



MONONA GROVE HIGH SCHOOL

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2023-2024

Monona Grove High School

Course Handbook



MGHS COURSE HANDBOOK 2023-2024

Students should plan a four-year program of courses as early in high school as possible. These choices can affect a student's ability to achieve their post-secondary educational and career goals. Every attempt should be made to plan carefully and accurately, constantly keeping in mind one's capabilities, interests, and work and post-secondary education ambitions. All students should actively seek the advice and counsel of their parents/guardians, teachers, and student services personnel in planning their four-year programs.

Planning for course selection during registration is important, as schedule changes after this time will only be considered for extenuating circumstances.

This course handbook has been prepared to help students make informed decisions. All of the courses offered at Monona Grove High School are listed and described on the following pages. We urge you to read this handbook; further information about specific courses can be obtained by talking with teachers of that course.

GRADUATION REQUIREMENTS FOR 2023-2024

1. **All students grades 9 - 11 are required to register for a minimum of 7 credits.** A minimum of 3.5 credits per semester must be maintained. **Seniors are required to register for a minimum of 6 credits.** A minimum of 3.0 credits per semester must be maintained.
2. The following credits must be successfully completed in order to receive a diploma:

English	4 credits
Math	3 credits
Science	3 credits
Social Studies	3 credits
Physical Education	1.5 credits
Health & Wellness	0.5 credit
American Government *	0.5 credit
Personal Finance	0.5 credit
<u>Additional elective credits</u>	<u>8 credits</u>
Total Credits	24 credits

* Seniors are also required to pass the Wisconsin State Civics Test.

3. It is the responsibility of the student to make sure that the course requirements in each area have been fulfilled.
4. When a course is failed and retaken a second time, both grades will be calculated in the GPA and be recorded on the transcript. Special permission must be granted from a school counselor to retake a course that was passed. Credit towards graduation will be counted only once.

MGHS FOUR-YEAR PROGRAM OF STUDIES PLANNING GUIDE

Grade 9

Semester 1	Semester 2
English 9	English 9
Math	Math
Biology	Biology
World Affairs	World Affairs
PE Level 1	Elective
Elective	Elective
Elective	Elective
Study Hall or Elective	Study Hall or Elective

Grade 10

Semester 1	Semester 2
English 10	English 10
Math	Math
Chemistry	Chemistry
World History	World History
PE Option	Health
Elective	Elective
Elective	Elective
Study Hall or Elective	Study Hall or Elective

Grade 11

Semester 1	Semester 2
English 11 or AP Lang & Comp	English 11 or AP Lang & Comp
Math	Math
Physics or AP Physics I	Physics or AP Physics I
US History or AP US History	US History or AP US History
PE Option	Elective
Elective	Elective
Elective	Elective
Study Hall or Elective	Study Hall or Elective

Grade 12

Semester 1	Semester 2
English	English
American Government or AP Government	Personal Finance
Elective	Elective
Elective	Elective
Elective	Elective
Elective	Elective
Elective	Elective
Study Hall or Elective	Study Hall or Elective

Course Selection/Registration – January/February Each Year

Students and parents should carefully consider post-secondary plans and make certain that the courses selected meet the long-term needs of the student.

- **Students should assume that the courses selected will be scheduled and should not expect to make changes at a later time.**
- School counselors will notify students if selected courses will not be offered due to low enrollment or budget constraints. Staffing and budgeting decisions for the following school year are made based on the student course selections. The master schedule is developed based upon student course selections and to create balanced classes.

Schedule Changes--Dropping and/or Adding a Course

Student schedules will be finalized in August. Parents/guardians and students will be emailed when schedules are available in Infinite Campus.

Course changes after classes begin:

1. Students can drop a class for a study hall if they maintain at least seven classes per semester (3.5 credits per semester).
2. Students can switch levels (i.e. AP US History to US History) if space is available in the new course and the rest of your schedule can accommodate the change.
3. Other change requests will be reviewed after the first four days of classes.
4. Changes will be made, after the student's school counselor or case manager receives parent/guardian approval, and if space is still available.

Days 1 – 4:

During the first four days of classes, no changes will be made.

Days 5 – 10:

Changes will be made, after the student's school counselor or case manager receives parent/guardian approval, and if space is still available. There will be no record of the course on the student's transcript.

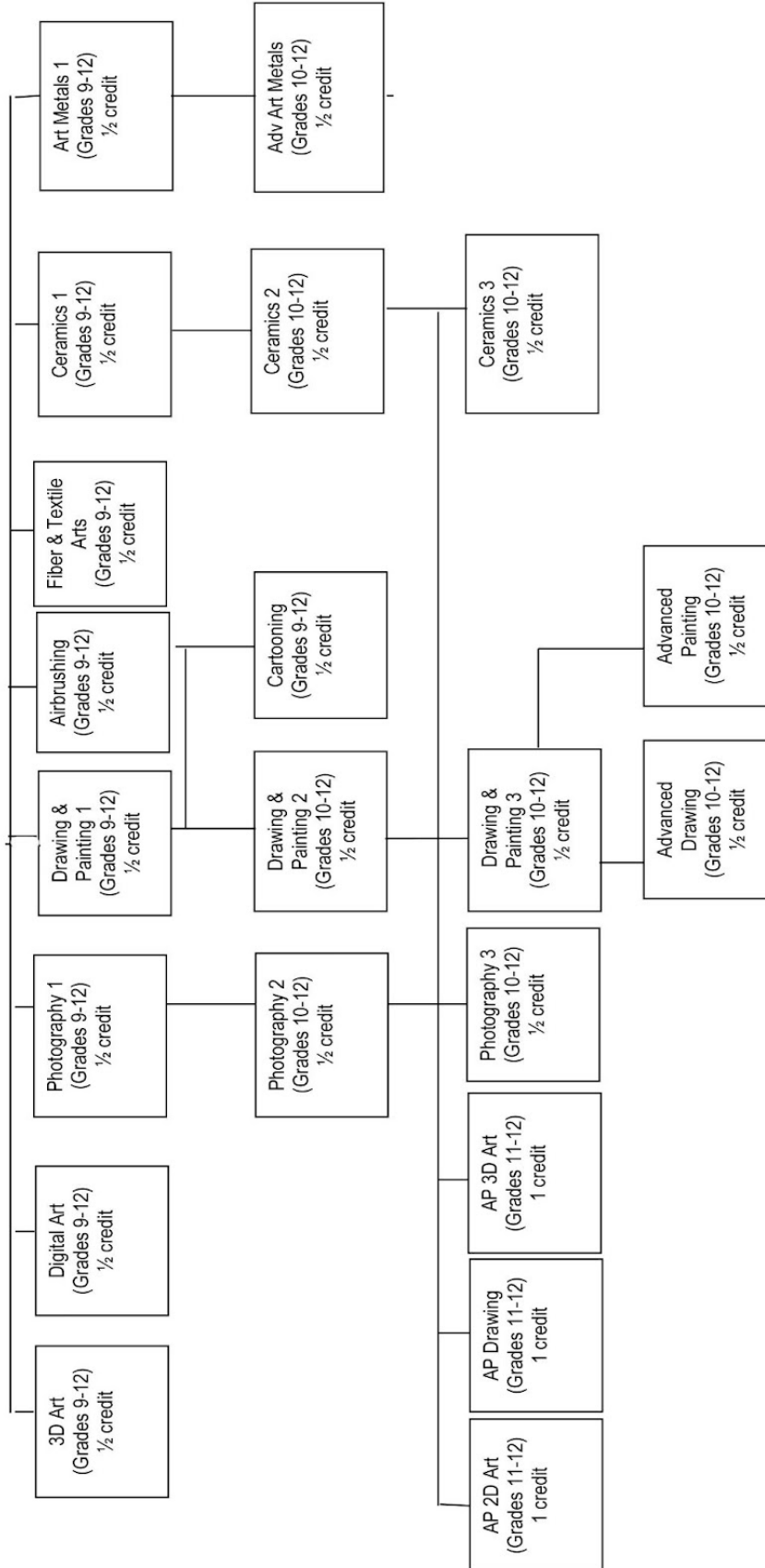
Days 11 – last day of quarter 1 or 3:

Drops will be made, after the student's school counselor or case manager receives teacher and parent/guardian approval. The student will receive a "W" on their transcript. This notation will not impact a student's GPA.

After 1st or 3rd quarter ends:

If a course is dropped after the end of first/third quarter an "F" is reflected on the student's transcript and this grade is calculated into the student's cumulative GPA.

Art



Revised 12/20/2022

ART

COURSE TITLE:	Airbrushing	(ART01220)	(Grades 9-12)	½ credit
DESCRIPTION:	This one-semester course offers students the ability to explore a medium other than those employed in traditional 2D courses offered at MGHS. Students will gain a skill set that is practical, unique and will enhance their marketability to colleges and job opportunities.			
COURSE TITLE:	Cartooning and Graphic Novels	(ART01430)	(Grades 9-12)	½ credit
PREREQUISITE:	Drawing/Painting 1			
DESCRIPTION:	This course is designed for students with a serious interest in the graphic novel art form. Through reading and analyzing existing graphic novels, the students learn what elements are involved in this media and learn how to create their own storyboards. Strong content as well as artist design is expected. Graphic Novels and 'Toon Art includes group, partner, and individual projects. The emphasis is on pencil/pen drawing, so some drawing skills will be necessary to be successful in this course.			
COURSE TITLE:	Ceramics 1	(ART01400)	(Grades 9-12)	½ credit
DESCRIPTION:	Students will engage in a beginning-level experience in handbuilt and wheel thrown projects that develop artistic techniques and aesthetic concepts in ceramics. All projects are designed to develop critical thinking, reflection, and creative problem solving while applying technical skill. Students will develop skills in creating, presenting, responding, and connecting to works of art and design. The Ceramics 1 Curriculum is consistent with the National Core Arts Standards.			
COURSE TITLE:	Ceramics 2	(ART01410)	(Grades 10-12)	½ credit
PREREQUISITE:	Ceramics 1			
DESCRIPTION:	Students will continue to explore the ceramic processes, with an emphasis on refinement of techniques and forms. Students will assist other students and take responsibility for some studio processes.			
COURSE TITLE:	Ceramics 3	(ART01420)	(Grades 10-12)	½ credit
PREREQUISITE:	Ceramics 2			
DESCRIPTION:	Students will work with complex forms and processes, including working with clay as a sculptural material in combination with other media.			
COURSE TITLE:	Digital Art	(ART01950)	(Grades 9-12)	½ credit
DESCRIPTION:	In this course, students learn to create artwork and digital illustrations through computer graphic and video programs. Students learn foundational skills in Photoshop and Adobe Illustrator. Commercial art skills will be developed in design, layout, and lettering. Previous computer experience is helpful but not necessary. This course coordinates well with Graphic Design.			
COURSE TITLE:	3-Dimensional Art	(ART01110)	(Grades 9-12)	½ credit
DESCRIPTION:	This course is an introduction to major concepts and techniques for working in 3-dimensional art. Basic sculptural techniques are explored through creating projects using a variety of media. Success in this course is not dependent upon representational sculpting skills, but does require an ability to work independently as well as a willingness to explore. The 3D Art Curriculum is consistent with the National Core Arts Standards.			
COURSE TITLE:	Drawing and Painting 1	(ART01100)	(Grades 9-12)	½ credit
DESCRIPTION:	This course is a prerequisite to all subsequent 2-Dimensional Art courses. This course is a general introduction to major concepts and techniques needed for drawing and painting. Experience and basic skills in these areas are emphasized along with practice connecting, responding to, and presenting drawings & paintings. Work in the areas of design, drawing, and acrylic painting is presented to allow the student a basis for selecting other art courses.			

COURSE TITLE: **Drawing and Painting 2** (ART01200) (Grades 10-12) ½ credit
PREREQUISITE: Drawing and Painting 1
DESCRIPTION: This one-semester course is designed to develop drawing skills in a variety of media such as pencil, colored pencil, chalk pastel, charcoal, pen and ink, brush and ink, and oil pastel. Fundamentals of drawing including sketching, perspective, creating a light source. Still life and composition will be stressed along with an art history component. Figure drawing, portraiture, and painting techniques will also be included. Both skill and expression will be emphasized.

COURSE TITLE: **Drawing and Painting 3** (ART01300) (Grades 10-12) ½ credit
PREREQUISITE: Drawing 2 or Painting 1/Drawing and Painting 2
DESCRIPTION: This one-semester course will continue the development and refinement of drawing skills as well as projects in watercolor and acrylic painting. Advanced methods in figure drawing and portraiture will be pursued in both drawing and painting. Collage will be introduced. An art history component will be included. There will be an emphasis on still and expression as well as developing an individual style.

COURSE TITLE: **Advanced Drawing** (ART01210) (Grades 10-12) ½ credit
PREREQUISITE: Drawing 2/Drawing and Painting 2
DESCRIPTION: This one-semester course will focus on advanced drawing and design techniques in a variety of media including pencil, colored pencil, pen and ink, charcoal, chalk pastel, oil pastel, and scratchboard. Advanced figure drawing, portraiture and projects in mixed drawing media will be explored. An art history component will be included. There will be a focus on developing and refining individual style along with an emphasis on skill and expression.

COURSE TITLE: **Advanced Painting** (ART01330) (Grades 10-12) ½ credit
PREREQUISITE: Painting/Drawing and Painting 2
DESCRIPTION: Advanced techniques in watercolor, acrylic and oil will be introduced, as well as an art history component including impressionism and expressionism. Students will be encouraged to further develop their own personal style which will be reflected in their project selections.

COURSE TITLE: **Art Metals 1** (ART01700) (Grades 9-12) ½ credit
DESCRIPTION: Art Metals is an introduction to designing and creating a variety of small forms using metal. Students will learn basic skills in piercing, forging, soldering, and creating wearable metal work. This course requires patience, hard work, and the maturity to design and execute small-scale, precise projects.

COURSE TITLE: **Advanced Art Metals** (ART01710) (Grades 10-12) ½ credit
PREREQUISITE: Art Metals 1
DESCRIPTION: This one-semester course uses the knowledge and skills gained from Art Metals 1 in doing more advanced work. Stress is on creating original and unique pieces of art through experimentation and using a combination of methods.

COURSE TITLE: **Fiber and Textile Arts** (ART01800) (Grades 9-12) ½ credit
DESCRIPTION: Textiles are a part of our everyday lives. They provide us with protection, warmth and comfort. Textiles connect us to our communities, cultures and our planet. In this semester-long course, students will learn about working with fibers and textiles as an artistic medium for expression. We will explore a variety of hands-on skills such as embroidery, sewing, felting, knitting/crochet, weaving, block printing, and other fiber related crafts. Students will also study and create textile projects through the lens of sustainability, self care and artistic problem solving. Students who take this course might consider taking Fashion Design as a complementary course. They might

also consider taking the AP 3D Art and Design course as a Junior or Senior if they wish to continue their learning in the realm of textiles, fibers, clothing, and fashion.

COURSE TITLE: **Photography 1** (ART01900) (Grades 9-12) ½ credit
DESCRIPTION: This course will introduce students to all basic aspects of black and white photography beginning with the history of photography. Students will learn basic artistic composition for photography. They will be instructed on camera use, such as how to set the camera's focus, shutter speed, F-stop, and ASA adjustments. Students will develop black and white film and work with a photographic enlarger to develop and print the images. Students will mount their photographs for presentation. **Students must have access to either an automatic or adjustable film camera in order to take this course- not a digital camera. Students must bring a working camera the first week of class unless alternate arrangements are made with the instructor.** Adjustable 35mm SLR cameras are preferred but not required. There will be some exposure to digital and Photoshop.

COURSE TITLE: **Photography 2** (ART01910) (Grades 10-12) ½ credit
PREREQUISITE: Photography 1
DESCRIPTION: This course will emphasize the refinement of technical skill in camera handling and darkroom use. Topics of portrait lighting, posing a model, stop/blur action, depth of field, and special effects will be explored. Students will learn more advanced presentation techniques. Students in this advanced course should also expect to study contemporary photographers, concepts and themes. Photo II will allow students to propose a self-directed series of photos. The goal of this course is for students to create thoughtful images with meaning, in addition to visuals, compositional interest and technical refinement. Digital photography will also be explored. **An adjustable 35mm SLR camera is required for this course.**

COURSE TITLE: **Photography 3** (ART01920) (Grades 10-12) ½ credit
PREREQUISITE: Photography 2
DESCRIPTION: This semester course will build on the techniques and skills learned in B&W Photo, and Photography 2. Emphasis will be half black and white film and half digital with advanced techniques taught in both disciplines. **An Adjustable 35 mm SLR camera is required for this course.**

COURSE TITLE: **AP Art: Drawing** (ART01711/2) (Grade 11-12) 1 Credit
PREREQUISITE: Completion of an upper level course related to their portfolio media of choice.
(Students can be approved by the instructor on a case by case basis) **Year long course**
DESCRIPTION: AP Art is a year long class focused on building a portfolio of art works for submission to the College Board. The main objective of this course is to help students develop their creative voice and learn through the process of inquiry. Students will support each other's artistic growth through critiques and discussion. Students can choose one of three portfolios; 2D Design, 3D Design or Drawing, all of which are contained within the "AP Art" class.

The AP Drawing program corresponds to the college foundation courses. Portfolios allow flexibility of coursework while guiding students to produce college-level quality, artistic investigation, and breadth of work. This course addresses design issues and involves decision making about how to use the elements and principles of art in an integrative way. Students' portfolios demonstrate skills and ideas developed, refined, and applied throughout the course to produce visual compositions. Students may choose to submit any or all of the portfolios. Portfolios are evaluated based on standardized scoring descriptors aligned with skills and understanding developed in college foundation courses.

COURSE TITLE: **AP Art: 2D Art & Design** (ART01511/2) (Grade 11-12) 1 Credit

PREREQUISITE: Completion of an upper level course related to their portfolio media of choice.

(Students can be approved by the instructor on a case by case basis) **Year long course**

DESCRIPTION: AP Art is a year long class focused on building a portfolio of art works for submission to the College Board. The main objective of this course is to help students develop their creative voice and learn through the process of inquiry. Students will support each other's artistic growth through critiques and discussion. Students can choose one of three portfolios; 2D Design, 3D Design or Drawing, all of which are contained within the "AP Art" class.

The AP 2D Design program corresponds to the college foundation courses. Portfolios allow flexibility of coursework while guiding students to produce college-level quality, artistic investigation, and breadth of work. This course addresses two-dimensional design issues and involves decision making about how to use the elements and principles of art in an integrative way. Students' portfolios demonstrate skills and ideas developed, refined, and applied throughout the course to produce visual compositions. Students may choose to submit any or all of the portfolios. Portfolios are evaluated based on standardized scoring descriptors aligned with skills and understanding developed in college foundation courses.

COURSE TITLE: **AP Art: 3D Art & Design** (ART01611/2) (Grade 11-12) 1 Credit

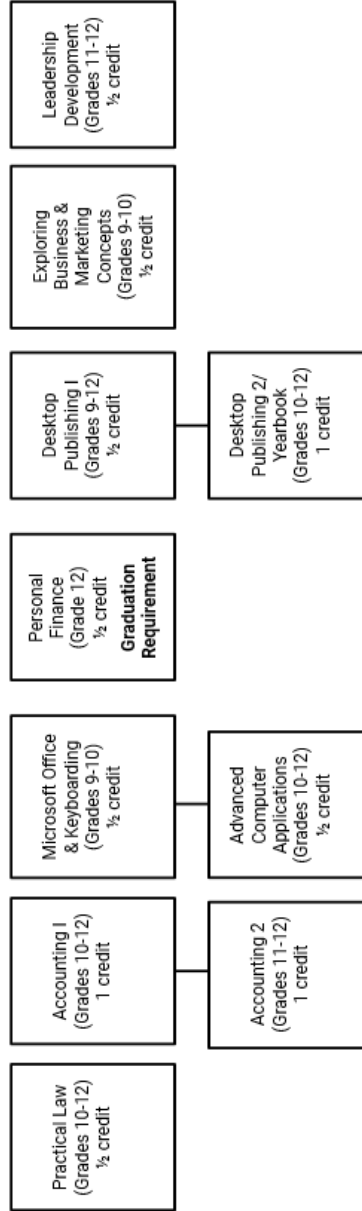
PREREQUISITE: Completion of an upper level course related to their portfolio media of choice.

