

# PROGRAM OF STUDIES



## 2024-2025

Montgomery High School  
Skillman, New Jersey

## **Administration**

Mrs. Heather Pino-Beattie	Principal
Mr. Vincent Cuccaro	Vice Principal/Supervisor of Student Activities
Mr. Cory Delgado	Director of School Counseling & Student Wellness
Ms. Tyniesha Douglas	Supervisor of Social Studies
Mr. Kristopher Grundy	Director of Athletics
Mr. John McAvaddy	Vice Principal/Supervisor of Career Education
Ms. Alma Reyes	Supervisor of World Languages
Mrs. Jennifer Riddell	Supervisor of Mathematics
Ms. Daryl Schwenck	Supervisor of Special Services
Ms. Karen Stalowski	Supervisor of English
Mr. Jason Sullivan	Supervisor of Science
Mr. John Vitale	Vice Principal/Supervisor of Health & Physical Education
Mr. Adam Warshafsky	Supervisor of Visual & Performing Arts

## **Guidance Staff**

Mrs. Kelly Apel	School Counselor
Mrs. Maureen Conway	School Counselor
Mr. Keith Glock	School Counselor
Mrs. Christine Grossmann	Student Assistance Counselor
Ms. Carla Hampton	School Counselor
Mr. Matthew Pogue	School Counselor
Mrs. Jessica Ritson	School Counselor
Mr. Raheel Saleem	School Counselor

## **Special Services Staff**

Ms. Renee Colangelo	School Psychologist
Mrs. Stacey Kohler	School Psychologist
Ms. Karen Krusen	Social Worker
Ms. Viveka Mandhyan	School Psychologist
Ms. Megan Matsil	School Psychologist/Transition Coordinator
Ms. Danielle Olney	Speech/Language Therapist
Ms. Kristen Wawrzyniak	LDTC

## **Board of Education**

Mr. Patrick Todd, President  
Ms. Maria Spina, Vice President  
Mr. Martin Calson  
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Ms. Joanna Filak  
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Ms. Christina Harris  
Ms. Zelda Spence-Wallace  
Ms. Ania Wolecka-Jernigan

## **Central Office Administration**

Mrs. Mary McLoughlin, Superintendent of Schools  
Mr. Damian Pappa, Assistant Superintendent of Schools



## **Message from the Principal**

Dear Students and Parents:

It is with great pleasure that I present to you the 2024-2025 Program of Studies for Montgomery High School. The administration and faculty are dedicated to providing an extensive and varied curriculum offerings suited to meet the diverse needs of all students. The emphasis on quality education for everyone is reflected in the courses listed.

Students should consider the many opportunities offered at Montgomery High School. I encourage you to read the information contained in this document carefully prior to course selection. Additional information on each academic program is available from the school's administration and counseling staff who are willing to meet with parents and students on an individual basis.

Montgomery High School is a school of excellence. Our courses are taught by an experienced and dedicated teaching faculty and will provide students with the skills necessary to decipher complex problems and situations, develop autonomy, and value the correlation between hard work and reward. We invite all students to embark on a journey of life-long learning and individual growth, developing their social, emotional and cognitive skills for the future.

Sincerely yours,

Heather Pino-Beattie  
Principal

### ***Montgomery High School Mission Statement***

***Montgomery High School is an academically challenging and supportive community that provides innovative educational, extra-curricular, and social opportunities that encourage responsible citizenship and life-long learning.***

**We believe that the MHS community will:**

Provide a supportive environment for academic and personal growth that fosters independence, self-reliance, and self-worth

Prepare students for a diverse and ever-changing society

Encourage the development of programs that promote good character

Enable everyone to feel physically, emotionally, and intellectually safe (free to verbally express opinions and ideas)

Value all for their unique qualities

Encourage all to pursue their individual goals in a challenging, supportive, and safe environment

Provide a positive learning environment where mutual respect and opportunity exist for the exchange of ideas among teachers, students, parents, and community members

Deliver an instructional program that addresses a variety of learning styles, interests, and levels of readiness for all students in all disciplines

Demonstrate honesty, integrity, and trustworthiness in academic pursuits and social interactions

Respect all people and cultures

Encourage participation in one's community as a social, civic, and personal responsibility

Promote learning as a life-long process.

