized.
Residential Construction I  
Credit: ½  
Level: 11, 12  
Prerequisite: Wood Machine Processes II or senior standing  
Fees: $30

The student will work on a "mock-up" of a single story ranch house. The student will be able to estimate the cost for building a house. The student will experiment with all phases of rough construction including: foundations, framing of floors, walls, doors/windows, ceilings, and roofs. The student will develop the ability to read and interpret blueprints. Career Pathways in designing, planning, managing, building and maintaining the built environment will be emphasized.

Residential Construction II  
Credit: ½  
Level: 11, 12  
Prerequisite: Residential Construction I

The student will work on a "mock-up" of a single story ranch house. The student will experiment with all phases of finish construction work including: basic electrical wiring, basic plumbing, interior finished wall coverings, window/door installations, advanced roof framing, roof coverings, and siding. Career Pathways in designing, planning, managing, building and maintaining the built environment will be emphasized.

Independent Seminar-Cabinetmaking  
Credit: ½ or 1  
Level: 11, 12  
Prerequisite: Wood Machines Processes I & II, Mechanical Design, and teacher approval  
Fees: varies depending on project

The student will have the opportunity to explore advanced areas of study related to the cabinetmaking field. The student and the instructor will decide, in advance, the area or areas to be studied. The student will have the opportunity to observe the operation of a cabinet shop within the community.

Independent Seminar-Construction  
Credit: ½ or 1  
Level: 12  
Prerequisite: Residential Construction I and II, Architectural Drafting, and teacher approval

The student will have the opportunity to explore advanced areas of study related to the construction field. The student and the instructor will decide, in advance, the area or areas to be studied. The student will have the opportunity to observe the operation of a residential construction company within the community.

Metal Forming  
Credit: ½  
Level: 10, 11, 12  
Fees: $20 project fee

This is an entry-level course designed to give students an understanding of basic machining and metalworking processes. Students will develop machining skills and knowledge necessary for manufacturing and engineering careers. Class projects may include: tic-tac-toe game, c-clamp, dice, and a handcart. Metal Forming is recommended for all students, especially those looking to pursue a career in engineering or take part in a youth apprenticeship.

Welding Technology 1  
This course is part of a 3 semester articulation agreement with MATC. Upon completion, students can earn up to 7 credits for MATC.

Credit: ½  
Level: 10, 11, 12  
Fees: $20 lab materials. Student must furnish approved welding gloves

Students will explore the following weld processes with main emphasis on GMAW: SMAW (ARC Welding), Oxy-Fuel – Cutting, GMAW (Mig Welding), GTAW (Tig Welding), and CNC plasma Cutting. Course content will explore Career Pathways related to manufacturing, and develop the entry level skills needed to pursue a Youth Apprenticeship at a local manufacturing company. This course is designed to teach students the fundamentals of welding in a wide range of positions. All students will work towards completion of entry level welding standards. Students will build a race car chassis for a Formula High School Racecar.

Welding Technology 2  
This course is part of a 3 semester articulation agreement with MATC. Upon completion, students can earn up to 7 credits for MATC.

Credit: ½  
Level: 10, 11, 12  
Fees: $20 lab materials. Student must furnish approved welding gloves

Students will explore the following weld processes with main emphasis on GMAW: SMAW (ARC Welding), Oxy-Fuel – Cutting, GMAW (Mig Welding), GTAW (Tig Welding), and CNC plasma Cutting. The course will place an emphasis on welding in vertical positions. Major course project includes completion and operation of a Formula High School race car. All students will work towards mastery of entry level welding standards that can
lead to manufacturing youth apprenticeship opportunities and competition in Skills USA Welding Events.

**Machine Tool Technology**
Credit: ½  
Level: 10, 11, 12  
Fees: $20 project fee

This is an entry-level course designed to give students a basic understanding of computer aided machining processes (CNC). Students will use a variety of software to design and program parts machined on a CNC mill. Machine Tool Technology is recommended for all students, especially those looking to pursue a career in engineering or take part in a youth apprenticeship.