(Students can be approved by the instructor on a case by case basis) **Year long course**

DESCRIPTION: AP Art is a year long class focused on building a portfolio of art works for submission to the College Board. The main objective of this course is to help students develop their creative voice and learn through the process of inquiry. Students will support each other's artistic growth through critiques and discussion. Students can choose one of three portfolios; 2D Design, 3D Design or Drawing, all of which are contained within the "AP Art" class.

The AP 3D Design corresponds to the college foundation courses. Portfolios allow flexibility of coursework while guiding students to produce college-level quality, artistic investigation, and breadth of work. This course addresses three-dimensional design issues and involves decision making about how to use the elements and principles of art in an integrative way. Students' portfolios demonstrate skills and ideas developed, refined, and applied throughout the course to produce visual compositions. Students may choose to submit any or all of the portfolios. Portfolios are evaluated based on standardized scoring descriptors aligned with skills and understanding developed in college foundation courses.

Business Education



BUSINESS EDUCATION

- COURSE TITLE:** **Accounting 1** (BUS21301/2) (Grades 10-12) 1 credit
DESCRIPTION: Accounting is a one-year course that teaches basic accounting principles and procedures. Students learn how to set up and maintain an accounting system for a service business and a merchandising business. Emphasis in the course is placed on learning how to use various types of journals, ledgers, worksheets, and financial statements. In addition, payroll systems, checking accounts, sales tax, bad debts, depreciation, notes and interest, and accrual accounting are presented. Accounting for a partnership and corporation is introduced. Two business simulations done during the year help to provide a realistic atmosphere for integrating the principles and concepts learned. Accounting is a **must** for students planning a career in the field of business or marketing occupations.
- COURSE TITLE:** **Accounting 2** (BUS21311/2) (Grades 11-12) 1 credit
PREREQUISITE: Accounting 1
DESCRIPTION: Accounting 2 continues teaching the principles learned in Accounting 1. Topics covered include Notes Receivable, Inventory, Investments and Depreciation in addition to review of journals, ledgers, cash payments, sales, accounts receivable and payable, business reports, payroll records, and taxes. . The study of a second year of accounting is an excellent background and preparation for college business and accounting courses and business majors as well as being a helpful qualifier for jobs in the business field. In addition, the cost, budgeting, and financial analysis topics are useful tools for the new entrepreneur. Workbook problems and online coursework are used for a practical approach to learning.
- COURSE TITLE:** **Microsoft Office & Keyboarding** (BUS21220) (Grades 9-10) ½ credit
DESCRIPTION: Effective communication via prepared documents, presentations, and data-based spreadsheets is an imperative skill in the world of business and marketing. In this course, students will use computers as a tool to explore the Microsoft Office Suite. In addition to learning about Word, PowerPoint, and Excel, students will also work daily on mastering the life-long skill of keyboarding. Computer application skills are an absolute necessity for work in the future.
- COURSE TITLE:** **Desktop Publishing 1** (BUS21920) (Grades 9-12)½ credit
DESCRIPTION: Students will be introduced to creating documents using Adobe In-Design, Adobe Illustrator, and Photoshop. Page layout, design, and basic photography editing will be covered. In addition, preparation and placement of photographs in documents will be practiced. Students will have the opportunity to create their own professional documents such as letterhead, business cards, flyers, booklets, magazine spreads, and produce school documents such as sport rosters, calendars and programs. Also, students will be introduced to the school yearbook by creating one page that will appear in our publication, the Silver Scroll. Creativity is a must to help design documents.
- COURSE TITLE:** **Desktop Publishing 2/Yearbook** (BUS21921/2) (Grades 10-12)1 credit
PREREQUISITE: Desktop Publishing 1 and/or consent of instructor
DESCRIPTION: This course will primarily be responsible for creating the yearbook. Students will continue to develop skills learned in Desktop Publishing 1. More advanced skills will be developed using Adobe software as well industry-standard online applications specifically for creating yearbook publications. Manipulation of photographs and working with layouts are skills worked with most class periods. Students will be required to attend school events as assignments for class to photograph and record these events for the yearbook. Students may also use InDesign and Photoshop to create other documents such as sport rosters and other projects.

COURSE TITLE: **Advanced Computer Applications** (BUS21810) (Grades 10-12)½ credit
PREREQUISITE: Microsoft Office & Keyboarding or Teacher Approval
DESCRIPTION: You might have used the Microsoft Office Suite, but do you know all of its advanced features? In Advanced Comp Apps you will learn how to format Microsoft Word documents to create materials such as resumes, cover letters, and memos. You'll explore how to develop formulas in Excel to analyze sports and entertainment data. Through this course you will also refine your professional presentation skills while working with PowerPoint. Other concepts in Advanced Comp Apps include social media for business, the use of Google Forms, how the internet has changed the global business landscape, current technology news, how the cloud works, and the use of ERP for logistics. This advanced computer course will teach you the skills needed to be successful in the business world.

COURSE TITLE: **Exploring Business and Marketing Concepts** (BUS21000) (Grades 9-10)½ credit
DESCRIPTION: Exploring Business is an excellent introductory course that is designed for students planning future studies in business courses. This course will expose students to concepts and career opportunities in the business world. Areas of study may include: entrepreneurship and business ownership, professionalism and business communication, saving and investing, accounting, human resources, economics, management, and marketing. This course will be taught through multimedia lectures, investigative Internet research, and hands-on individual and group projects that allow you to be creative and apply what you've learned to real life situations. Many of the concepts learned in Exploring Business will be applicable to classes that students can take as sophomores, juniors, and seniors. These classes include Personal Finance, Marketing Principles, Sports and Entertainment Marketing, Accounting, Computer Applications, Desktop Publishing, and Webpage Design.

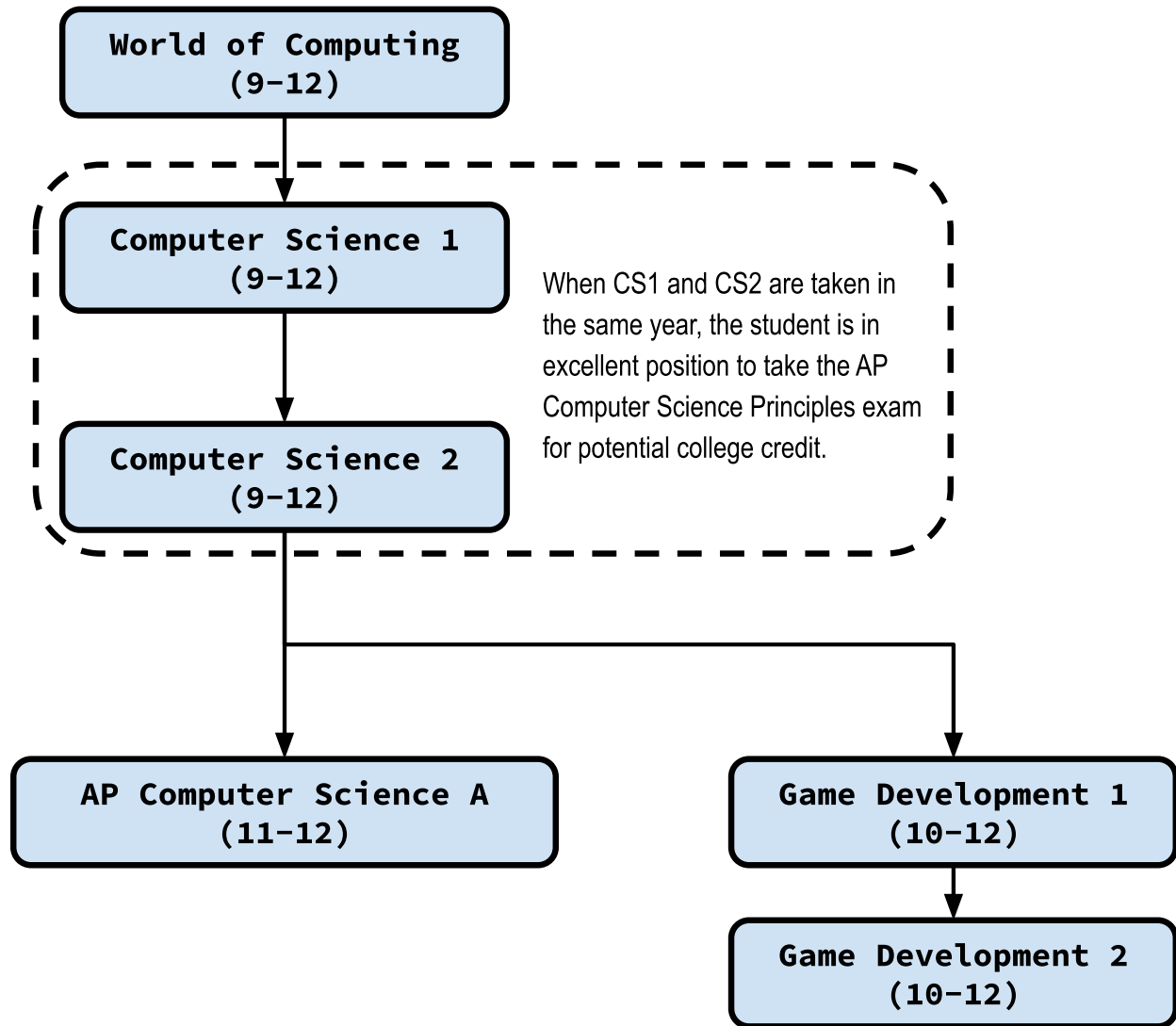
COURSE TITLE: **Personal Finance** (BUS21340) (Grade 12) ½ credit
DESCRIPTION: Financial literacy is essential in meeting the financial challenges students will face in the future. Students will learn basic principles of economics and best practices for managing their own finances. In addition, students learn core skills in creating budgets, developing long-term financial plans to meet their goals, and making responsible choices about income and expenses. Topics covered are: Budgeting, Banking, Taxes, Insurance, Credit, and Investments. **This course is a required course for graduation.**

COURSE TITLE: **Practical Law** (BUS21200) (Grades 10-12) ½ credit
DESCRIPTION: Have you ever wondered if something you saw or heard could possibly be legal? Or what your rights might be in situations you may encounter daily? This course will take you through a study of several areas of law. You will gain an understanding of how the legal system works, through focused study of civil and criminal law. You will further gain an overview of the areas of consumer law, employment law, contracts, environmental law, and family law. This is an excellent, practical course for students who want to explore how law will personally affect their life or who wish to broaden their business knowledge. Students enrolled in the course will learn firsthand through case studies examining high-profile, real-life situations. You'll even have the chance to try your hand at various roles in the legal system through a mock trial. Practical Law is a way to become more informed about the world and the legal system that we live in, as well as to investigate careers available in this vast field.

COURSE TITLE: **Leadership Development** (BUS01000) (Grades 11-12) ½ credit

DESCRIPTION: In this course, you will explore possibilities, meet new challenges, and seek to strengthen your leadership skills. This interactive course focuses on two themes - developing personal servant leadership skills and creating a positive change within MGHS and the great Monona-Cottage Grove community. Each week, students are given an opportunity to work on their leadership skills through hands-on group activities in which you will gain valuable, real-life experience. Students who accept the opportunity to enroll in this course should be willing to step out of their comfort zone, engage in personal growth and development, and approach each class period with a growth mindset. Learning will take place through reading, discussion, hands-on exercises, and guest speakers. Areas of emphasis include learning to ask questions that inspire growth, becoming an effective listener, 'reaching' servant leadership, the importance of positivity and a growth mindset, communicating based on behavior styles and needs, and fostering trust and relationships within a community.

Computer Science



COMPUTER SCIENCE

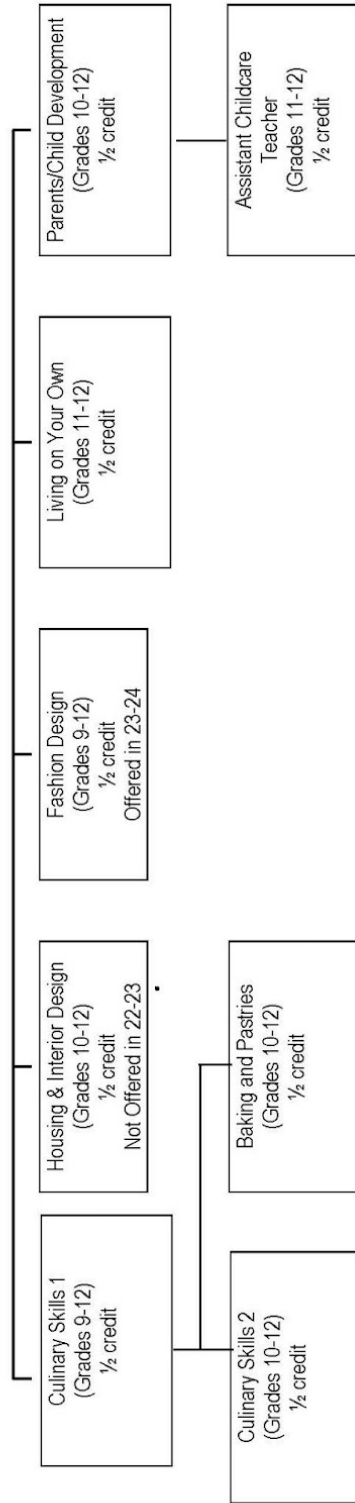
- COURSE TITLE:** **World of Computing** (CPT18000) (Grades 9-12) ½ credit
DESCRIPTION: Are you curious about how the smartphone in your pocket and the apps that run on it work? This course, geared toward freshmen but open to anyone, will use exploratory projects to discover what powers the digital world. Topics include how computers work, digital communication, data analysis and an introduction to programming. Each unit in this course will develop your computational thinking skills, such as decomposing problems, pattern recognition and designing algorithms. These are 21st century skills that would serve you well in any field you choose.
- COURSE TITLE:** **Computer Science 1** (CPT61900) (Grades 9-12) ½ credit
PREREQUISITES: Successful completion of World of Computing and/or consent of the instructor.
DESCRIPTION: This course will introduce many of the core principles of computer science while developing computational thinking practices. The Python programming language will be used to solve increasingly complex problems, with an emphasis on the foundational concepts of variables, conditionals and iteration. The course also explores how the internet works and the impact of technology innovation on society. *Taking Computer Science 1 and 2 qualifies the student for potential college credit via the AP Computer Science Principles exam. Completing CS1 and CS2 in the same year is recommended, but not necessary.*
- COURSE TITLE:** **Computer Science 2** (CPT61920) (Grades 9-12) ½ credit
PREREQUISITES: Computer Science 1
DESCRIPTION: Computer Science 2 continues developing programming minds in algorithm development, problem solving, and programming, all within the context of problems that are relevant to the lives of today's students. Central to this semester course is data. Students will model real-world data using complex data types and manipulate it using computational math in Python. A variety of topics such as cryptography, data compression and data science will form the basis of programming projects. *Taking Computer Science 1 and 2 qualifies the student for potential college credit via the AP Computer Science Principles exam. Completing CS1 and CS2 in the same year is recommended, but not necessary.*
- COURSE TITLE:** **AP Computer Science A** (CPT61941/2) (Grades 10-12) ½ credit or 1 credit AP & N
PREREQUISITES: Computer Science 2 with CS teacher recommendation.
DESCRIPTION: This course intends to prepare students for the AP Computer Science A exam, and is equivalent to a one-semester introductory college course in the science of programming. Topics include the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and the analysis of potential solutions. The course emphasizes object-oriented design using the Java programming language. **Students should plan to program and complete labs outside of class for approximately 30 - 90 minutes per class, depending upon comfort with the material. Semester One is a prerequisite for Semester Two. Students may take this course over 2 different academic years, though not recommended.**
- COURSE TITLE:** **Game Development 1** (CPT61940) (Grades 10-12) ½ credit
PREREQUISITES: Computer Science 2
DESCRIPTION: Game Development 1 is an interactive project based course that focuses on animation and programming of 2D games. This course offers those advanced students an opportunity to program and develop engaging PC games. We will use PhotoShop, GameMaker, and a plethora of other software to fulfill our gaming needs.

COURSE TITLE: **Game Development 2** (CPT61930) (Grades 10-12) ½ credit

PREREQUISITES: Game Development 1

DESCRIPTION: Game Development 2 is an interactive project based course that revisits some of the skills acquired during Game Development 1 and introduces new topics. These topics are advanced interface commands, human physical/perceptual limits of character development, advanced level design, building game assets, game physics, artificial intelligence, and complex shading effects using Unity 3D.

Family and Consumer Sciences



Updated 12/12/2022

FAMILY and CONSUMER SCIENCES

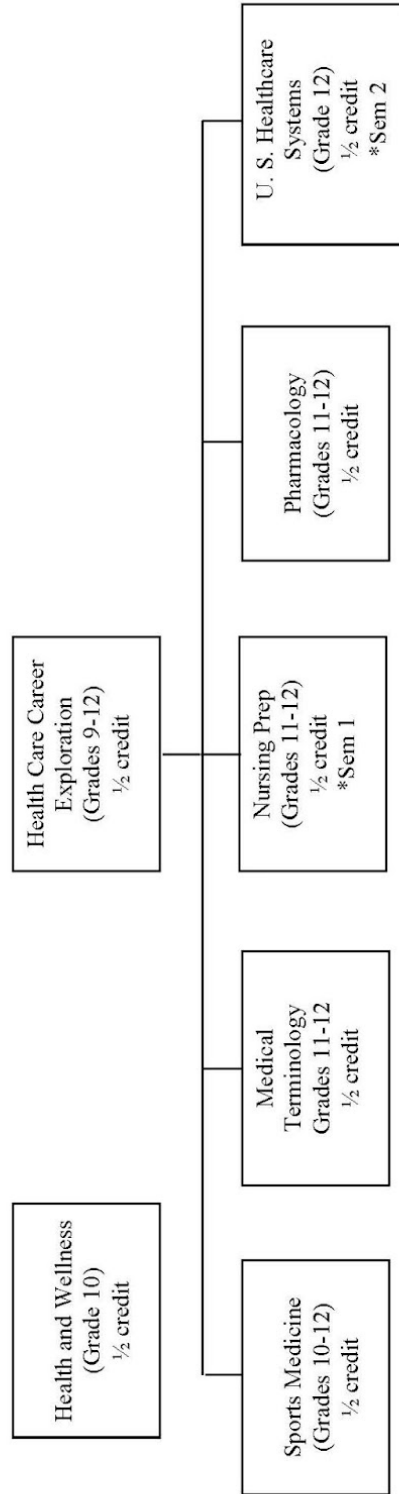
- COURSE TITLE:** **Parents/Child Development** (FAM71280) (Grades 10-12) ½ credit
DESCRIPTION: Learning how to be a successful parent is one of the most important jobs in your life. This course is for students who are interested in learning the skills to become effective parents or caregivers or are interested in a career that deals with children, such as a pediatrician, school psychologist, nurse, or teacher. Topics of study include decision-making regarding parenthood, environmental and genetic influences on children, teen pregnancy, prenatal development, changes that occur during pregnancy, labor and delivery, caring for children, discipline, child development, and societal issues that affect children. Learning activities include: Real Care baby simulation, guest speakers, interviews, discussion, and more!
- COURSE TITLE:** **Assistant Childcare Teacher** (FAM71290) (Grades 11-12) ½ credit
DESCRIPTION: Prerequisite: Juniors and Seniors who have completed Parenting and Child Development. This course will introduce students to occupations in the childcare services profession or any career working with children by requiring volunteer hours to be completed by students. Coursework and volunteer hours will provide the training and background necessary to receive certification as an Assistant Childcare Teacher. Topics of study include a historical overview of child care service profession, exploring careers in the childcare profession, understanding and interacting with children, creating a safe and healthy environment, guiding young children, learning experiences for children, planning curriculum and activities, center relationships and parent involvement, and professional development.
- COURSE TITLE:** **Culinary Skills 1** (FAM51110) (Grades 9-12) ½ credit
DESCRIPTION: This foods class provides students with an introduction to the basic techniques of food preparation while learning about nutrition and food safety. As beginning cooks, students have ample opportunity to apply their knowledge of food preparation through hands-on lab experiences. Whether for personal or career use, students completing this class will have developed the basic cooking skills to prepare breakfast items, salads, sandwiches, dinner entrees, cookies, desserts, as well as other nutritional fare. ***This course is a prerequisite for Culinary Skills 2 and Baking and Pastries.**
- COURSE TITLE:** **Culinary Skills 2** (FAM51220) (Grade 10-12) ½ credit
PREREQUISITE: Successful completion of Culinary Skills 1
DESCRIPTION: This intermediate foods course introduces students to more advanced aspects of food preparation. Building upon the lab skills learned in Culinary Skills I, students will prepare entrees, decorative foods, ethnic foods, soups, buffet style foods, and more! As foods are prepared, career options will be identified and explored.
- COURSE TITLE:** **Baking and Pastries** (FAM51250) (Grades 10-12) ½ credit
PREREQUISITE: Successful completion of Culinary Skills 1
DESCRIPTION: This course will provide students with the basic skills necessary for entry work in a bakery or pastry shop in the foodservice industry. Students will learn about a variety of techniques, terminology, and tools used to create, garnish, and serve pastries and baked goods. Building upon skills learned in Culinary 1, students will have exposure to yeast raised breads, cake decorating techniques, pies, tarts, doughs and batters.