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## GRADUATION REQUIREMENTS

All students must demonstrate successful completion of the following requirements:

### NJ State Minimum\* Graduation Requirements by Content Area

NJ DEPARTMENT OF EDUCATION REQUIRED ASSESSMENTS	For the most current New Jersey Department of Education Graduation requirements please visit this website: <a href="http://www.state.nj.us/education/assessment/parents/GradReq.pdf">http://www.state.nj.us/education/assessment/parents/GradReq.pdf</a>
ENGLISH/LANGUAGE ARTS LITERACY	20 credits aligned to grade 9 through 12
MATHEMATICS	15 credits including algebra I and geometry or the content equivalent**, and a third year of math that builds on the concepts and skills of algebra and geometry and prepares students for college and 21 <sup>st</sup> century careers
SCIENCE	15 credits including at least five credits in laboratory biology/life science or the content equivalent**; an additional laboratory/inquiry-based science course including chemistry, environmental science, or physics; and a third laboratory/inquiry-based science course
SOCIAL STUDIES	15 credits including satisfaction of N.J.S.A. 18A:35-1 and 2; five credits in world history; and the integration of civics, economics, geography and global content in all course offerings
FINANCIAL, ECONOMIC, AND ENTREPRENEURIAL LITERACY	2.5 credits
PHYSICAL EDUCATION, HEALTH AND SAFETY	A minimum of 3.75 credits in physical education, health & safety* during each year of enrollment, distributed as 150 minutes per week
VISUAL AND PERFORMING ARTS (Art, Music, Drama, Dance)	5 credits
WORLD LANGUAGES	5 credits
21 <sup>ST</sup> CENTURY LIFE AND CAREERS (Family/Consumer Science, Business Administration & Technology, Technology Education)	5 credits
CHOICE CREDITS (Any class taken in any subject area in excess of the State Requirement shall fulfill these credits)	15 credits
TOTAL CREDITS (State Minimum)	120 credits***

\*School districts may establish course and/or credit requirements which exceed the State minimums.

\*\* “Content equivalent” means courses or activities that include the same or equivalent knowledge and skills as those found in traditionally titled courses which are required for high school graduation and which are aligned with N.J. State Standards. This content must be taught by certified teachers, may be integrated in one or more courses, may be titled differently, or may present material in an interdisciplinary or spiral format.

\*\*\*The 120 credit total is greater than the sum of the individual requirements above, to allow for student electives.

**Note:** The information in this Program of Studies is subject to change due to changes or revisions to district policies and/or state code that may occur during the school year.

## **EARLY GRADUATION**

Parents/Guardians of a student seeking early graduation may initiate a written request for special consideration. The written request by the student's parents/guardian must be filed in the Counseling/Guidance Office before March 15 of the student's sophomore year for consideration for the following year. The request must include the reasons for the student's plan for fulfilling graduation requirements. A meeting with the student's school counselor must follow this request. The principal will review and either approve or deny the request.



## GRADING INFORMATION

Montgomery High School uses a numerical grading system based on the 100-point scale.

Grade Range: 0 - 100

Lowest Passing Grade: 60

Highest Grade Allowed: 100

For your convenience, the guidelines for letter grade equivalents are listed below:

A+ = 98-100	B+ = 88 - 89	C+ = 78 - 79	D+ = 68 - 69	F = 0 - 59
A = 93 - 97	B = 83 - 87	C = 73 - 77	D = 63 - 67	
A- = 90 - 92	B- = 80 - 82	C- = 70 - 72	D- = 60 - 62	

### **Rounding**

Use standard scientific rules of rounding to the nearest whole point for all marking period grades (0.5 will be rounded up for report card only).

### **Weighted GPA**

A weighted GPA is computed to provide information for scholarships and to determine valedictorian, salutatorian, and students graduating with honors. The weighted GPA is determined by adding 5 points to Honors and AP courses.

### **Class Rank**

Montgomery High School does not engage in the automatic calculation and reporting of class rank for students. A student's class rank shall be calculated to determine valedictorian, salutatorian, and students graduating with honors. A student's class rank will only be released to a requesting institution (such as a service academy) or a scholarship provider.

### **Honor Roll/Principal's Honor Roll**

Students qualify for Honor Roll if they are full time students carrying a minimum of 30 credits and all unweighted grades within a marking period are 80 or better. To qualify for the Principal's Honor Roll students must carry a minimum of 30 credits and all unweighted grades within a marking period must be 90 or better.