**Advanced Machine Tool Technology**
Credit: ½  
Level: 10, 11, 12  
Prerequisite: Machine Tool Tech or Metal Forming  
Fees: $20 project fee

This is an advanced level course designed to give students a deeper understanding of computer aided machining processes (CNC). Students will use a variety of software to design and program parts machined on a variety of CNC machines. Advanced Machine Tool Technology is recommended for all students, especially those looking to pursue a career in engineering or take part in a youth apprenticeship.

**Vocational Metals**
Credit: ½  
Level: 12  
Prerequisite: Advanced Machine Tool Technology and Welding  
Fees: $40 project fee

This is an advanced level course designed to utilize all areas of the manufacturing lab. Project options for this course will require students to choose one of the following: Formula High School race car or Battlebot. Students will then take prior knowledge gained in GHS machining classes to create/modify advanced parts such as a front independent suspension or Battlebot weapon system. Each student will meet with the instructor prior to the beginning of the school year, and jointly develop an individualized learning plan that the student will follow depending on which scheduling option has been selected.

This course is part of a 3 semester articulation agreement with MATC. Upon completion, students can earn up to 7 credits for MATC.

Credit: ½ or 1  
Level: 11, 12  
Prerequisite: Welding 2 and teacher approval  
Fees: Varies depending on projects

The student will have the opportunity to explore advanced areas of study related to a career in the welding field. The student and instructor will decide, in advance the area or areas to be studied, and projects to be completed. Student will finish up course work related to MATC Articulation agreement in welding. Upon completion, student will have earned: 2 MATC credits for blueprint reading and 5 MATC credits for GMAW.

**Independent Seminar - Machining**
Credit: ½ or 1  
Level: 12  
Prerequisite: Advanced Machine Tool or Vocational Metals and teacher approval  
Fees: Varies depending on projects

The student will have the opportunity to explore advanced areas of study related to a career in the machining field. The student and instructor will decide in advance the area or areas to be studied, and projects to be completed.

**Air-Cooled Engine Technology**
Credit: ½  
Level: 10, 11, 12  
Fees: $10 lab materials plus any personal engine parts needed

Students will perform disassembly, measuring, testing, diagnosis, repair, and reassembly of power equipment and air-cooled engines. Tests on current production engines will be emphasized. The student will learn the operational characteristics of both 2 stroke-cycle and 4 stroke-cycle engines. A special emphasis on electrical engine systems and transaxles will be included in the subject matter. Students will also be introduced to the concepts considered in engineering an internal combustion engine. Students may service their own engines and will work on shop engines that are in the 2 through 20 horsepower range. This class is taken in preparation for Auto Diagnosis, Systems Repair and Advanced Auto Tech.

**Independent Seminar – Welding 3**
Credit: ½
Learned F 10, 11, 12
Fees: $10 lab materials

This is an entry-level course in the study of the automobile and its systems. It will meet the needs of the students who just want to know more about the motor vehicles they will be driving, as well as the first course in the full progression of the automotive technology program. This course requires no previous mechanical experience. Students will learn through a combination of regular class work (written assignments, lectures, discussions, and tests) and hands-on lab activities, based on NATEF Standards. By using professional service and testing equipment, the student will become safe and lightly skilled at routine service and maintenance of automobiles. Career Pathways in transportation, distribution, and logistics will be emphasized. Auto body work is not covered in class. This class is a prerequisite for Auto Diagnosis, Systems Repair and Advanced Autos.

**Auto Diagnosis**
Credit: ½
Level: 11, 12
Prerequisite: Final grades of "C" or better in both Air-Cooled Engine Technology and Auto Service. Instructor approval needed.
Fees: $10 lab materials

This is an advanced level course that is strictly "driveability-oriented". There is a heavy emphasis on electrical and electronic theory. The student will learn diagnostic procedures involving the use of professional test equipment such as oscilloscopes, digital volt-amp-ohm meters, infrared exhaust analyzers, computer scan tools, precision measuring tools, and a variety of pressure, vacuum, leakage, temperature and sound testing devices. There is as much theory as there is hands-on emphasis in this course. It is designed for the student seriously considering a career in some type of repair, engineering, or testing of automobiles and their systems. Content is based on NATEF Standards and accomplishing ASE tasks A4 & A5 is a major emphasis. Career Pathways in transportation, distribution, and logistics will be emphasized. This class is taken in preparation for Systems Repair and Advanced Auto Tech.