COURSE TITLE: **Fashion Design** (FAM51100) (Grades 9-12) ½ credit
DESCRIPTION: This course is for students who have an interest in learning about fashion design or in developing sewing skills. Labs are designed to help students progress quickly through a variety of projects. Students have the option to follow along with the class to make projects or use their creative talents to create projects of their own. If you enjoy clothing as an important part of self-expression, this course provides a meaningful experience in creativity. Students also learn about the elements and principles of fashion design and careers in the clothing and fashion industry as well as the environmental and social justice impacts of the industry. **This class is offered on an every other year schedule. It will be offered in 2023-2024.**

COURSE TITLE: **Housing and Interior Design** (FAM51810) (Grades 10-12) ½ credit
DESCRIPTION: This semester course is designed for students who are interested in exploring careers in housing or interior design. Various aspects of the housing industry will be covered including types of housing, trends, floor plans, and furnishings. Hands-on projects will provide exposure to typical career-related experiences. Students will draft and create floor plans using computer simulated technology. Exploration with material and color will provide practical adventures into the career areas of interior design. **This class is offered on an every other year schedule. It WILL NOT be offered in 2023-2024.**

COURSE TITLE: **Living On Your Own** (FAM51410) (Grades 11-12) ½ credit
DESCRIPTION: This semester course is designed for students who want to explore those skills needed to succeed after high school. Topics include: apartment hunting, basic money management, simple car/home maintenance, and health/wellness tips. This will be a “hands on” class relying mostly on in-class reading/discussions, projects, and student participation to determine a grade.

Health Sciences



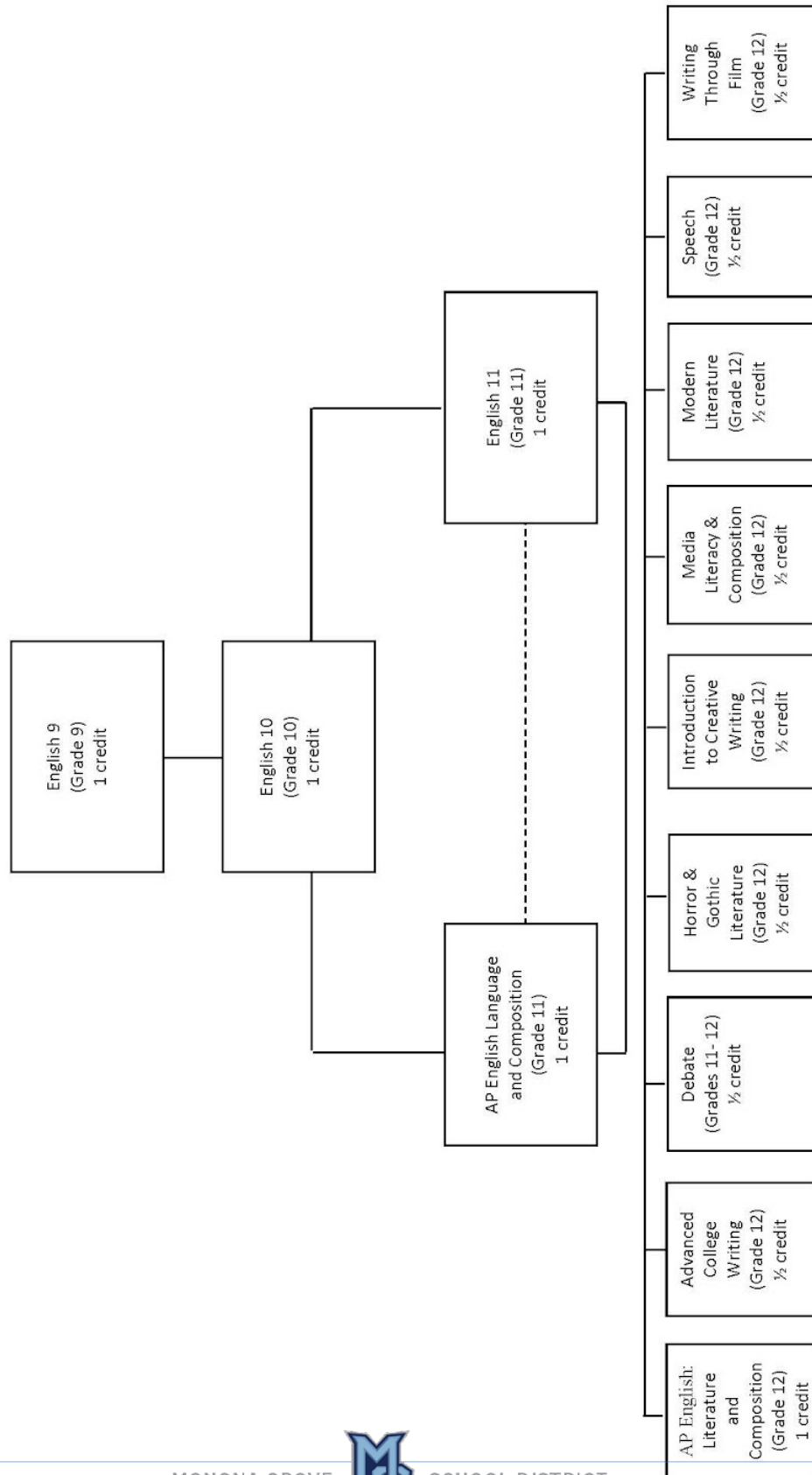
HEALTH and HEALTH SCIENCES

COURSE TITLE:	Health and Wellness	(HLT71350)	(Grade 10)	½ credit
PREREQUISITE:	Required for all Sophomores			
DESCRIPTION:	In this required class, students will learn how to incorporate health and wellness concepts, skills, attitudes, and behaviors necessary to live productive and healthy lives. A main goal of this interactive course is to help students develop a desire to practice sound principles of physical, emotional, and social health. This is done through class discussions, class presentations, and small group activities. Units covered in this student-driven course include the following: building community, influences on self-development, managing stress and anxiety, untimely death, substance use and abuse, human growth and development, and nutrition.			
COURSE TITLE:	Healthcare Career Exploration	(MED71110)	(Grades 9-12)	½ credit
DESCRIPTION:	If students want to explore possible career choices, this is the place to be! This course is designed to introduce students to a wide variety of health careers. The nature and scope of the profession including the educational and physical requirements, as well as personal characteristics of each career are discussed. The healthcare system with a historical perspective is presented. The students are introduced to ethical, legal and safety conditions in healthcare. The students will investigate career security strategies and tools. Students in this course are encouraged to become members of the Monona Grove Chapter of HOSA: Future Health Professionals. <i>*This class is a prerequisite for all other Health Science courses.</i>			
COURSE TITLE:	Sports Medicine	(MED71190)	(Grades 10-12)	½ credit
PREREQUISITE:	Healthcare Career Exploration or consent of instructor			
DESCRIPTION:	This course is designed to give students a broad introduction to the many areas of sports medicine. Course content will range from such topics as the emergency care and evaluation of athletic injuries to topics, such as prevention, rehabilitation, and conditioning. The labs are designed to give students practical, hands-on experience in the areas of wrapping, taping and padding, as well as learning emergency first aid procedures. Students are encouraged to become active members of the Monona Grove Chapter of HOSA: Future Health Professionals.			
COURSE TITLE:	Medical Terminology	(MED71150)	(Grades 11-12)	½ credit
PREREQUISITE:	Healthcare Career Exploration, Sports Medicine or Anatomy and Physiology is recommended. An intense interest in the medical field, ability to focus on detail, and a good science background will be helpful.			
DESCRIPTION:	This semester course is designed for students who plan to pursue a career in healthcare. Medical terminology as it pertains to body systems will be covered in detail, as well as medical abbreviations, diagnostic procedures, and medical tests. Students will be required to purchase a text/workbook. Students are encouraged to also purchase notecards. <i>*Note: There is a \$50.00 workbook fee for this class.</i> Students are encouraged to become active members of the Monona Grove Chapter of HOSA: Future Health Professionals.			
COURSE TITLE:	Pharmacology	(MED71200)	(Grades 11-12)	½ credit
PREREQUISITE:	Juniors and Seniors who have taken Healthcare Career Exploration and are interested in a career in pharmacy or one of the many related health sciences			
DESCRIPTION:	This course is designed to give students an introduction to pharmacology topics. Topics include: drug side effects, drug interactions, safety, patient interaction and advocacy skills, and common over-the-counter and prescription medications. Students will also learn about proper dosages and use math skills. Students who take this class may be eligible to sit for a certification exam at the age of 18 to become a Pharmacy Technician. Students are encouraged to become active members of the Monona Grove Chapter of HOSA: Future Health Professionals.			

COURSE TITLE: **Nursing Prep** (MED71240) (Grades 11-12) ½ credit
PREREQUISITE: Juniors and Seniors who have taken Healthcare Career Exploration and are interested in a career in nursing or one of the many related health sciences
DESCRIPTION: This course provides the knowledge and nursing skills that are often needed to go into the nursing field at multiple levels. Students will be introduced to the different levels of nursing certification and different avenues that a nursing degree can be attained. Students will explore the career of nursing through readings, testimonials, skill labs, and discussions. Other soft skills needed in the nursing profession will be addressed, as well as, skills needed to work with a variety of populations. Students are encouraged to become active members of HOSA.

COURSE TITLE: **U. S. Healthcare Systems** (MED71210) (Grade 12) ½ credit
PREREQUISITE: Healthcare Career Exploration or Intro to Biotechnology or consent of instructor
DESCRIPTION: If students are interested in learning more about the healthcare/human services career clusters, U.S. Healthcare System is planned to meet those needs. Students will explore the ethical, bioethical, and human dilemmas that healthcare workers and others face because of new technology. Students will explore the constant changes in the U. S. Healthcare System and how those changes affect different populations. Students will review and be updated on disease, disorder, and drug information. Pertinent career related information is also included. Students are encouraged to become active members of the Monona Grove Chapter of HOSA: Future Health Professionals.

Language Arts



LANGUAGE ARTS

English, Reading, and Writing skills that are a focus of the Career and College Readiness Skills (CCRS) are integrated in all English courses. The CCRS skills are assessed on the ACT and correlate with academic success in college.

FRESHMAN COURSES

COURSE TITLE: **English 9** (ENG32111/2) (Grade 9) 1 credit N
DESCRIPTION: English 9, a year-long course, aligns the core learning goals with College Readiness Skills in the areas of language/grammar, composition, vocabulary, and critical reading. Composition focuses on the accurate use of textual evidence as support in well-developed paragraphs and in the five-paragraph essay format. Reading for this course will include novels, poetry, non-fiction, drama, and short stories. As a **college preparatory course**, students should be aware that the workload in this class is demanding and expectations for content, organization, and mechanics in written work are high. Required homework is directly tied to skills practice and content in order to build skills in reading and writing.

SOPHOMORE COURSES

COURSE TITLE: **English 10** (ENG32211/2) (Grade 10) 1 credit N
DESCRIPTION: English 10, a year-long course highlighting reading skills through world literature and emphasizes further language skill development in essay writing, identifying and using rhetorical strategies, and literary analysis. Throughout these units, instruction is given in grammar, usage, vocabulary, and oral communication skills. Because this is a **college preparatory course**, students should be aware that the workload in this class is demanding and expectations for content, organization, and mechanics in written work are high.

JUNIOR COURSES

COURSE TITLE: **AP English Language and Composition** (ENG31611/2) (Grade 11) 1 credit AP N
DESCRIPTION: This is a year- long rhetoric course focusing on the analysis, synthesis, and evaluation of complex function and nonfiction texts from writings in the arts, history, social science, politics, science and other areas of study. In addition to critical reading, students will write frequently and simulate the writing process, especially the rewriting phase. Students write in-class essays to prepare for the AP test. Research, presentations, and discussions are part of the course and focus on the use of rhetorical strategies. As an officially accredited AP course, students may have the opportunity to attain college credit. Students should be aware that the workload in this class is extremely demanding and expectations for content, organization, and mechanics of written work are extremely high, equivalent to a college freshman-level language/composition course. **Average nightly homework: 1 hour.**

COURSE TITLE: **English 11** (ENG31311/2) (Grade 11) 1 credit N
DESCRIPTION: English 11 is a year-long course which focuses on the development of students' reading, writing, speaking, grammar, and vocabulary skills through the exploration of the American dream and the American experience. Units include a mixture of fiction and non-fiction; by examining visual texts (graphs, TV shows, advertisements, paintings) and written texts (essays, short stories, plays, poems, news articles, historical documents), students come to a deeper understanding of central questions about values of Americans today and through history. As a college preparatory course, the skills inherent in instruction are aligned with those asked of students on the ACT exam students take in the spring. Students write, discuss, present, and complete creative projects as assessments throughout the year.

LANGUAGE ARTS ELECTIVES

Seniors and students interested in extra English electives will select electives from the following courses. Electives will be offered each semester according to interest and staff availability.

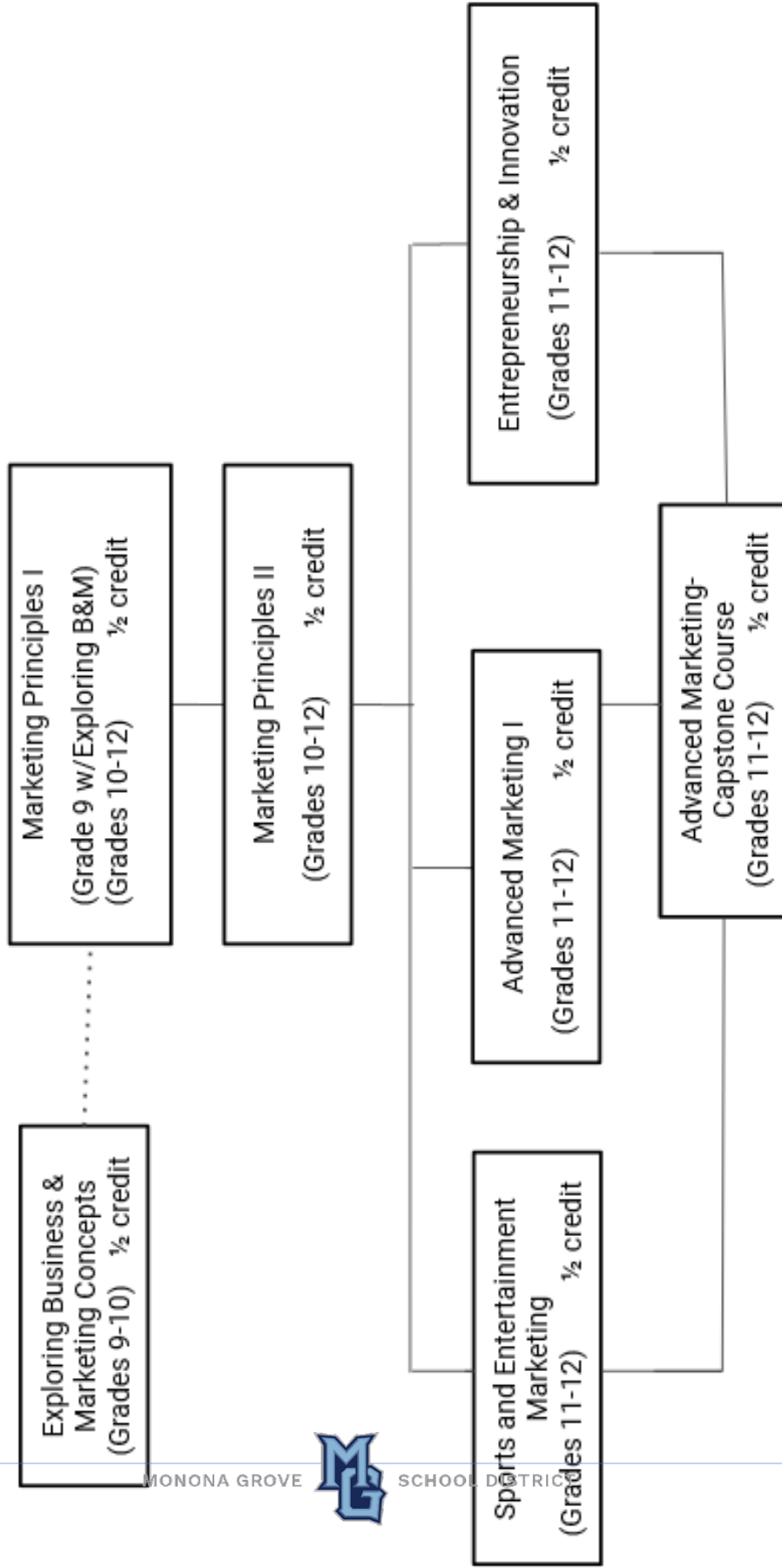
- COURSE TITLE:** **AP English: Literature and Composition** (ENG31591/2) (Grade 12) 1 credit AP N
DESCRIPTION: This college-level course examines literature, both classic and contemporary, from a critical perspective. Students can expect to read a variety of genres of literature from poetry to short fiction to drama to novels from the 16th century to the present. Students will explore literary criticism and literary theory as a means to analyze key texts. In addition to critical reading, composition is fundamental to the course design. Students will work extensively on their writing both in and out of class, largely in response to the literature they read. Students will write frequently and simulate the writing process essential to college-level writing. As an officially accredited AP course, students may have the opportunity to attain college credit upon successful passing of the AP exam in May. **Prospective students should be aware that the rigor of the course is demanding, and, as such, AP English Literature and Composition should be equated to a college freshman-level literature/composition course. Average nightly homework : 1 hour. Required summer reading: How to Read Literature Like A Professor by Thomas C. Foster**
- COURSE TITLE:** **Advanced College Writing** (ENG31620) (Grade 12) ½ credit N
DESCRIPTION: The learning objective for this semester-long college prep course is to strengthen students' comfort, confidence, and consciousness with writing at the college level. Reading, writing, and rhetorical skills are the foundation of this course. Students will critique various non-fiction compositions for effectiveness and learn to model good writing. Students will write using various modes of discourse: description, comparison/contrast, classification and division, and persuasive writing. Students will also review and practice the elements of style, usage, and grammar, as well as work on vocabulary-building and proper MLA research format. The course is open to seniors only.
- COURSE TITLE:** **Debate and Argumentation** (ENG31460) (Grade 11-12) ½ credit N
DESCRIPTION: The skills taught in debate help students in all areas of learning by utilizing appropriate career and college readiness standards while emphasizing critical thinking, logic, analysis, argumentation, persuasion, listening, and research. During the semester students study a number of topics of contemporary significance and respond weekly to an online element. The culminating project for this course is a minimum 8-10 page research paper with 8-10 minute in-class presentation. Students should be aware that the workload in this class is demanding. This course is open to all students in grade 12, and as an elective for grade 11. It is especially recommended for college-bound students.
- COURSE TITLE:** **Horror and Gothic Literature** (ENG31500) (Grade 12) ½ credit N
DESCRIPTION: This semester course is reading intensive and based around the Career and College Readiness Standards. The course will evaluate literature spanning the early 1800's to present day authors. Students should expect a wide range of literary styles and genres. These readings will challenge students to consider the texts in unexpected and thought provoking ways. Horror and Gothic Literature relies heavily on outside reading, class discussion, and writing. Students should expect challenging reading with the expectation that much of that reading will occur outside of class. Strong readers, creative writers and students looking for a challenge are encouraged to take this class.
- COURSE TITLE:** **Introduction to Creative Writing** (ENG31320) (Grade 12) ½ credit N
DESCRIPTION: This is a writing-intensive course that aims to give students who are interested in creative writing an opportunity to engage with various genres of writing. Students will walk through the writing process, from drafting to revising, as they develop their talents. Students will be writing an average of 45-60 minutes per class and are expected to use workshop time wisely. The intention of the course is to allow students to

engage with a variety of genres and styles and to guide them as they learn to illustrate their ideas and have fun with language. Students will be expected to rewrite pieces of their writing and to engage positively in the community of writers as they share their own writing regularly and learn from others. Students will be required to keep a folder with all their writings created in and out of class and will present their writings in a culminating portfolio project.