## GRADE POINT AVERAGE

Montgomery High School computes two averages for students. The first computation is an unweighted or “true” average for all courses attempted. The second is a weighted average to determine valedictorian, salutatorian, and honor students.

### Example: Unweighted GPA Computation

Course	Grade	Credit	Grade Points
English II Honors	90	5	450
World History	88	5	440
Biology Honors	80	5	400
Physical Education	82	<u>5</u>	<u>410</u>
		20	1700

$1700/20 = 85.00$  Unweighted GPA (rounded to 2 decimal places)

### Example: Weighted GPA Computation

Course	Grade	Add'l Points	Total	Credits	Grade Points
English II Honors	90	5	95	5	475
World History	88	0	88	5	440
Biology Honors	80	5	85	5	425
Physical Education	82	0	82	<u>5</u>	<u>410</u>
				20	1750

$1750/20 = 87.50$  Weighted GPA (rounded to 2 decimal places)

The student who has the highest average using the weighted computation after seven semesters is determined to be the valedictorian; the student with the second highest average using the weighted computation after seven semesters is determined to be the salutatorian. After seven semesters, the top ten percent of the class, based on the weighted computation, is deemed to be graduating with honors.

### Transfer Students

All transcripts of incoming students are analyzed on an individual basis with appropriate credit and weight assigned based upon the course offerings of MHS. An honors course completed at another high school receives appropriate weight as long as a comparable course was available at MHS. A transfer student must attend MHS for his/her entire junior and senior years to be considered as valedictorian or salutatorian. Transcripts of students entering MHS from a school in another country will be given credit based on the translation of the transcript and equivalency to courses available at MHS and will receive a P (pass)/F (fail) grading. Students entering MHS with credits from an Accredited Online Program will be given the appropriate credit and a P (pass)/F (fail) will appear on their transcript for the grade.

### Courses Taken Prior to High School

Any high school level courses taken prior to 9<sup>th</sup> grade may be used for advancement in a specific subject area or to satisfy a prerequisite. However, only courses taken during the student's high school career will appear on the transcript, be included in the GPA calculation, and count towards graduation requirements. A student is considered to be in 9<sup>th</sup> grade once they have successfully completed 8<sup>th</sup> grade.

### Grade Level Promotion Requirements

In order for students to be promoted to the next grade level, they must have successfully completed a required amount of credits prior to the beginning of the next school year. These minimums may not meet athletic eligibility requirements. For minimum athletic eligibility requirements please refer to page 7.

9<sup>th</sup> grade to 10<sup>th</sup> grade 27.5 credits  
10<sup>th</sup> grade to 11<sup>th</sup> grade 55.0 credits  
11<sup>th</sup> grade to 12<sup>th</sup> grade 82.5 credits

## **GRADING**

### **Full Year Courses**

- No grade may be lower than 50 for semester 1 of a full year course.
- The second semester grade and the final examination will reflect the actual grade earned, i.e., there is no minimum grade. A student who has attempted all course requirements will receive a grade no lower than 50 on the transcript.
- Special situation: If a student passes both semesters but has a failing average due to the final exam grade, he/she will receive a final average of 60 (\*provided that the student took the exam and made a diligent effort to pass).
- Final exam
  - Equals 12 percent of the final grade
  - Averages with the first and second semester grades to determine the final grade.
  - Seniors who have a pre-exam average of 90 or higher are exempt from taking the exam.
  - Any student who cheats on the exam will receive a zero.

### **Semester Courses**

- No grade may be lower than 50 for the first half of the course.
- No grade may be lower than 30 for the second half of the course.
- No grade may be lower than 25 for the final exam, provided that the student took the exam and made a diligent effort to pass.
- Special situation: If a student passes the semester but has a failing average due to the final exam grade, he/she will receive the minimal passing grade of 60 (\*provided that the student took the exam and made a diligent effort to pass).
- The final exam is equal to 12 percent of the course grade.
- Any student who cheats on the exam will receive a zero.

### **Communication of Student Progress**

All parents are encouraged to create an account to access the Montgomery Township School District Parent Access online portal.

Parents/guardians should check student progress regularly including attendance, missing assignments, and grades. If parents/guardians have questions concerning their child's academic progress, they should first contact the classroom teacher, and then if necessary, the appropriate department supervisor. For concerns about overall student progress, the parent/guardian should contact their child's school counselor.