**Auto Systems Repair**
Credit: 1 (1st semester/every day)
Level: 12
Prerequisite: Final grades of "C" or better in Air-Cooled Engine Technology, Auto Service and Auto Diagnosis. Instructor approval needed.
Fees: $10 lab materials

Auto Systems Repair lightly covers all previously learned diagnosis and testing of vehicle systems. In addition, the new emphasis is on steering, suspension, brake and chassis systems. Students will learn repair and service procedures on anti-lock brake systems, will perform front wheel alignments, tire mounting and balancing and replacement of major steering and suspension components. This is truly a class that is concerned with performing major vehicle repairs. Content is based on NATEF Standards and accomplishing ASE tasks A4 & A5 is a major emphasis. Career Pathways in transportation, distribution, and logistics will be emphasized. Since this is a first semester-senior class, selection for automotive competitions is made from the students enrolled in this class. A high ability level and an interest in an automotive career is a usual characteristic of a student taking this advanced level course. This class is taken in preparation for Advanced Auto Tech.

**Advanced Autos**
MATC
Credit: 1 (2nd semester/every day)
Level: 12
Prerequisite: Final grades of "C" or better in Auto Service, Auto Diagnosis, and Auto Systems Repair. Instructor approval needed.
Fees: $10 lab materials

The course covers automotive engine overhaul, manual transmission and clutches, automatic transmission, air conditioning theory. It is expected that all information and skills from prerequisite courses be able to be applied during Advanced Auto Tech labs. The class offers at least one hour every day of lab time since more intense projects such as engine and transmission overhauls will be attempted. Students enrolled in this class will be required to perform high quality vehicle service in a time frame that is competitive with industry flat rate. Students in automotive competitions are required to be enrolled in this class. Content is based on NATEF Standards and accomplishing ASE tasks A1, A2, A3 & A7 is a major emphasis. Career Pathways in transportation, distribution, and logistics will be emphasized. Students will finalize their understanding of total vehicle repair and service. This course will prepare the student for entry level positions in the field of automotive repair. It will also give them an edge in technical college courses involving automobile service and repair. Students with career goals in mechanical engineering will also benefit from the course. During the semester, students will take the ASE Student Certification Exam that is in each ASE Area A1-A8 and G1.

**Architectural Design 1**
Credit: ½
Level: 10, 11, 12
Architectural Design 2
Credit: ½

Applied Interdisciplinary Math
Credit: ¼ per approved Tech/Engineering course
Level: 10, 11, 12

Applied Interdisciplinary Math (AIM) is a math credit embedded into select Technology and Engineering (T&E) classes. A student chooses the AIM option at the beginning of a semester with parent, teacher, and counselor approval.
During every unit of a semester-long T&E class, the student will complete additional benchmark and summative activities that apply math concepts and calculations to the technical discipline of the class. At each unit test in the T&E class there will be an AIM assessment. There will be a separate AIM final exam covering math concepts from the whole semester.

AIM will require extra time outside of the regular T&E class to study, complete homework assignments, and to do related assessments. Successful completion of AIM earns .25 math credit for each .5 credit T&E class.

Grades of B or better on both of the AIM assignments and assessments as well as the regular T&E class are required to earn the credit. Grades of C or better on both the AIM final exam as well as the regular T&E class are required to earn the credit. Assignments and assessments in both the AIM and

Independent Seminar – Arch Design
Credit: ½ or 1
Level: 11, 12
Prerequisite: Architectural Design I and II, Mechanical Design I and II teacher approval
Fees: Varies depending on projects

The student will have the opportunity to explore advanced areas of study related to the mechanical or architectural design field. The student and the instructor will decide, in advance, the area or areas to be studied. The student will work on multiple short-term projects relating to the area or areas being studied.

the regular T&E classes are expected to be completed in a timely fashion.

Students will gain an increased understanding and application of how mathematics is used in specific technology and engineering disciplines. Students will gather data, make measurements, use charts and graphs, make use of formulas, and determine action to be taken based on applying mathematics to specific T&E disciplines. AIM will help the student meet the DPI rule pertaining to math required for graduation (High School Graduation Standards Wisconsin Statute 118.33 (1) c.).