COURSE TITLE:	Media Literacy and Composition	(ENG31330)	(Grade 12)	½ credit	
PREREQUISITE:	Students should have an average to above-average writing skills.				
DESCRIPTION:	This English elective is designed to introduce and develop media literacy, which is the ability to question critically, understand, interpret, analyze, and evaluate the content, intent, strategies, and effects of the mass media. Being media literate means that one controls the interpretation of the media instead of it controlling the person. Students will become aware of principles, myths, and techniques in media, and media literacy terms and concepts. Students will focus on different media units and be expected to read a variety of magazine/newspaper articles and book excerpts, think critically and take part in daily class discussions, write responses and analyses to what they have read or seen, present projects individually and in groups, and watch television newscasts, shows, films, and commercials for analysis. Learning unit-specific vocabulary is also a part of becoming media literate.				
COURSE TITLE:	Modern Literature	(ENG31490)	(Grade 12)	½ credit	N
DESCRIPTION:	The core learning goals for this reading intensive course are anchored around the Common Core State Standards. All titles are modern and were written between 1980 and present; they include a variety of genres, voices, genders, cultural perspectives, and text types. Students will read approximately five titles in this semester-long course. Critical reading skills are required in the examination and analysis of current issues in our society as they appear in the reading. Student performance is demonstrated through notes, discussions, projects, assessments, and writings on each title. On average, students will read a minimum of fifty pages per class period.				
COURSE TITLE:	Speech	(ENG31450)	(Grade 12)	½ credit	N
DESCRIPTION:	Different kinds of speeches (extemporaneous, manuscript, and impromptu) and dramatic performances, which enable freedom of expression, personal confidence, critical thinking, and improved ability, will be given. Additionally, students will enhance their ability to listen, take notes, and do research. Evaluation includes performances on both written and speaking assignments. Students will study speeches and speaking techniques. This college preparatory course is designed to reinforce oral and written communication skills.				
COURSE TITLE:	Writing Through Film	(ENG31480)	(Grade 12)	½ credit	
DESCRIPTION:	In this elective class, film will serve as the medium by which students work to improve their writing and critical thinking skills. The students will analyze the form of a given film (its structure and related technical components), its content (the meaning or theme), and director's style. Film history will be included. This class emphasizes writing of varying types and group discussion. If a student merely wants to "kick back" and watch films, this course is not recommended. It will, however, meet the expectations of those students who wish to engage in a serious study of film. Because this is a college preparatory course , students should be aware that the workload is demanding, with strict deadlines. Also, outside film viewing is required. Please be advised that school-board approved R-rated films are on the course syllabus. Also, students will be required to complete a culminating project at the end of the semester.				

Key: N = NCAA Accepted

Marketing Elective Courses



MARKETING EDUCATION

- COURSE TITLE:** **Marketing Principles I** (MKT11000) (Grades 9-12) ½ credit
PREREQUISITE: Exploring Business & Marketing Concepts (Required: Grade 9, Preferred: Grades 10-12)
DESCRIPTION: What is a target market and what are the 4Ps of the Marketing Mix? We will introduce marketing concepts and explore how businesses reach their customers effectively through the art of marketing in Marketing Principles I.
- By learning the foundational concepts of marketing and applying them to an effective marketing plan, students will gain insight into what marketing looks like in action in today's corporate world. Other topics covered will include applications of consumer behavior, customer service, and the marketing research process. Marketing is important to understand regardless of your career area of interest, because it truly impacts everything we see, hear, and do on a daily basis. This is a project based course where students will expand their self-awareness, communication, collaboration, and leadership skills through the application of course concepts. Students are encouraged to be actively involved in DECA, an association of marketing students. DECA provides opportunities to participate in local, state and national activities to showcase their own talents and network with their peers and industry professionals.
- COURSE TITLE:** **Marketing Principles II** (MKT22100) (Grades 10-12) ½ credit
PREREQUISITE: Marketing Principles I
DESCRIPTION: Marketing Principles II will build on the foundational concepts learned in the Marketing Principles I course, and gain practice applying them to activities and projects. By applying the marketing mix to individual and group projects, students will gain confidence in their marketing skills and flex their creative muscles in coming up with ideas for new products and how to communicate them to potential customers. Other topics covered will include an introduction to global marketing, corporate responsibility and ethics, and a focus on "marketing yourself" through interview practice and exposure to marketing careers. Marketing is important to understand regardless of your career area of interest, because it truly impacts everything we see, hear, and do on a daily basis. This is a project based course where students will expand their self-awareness, communication, collaboration, and leadership skills through the application of course concepts.
- Students are encouraged to be actively involved in DECA, an association of marketing students. DECA provides opportunities to participate in local, state and national activities to showcase their own talents and network with their peers and industry professionals.
- COURSE TITLE:** **Advanced Marketing I** (MKT22110) (Grades 11-12) ½ credit
PREREQUISITE: Marketing Principles II (or previously offered Marketing Principles 1 credit course)
DESCRIPTION: Advanced Marketing I is a course designed to take the skills and concepts learned in the two semesters of Marketing Principles and apply them to the field of Marketing Management. The course includes instruction in marketing management, human resources, and customer relationships. It also focuses on the use of digital marketing to connect creative product ideas to consumers - All skills that are integral to being successful in a marketing career.
- Advanced Marketing I is a project based course in all areas of instruction. By engaging in task focused on human resources management, case study review and analysis, and developing product plans incorporating messaging through social media, students gain valuable insights into a future in the marketing managerial world. Students are encouraged to be actively involved in DECA, an association of marketing students. DECA provides opportunities to participate in local, state and national activities to showcase their own talents and network with their peers and industry professionals.

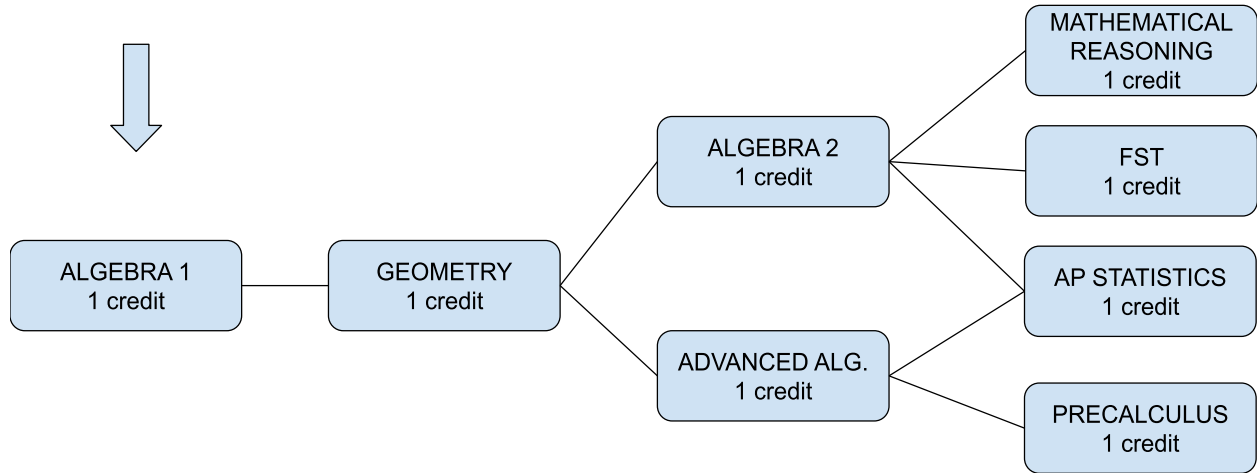
COURSE TITLE: **Advanced Marketing - Capstone Course** (MKT22220) (Grades 11-12) ½ credit
PREREQUISITE: Successful Completion of Advanced Marketing I, Sports & Entertainment Mktg., or Entrp. & Innovation
DESCRIPTION: Advanced Marketing - Capstone Course is the capstone marketing course for MGHS students.
This course brings together the collective marketing knowledge that students have gained through their MGHS marketing courses, and focuses on the project management and creation of a complete marketing plan for a business. This course is intended to simulate a real world project marketing experience, enabling students to cite some actual marketing experience on their resumes.
Students are encouraged to be actively involved in DECA, an association of marketing students. DECA provides opportunities to participate in local, state and national activities to showcase their own talents and network with their peers and industry professionals.

COURSE TITLE: **Sports and Entertainment Marketing** (MKT22200) (Grades 11-12) ½ credit
PREREQUISITE: Marketing Principles II (or previously offered Marketing Principles 1 credit course)
DESCRIPTION: Fiserv Forum, The Kohl Center, and the Overture Center are all entertainment meccas. You can't avoid it. Turn on the television and you're likely to see a sporting event, or an entertainer trying to sell you something. Open the newspaper and sports might be on the front page, and if not, it has an entire section. Today sports and entertainment marketing is a multibillion-dollar industry. As a result, sports teams and leagues need the revenue that is generated from their partnerships with business. This revenue comes from a variety of sources including sponsorship fees and licensing, advertising, and promotional opportunities.
Sports and Entertainment Marketing is a course designed for students interested in learning the essentials of marketing as they relate to the sports and entertainment industries. The essentials of marketing including product development, advertising, public relations, consumer behavior, promotion, publicity, research, pricing, and ethics are studied. Additional areas studied include licensing, endorsements, sponsorships, economic issues, and current events as they relate to sports and entertainment marketing. This course is designed for students to learn about this vast growing industry, how it relates to our society, and career options available in this field. Students are encouraged to be actively involved in DECA, an association of marketing students. DECA provides opportunities to participate in local, state and national activities to showcase their own talents and network with their peers and industry professionals.

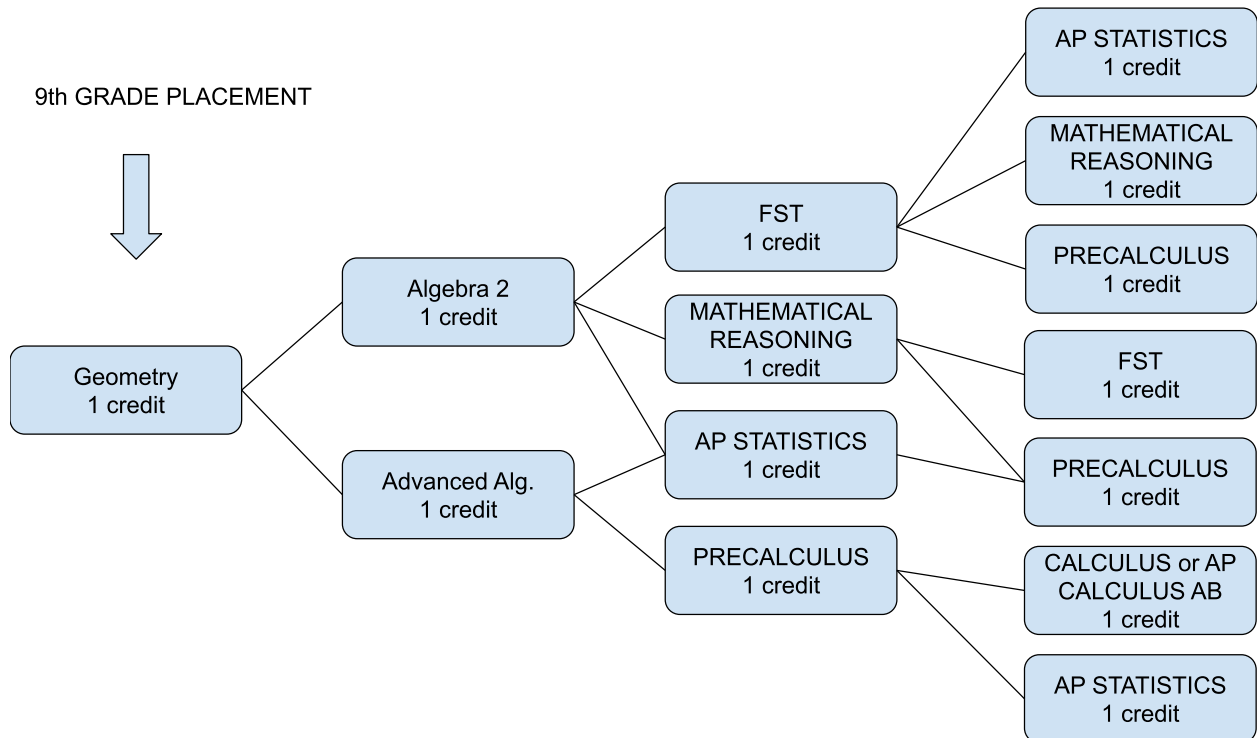
COURSE TITLE: **Entrepreneurship & Innovation** (MKT22120) (Grades 11-12) ½ credit
PREREQUISITE: Marketing Principles II (or previously offered Marketing Principles 1 credit course)
DESCRIPTION: Being your own boss, owning your own business; these are the foundations of the American Dream. This class provides students with the opportunity to make that happen. This course provides a comprehensive view of retail marketing concepts, business concepts, and entrepreneurial skills and examples in a practical environment, utilizing The Eagle's Nest school-based enterprise as an extended classroom learning experience.
Students will work in and operate The Eagle's Nest School Store. They will learn skills in developing and starting a retail business, and learn business functions that are involved in running a successful operation. Students will study store design and visual merchandising, promotion and advertising, merchandise planning, retail marketing strategy, inventory, pricing, and risk management. Additional topics include the study and application of the retail marketing mix, innovation and what it takes to be an entrepreneur, customer service and relationships, and careers in the field of retail marketing and entrepreneurship. Students are encouraged to be actively involved in DECA, an association of marketing students. DECA provides opportunities to participate in local, state and national activities to showcase their own talents and network with their peers and industry professionals.

MATHEMATICS

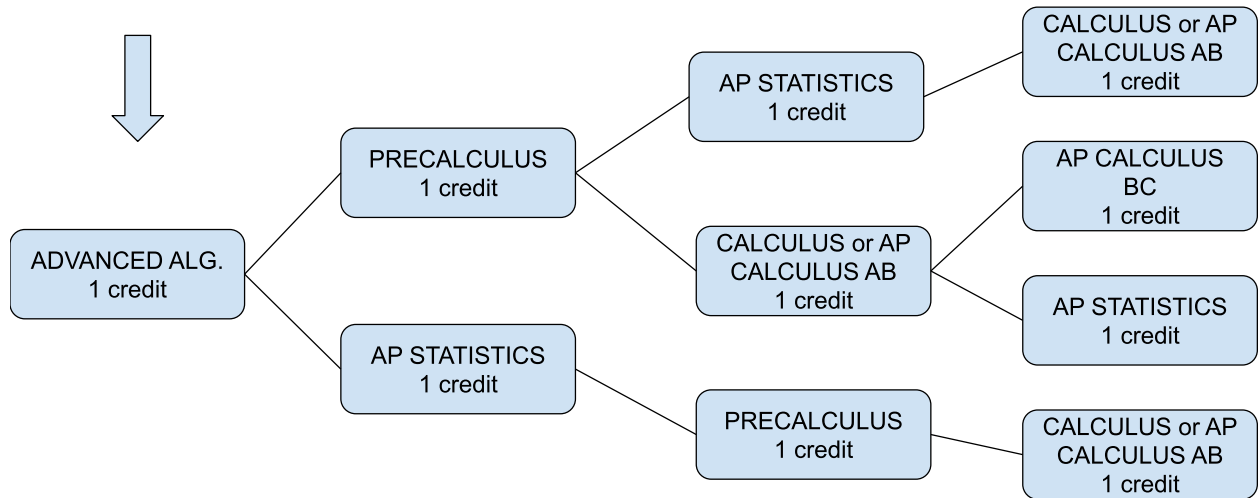
9th GRADE PLACEMENT



9th GRADE PLACEMENT



9th GRADE PLACEMENT



MATH SKILLS
1 credit

MATHEMATICS

Three credits of mathematics are needed for graduation. All freshmen are required to take and successfully complete a mathematics course. Please check the calculator requirements for your course.