### **Prerequisites, Course Placement & Waiver Applications**

Counselors will guide students into proper placement for English, Math, Social Studies and World Language courses based on established prerequisites. Science placement will be based on diagnostic strategies including previous grade earned, proficiency assessments, level of interest, and teacher recommendation. MHS faculty and administrators strongly believe that the prerequisites set forth in the high school's Program of Studies are reasonable guidelines. Whenever prerequisites are not applicable, counselor and teacher recommendation should be adhered to. However, if the student did not meet the expectations that have been established for a course, but would like to challenge themselves beyond the MHS recommendation, a waiver application must be obtained from the students' current subject teacher and submitted through the appropriate department supervisor for approval. In order to maintain balanced class sizes and consistent learning environments, deadlines will be strictly adhered to and level changes, if waiver is approved, will be subject to supervisor approval.

If a student drops the course, the grade they have earned up to that point will be calculated into their grade in the new course.

### **STEM and STEAM**

Montgomery High School offers a wide array of courses allowing students the opportunity to develop both introductory and advanced skills in a variety of career paths:

- Architecture
- Photography
- Graphic Design
- Industrial Materials
- Computer Languages
- Web Design
- Robotics

Some courses are specifically designated in the Program of Studies as either STEM or STEAM. STEM is an acronym for Science, Technology, Engineering, and Math education. STEM is an interdisciplinary and applied approach that is coupled with hands-on, problem-based learning. STEAM, a newer movement widely adopted by institutions, corporations, and individuals, aims to integrate Art and Design in education and place it firmly at the center of STEM.

## COURSE CHANGE AND CREDIT INFORMATION

### Course Withdrawal

Students are placed in courses after serious discussion among students, parents and counselors. Students are encouraged to develop persistence and resilience in honoring their commitments to course selection by attending and satisfactorily completing the courses in which they enroll.

Students have until April 10th, 2024 to make adjustments to their course requests. After this period of time, changes will only be made when concerns regarding the student's schedule are initiated through the Montgomery High School professional staff. **Requests for discretionary schedule changes will not be considered (e.g., teacher, elective courses, physical education, and early dismissal).** Only changes that are deemed educationally beneficial for the student will be considered and reviewed. Of course, parents and students will be involved in this process before any final decisions are made.

Students must carry a minimum of 3 classes a day (30 credits total) to be considered a full-time student at MHS. Any request to drop a course which would cause the students total credits to fall below the 30 credit minimum will not be permitted without administrative approval.

All course withdrawals after October 25<sup>th</sup> will result in a record of WP (Withdrawal Passing) or WF (Withdrawal Failing) on the official transcript and report card. Students may not change classes (with the exception of a level change) i.e. Honors to CP, after the class has met for 10 times for a full year course and 5 times for a semester course. This includes elective classes in addition to English semester classes for juniors and seniors.

**NOTE:** Students may not withdraw from a **full year course** after semester 1 without administrative approval from the MHS Principal and Director of School Counseling & Student Wellness. In addition, students may not withdraw from a **semester 1 course** after November 15<sup>th</sup> or a **semester 2 course** after March 26<sup>th</sup> without administrative approval (MHS Principal and Director of School Counseling & Student Wellness).

### Course/Level Change Procedures

In an ongoing effort to improve the student experience at MHS, we have formally outlined the procedure for Course and/or Level Changes for all students and their families in detail below.

It is critical to first understand what is defined as a course change and level change:

- A **COURSE CHANGE** is defined as switching to a totally different course, i.e. Choir to Band or Studio Art to Culinary.
- A **LEVEL CHANGE** is defined as switching levels of the same course, i.e. Honors Algebra II to CP Algebra II.

### Important information about Course and Level Changes:

- FOR STUDENTS WHO HAVE **NOT WAIVED** INTO A COURSE:
  - These students may **request a COURSE or LEVEL CHANGE without** completing the Course and/or Level Change Request form IF:
    - it is within the first 10 sessions for a full-year course; or
    - it is within the first 5 sessions of a half-year course
  - **All COURSE CHANGES** made after the first 10 sessions of a full-year course, first 5 sessions of a half-year course, or **LEVEL CHANGES** made after **October 25th, 2024** will be noted on student transcripts as a **WP** (Withdraw Pass) or **WF** (Withdraw Fail).
  - For a student requesting a **LEVEL CHANGE**, this process must be completed by **October 25th, 2024**. **LEVEL CHANGES** completed after **October 25th, 2024** will result in a **WP** (Withdraw Pass) or **WF** (Withdraw Fail) noted on the student's transcript.