A.I.M. can be taken with the following courses:

Fees: $5 lab fee

To further acquaint students with residential architectural designs, including the designing and drawing of a residential home and a brief study of building codes, and structural symbols. Career Pathways in designing, planning, managing, building and maintaining the built environment will be emphasized.

Level: 10, 11, 12
Prerequisite: Architectural Design 1
Fees: $5 lab fee

To permit students interested in architectural drawing to further their studies in more complicated structural problems. To design electrical, plumbing and heating systems, cost analysis, modular components, specifications, and building loads. Career Pathways in designing, planning, managing, building and maintaining the built environment will be emphasized.
Spanish I
Credit: 1
Level: 9, 10, 11, 12
Fees: $15 workbook

Spanish 1 begins the study of the language and cultures of the Spanish-speaking world. Grammar and vocabulary are practiced at the introductory level with speaking, listening, reading, and writing activities. Through readings, videos, and cultural activities students begin to learn about Hispanic contributions to culture and civilization. In this class, we will use more Spanish as the year progresses.

Spanish II
Credit: 1
Level: 9, 10, 11, 12
Prerequisite: Spanish I
Fees: $19 workbook

Spanish 2 continues the study of the language and cultures of the Spanish-speaking world. Grammar, vocabulary, speaking, listening, reading, and writing skills are the focus of this course. Through readings, videos, and cultural activities, the students continue to learn about Hispanic contributions to culture and civilization. This class will be taught in Spanish with some English.

El Quinto
Level 3 course, taken right before or after Adelante
Credit: ½
Level: 10, 11, 12
Prerequisite: Spanish II
Fees: Workbook from Spanish II

All four language skills will be addressed: reading, writing, speaking and listening. Emphasis will be on paired and small group work. Through readings, videos, authentic text and cultural activities, students will continue to learn about Hispanic contributions to culture and civilizations. This course concludes with the Realidades textbook series. This class will be taught in Spanish with some English.

Adelante
Level 3 course, taken right before or after El Quinto
Credit: ½
Level: 10, 11, 12
Prerequisite: Spanish II

This course will be a comprehensive review of Spanish grammar and an introduction to advanced grammatical concepts to improve writing skills. Course content will be pronouns, verbs and their tenses, prepositions, adjectives, sentence structure, translation, and correct use of a Spanish/English dictionary. This course is designed to aid the students in a review and continuation of Spanish grammar and to improve writing skills.
**Charlemos**
Level 4 conversation course  
Credit: ½  
Level: 11, 12  
Prerequisite: El Quinto and Adelante

A major focus of the course is development of the ability to converse. We will review and add new grammar structures and vocabulary. This course will help the students be able to use Spanish orally whether in a foreign country or living and working in the United States.

**Surprising Spain**
Level 4/5 cultural course, offered every other year  
Credit: ½  
Level: 11, 12  
Prerequisite: El Quinto and Adelante

Students will study the geography, history, music, dance, food, and overall daily life and culture of Spain. This course is taught almost exclusively in Spanish. Students will continue to learn and build their vocabulary base and advanced grammar skills by reading, writing, listening, and speaking in Spanish.

Note: Students will need to cook one authentic Spanish dish with a partner or group of three during our “Foods of Spain” unit. Cost will vary depending on the recipe chosen.

**Latin American Studies**
Level 4/5 cultural course, offered every other year  
Credit: ½  
Level: 11, 12  
Prerequisite: El Quinto and Adelante

Students will study the geography, history, music, dance, food, and overall daily life and cultures of Latin American countries. This course is taught almost exclusively in Spanish. Students will continue to learn and build their vocabulary base and advanced grammar skills by reading, writing, listening, and speaking in Spanish.

Note: Students will need to cook an authentic meal with a partner or group of three during our “Foods in Latin America” unit. Cost will vary depending on recipe chosen.