COURSE TITLE:	Algebra 1	(MAT61111/2)	(Grades 9-12)	1 credit	N
DESCRIPTION:	The teaching-learning model in this algebra class actively engages students in both guided and open-ended mathematical explorations that help make sense of their experiences. Topics covered include linear equations, lines of best fit and real-life models, systems of equations, inequalities, quadratic functions, exponential functions, data analysis, probability, and graphing statistics. Students MUST have their own scientific calculator.				
COURSE TITLE:	Math Skills (ALEKS)	(MAT61701/2)	(Grades 9-12)	½ - 1 credit	
PREREQUISITE:	Recommendation of the Mathematics Department				
DESCRIPTION:	This course will help students who have struggled with math in the past work at their own pace through a computer-based curriculum individualized to the student's needs. Math Skills is for any student who desires more practice with skills at any level. Math instructors must be consulted before enrolling in this course.				
COURSE TITLE:	Geometry	(MAT61211/2)	(Grades 9-12)	1 credit	N
PREREQUISITE:	Successful completion of Algebra I or recommendation of the Mathematics Department				
DESCRIPTION:	This course is designed to acquaint students with the properties of one-, two-, and three- dimensional figures in a plane and in space. Students gain experience with inductive reasoning as they perform investigations and make conjectures, and deductive reasoning as they use those conjectures to "explain why" in other situations. Algebra is used throughout the course. Topics include vocabulary, special angles, triangles, polygons, quadrilaterals, circles, area, volume, and trigonometry. Students are required to have their own scientific calculator; preferably a Texas Instruments TI-30XIIS.				
COURSE TITLE:	Algebra 2	(MAT61311/2)	(Grades 10-12)	1 credit	N
PREREQUISITE:	Successful completion of Geometry or recommendation of the math department.				
DESCRIPTION:	Algebra 2 is the first year of a two-year advanced algebra course, with FST being year two. In comparison to the one-year course, Advanced Algebra, Algebra 2 is taught at a slower pace with time given to review Algebra 1 concepts as necessary. These concepts are then extended and covered in greater depth. Students study quadratics and other functions, logarithms, and exponential functions. Students are required to have their own scientific calculator; preferably a Texas Instruments TI-30XIIS.				
COURSE TITLE:	Functions, Statistics, & Trigonometry (FST)	(MAT61411/2)	(Grades 10-12)	1 credit	N
PREREQUISITE:	Successful completion of Algebra 2				
DESCRIPTION:	FST is the second year of the two-year advanced algebra course, with Algebra 2 being year one. This course includes some review of material as necessary, but not as much given in Algebra 2. Concepts studied include polynomials, transformations of functions, trigonometry, statistics, and probability. Students who complete this course with a grade of C or better will be prepared to take Pre-Calculus the following year. Students are required to have their own scientific calculator; preferably a Texas Instruments TI-30XIIS.				
COURSE TITLE:	Advanced Algebra	(MAT61331/2)	(Grades 9-12)	1 credit	N
PREREQUISITE:	Successful completion of Geometry or recommendation of the math department				
DESCRIPTION:	Advanced Algebra is a fast-paced course which combines topics from Algebra 2 and FST into a single, year-long class. Students finishing this course at an acceptable level will have the opportunity to take AP				

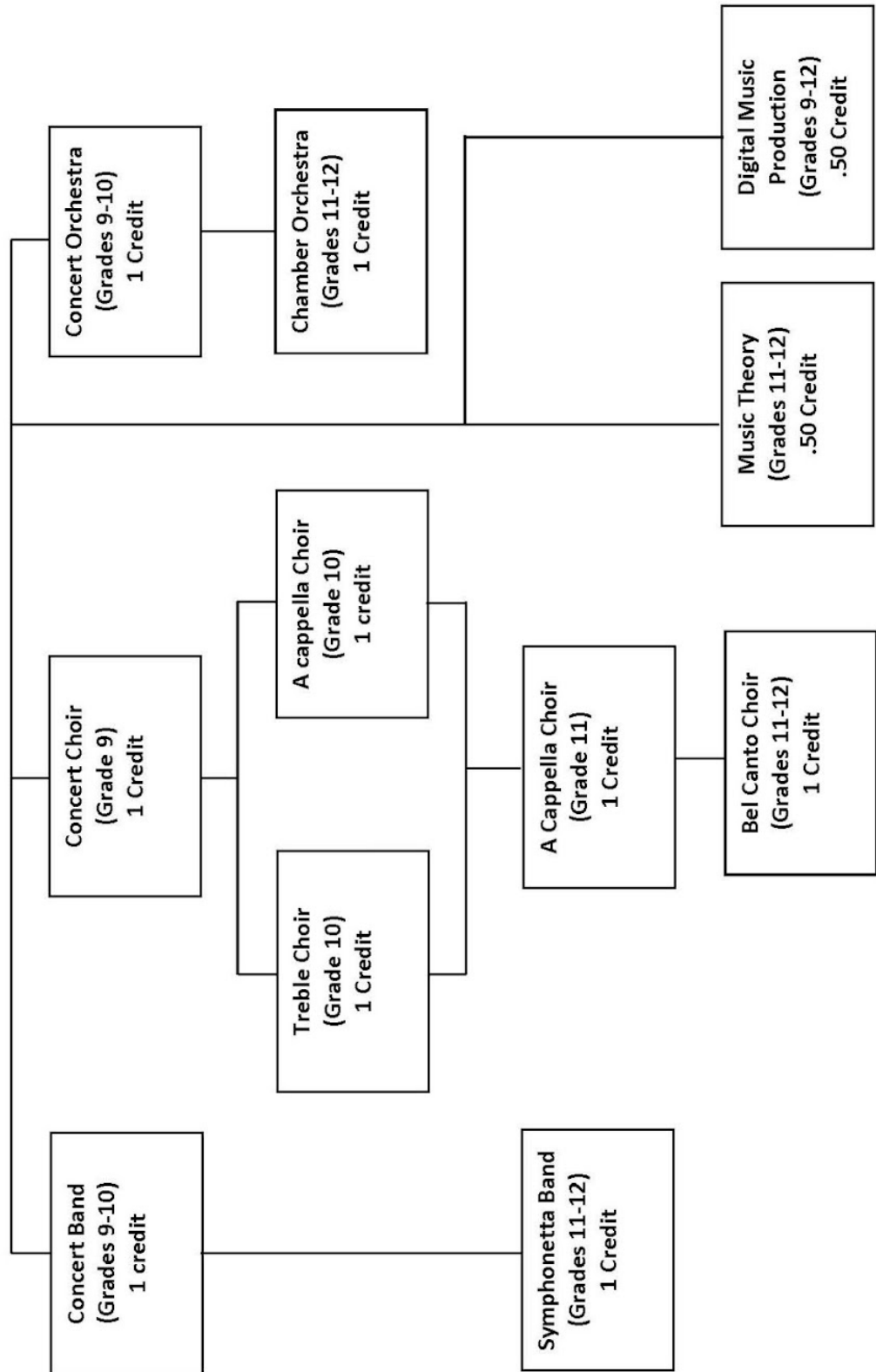
Statistics or Pre-Calculus. Functions, logarithms, trigonometry, and other advanced topics will be covered in this class. The Math Department will assign students to this class based on their performance in Algebra 1 and Geometry. **Students are required to have their own TI-83+ or TI-84 graphing calculator.**

COURSE TITLE:	Pre-Calculus	(MAT61501/2)	(Grades 10-12)	1 credit	N
PREREQUISITE:	Successful completion of Advanced Algebra or FST				
DESCRIPTION:	Pre-Calculus topics include a review of the elementary functions, advanced properties of functions (including special attention to polynomial, rational, and trigonometric functions), conic sections, sequences and series, vectors, and introductions to the derivative and integral. This course will prepare students for Advanced Placement Calculus. Students are required to have their own TI-83+ or TI-84 graphing calculator.				
COURSE TITLE:	Calculus (non-AP)	(MAT61531/2)	(Grades 10-12)	1 credit	N
PREREQUISITE:	Successful completion of Pre-calculus				
DESCRIPTION:	This class covers calculus concepts but not to the level of the AP Calculus AB course. Topics covered include extensive review of Pre-calculus concepts, limits, rate of change of a function, derivatives, applications of derivatives, integration, and applications of definite integrals. Students who have already taken AP Calculus AB may not enroll in this class, nor may students take this class and AP Calculus AB at the same time. However, students may take AP Calculus BC upon successful completion of this course. Students are required to have their own TI-83+ or TI-84 graphing calculator.				
COURSE TITLE:	AP Calculus AB	(MAT61511/2)	(Grades 11-12)	1 credit	AP N
PREREQUISITE:	Successful completion of Pre-Calculus and Teacher Recommendation				
DESCRIPTION:	This course is intended to prepare students for the advanced placement exam at the AB level. This level is equivalent to one semester of rigorous college calculus. Students who score well on the AP test in May can earn college credit in calculus. Topics covered include limits, rate of change of a function, derivatives, applications of derivatives, integration, applications of definite integrals, and the calculus of transcendental functions. Students are required to have their own TI-83+ or TI-84+ graphing calculator. A TI-89 calculator will also suffice. This course requires a summer packet, the time estimated for homework each class period will vary between 30 to 90 minutes.				
COURSE TITLE:	AP Calculus BC	(MAT61521/2)	(Grade 12)	1 credit	AP N
PREREQUISITE:	Successful completion of AP Calculus AB or Calculus (non-AP)				
DESCRIPTION:	This class is designed to help students prepare for the Advanced Placement BC Calculus test. We review the main topics from Calculus 1 (rules and applications of integrals and derivatives), then extend these concepts to parametric equations, vector-valued functions, polar equations, sequences, and series. Students are required to have their own TI-83+ or TI-84+ graphing calculator. A TI-89 calculator will also suffice. This course requires a summer packet, the time estimated for homework each class period will vary between 30 to 75 minutes.				
COURSE TITLE:	AP Statistics	(MAT61551/2)	(Grades 10-12)	1 credit	AP N
PREREQUISITE:	Successful completion of Advanced Algebra or FST or Algebra 2				
DESCRIPTION:	This course is intended to prepare students for the advanced placement exam. It is equivalent to a one-semester college course in introductory statistics. Students who score well on the AP test in May can earn college credit in Statistics. The course (and AP test) covers four main themes. The first theme is producing data. Students will learn about different types of studies, how to choose a sample, randomization and how to identify potential biases in a study. The second is organizing data. This will include a discussion on looking for patterns and departures from patterns in data through numeric and				

graphic summaries. The third theme is probability. After learning probability rules and models, students will use their knowledge to learn about inference—the ability to confidently make conclusions about data and how it might apply to a more general population. This last theme is the cornerstone of the course. Projects that apply the statistical procedures learned throughout the year will make the material learned meaningful and fun. **Students are required to have their own TI-83+ or TI-84+ graphing calculator. A TI-89 calculator will also suffice. This course requires a summer packet, the time estimated for homework each class period will between 30 to 90 minutes.**

COURSE TITLE:	Mathematical Reasoning (Dual Credit) (MAT61901/2) (Grade 11- 12) 1 credit N
PREREQUISITE:	Junior or Senior standing with successful completion of Algebra 2
DESCRIPTION:	All college students, regardless of their college major, need to be able to make reasonable decisions about fiscal, environmental, and health issues that require quantitative reasoning. A collaborative, activity-based approach is used in this course to explore numerical relationships, graphs, proportional relationships, algebraic reasoning, and problem solving using linear, exponential and other mathematical models. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. This is a dual-credit Madison College course. Students who successfully complete this course can earn both MGHS and Madison College credit. As of the printing of this course handbook, this class meets the requirements to be deemed dual credit. Students are required to have their own scientific calculator; preferably a Texas Instruments TI-30XIIS.

Music



MUSIC

COURSE TITLE: **A cappella Choir*** (MUS02421/2) (Grade 10 male identifying/ female identifying Grade 11) 1 credit
PREREQUISITE: Membership in the high school Concert or Treble Choir or Consent of Director after an audition.
DESCRIPTION: A cappella Choir, is a course offered for one credit that is open primarily to **11th grade male and female students, and 10th grade male singers**, who pass a basic pitch test and who have the vocal maturity to perform more advanced choral literature. A variety of musical styles will be performed, and the choir will participate in at least four concerts during the school year. All concerts are outside school time, and attendance is **mandatory** as part of the grading process.

COURSE TITLE: **Bel Canto Choir*** (MUS02401/2) (Grades 11-12) 1 credit
PREREQUISITE: Membership in the high school A cappella Choir or Consent of Director after an audition.
DESCRIPTION: Bel Canto Choir, is a course offered for one credit that is open to **11th and 12th grade male and female students by audition only**. A variety of musical styles will be performed, and the choir will participate in at least four concerts during the school year. All concerts are outside school time, and attendance is **mandatory** as part of the grading process.

COURSE TITLE: **Concert Choir*** (MUS02601/2) (Grade 9) 1 credit
PREREQUISITE: Grade 9 or consent of director
DESCRIPTION: This class is primarily for **9th grade students**. Concert Choir will focus on gaining skills related to choral singing and exploring a variety of music. The groups will sing as a male/female choir or combined as a mixed choir. The choir will participate in at least four concerts during the school year. All concerts are outside school time, and attendance is **mandatory** as part of the grading process.

COURSE TITLE: **Treble Choir** (MUS02411/2) (Grade 10 male identifying/ female identifying) 1 credit
PREREQUISITE: Consent of Director
DESCRIPTION: The Treble Choir is a course offered for one credit and offered primarily to **10th grade female singers**. A variety of musical styles will be performed, and the choir will participate in at least four concerts during the school year. All concerts are outside school time, and attendance is **mandatory** as part of the grading process. The focus of this choir will be to work on the vocal production and problems inherent at this age of the female voice. The choral literature will concentrate on intermediate and advanced level three and four-part singing.

COURSE TITLE: **Concert Orchestra*** (MUS02321/2) (Grade 9-10) 1 credit
PREREQUISITE: Membership in middle or high school orchestra or consent of director after an audition
DESCRIPTION: This orchestra is primarily for **9th and 10th grade students**. Concert Orchestra will continue to build on skills learned in middle school orchestra, as well as introduce new techniques needed to perform high school orchestra literature. All concerts are outside of school time. Because this class is a part of the regular curricular program, attendance is **mandatory** at all concerts and is included as part of the grading process.

COURSE TITLE: **Chamber Orchestra*** (MUS02301/2) (Grades 11-12) 1 credit
PREREQUISITE: Membership in Concert Orchestra or consent of director after an audition
DESCRIPTION: This orchestra is primarily for **students in grades 11-12**. Students will continue to build and refine learned skills as well as introduce new techniques needed to perform high school orchestra literature. All concerts are outside of school time. Because this class is a part of the regular curricular program, attendance is **mandatory** at all concerts and is included as part of the grading process.

COURSE TITLE: **Concert Band*** (MUS02001/2) (Grade 9-10) 1 credit
PREREQUISITE: Enrollment in high school band/middle school band or consent/approval of band instructors
DESCRIPTION: This band is primarily for **9th and 10th grade students**. Continued development of instrumental techniques is necessary to perform high school literature. All concerts and marching band performances are outside of school time. Because this class is a part of the regular curricular program, attendance is **mandatory** at all performances and is included as part of the grading process. * **9th grade and new high school band members will need to purchase marching shoes. (We have gently used shoes for \$10 and new shoes for \$30).**

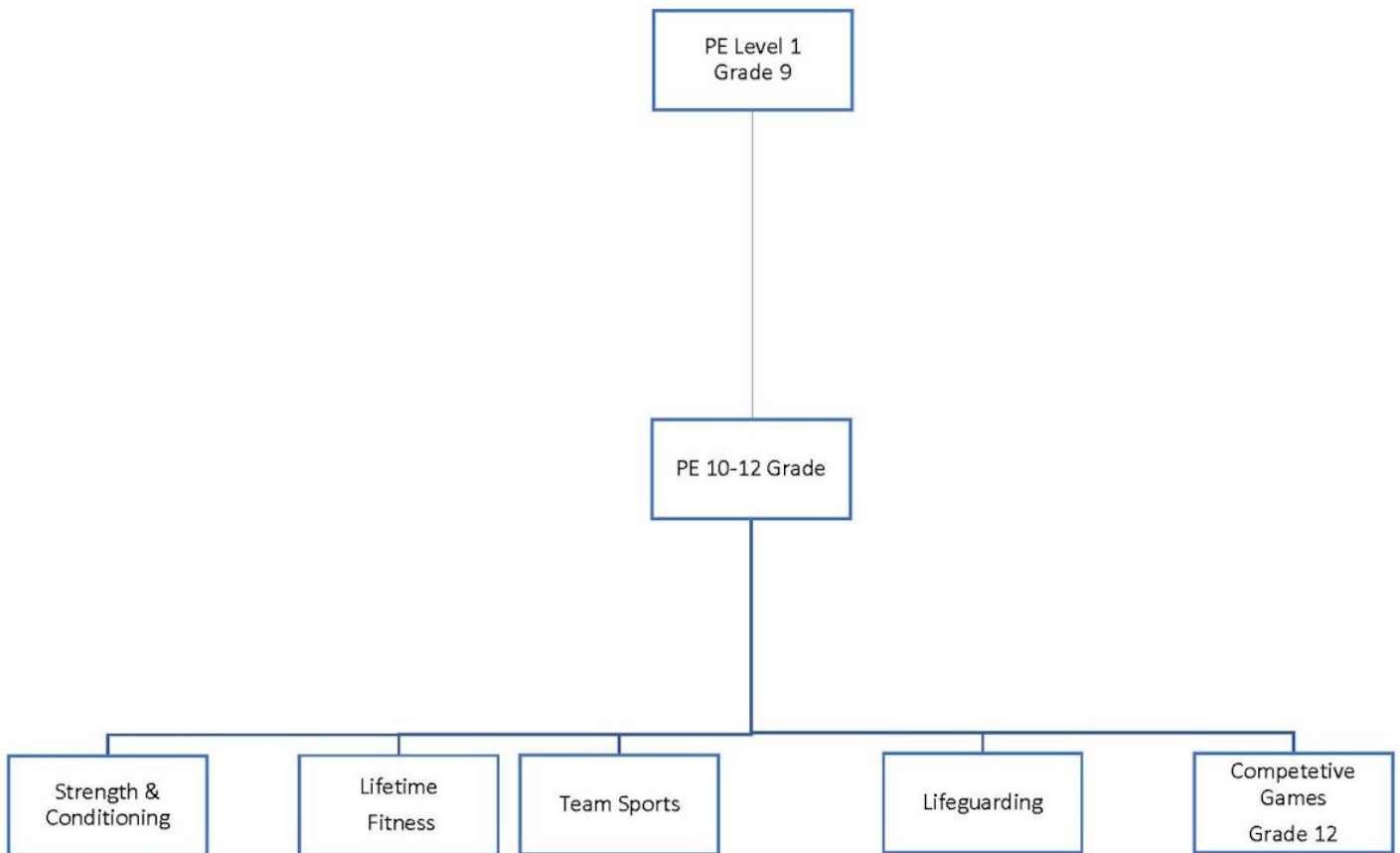
COURSE TITLE: **Symphonetta Band*** (MUS02101/2) (Grades 11-12) 1 credit
PREREQUISITE: Enrollment in high school band/middle school band or consent/approval of band instructors
DESCRIPTION: This band is primarily for **students in grades 11-12**. Continued development of instrumental techniques is necessary to perform high school literature. All concerts and marching band performances are outside of school time. Because this class is a part of the regular curricular program, attendance is **mandatory** at all performances and is included as part of the grading process.

COURSE TITLE: **Digital Music Production** (MUS03000) (Grades 9-12) .50 credit
DESCRIPTION: This new class introduces all students to music composition and production. Learn how to analyze and synthesize your favorite songs and compose your own music using digital software. This class will offer opportunities for creating music with beats, loops, and various software.

COURSE TITLE: **Music Theory** (MUS02900) (Grades 11-12) .50 credit
PREREQUISITE: This course is open to juniors and seniors that are enrolled in band, choir, or orchestra or with instructor approval.
DESCRIPTION: Music Theory will introduce students to the technical study of music. Music Theory is an overview of music reading, analysis, and composition. Students will learn how to properly read and write music and analyze elements like melody, harmony, and rhythm. Additionally, students will be introduced to sight-singing, ear training, dictation, and basic piano.

PHYSICAL EDUCATION

Updated 12/13/2022



Physical Education

General Information

One and one-half credits of physical education are required for graduation. Students are required by the State of Wisconsin to take one semester of physical education in **three different years to fulfill their graduation requirement.** Students should take only one semester of physical education in each of their 9th grade and 10th grade years. All freshmen are required to take PE Level 1 (PE Level 1 is designed to introduce students to Lifetime Fitness, Individual Sports, Team Sports, Strength/Conditioning, and Aquatics). During grades 10-12 students can select any of the PE courses listed categorically by grade below. Strength and Conditioning, Lifetime Fitness, and Lifeguarding will include students in grades 10-12, while Team Sports will include students in grades 10 and 11. Classes may be taken more than one time (except PE 1, and WSI/Lifeguarding) to fulfill a student's graduation requirement. **No students are allowed to take more than one PE course per semester.**

REQUIRED PROGRAMS

- COURSE TITLE:** **PE Level 1** (PED84110) (Grade 9) ½ credit
DESCRIPTION: This course is a semester course. Core curriculum instruction will be given in activity skills. Activities may include pickleball, track and field, ultimate frisbee, soccer, speedball, softball, basketball, swimming, weight training, aerobics, low organized games, biking, possibly some alternative offerings due to facility availability. Students will be evaluated on cognitive awareness of skills, rules, and strategies for each activity. Emphasis is on the improvement of physical fitness through a variety of team/individual sport and fitness related activities. **If a student fails level 1 physical education, the student is required to make up level 1 physical education.**
- COURSE TITLE:** **Lifetime Fitness** (PED85000) (Grades 10-12) ½ credit
DESCRIPTION: Lifetime Fitness is designed for students who want to explore options for improving and maintaining their individual fitness levels through a variety of activities. The goal of this course is to give students both the knowledge and the physical skills to develop and continue good lifetime fitness habits. Emphasis in this class will be more on development of a spirit of cooperation and good sportsmanship rather than on fostering a sense of competition. Units/Activities may include strength training, recreational individual sports, recreational team sports, walking, yoga, self defense, dance, biking, and low organized games.
- COURSE TITLE:** **Strength & Conditioning** (PED85010) (Grades 10-12) ½ credit
DESCRIPTION: This course is a semester-long course. Strength & Conditioning provides an introduction and progression into various strength and conditioning practices/techniques for individuals who are looking to increase their strength, speed, and power. Students will participate in daily warmups, speed, agility, change of direction, and strength exercises provided by the instructor. This class will utilize outdoor and indoor facilities including the outdoor turf field, indoor gymnasium, and the weight room. Students will spend some class time participating in traditional physical education games/activities.
- COURSE TITLE:** **Team Sports** (PED85020) (Grades 10-11) ½ credit
DESCRIPTION: This course is a semester course and completes the physical education requirement. The goal of Team Sports is to give students the opportunity to participate in a variety of team sports while taking on a variety of roles (teammate, captain, assistant). We will spend some class time preparing for the team competition for each unit. It is our goal that you learn what it takes to be a teammate and a positive contributor throughout the semester as well as improve your present level of fitness. You will have many opportunities to become more fit and have fun but you must take ownership if this is going to happen. Come to class

ready to be an active participant, learner and teammate. If a student fails level 3 physical education, the student is required to make up level 3 physical education. Activities may include flag football, speedball, softball, basketball, killer kickball, 3 ball battle ball, tennis, volleyball, badminton, swimming, and many more. Racket activities and additional team sports will be included in this course. Students will be evaluated on cognitive awareness of skills, rules, and strategies for each activity. Emphasis is placed on the improvement of physical fitness, carry-over lifetime skills, and developing social skills.