- Students who have **not waived** into the course who wish to **request a LEVEL CHANGE** after the first 10 sessions of a full-year course or first 5 sessions of a half-year course **MUST** complete the **MHS Course and/or Level Change Request Google form**.
- **FOR STUDENTS WHO HAVE WAIVED INTO A COURSE:**
  - Students who **have waived** into the course and wish to request a change **MUST** complete the **MHS Course and/or Level Change Request Google form** for both COURSE and LEVEL CHANGE requests, regardless of how many sessions have taken place.
  - **All COURSE CHANGES** made after the first 10 sessions of a full-year course, first 5 sessions of a half-year course, or **LEVEL CHANGES** made after **October 25th, 2024** will be noted on student transcripts as a **WP** (Withdraw Pass) or **WF** (Withdraw Fail).

#### **Steps to Complete the Course/Level Change Process**

1. The student completes the **MHS Course and/or Level Change Request Google Form** which can be found on the MHS Guidance web page, every department web page, and on all teacher Google Classrooms.
2. The appropriate counselor will receive the completed Google Form and schedule an appointment with the student.
3. The counselor will review the request with the student and, if needed, provide the student with a **COURSE and/or LEVEL CHANGE Request form** (paper copy).
4. The student meets with and obtains signatures on the **COURSE and/or LEVEL CHANGE Request form** (paper copy) from the following parties:
  - a. the counselor
  - b. the current teacher in the course they are requesting to change
  - c. the parent/guardian
5. Once all sections of the **COURSE and/or LEVEL CHANGE Request form** (paper copy) have been completed, the student will submit the form to the supervisor of the department for the course they are requesting to change.
6. The department supervisor will review the request and approve, deny, or recommend remediation as appropriate.
7. The supervisor's decision will be shared with the counselor who will make the appropriate changes, if any, and inform the student.

## **NJSIAA**

For students who participate in the MHS athletic program, dropping a class may jeopardize a student's eligibility to participate in interscholastic athletics during the next academic year or sports season. Students must confirm to all rules and regulations set forth by the state's governing body for athletics, the New Jersey State Interscholastic Athletic Association.

The NJSIAA bylaws in Section 2E states:

### ***E: Credits***

***1) To be eligible for athletic competition during the first semester (September 1 to January 31) of the 10<sup>th</sup> grade or higher, or the second year of attendance in the secondary school or beyond, a pupil must have passed 25% of the credits (30) required by the State of New Jersey for graduation (120) during the immediately preceding academic year.***

***2) To be eligible for athletic competition during the second semester (February 1 to June 30) of the 9<sup>th</sup> grade or higher, a pupil must have passed the equivalent of 12 ½ of the credits (15) required by New Jersey for graduation (120) at the close of the preceding semester (January 31). Full year courses shall be equated as one-half of the total credits to be gained for the full year to determine credits passed during the immediately preceding semester.***

### **Incomplete Grades**

When a student returns to school after an absence, he/she is responsible for making up all missed assignments. The work should be completed as soon as possible after returning to school. If the absence occurs within the last two weeks of the semester and the work is not completed by the time grades are submitted, an INC (Incomplete) is given as the marking period grade. Students have a maximum of 10 days to submit all work after the end of the marking period. Failure to do so will result in the student receiving no credit for all missing assignments with the potential of failing the semester.

### **Early Dismissal Privilege**

The MHS Early Dismissal privilege is an opportunity for seniors to leave school earlier by one period; provided they continue to meet the required 30 credit minimum. Without prior administrative approval, students with Early Dismissal privileges must leave school grounds at the end of the school day.

Any student who is in danger of not passing a course required for graduation **will** jeopardize this privilege which in turn might result in an additional change in his/her course schedule.

## OPTION II GUIDELINES

(Alternative pathways for attaining High School Graduation Credits)

**General Statement:** Option II establishes alternate pathways for students of Montgomery High School to satisfy graduation requirements and meet the N.J. State Standards in accordance with New Jersey Administrative Code {N.J.A.C. 6A:8-5.1 (a) *I ii*}. Option II alternative experiences are voluntary. Students may fulfill the requirements for graduation by pursuing credits earned through the traditional classroom environments, alternative learning experiences availed through Option II or through a combination of both programs.