**AP Spanish Language**  
Credit: ½  
Level: 12  
Prerequisite: Charlemos, Adelante, El Quinto, and both cultural classes

This course will be a comprehensive review of advanced grammatical concepts focusing heavily on the subjunctive mood in the present. This course will include a variety of authentic reading/listening sources such as: short stories, poems, proverbs, music, and a movie in Spanish. All four skills of reading, writing, listening and speaking will be covered. This class is conducted almost exclusively in Spanish.

**Hispanic Films and Literature**
Credit: ½  
Level: 12  
Prerequisite: Latin American Studies, Surprising Spain, AP Spanish Language

This course introduces students to a variety of short stories and movies from Spain and Latin America. It will provide students with ongoing and varied opportunities to further develop their proficiency across a range of language skills—with special attention to reading and writing—and to encourage students to reflect on the many voices and cultures included in a rich and diverse body of authentic literature written in Spanish and authentic film produced in Spain/Latin America. We will compare and contrast a few different film genres (surrealism, melodrama, Hollywood realism, etc.) in their Hispanic contexts. Students will study the work of renowned Latino, Spanish, and Latin American authors. Students will analyze important cultural and historical events in the films and literature (the Guatemalan Civil War, Hispanic superstitions, the Spanish/Moor conflicts, Columbian drug trafficking, etc.)

**SPANISH COLLEGE CREDIT OPPORTUNITY:**
The University of WI - Green Bay and Grafton High School have partnered up to offer students the option of earning UW credit while still in high school. To be eligible for this program, students must enter Spanish 2 as freshmen. The prerequisite is three years of high school Spanish. Students will need to sign up for and take both AP Spanish and the last cultural studies Spanish course in their senior year. Students will also sign up for Spanish 202 through the University of WI- Green Bay. If students earn an average of B or better, they will earn 3 University of WI credits and 11 retroactive credits. Any questions, please see your Spanish teacher and/or school counselor. UW Green Bay determines the cost of the 3 credits in August prior to school starting.
German 1
Credit: 1
Level: 9, 10, 11, 12

German 1 is an introduction to the language and culture of the German-speaking countries. Students are actively engaged as they learn to speak, listen, read, and write German at a basic level. Topics of study include: the classroom, time and numbers, weather and calendar, food and family, free time activities, food and clothing. Culture, geography and grammar are integrated into each unit. The Mosaik textbook and supplements are supplied to each student.

German 2
Credit: 1
Level: 9, 10, 11, 12
Prerequisite: German 1

German 2 is a continuation of German 1, making progress toward a novice high level of proficiency in both written and spoken German. Topics at this level include personal descriptions, health, city vs. country living, travel and student life which increase the use and understanding of German vocabulary and grammar, and help students identify opportunities to learn and use German outside the classroom. The Mosaik textbook and supplements are supplied to each student.

German 3
Credit: 1
Level: 10, 11, 12
Prerequisite: German 2

German 3 expands students’ listening, speaking, reading and writing skills in more creative situations, making progress toward an intermediate low to mid level of proficiency in German. Students identify opportunities to learn and use German outside the classroom, and to recognize its potential for personal growth, enrichment, and enjoyment. This class is mostly taught in German. The Mosaik textbook and supplements are supplied to each student.

AP German Language & Culture (level 5)
Credit: 1
Level: 12
Prerequisite: German 4

AP German Language and Culture is a rigorous college course designed for highly motivated students to improve their German proficiency and knowledge. Instruction is in German, with an emphasis on refining and expanding speaking, reading and writing, working toward an advanced low to mid level of proficiency. Authentic texts, films and materials are provided. Themes include: International Business, the Environment, Science and Technology, Music and Poetry, and Comparisons of Family and Society. Students will obtain skills to help qualify for professional work in various areas such as business, teaching, translating and interpreting, and become prepared to attend German courses as a college freshman.

GERMAN COLLEGE CREDIT OPPORTUNITY:
The University of Wisconsin Green Bay and Grafton High School have partnered up to offer students the option of earning UW college credit while in high school. Students sign up for German 5 their senior year and German 202 through UW Green Bay. If students earn an average of B or better, they will earn 3 credits for the UW Green Bay German 202 course and 11 retroactive credits. UW Green Bay determines the tuition in August.

GERMAN TRIP OPPORTUNITY:
A student trip to our partner school in Germany is offered every other year. All German students in good standing may participate.