COURSE TITLE: **PE Level 4 Competitive Games and Sports** (PED84410) (Grade 12) ½ credit

PREREQUISITE: Grade 12 and have completed the required physical education offerings at levels 1, 2, and 3.

DESCRIPTION: This course is one semester. Students will select possible activities for participation from the following: softball, tennis, ultimate frisbee, football, soccer, Frisbee golf, basketball, volleyball, badminton, bowling, golf, team handball, and weight training. Other possible offerings will be dependent on facility availability and equipment. Other future activities may be added if there are high interest levels.

COURSE TITLE: **Lifeguard/WSI Certification** (PED74420) (Grade 10-12) ½ credit

Prerequisites for Lifeguarding:

1. Swim 300 yards continuously front crawl and/or breaststroke with breath control and rhythmic breathing
2. 2 minutes of treading water with legs only. (hands stay under armpits)
3. 10 LBS brick challenge includes 20 yard swim, brick recovery from bottom, 20 yard swim holding brick with head not going underwater

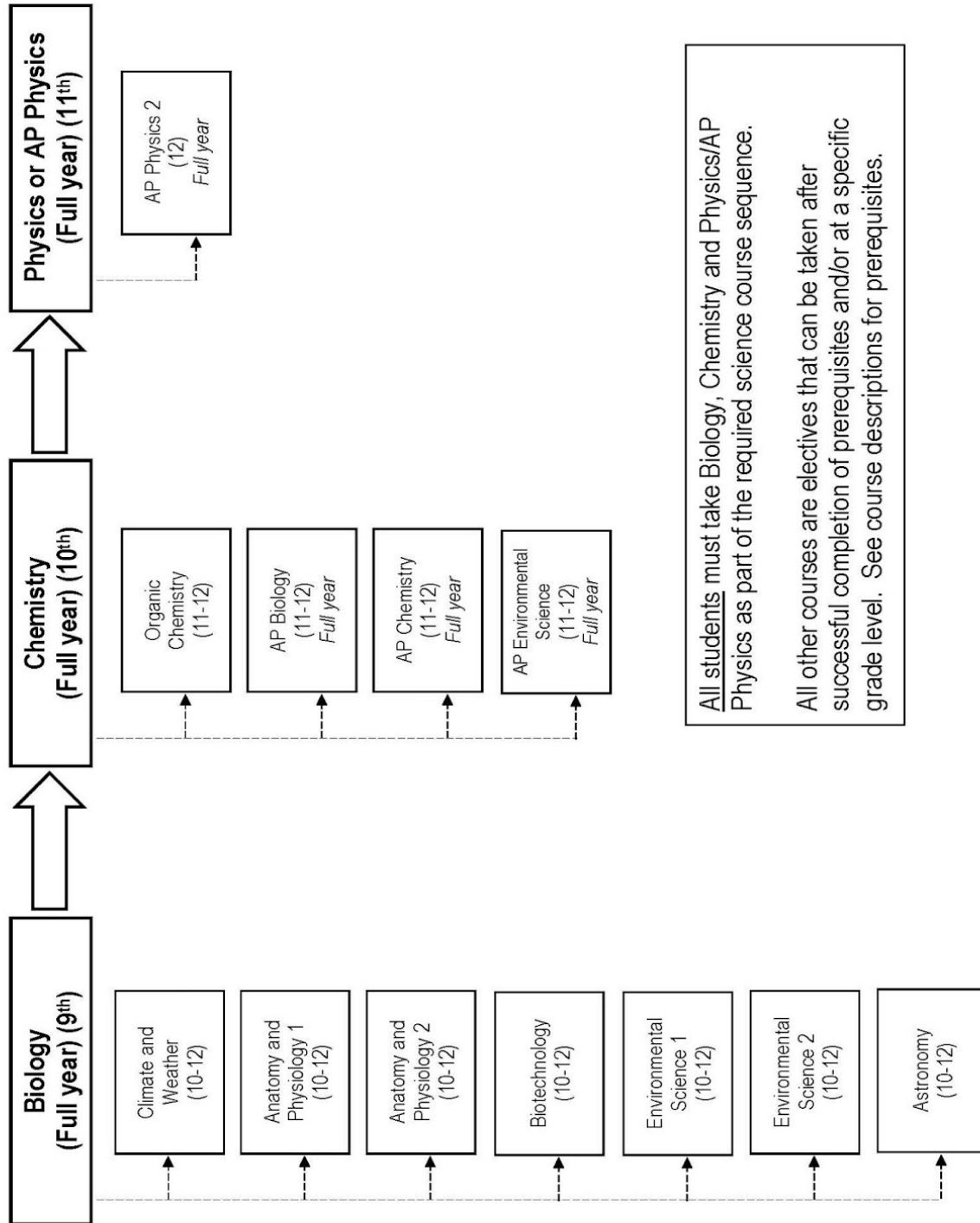
Prerequisites for Water Safety Instructor (WSI)

1. Demonstrate Level 4 swimming strokes including 25 yards front crawl, elementary backstroke, back crawl, sidestroke, breaststroke and 15 yards of butterfly
2. Maintain position on back for 1 minute using sculling with hands
3. Tread water 1 minute

Other Requirements and Information:

1. Age 16 by the end of fall semester
2. Open to 10th, 11th, and 12th Grade Students
3. Minimum of 31.25 hours of actual full participation for WSI Certification
4. Minimum of 28.50 hours of actual full participation for Lifeguard Certification
5. This course will be .50 of high school PE credit and will be a semester in length
6. This course will fulfill the PE 2 or PE 3 requirements
7. This course will be limited to the first 15 qualified applications received
8. This course will be taught by PE instructor and WSI-T/LGI instructor
9. **Cost Requirements:** \$40 for Lifeguard Certification. \$40 for WSI Certification.

Science



All students must take Biology, Chemistry and Physics/AP Physics as part of the required science course sequence.

All other courses are electives that can be taken after successful completion of prerequisites and/or at a specific grade level. See course descriptions for prerequisites.

SCIENCE

The first three years in the science sequence focuses on the College Readiness Skills (CCRS) as outlined by the ACT. The CRS are general skills that focus on a student's ability to think critically and problem-solve. These are skills that all of our students will need to be equipped with when they graduate from high school, and thus, are integrated into our courses.

To meet our students' abilities, Biology and Chemistry courses have been divided into two tiers. These tiers are based on student scores on the Aspire assessments in order to facilitate academic growth.. Both tiers of each course generally cover the same content, are rigorous, and provide students with the skills that are necessary for college and beyond. This allows us to appropriately focus our instruction for all of our students' needs and skill levels. Students who did not qualify for the Honors tier, who wish to be considered for this placement, should consult their science teacher. As noted above, both tiers focus on both content and skills, and are rigorous and college preparatory. Junior year, students have the choice of either Physics or AP Physics 1.

REQUIRED SCIENCE COURSES

COURSE TITLE:	Biology	(SCI81111/2)	(Grade 9)	1 credit	N
DESCRIPTION:	Biology is the first year of a three-year science requirement. The course begins with an introductory unit that includes significant skills for every science student. First semester continues with the study of ecology, plants, homeostasis, and the study of human body systems. Second semester encompasses a thorough study of genetics and evolution by natural selection, the two cornerstones of life science. The course emphasizes college and career readiness skills at a level that is appropriate to the student.				
COURSE TITLE:	Chemistry	(SCI81281/2)	(Grade 10)	1 credit	N
PREREQUISITE:	Successful completion of Biology				
DESCRIPTION:	Chemistry is the second year of the three-year science requirement. The course begins with a thorough study of matter, atomic theory, and the Periodic Table. The first semester continues with the study of gasses and chemical reactions. Second semester begins with a more math based unit about stoichiometry. Second semester then encompasses deep dives into bonding, thermodynamics, and solutions. Laboratory techniques and safety are emphasized throughout the course. The course emphasizes college and career readiness skills at a level that is appropriate to the student.				
COURSE TITLE:	Physics	(SCI81381/2)	(Grade 11-12)	1 credit	N
PREREQUISITE:	Successful completion of Chemistry				
DESCRIPTION:	Physics is the final course in the science sequence which prepares students for the ACT examination taken by all of our students. Topics covered include mechanics and dynamics, gravitation, light and sound, electricity, and magnetism. This course emphasizes college and career readiness skills at a level that is appropriate to the student. The students will travel to Great America/Six Flags in the spring to use the amusement park as a physics laboratory.				
COURSE TITLE:	AP Physics 1	(SCI881411/2)	(Grade 11)	1 credit	AP N
PREREQUISITE:	Successful completion of Chemistry and Geometry. Must also be concurrently enrolled in Algebra II or an equivalent course.				
DESCRIPTION:	AP Physics 1 is an algebra-based, introductory college-level physics course that explores topics such as Newtonian mechanics (including rotational motion); work, energy and power; mechanical waves and sound; and introductory, simple circuits. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide				

students with opportunities to apply the science practices. AP Physics 1 continues to emphasize college and career readiness skills. Students will travel to Great America/Six Flags in the spring to use the amusement park as a physics laboratory. **Expect to spend between three and six hours per week, depending on your comfort with the material, working on the course outside of the classroom.**

ADVANCED TOPICS IN SCIENCE ELECTIVES

COURSE TITLE:	Anatomy and Physiology 1	(SCI81350)	(Grades 10-12)	½ credit	N
PREREQUISITE:	Successful completion of Biology				
DESCRIPTION:	This Anatomy and Physiology course involves the study of the structure and function of the human body at mainly the molecular and cellular levels. Systems to be explored include the nervous, muscular, circulatory, and possibly one other system. The concepts will be discovered and illustrated through text reading, lecture, case studies and online laboratory activities. At home, students will be asked to use the online textbook and complete online practice on a regular basis.				
COURSE TITLE:	Anatomy and Physiology 2	(SCI81360)	(Grades 10-12)	½ credit	N
PREREQUISITE:	Successful completion of Anatomy and Physiology 1				
DESCRIPTION:	This Anatomy and Physiology course continues the study of the structure and function of the human body and the main body systems. Systems to be explored are respiratory and immune systems, along with sensory organs and possibly one other body system. The concepts will be discovered and illustrated through text reading, lecture, case studies and online laboratory activities. The main lab activity will be the detailed dissection of a cat. The field trip for this class may include viewing and possibly hands-on exploration with human cadavers.				
COURSE TITLE:	Astronomy	(SCI81390)	(Grades 10-12)	½ credit	N
PREREQUISITE:	Biology and Geometry				
DESCRIPTION:	This one semester course provides the opportunity to develop knowledge and understanding about the solar system, galaxy, and universe we live in. Students use tools of observation to learn about space and learn how other astronomers past and present have used tools available. Areas of study include: daily, seasonal, and yearly motions of the sky, electromagnetic spectrum, birth of the solar system and universe, stellar astronomy and how stars change over time; and the fate of our universe. Basic algebra is required for this course.				
COURSE TITLE:	AP Biology	(SCI81461/2)	(Grades 11-12)	1 credit	AP N
PREREQUISITE:	Successful completion of Biology and Chemistry				
DESCRIPTION:	AP-Biology is an advanced biology course covering much of the material of a first year college biology/zoology course, and is intended to prepare students who are interested in taking the AP Exam. The course builds on topics covered in freshman-level biology AND sophomore-level chemistry. Laboratory processes, analytical skills, and content are equally emphasized throughout the course, and combine to give students a deep understanding of biological concepts. Please note that this course is designed to cover all content requirements for the AP Biology exam and as such, moves at a fast pace. Students will take a field trip to BTCL to learn and utilize lab skills for manipulating DNA. Students should plan to complete readings and pre-lab work outside of class. Depending on comfort with the material, students should plan on spending approximately 1-1.5 hours for each class period we meet.				
COURSE TITLE:	AP Chemistry	(SCI81431/2)	(Grades 11-12)	1 credit	AP N
PREREQUISITE:	Successful completion of Chemistry				
DESCRIPTION:	AP-Chemistry is an advanced chemistry course covering much of the material of a first year college chemistry course to prepare students who are interested in taking the AP Exam. The course builds on topics covered in sophomore-level chemistry through more advanced problem solving and conceptual explanations for the				

behavior of matter. Laboratory techniques and safety are emphasized throughout the course. Please note that this course is designed to cover all content requirements for the AP-Chemistry exam and as such, moves at a fast pace; although it is difficult to estimate how much time an individual student may need to be successful, **interested students should plan on studying/completing practice or assignments approximately 1-1.5 hours outside of class for each class period we meet. A summer reading/review assignment covering the first three chapters of our textbook will also be expected to be completed before the start of the school year.**

COURSE TITLE: **AP Physics 2** (SCI81421/2) (Grade 12) 1 credit AP N
 PREREQUISITE: Students should have had AP Physics 1 or a comparable introductory course.
 DESCRIPTION: AP Physics II is an algebra-based, introductory college-level physics course that explores topics such as fluid statics and dynamics; thermodynamics with kinetic theory; PV diagrams and probability; electrostatics; electrical circuits with capacitors; magnetic fields; electromagnetism; physical and geometric optics; and quantum atomic and nuclear physics. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices. AP Physics 2 continues to emphasize college and career readiness skills. Students will travel to Great America/Six Flags in the spring to use the amusement park as a physics laboratory. **Students should plan to complete readings, problem sets and pre-lab work outside of class, approximately 1-1.5 hours for each class period we meet.**

COURSE TITLE: **AP Environmental Science** (SCI81491/2) (Grades 11-12) 1 credit N
 PREREQUISITE: Successful completion of Biology and Chemistry
 DESCRIPTION: AP-Environmental Science is an introductory college-level course that explores a wide range of topics in the field of environmental science. In this course students will explore and investigate the interrelationships of the natural world and analyze environmental problems, both natural and human-made. This course will focus on applying science to real-world social and environmental problems. Laboratory and field investigation will be a focus of the course. Topics include: Ecosystems, Biodiversity, Land and Water Use, Energy Resources and Consumption, Pollution and Global Change. This course is intended to cover all the requirements for the AP Environmental Science exam and will move at a fast pace. **Students should plan on reading/completing practices/taking notes for approximately 1 hour outside of class for each class period we meet.**

COURSE TITLE: **Biotechnology** (SCI81340) (Grades 10-12) ½ credit N
 PREREQUISITE: Successful completion of Biology
 DESCRIPTION: Many areas of our lives today are affected by the science of biotechnology from medical discoveries and treatments to areas as diverse as agriculture and waste treatment. Students enrolled in this semester course will participate in many hands-on labs to gain skills and experience in a variety of laboratory procedures. Topics covered will include bacteria and viruses, regenerative medicine, recombinant DNA technology, cloning, DNA forensics, and the moral and ethical issues that are related to the science and applications of biotechnology.

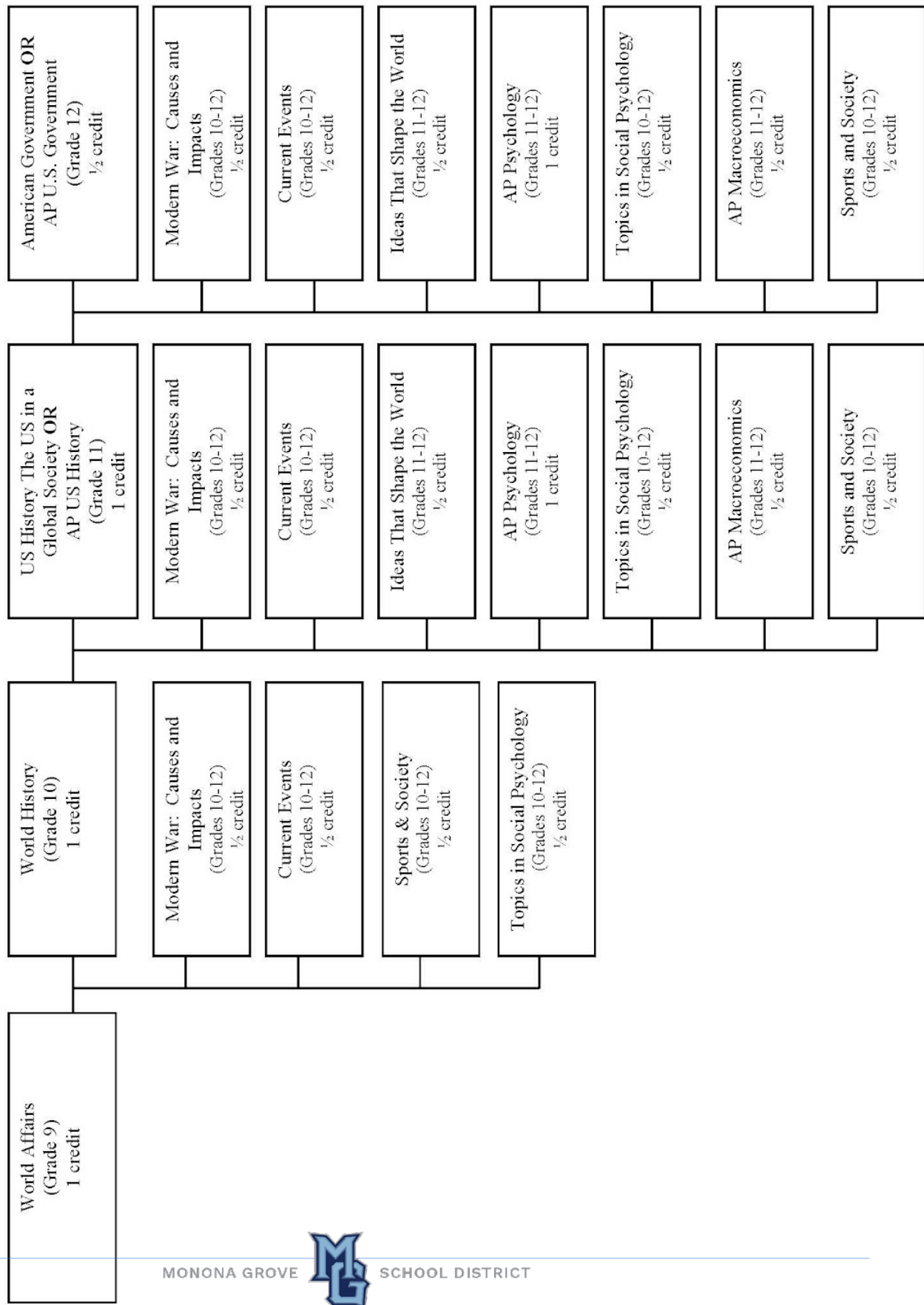
COURSE TITLE: **Climate and Weather** (SCI81510) (Grades 10-12) ½ credit N
 PREREQUISITE: Successful completion of Biology
 DESCRIPTION: You are also probably aware, due to recent media coverage, that climate and weather phenomena present important and unpredictable challenges for our society. Most of us check the weather prediction every day before leaving home. Scientists are currently working towards a better understanding of the climates system while politicians debate how to respond to the rapidly intensifying impacts of global warming. Some in private industry

are already trying to reduce their climate-change related risks and gain a future competitive edge. It seems that everybody talks about the weather and climate change these days, but do they know the details for what they are talking about? We will cover the science behind the processes that determine the world's climates and weather.