Option II permits students to engage in a variety of alternative learning experiences which are stimulating and intellectually challenging, enabling them to fulfill or exceed expectations set forth by the academic department's Core Curriculum Content Standards. Students may take part in Option II alternatives by participating in the following: student exchange programs, theme-based programs, and accredited college coursework, concurrent enrollment at colleges and universities, on-line and distance learning opportunities.

Transportation, personal safety and well-being, specialized equipment and any and all costs not otherwise provided by Montgomery High School will be the responsibility of the student and/or parent/guardian.

### **Rationale for Option II:**

1. Credit Recovery – *To make up a subject failed during regular school session:*
  - Credits are awarded after successful completion of the recovery course and the respective MHS proficiency assessment has been completed. Successful completion requires the minimum passing grade.
  - The course must have a minimum of 60 clock hours to recover five credits.
  - (PCR) pass credit recovery or (F) fail will be recorded on the student's transcript. A number grade of 60 will factor into the G.P.A. for a passing grade of (PCR).
  - It is the student's responsibility to have appropriate grade reports forwarded to the Guidance Office upon completion-and in accordance with the Option II deadlines.
2. Original Credit – *To earn credits outside of MHS for academic advancement or meet graduation requirements:*
  - Credits are awarded after the course/program and the respective MHS proficiency assessment have been successfully completed. Successful completion requires the minimum passing grade. Option II courses will only be included on the student's transcript after the course and the assessment are complete.
  - A (P) pass or (F) fail will be recorded on the student's transcript and will not affect G.P.A. If the course is taken at an accredited college or university, a letter grade will be recorded on the student's transcript; this will not be calculated into the G.P.A.
  - A copy of the transcript from the institution where an alternate class was taken must be provided to the Guidance Office and will be sent with the MHS transcript.
3. To Meet Grade Prerequisites – *To improve grade for the purpose of meeting prerequisites ONLY.*
  - For the purpose of meeting grade prerequisites, the summer school course must be completed and no grade will be recorded on the transcript. A proficiency assessment will be required and the assessment grade will determine placement.



### **Application for Option II**

Montgomery High School students are required to complete a google application form, upload course syllabus/curriculum, and wait for final approval before registering for a course for course credit. Once approved, you are expected to register and begin the course promptly to ensure completion by the deadline. The course must be offered by an accredited institution and must meet or exceed N.J. State Standards. Such courses may not take the place of a course that is a required academic course (i.e. English 9-12, U.S. History I & II, etc.) for graduation; however, it may be taken for advancement (i.e. in math courses) only when approved by the content area supervisor. **Any course taken by an MHS student without the prior approval of administration will NOT be granted course credits.**

*Any Option II course not completed by the course deadline will not be eligible for course credit.*

<b>Option II Deadlines</b>			
<b>For Course Work in:</b>	<b>Application Due Date:</b>	<b>100% Coursework End Date:</b>	<b>Course Transcript/Verification of completion Due Date:</b>
Credit Recovery	Last day of School	August 15	August 30
Summer	June 1	August 15	August 30
Fall	September 15	January 15	January 30
Full Year	September 15	June 1	June 10
Spring	January 15	June 1	June 10

### **Proficiency Assessments**

Proficiency assessments are used for placement purposes and may also be required for Option II credits to be received. For math courses students must show a minimum proficiency on the designated assessment for the course taken. The grade earned on the assessment will determine placement in the following course or the student's ability to advance to the next course. These assessments will be administered by the MHS department supervisor or designee. These assessments are aligned with N.J. State Standards. For other courses students should be prepared to submit a portfolio of work completed, if requested by the department supervisor. A (P) pass or (F) fail will be recorded on the student's transcript after the course is completed.

## **CONCURRENT ENROLLMENT**

MHS has partnered with Raritan Valley Community College and Seton Hall University's Project Acceleration concurrent enrollment program to offer college credit for approved high school courses. Students enrolled in a Project Acceleration approved course at MHS will receive five (5) high school credits, and students who also enroll in the Project Acceleration program for concurrent enrollment will earn three (3) college credits for each successfully completed course. These college credits may be transferable to some/all affiliated colleges and universities throughout the United States.