COURSE TITLE:	Environmental Science 1	(SCI81470)	(Grades 10-12)	½ credit	N
PREREQUISITE:	Successful completion of Biology				
DESCRIPTION:	Topics covered: the World Food Crisis, algae blooms in Wisconsin lakes, the World's Freshwater Crisis, and Media Literacy & Climate Change. In each unit there is a focus on hands-on learning, and working together in groups. This course provides an in-depth understanding of how species interact with each other to make up ecosystems. Students will study the structure of ecosystems and biomes of the world. Furthermore, students will study freshwater ecosystems in depth, as well as the freshwater crisis. In all units, there is an emphasis on the impacts that humans have on ecosystems, as well as focus on problem solving and 21st century skills. This course has a large amount of group work which includes big projects, and is appropriate for students who have an interest in environmental science.				
COURSE TITLE:	Environmental Science 2	(SCI81480)	(Grades 10-12)	½ credit	N
PREREQUISITE:	Successful completion of Biology				
DESCRIPTION:	Topics covered: Current environmental situation, environmental ethics, Honeybee crisis, Climate change and new energy technology. In each unit there is a focus on hands-on learning and working together in groups. The major goal of this course is to develop an understanding of the complex environmental problems facing society today. In this course students will explore a number of topics that will build on their understanding of ecosystems, how they work, and the impact of human actions on them. Topics will also include environmental ethics, honeybee crisis, climate change and alternative energy. This course has a large amount of group work which includes projects and is appropriate for students who have an interest in environmental science.				
COURSE TITLE:	Organic Chemistry	(SCI81450)	(Grades 10-12)	½ credit	N
PREREQUISITE:	Successful completion of Chemistry				
DESCRIPTION:	Organic Chemistry is an introductory course to the college level equivalent. This course focuses on the molecular structure and function of many of the basic groups of organic compounds such as saturated and unsaturated hydrocarbons, and aromatic compounds. We will look at the reactions these groups undergo that allows for the synthesis of other groups like alcohols, aldehydes, ketones, ethers, carboxylic acids, and esters. Laboratory experiments will be used to teach separation and purification techniques as well as to look at synthesizing molecules and how the presence of molecules can be experimentally verified.				

Key: AP= Advanced Placement; N = NCAA Accepted

Social Studies



SOCIAL STUDIES

Three and one-half credits of social studies, including government, are required to graduate. The social studies program consists of full-year required courses for freshmen, sophomores, and juniors and a required semester course in American government for seniors. In addition, elective courses are offered to sophomores, juniors, and seniors, but these may not be taken to fulfill the three and one-half year social studies requirement. **All students, and especially those who plan to attend a four-year college, should seriously consider taking social studies elective courses.**

REQUIRED SOCIAL STUDIES COURSES – FULL YEAR

FRESHMAN COURSES

COURSE TITLE: **World Affairs** (SOC91101/2) (Grade 9) 1 credit N
DESCRIPTION: World Affairs is a year-long course that will help students to better understand the global community through the overarching themes of identity, movement, power, and resources. Specific units of study will include: gender and race; migration; resources and climate; innovation, internet, and the information economy; security, defense, and terrorism; cultural, ethnic, religious conflict; globalization and commerce; and oppression and human rights. This course will have an emphasis on reading, writing, discussion, and research skills.

SOPHOMORE COURSE

COURSE TITLE: **World History** (SOC92141/2) (Grade 10) 1 credit N
DESCRIPTION: A year-long course which will look at various regions of the world, focusing on history, geography, and important events that shape our modern world.. By looking at historical concepts in a thematic way, as opposed to a simple chronological approach, students are able to understand the greater historical narrative. This gives the student the opportunity to look for trends, patterns, and the development of the modern world over time, which translates into the opportunity to develop critical thinking, understanding, and reasoning for today's world. We will work on reading, writing, discussion, and research skills, as well as study skills, presentation skills, and using technology to deepen our understanding of the issues which affect our daily lives.

JUNIOR COURSES

COURSE TITLE: **U.S. History : The United States in a Global Society in the 20th & 21st Centuries** (SOC93351/2) (Grade 11) 1 credit N
DESCRIPTION: This is a year-long course that uses the social studies disciplines of history, political science, and economics to understand issues that current conditions in the United States are based in large part on crucial developments throughout United States History. By studying units thematically, students gain an understanding of change over time using a wide variety of primary and secondary sources, and independent research projects that cover America across various time periods. Students explore important issues to understand how recent events shaped the society in which we live.

OR

COURSE TITLE: **AP United States History** (SOC91311/2) (Grade 11) 1 credit AP N
DESCRIPTION: AP United States History (APUSH) is the class for you if you thoroughly enjoy United States history and/or relish an academic challenge. Through both primary and secondary sources, students will study not only the who, what, when, and where of history, but, more importantly, the why and how. This full year course addresses major themes in United States history from colonization through the early 2000's. Central themes of the course include the growth of participatory democracy, the role of ethnic and minority groups, the role of women, dissent

and dissenters in American life, economic driving forces in American history, and the search for equality under the law. Course content will range from traditional political and economic history to discussions of social history—the lives of everyday people in the context of their historical time period. Students will have the option of taking the APUSH test in May and those who score well can earn college credit in United States history for their efforts. **Average weekly homework : 3-4 hours. Required summer work: 8-10 hours.**

Key: AP= Advanced Placement; N = NCAA Accepted

REQUIRED SOCIAL STUDIES COURSE - SEMESTER

COURSE TITLE: **American Government** (SOC91500) (Grade 12) ½ credit N
DESCRIPTION: Students in this course will examine the origins of our system of government, the roles of the three branches of government, the protections offered by the Bill of Rights and how the political process and voter behavior shape public policy. Through a variety of educational activities that emphasize current events, students will learn not only how the system works, but also how they fit into the system as citizens.

OR

COURSE TITLE: **AP U.S. Government & Politics** (SOC91510) (Grade 12) ½ credit AP N
DESCRIPTION: Students with a strong interest in American government and the desire to challenge themselves academically may choose this course rather than the traditional course in government. Both classes examine the origins of our system of government, the roles of the three branches of government, the protections promised by the Bill of Rights, the political process, and voter behavior. Students in this college lecture style AP course will delve deeper into these topics and explore the federal bureaucracy to develop an understanding of the relationships among the actors and institutions of government. This course emphasizes vocabulary and analysis and should prepare students to take the AP Government exam in May. Students who score well earn college credit. **Average weekly homework : 1-2 chapter readings/assignments. Required summer work: None**

COURSE TITLE: **Current Events** (SOC91250) (Grades 10-12) ½ credit N
DESCRIPTION: This semester course is intended for students who have an interest in current events. Answering the basic questions of who, what, when, where, and why, students will discover and discuss national and world events as they happen. Online news sources, television news programs, social media/newspapers, and current events magazines will provide additional information for discussion of topical issues. If students want to find out what's going on, this course is for them!

COURSE TITLE: **Modern War Causes and Impacts** (SOC91220) (Grades 10-12) ½ credit N
DESCRIPTION: This semester class uses documentaries, dramatic movies, class discussions, and course readings (there is no textbook) in an effort to convey both the glory and horror of war and to understand war in the broad sense—not just battles and military heroes. As a result, the emphasis in this course will be on the causes of war, the effects of war, propaganda, the human impact, and other topics related to war in the 20th and 21st centuries that make students both think and feel. By the end of this course, students should be asking themselves: Who are the heroes in war? Who are the victims? What has been won? What has been lost?
 *Course readings are extensive and do require a time commitment outside of class. **This class is intended for ALL students!**

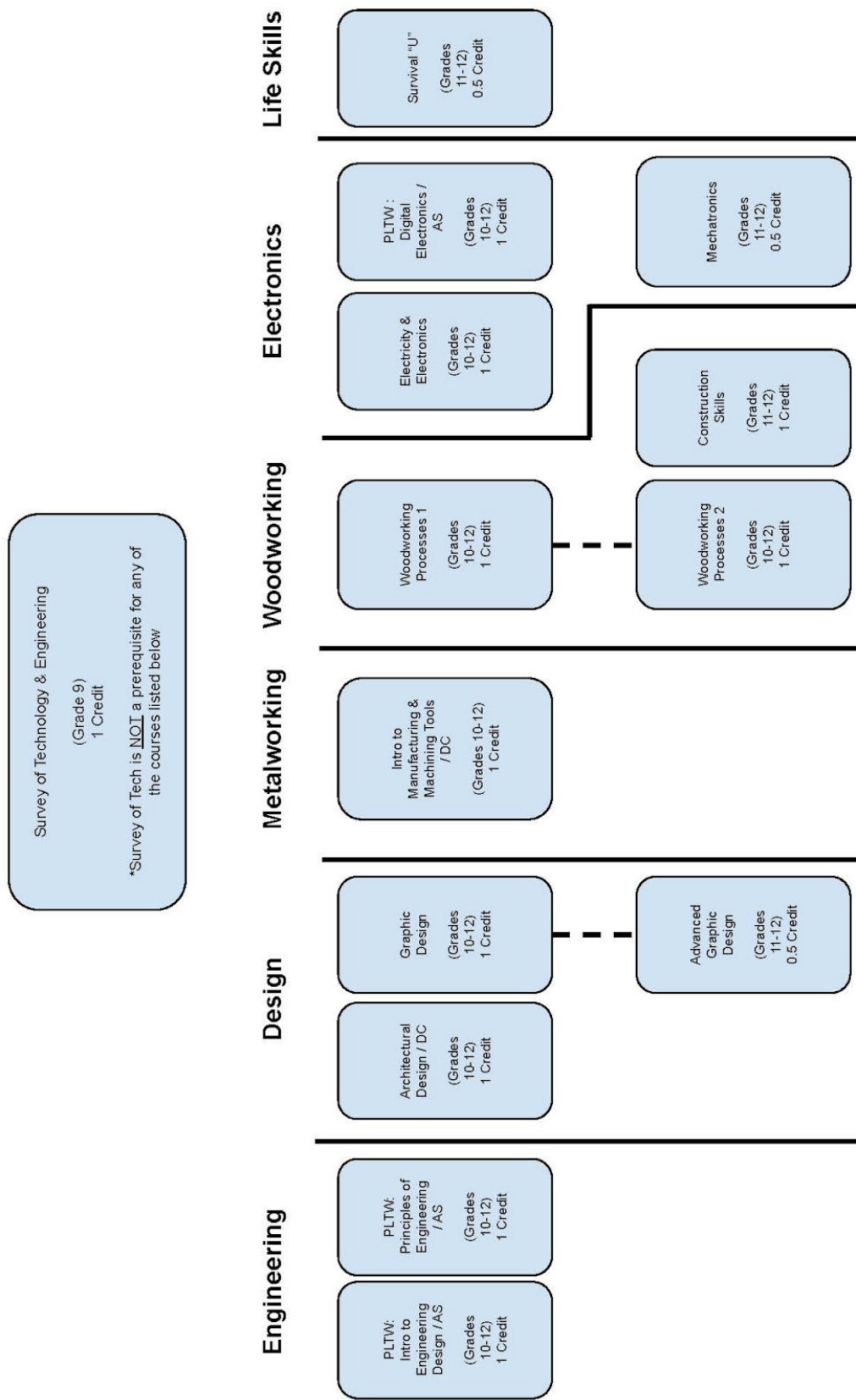
COURSE TITLE: **Ideas That Shape the World** (SOC91230) (Grades 11-12) ½ credit N
PREREQUISITE: Grade 10 only with consent of department
DESCRIPTION: This semester course uses readings and discussion to explore the ideas that have shaped our views of the world. Students are introduced to influential thinkers such as Socrates, Plato, Siddhartha Gautama, Henry David Thoreau, Daniel Quinn, and George Carlin. Discussions address such timeless issues as identity,

language, gender, religion, justice, the role of man in the state and the effects of technology on our culture. Students should bring an open mind, a willingness to contribute to classroom discussions, and a desire to consider what they believe and why. Topics in this course include some mature themes. Several films and film clips will be shown, some of which are rated R.

COURSE TITLE:	Sports and Society	(SOC91560)	(Grades 10-12)	½ credit	
DESCRIPTION:	This class will go beyond the statistics and box scores of the sporting world and dive into topics related to sports in society, such as women in sports, race, class, media, violence, and social justice. Students will look at these issues by studying sport at different levels, including the youth, high school, and professional levels. While many might be surprised that these issues exist in the sporting world, this class will grapple with how sports are a reflection of society. Students more interested in social issues than sports are encouraged to take this course. This class is discussion based, as we look at the topics mentioned above through movies, video clips, course readings, and guest speakers. Later in the semester, students will have the opportunity to explore a topic of their own interest.				
COURSE TITLE:	AP Macroeconomics	(SOC91700)	(Grades 11-12)	½ credit	AP N
PREREQUISITE:	Strong interest in business, finance or economics.				
DESCRIPTION:	This semester course focuses on macroeconomics. Major topics studied include supply and demand, inflation, unemployment, gross domestic product, fiscal policy, monetary policy, the federal budget, and international trade. Emphasis is placed on critical thinking skills through the understanding, application, and analysis of basic economic concepts and the current state of the U.S. economy. In May, students will have the option of taking the AP Macroeconomics test. Students who score well may earn college credit in economics. AP Macroeconomics is a course that requires 1 – 1.5 hours of work outside of class for every class period that we meet. Please see Mr. Jefferson if you are curious, he'd love to meet with you and answer any questions. Students who are considering a career in business should give serious thought to taking this course.				
COURSE TITLE:	Topics in Social Psychology	(SOC91950)	(Grades 10-12)	½ credit	N
DESCRIPTION:	Topics in Social Psychology is a one-semester course focusing on the scientific study of the way people think about, feel, and behave in social situations. It involves understanding how people influence, and are influenced by others around them. A primary goal of this course is to introduce the perspectives, research methods, and empirical findings of social psychology. Topics to be covered include: Conformity, Aggression, Attraction and Relationships, Conflict and Peacemaking, Group Influence, Persuasion, and Prejudice and Stereotyping, among others. Students may enroll in this class even if they have taken, or are planning on taking AP Psychology.				
COURSE TITLE:	AP Psychology	(SOC91911/2)	(Grades 11-12)	1 credit	AP N
PREREQUISITE:	Science background or high interest in psychology.				
DESCRIPTION:	This college level introductory course is designed to introduce students to the scientific study of human behavior and mental processes. Students are exposed to the facts, principles, and phenomena associated with the major subfields within psychology. Topics studied include experimentation, the brain, human development, sensation and perception, psychological disorders, therapy, cognition, and social psychology. Students will also learn about the methods psychologists use in their science and practice. College credit may be earned by passing an advanced placement test given at the high school in May. AP Psychology requires approximately 3 hours of work outside of class per week.				

Key: AP = Advanced Placement; N = NCAA Accepted

Technology & Engineering



TECHNOLOGY & ENGINEERING DEPARTMENT

COURSE TITLE: **Survey of Technology & Engineering** (TEC11001/2) (Grades 9-12) 1 credit
DESCRIPTION: This is a year-long course. The course is a general introduction to the technology education department and the courses offered in the department at the high school. Study will include many hands-on opportunities in the general areas of woodworking, electronics and electronic communication, manufacturing and metalworking, drafting (3D Modeling), graphic design, desktop publishing and principles of engineering technology and design. All areas of study will include on-going activities in problem solving, critical thinking, assessing various technologies, and applying appropriate technologies to solve problems while working effectively both as a team member and individually. Projects include a cutting board, dustpan, screwdriver, pen, pen box, jump the peg game, 3d printing, vinyl sticker design, LED robot, clock, and more. **NOTE: SURVEY OF TECHNOLOGY & ENGINEERING IS NOT A PREREQUISITE FOR ANY OTHER TECH & ENGINEERING COURSES.**

***There will be a \$60.00 fee for this course. Assistance is available for students that qualify.**

COURSE TITLE: **Survival "U"** (TEC11980) (Grades 11-12) ½ credit
DESCRIPTION: **This semester course is intended for students with *limited exposure to traditional technology and engineering courses such as Woods and Construction. Preference will be given to these students as sections become full.*** Students will learn how to become educated consumers and how to maintain the systems associated with renting or owning property. Students will explore a variety of topics like drywall repair, hanging a heavy mirror on a wall, replacing a faucet/toilet, replacing electrical fixtures, automobile maintenance, beginner woodworking skills, buying a home/financial credit, and various other real life areas of study. Projects that students will complete make use of the tools and materials that one would encounter while performing household repair/minor upgrades and renovations. Projects may include: concrete nightlight, step stool, wall-mounted coat hanger, ceramic tile trivet. The intent of this course is to give students a diverse knowledge and basic skill level to deal with products and projects; whether they own or rent, drive or walk, work or play, fix or hire, buy or sell

COURSE TITLE: **Introduction to Manufacturing (Dual Credit)** (TEC11101/2) (Grades 10-12) 1 credit
DESCRIPTION: Introduction to Manufacturing and Machine Tool is an introductory course designed to equip students with the basic fundamental skills of metalworking, machine tool operations and manufacturing processes. Students will gain experience in drilling, cutting, grinding, bench metal, turning, milling, sheet metal fabrication, TIG/MIG/Stick welding, basic metallurgy, forging, 3D printing, plasma cutting and CNC machining. Projects include a meat-tenderizing hammer, cold chisel, riveting hammer, 3D printed parts, toolbox, and tailgate grill. ***This is a dual-credit Madison College course. Students who successfully complete this course can earn both MGHS and Madison College credit. As of the printing of this course handbook, this class meets the requirements to be deemed dual credit. *This course has a \$75.00 fee to pay for material.**

Pre-engineering courses offered - Project Lead the Way (PLTW)

The Technology & Engineering Department offers several certified pre-engineering courses. Students who may be interested in engineering and technology related careers should enroll in any/all of these courses. Through Project Lead the Way, a national organization established to assist schools with pre-engineering curriculum, students are provided with the knowledge and skills to excel in high-tech fields. Students who successfully complete any of the courses can receive credit at affiliated colleges throughout the country. Courses specified with PLTW are certified Project Lead The Way courses. For further information regarding these courses please see any of the Technology & Engineering instructors.

To earn Project Lead the Way (PLTW) credit, students must take the full year version of the class. *PLTW courses afford the possibility for students to receive College Credit. For specific information on accreditation opportunities, please see the PLTW website at PLTW.org or the Technology & Engineering instructor who teaches the specific course. As of the printing of this course handbook, these classes meet the requirements to be deemed PLTW.

COURSE TITLE: **PLTW: Computer Integrated Manufacturing (CIM)** (TEC11111/2) (Grades 11-12) 1 credit

PREREQUISITE: Introduction to Manufacturing and Machine Tool (unless given instructor permission)

DESCRIPTION: Integrated Manufacturing is a course for students interested in the area of manufacturing and advanced machining technology. Students will further develop the skills learned in the introduction to manufacturing class and IED courses and will explore CNC machining and automated manufacturing systems. This course is designed to develop the skills necessary for pre-engineering programs, vocational and industrial training programs, pre-engineering programs, or entry-level jobs. The software used in this course is identical to the software used in industry (Inventor and MasterCAM). Students will design, assign tool paths, and machine complex parts on the CNC mill. There will be additional fees charged in this course for materials and consumables. **(CIM will not be offered in 2023-2024).**

COURSE TITLE: **Woodworking Processes 1** (TEC11301/2) (Grades 10-12) 1 credit

DESCRIPTION: Woodworking Processes 1 is an introductory course designed to give the student a basic understanding of the materials and processes involved in modern woodworking. Emphasis is on the safe operation of all machines. Areas of study include the use of hand tools, portable power tools, woodworking machines, methods of fabrication, finishing processes, and interpreting working drawings with cost estimation. Three major projects are to be constructed involving the use of all woodworking machines in the shop as a requirement of the course. Students must pay for the materials needed to complete each project (approximately \$130-\$190 total cost for all three projects assistance provided for eligible students). Payments will be required at three different times, and will be due prior to the beginning of each of the three projects.

This course will require additional fees. Fees will vary depending on the material chosen. Estimated \$150-225. Financial assistance is available for qualifying students.

COURSE TITLE: **Woodworking Processes 2** (TEC11401/2) (Grades 11-12) 1 credit

PREREQUISITE: Woodworking 1 or consent of instructor

DESCRIPTION: This course is designed to develop advanced skills in wood production and machining techniques, as well as create an understanding and appreciation of the woodworking industry. In this class students will build on the skills acquired in Woods I to design, plan, estimate, and ultimately construct a project of their choosing. Areas of study include: wood material technology, design in woodworking, advanced operations on woodworking machines, advanced finishing methods and techniques, industry standards, and customizing with inlays, veneers, and laminates. Want the freedom to learn what you want? work at your pace and build what you want? Then this is the class for you. (Must have passed Woods 1 to be eligible)

An additional course fee will be required for materials. This cost varies greatly depending on the project and can range from \$50 - \$400 depending on the size, complexity, and the materials chosen.

COURSE TITLE: **Construction Skills** (TEC11971/2) (Grades 11-12) 1 credit
DESCRIPTION: This course is intended for students interested in construction, home building, remodeling, and other building trades. Class activities will include site layout, concrete work, floor and wall framing, rafter framing, and stairways. Additional projects will include house models, bean bag toss boards, and typically and end of the year project along the lines of a storage shed. Students will learn vocabulary, background knowledge, and skills that will benefit a wide group of students ranging from those directly entering the workforce after high school to those continuing in post-secondary education (2 year or 4 year) in the construction field. Thinking about a youth apprenticeship in construction? This class is for you!

An additional course fee of \$40.00 will be required for this class to cover the cost of project materials.

COURSE TITLE: **PLTW: Intro to Engineering Design** (TEC11611/2) (Grades 10-12) 1 credit
DESCRIPTION: This course is based on the PLTW I.E.D. **course and can be taken as a 1st semester course only.** This course is based on the PLTW "Intro to Engineering Design" course, and focuses on developing problem solving skills with respect to design and engineering. Students develop 3D modeling skills, drafting and sketching skills, and they will become proficient with 3D printing. There will be frequent team engineering challenges that require problem solving and group work. Other concepts covered include reverse engineering, product development, and manufacturing. Students develop advanced CAD skills.

COURSE TITLE: **Graphic Design** (TEC11501/2) (Grades 10-12) 1 credit
DESCRIPTION: This course is intended for students interested in design, graphic arts, desktop publishing, printing, and advertising. Adobe programs will be used. Course projects will include sketching, logo creation, photo editing, and career-related exploration. Students will participate in projects involving the design and creation of vinyl stickers, T-shirts, 3D printing, and will have access to the laser engraving equipment. Coursework will be hands-on activities and problem solving in these areas of study.

COURSE TITLE: **Advanced Graphics** (TEC11710) (Grades 11-12) 1/2 credit
PREREQUISITE: Graphic Design or consent of the instructor.
DESCRIPTION: This semester course is for students who would like to continue developing their skills in the graphic arts and printing industries. Activities will include extensive work in desktop publishing, electronic pre-press imaging, plate layout and design, laser printing, finishing, and bindery. Students will have an opportunity to work with a laser engraver and 3D printers.

COURSE TITLE: **Architectural Design** (TEC11701/2) (Grades 10-12) 1 credit
DESCRIPTION: This course is designed to give students an understanding of the fundamentals of residential home design. Major emphasis is placed on learning the architectural styles and the function of architecture along with learning multiple software programs. Activities will include developing single family and multi-family floor plans. Projects include urban and residential development, landscape architecture, dream home design and building scaled models. This class is recommended for students interested in architectural design and careers related to architecture and structural engineering. This course will work with the latest version of Autodesk Revit and other modeling programs.

COURSE TITLE: **Electricity & Electronics** (TEC11801/2) (Grades 10-12) 1 credit
DESCRIPTION: This is an introductory course designed to provide the student with a greater understanding of electricity, electronics, and robotics. Students will combine electronic theory with hands-on project work. Project work will include electronic bread-boarding, printed circuit board fabrication, and various electronically-related projects such as a 2-pole motor, homemade speaker, metal detector, remote control jammer, AM crystal radio, 4x4x4 LED Cubes, TV-B Gone Prank project, smartphone remote controlled paraglider, and a custom microcontroller project and robotic design and programming using Lego EV3's. Students will also learn how to use digital voltmeters, oscilloscopes, and other electronic testing equipment. This course is recommended for students who may have an interest in electrical engineering, electronics technology, mechatronics, electrician trades, electronic repair, communications, or an exploratory interest in electronics and related areas.

***An additional course fee of \$35.00 will be required for project materials**

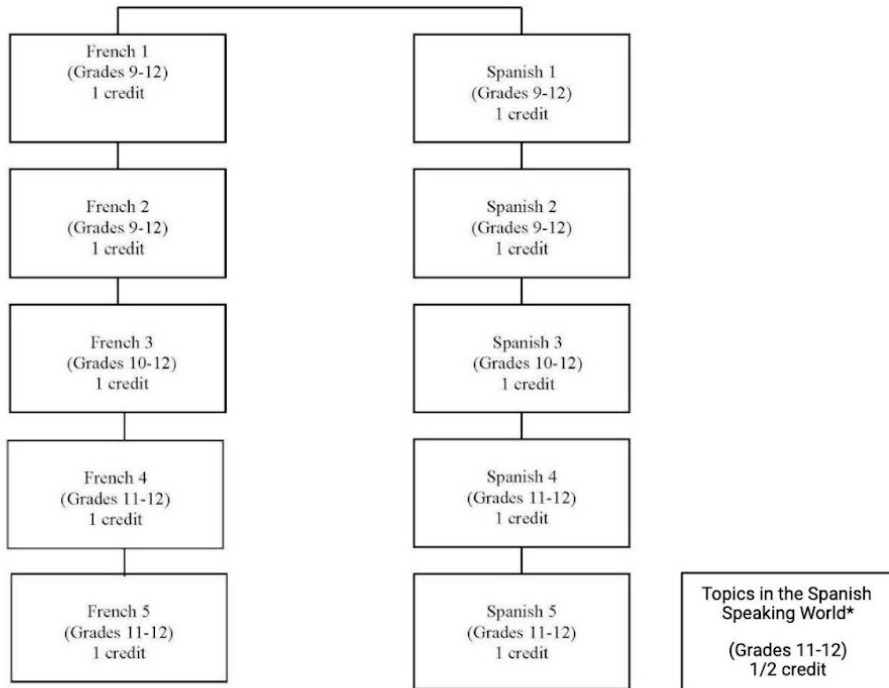
COURSE TITLE: **PLTW: Principles of Engineering** (TEC11831/2) (Grades 10-12) 1 credit
DESCRIPTION: Principles of Engineering is a PLTW pre-engineering course that will provide students with a comprehensive understanding of the field of engineering/engineering technology. Problem solving skills, teamwork, and public speaking are emphasized as they relate to engineering careers and post-secondary education programs. Students will explore various technological systems and processes through interactive hands-on activities such as: the design and construction of an automated electromechanical machine, a balsa-wood structure, a ballistics device, a pencil breaking compound machine, and potentially, a 'Rube Goldberg' like machine. This class will illustrate how engineers and technicians use math, science, and technology in engineering problem-solving processes. Unit topics include: Energy and Power, Materials and Structures, Control Systems, Statistics and Ballistics.

COURSE TITLE: **PLTW: Digital Electronics** (TEC11941/2) (Grades 10-12) 1 credit

DESCRIPTION: Digital Electronics is a PLTW pre-engineering course in applied logic that encompasses the application of electronic circuits and devices. Industry leading computer simulation software is used to design and test digital circuitry prior to the physical construction of circuits and devices on digital logic trainers. The *Multisim* simulation software allows students to design, test and analyze electronic circuits on the computer without having to physically construct the circuit. Microcontrollers, robotics and electromechanical devices are also investigated using the Arduino Inventors Kit and/or the Basic Stamp/PIC Microcontroller. Students will learn how software and hardware work together as they develop and construct projects simulating real-life electronic devices. Unit topics include: Foundations in Electronics, Combinational Logic, Sequential Logic and Controlling Real World Systems.

COURSE TITLE: **Mechatronics** (TEC11800) (Grades 11-12) ½ credit
DESCRIPTION: This semester course will introduce students to the expanding field of Mechatronics, a multidisciplinary STEM (Science, Technology, Engineering and Math) pathway that incorporates principles in electricity, electronics, mechanics, programming and information technology. A portion of this Mechatronics course will be focused on teaching students the use and application of the Arduino Uno microcontroller, a very popular "mini-computer" of sorts, using graphical programming. Students will progress through a variety of physical lab activities as they learn how to create and/or modify programs that control output devices such as lights, buzzers, LEDs and motors; as well as read from a variety of electronic sensors such as light, touch, pressure and sound. These lab activities are intended to teach students how to construct electrical circuits using schematic and pictures diagrams, as well as how to alter and write computer code that is used to control the electrical circuits. As a culminating project, students will design, construct and program their own take-home arduino based electro-mechanical project - an automated gumball machine!

World Languages



***Must demonstrate advanced Spanish proficiency by one of the following:**

- successfully completing Spanish 4
- successfully completing Spanish 5
- being a heritage Spanish speaker or student that attended an Spanish immersion school (a placement test may be requested by a Spanish teacher)

Students can concurrently enroll in Spanish 5 AND Topics in the Spanish Speaking World.

World Languages

COURSE TITLE: **French 1** (FOR42101/2) (Grades 9-12) 1 credit N
DESCRIPTION: French 1 introduces students to the French language through practice in listening, speaking, reading, and writing. Students will study basic grammar and conversational phrases. Communication skills will be acquired through the exploration of cultural topics, such as student life, family, leisure activities and food in French-speaking countries. Upon successful completion, students will possess the skills to communicate effectively on straightforward, day-to-day themes. **Students that completed a full year of French in 8th grade will take French 2.**

COURSE TITLE: **French 2** (FOR42201/2) (Grades 9-12) 1 credit N
PREREQUISITE: Satisfactory completion of middle school French or French I
DESCRIPTION: Activities that give the student the necessary skills to communicate in French at a very basic level will be a major part of this course. These activities include practice of basic pronunciation, conversational situations, role-playing, descriptions, expansion of vocabulary useful to everyday situations, and grammar and usage study. Cultural aspects are included in each unit. Reading comprehension is developed through selections especially written for this level.

COURSE TITLE: **French 3** (FOR42301/2) (Grades 10-12) 1 credit N
PREREQUISITE: French 2
DESCRIPTION: This level continues the development of speaking and comprehension skills through grammar development and vocabulary expansion. Each unit contains a specific cultural aspect. During second semester, students read and analyze level-appropriate selections and study one French film.

COURSE TITLE: **French 4-5** (FOR42411/2) (FOR42501/2) (Grades 11-12) 1 credit N
PREREQUISITE: French 3/4
DESCRIPTION: "Because this is a combined class of fourth and fifth levels, a two-year cycle (cycle A and cycle B) of course content is studied on an alternating basis. The goal is to express oneself on a higher level, using more sophisticated syntax and vocabulary. Specific cultural projects include but are not limited to provinces of France, the francophone world, Impressionism, castles, and award-winning French films, and the novel Le Petit Prince. Upon satisfactory completion of the fifth level, the student should be sufficiently prepared to place high enough on a college placement exam in order to earn retro-credits (UW System).

French 5 can also be taken as a dual-credit class via UW-Green Bay to earn up to 14 college credits if successfully completed (B or better). UW-GB credits will transfer to the majority of other colleges and universities. As of the printing of this course handbook, this class meets the requirements to be deemed dual credit. Average nightly homework : 20-30 minutes per night. Required summer work: None

COURSE TITLE: **Spanish 1 - Beginning** (FOR41101/2) (Grades 9-12) 1 credit N
DESCRIPTION: Spanish 1 students will practice basic grammar and phrases in conversational situations in order to begin developing speaking skills. Emphasis will also be placed on developing listening skills. Students will acquire communication skills through studying various cultural topics like food, leisure activities, and student life in Spanish-speaking countries. **Students that completed a full year of Spanish in 8th grade will take Spanish 2.**

COURSE TITLE: **Spanish 2** (FOR41201/2) (Grades 9-12) 1 credit N
 PREREQUISITE: Successful completion of middle school Spanish or Spanish I
 DESCRIPTION: Activities that give the student the necessary skills to communicate in Spanish at a very basic level will be a major part of this course. Emphasis will be placed on vocabulary building, grammar usage, writing, and pronunciation in order to allow for better self-expression in Spanish. The presentation of basic cultural knowledge of Spanish-speaking people will be a focus throughout the course. *Students who are weak in Spanish I concepts should expect to have to work harder to be successful.

COURSE TITLE: **Spanish 3** (FOR41301/2) (Grades 10-12) 1 credit N
 PREREQUISITE: Successful Completion of Spanish 2 or teacher recommendation based on a placement test.
 DESCRIPTION: This is an intermediate Spanish course. Emphasis in this course will be placed on improving speaking and writing skills through the expanded study of vocabulary and grammar. Students will be expected to combine previously learned material with new concepts. Therefore, students who are weak in Spanish II concepts should expect to have to work harder to be successful. Pair and small group practice is an integral part of the class.

COURSE TITLE: **Spanish 4** (FOR41401/2) (Grades 11-12) 1 credit N
 PREREQUISITE: Successful Completion of Spanish 3 or teacher recommendation based on a placement test.
 DESCRIPTION: This is an advanced course which is more abstract and more academic than previous courses in the department. The review of grammar and the study of vocabulary will continue throughout the year with major emphasis on improving speaking, reading, and writing skills. Units of study focus on humanities or culture, such as music, celebrations, and current social issues in Spanish-speaking countries.

COURSE TITLE: **Spanish 5** (FOR41501/2) (Grades 11-12) 1 credit N
 PREREQUISITE: Successful Completion of Spanish 4 or teacher recommendation based on a placement test.
 DESCRIPTION: Material from previous years will be reviewed, and new material will be introduced in order to achieve a greater degree of proficiency. Communicating in Spanish both in oral and written forms will be stressed. Students will read Hispanic literature, watch cultural movies, and relate the themes to contemporary events. Upon completion of Spanish V, students should be able to speak and write about past, present, and future events with a limited number of errors and a certain degree of proficiency. The students should be prepared to utilize their knowledge of Spanish for pleasure, at the university, or on the job. Upon satisfactory completion of the fifth level, the student should be sufficiently prepared to place high enough on a college placement exam in order to earn retro-credits (UW System).

This class can also be taken as a dual-credit class via UW-Green Bay to earn up to 14 college credits if successfully completed (B or better). UW-GB credits will transfer to the majority of other colleges and universities. As of the printing of this course handbook, this class meets the requirements to be deemed dual credit. Average nightly homework : 20-30 minutes per night. Required summer work: None

COURSE TITLE: **Topics in the Spanish Speaking World** (FOR41001/2) (Grades 11-12) ½ credit N
 PREREQUISITE: Juniors or seniors who meet one of the following criteria:

- Students who have completed Spanish 4 or Spanish 5 with advanced levels of proficiency.
- Is a native / heritage Spanish speaker (or went to a Spanish immersion school) with advanced levels of proficiency.

Additional notes:

- Students may contact any Spanish teacher with questions about what “advanced levels of proficiency” means. A placement test can be taken to determine proficiency level.
- **Students CAN enroll in this course as well as Spanish 5 concurrently.

DESCRIPTION: This course is designed to provide opportunities for students to continue Spanish language development beyond,

or in place of, current Spanish curriculum. In the course, students with advanced levels of proficiency will develop both language and cultural bi-literacy in an environment where students' background knowledge and personal experiences are valued and utilized. In the class, students will explore topics of cultural interest and relate them to historical and current events while developing reading, writing and discussion skills through text analysis. The course is built around the following themes: current events, history, film, and literature. It can be taken as a stand-alone class, or in conjunction with Spanish 5 coursework. While it is not a requirement that students have already taken a Spanish course prior to this, students must be able to demonstrate advanced speaking/reading/writing proficiency in Spanish, as **students should expect to function in Spanish 90%+ of the time**. This course does not have the traditional college preparation focus, but it could serve as a great complement to the traditional track Spanish courses.

Key: N=NCAA Accepted

Other Credit Opportunities

COURSE TITLE: **Teaching Assistant** (Grades 12) 0.5 credit/semester (max of 1.0)
PREREQUISITE: Senior with a minimum GPA of 2.5
DESCRIPTION: The primary purpose of the Student Assistantship Program is to provide students with additional experiences and opportunities for learning that are not provided through regular course enrollment. The teacher and the student will establish curriculum responsibilities that may include assisting the teacher in delivering a lesson, demonstrating procedures, tutoring students, and assisting with curriculum materials. The student is to be actively engaged in the learning process on a daily basis. Examples of a student assistantship include: teacher's aide, lab assistant, or IMC aide. The teacher and the student may submit another type of assistantship to the principal for approval.

Students must complete "The Application for Teacher Assistantship" at the beginning of the school year. Students will receive a Pass (P) or Fail (F) grade. This is an 8th class, students will not be eligible for a study hall or release.

COURSE TITLE: **Independent Study** (Grades 12) 0.5 credit/semester (max of 1.0)
PREREQUISITE: Senior with a minimum GPA of 3.0
DESCRIPTION: Independent Study is intended for the student, who in the teacher's estimation, would benefit from additional study in a particular curricular area. The independent study is intended to provide learning and/or research opportunities for the student in areas that are not available in the MGHS curriculum. The student will be evaluated on the four point grading scale and will therefore be calculated into the GPA.

Monona Grove Youth Apprenticeship Program

Wisconsin's Youth Apprenticeship program is a Department of Workforce Development program targeting high demand industry sectors in the state. Students in 11th or 12th grade are able to use this opportunity to be employed at local businesses where specific job related skills are learned and reinforced. Youth Apprenticeship is a one or two year opportunity requiring 450 hours of on-the-job experience per year.

In addition to the hour requirement, students must enroll in concurrent classes related to their apprenticeship, as well as complete regular check-in assignments with the MGHS Career and Technical Education Coordinator, in order to earn credit for the program. Students who are interested in participating in Youth Apprenticeship, must meet with Ms. D'Amelio, Monona Grove's Career and Technical Education Coordinator, prior to completing the Youth Apprenticeship application. Students who wish to participate in Youth Apprenticeship should plan to enroll in a full course load during registration time. After the student has been accepted into Youth Apprenticeship and employment has been secured, release time for Youth Apprenticeship will be added to the student's schedule. Students will not be allowed to be released from school to go to work until after their Education Training Agreement meeting has taken place and all required paperwork is in place.

Apprenticeship placement is in the community and will be off site. Click [here](#) to see a list of Youth Apprenticeship programs and pathways, along with their corresponding checklists. Students will need to provide their own transportation and employment placements are not guaranteed.

In the event MGHS does not offer suitable related coursework to fit the needs of the Youth Apprentice, students may need to enroll in either a Start College Now class through Madison College, an asynchronous virtual class through an online vendor, or take an evening class in order to satisfy this requirement.

Early College Credit Program and Start College Now

The Early College Credit Program (ECCP) and **Start College Now (SCN)** programs were established to allow students to enroll at an institution of higher education in Wisconsin to take courses that lead to credit toward high school graduation. Grades earned at a postsecondary institution will likely count in the high school GPA because the district pays for the courses in most cases.

The **ECCP** is open to students in grades 9-12 and covers courses taken at a UW System school or private college. Courses may be taken during the Fall, Spring, and Summer semesters. The **SCN** program is open to students in grades 11-12 and covers courses taken at Madison College. Courses may be taken during the Fall and Spring semesters.

Participating in ECCP/SCN may limit the number of courses a student can take at MGHS. Courses requested can't be similar or equivalent to courses offered by the district. Applications are available online ([ECCP application link](#), [SCN application link](#)) and from your school counselor. If you wish to participate in ECCP/SCN, discuss your plans with your school counselor. Students must complete the application and return it to their school counselor prior to the state-mandated deadlines (please allow for ample processing time at the school level in order to meet the deadline for submission):

- October 1st for spring courses
- February 1st for summer courses (ECCP only)
- March 1st for fall courses.

Prospective ECCP/SCN students must register for a full schedule of MGHS courses. Changes to their MGHS schedule will be made upon enrollment in their ECCP/SCN course and as their schedule allows. Students must meet institutional entrance requirements and are only enrolled if there is space available in the requested course.