Tuition for Project Acceleration courses must be paid directly to Seton Hall upon registration in the Project Acceleration program. Once registered, students must earn a grade of "C" (2.0 grade point average) or better in their Project Acceleration courses in order for the classes to be easily transferable. Grades falling below "C" will not result in a refund of tuition, and grades cannot be removed from a transcript.

**Concurrent Enrollment is open to all 11<sup>th</sup> and 12<sup>th</sup> grade students.**

**For additional program information, reach out to your MHS counselor.**

## **SOMERSET COUNTY VOCATIONAL TECHNICAL SCHOOL – SHARED TIME**

The Somerset County Vocational-Technical High School offers a shared-time program for students who want to learn a technical trade but wants to complete their academic requirements in their local high school. Students who select this vocational shared-time option spend a portion of each day at Vocational-Technical High School and the remainder of the day at Montgomery High School. Transportation is provided at no cost both to and from the Vocational School. Upon graduation, students receive a M.H.S. diploma. For a description of the Vocational offerings at Somerset County Vocational-Technical School by clicking the following link: <https://www.scvths.org/>

Students who are interested in attending Somerset County Vocational-Technical High School are to inform their counselor by January of the prior year. Current 8<sup>th</sup> grade students must inform their UMS counselor as well as their MHS counselor. It is the responsibility of the Parent/Student to check the Vo-Tech application for specific program deadlines and inform the MHS counselor of the Vo-Tech program the student will attend in early August of the upcoming year. Students and their families are encouraged to arrange on their own a tour of Somerset County Vocational-Technical High School before requesting to attend.

# **COURSE DESCRIPTIONS**

## ENGLISH

### **AP and HONORS COURSE EXPECTATIONS - ALL LEVELS: PLEASE READ CAREFULLY**

Honors level courses offered in grades 9-12 and AP level courses offered in grades 11 and 12 are designed for students who wish to challenge themselves academically and desire a rigorous study of literature, language, and composition. It is important to carefully consider a student's past performance in English when selecting an appropriate course of study. AP and Honors courses require students to complete additional coursework, read avidly and widely, and maintain a higher level of independent accountability than non-weighted courses. The MHS English department offers assistance in placement decisions through teacher recommendations, diagnostic assessments describing cognitive readiness, and core competency review materials. In cases where students select a course level for which they have not met the prerequisites, the student and parent/guardian will be required to complete a waiver application that must be approved by the department supervisor pending review. It must also be understood that if a student takes an Honors or AP English course and decides to drop it, the un-weighted grade will transfer to his/her/their new College Prep or Honors class. Montgomery High School only administers Advanced Placement exams for students who are currently enrolled in the course at MHS for that exam.

### **A NOTE ABOUT MEETING PREREQUISITES AND MAINTAINING ELIGIBILITY: PLEASE READ CAREFULLY**

Students must meet the course prerequisite at the time of course selection in order to enroll in a given course, and must continue to meet the prerequisite through the remainder of the current school year in order to remain eligible for the course. The same expectation will be applied to students who are granted waivers into a given course. Student's average must not fall below their average at the time of waiver approval for the remainder of the current school year to remain eligible for a given course. If a student fails to maintain the expected average for a course by the end of the current school year, they will be removed from enrollment in the course.

#### **11000 English 9 Literature and Composition 5 credits**

This is a full year, comprehensive survey of the elements of literature, language, and composition. The aim of this

course is to improve students' control of the skills of communication, reading, writing (narrative writing, argumentative writing) speaking, listening and viewing – and to help them appreciate a wide selection of readings that increase students' understanding and appreciation of literature. Students are expected to write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence (N.J. State Standards). Students are expected to write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences (N.J. State Standards). Additionally, students will conduct short as well as more sustained research projects to answer a question or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

*PREREQUISITE: Successful completion of 8th Grade Language Arts*

#### **11500 English 9 Literature and Composition Honors 5 credits**

*PREREQUISITE: 93% average for Marking Periods 1 & 2 in 8th grade Language Arts and a score of Advanced on the high school placement test administered to all 8<sup>th</sup> grade students prior to course selection*

#### **12000 English 10 Literature and Composition 5 credits**

This full year course continues to explore the elements of literature, language, and composition begun in 9<sup>th</sup> grade. Examples of the major literary genres are studied along with an emphasis on the development of the expository essay. Students are expected to write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence (N.J. State Standards). Students are expected to write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences (N.J. State Standards). Additionally, students will conduct short as well as more sustained research projects to answer a question or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

*PREREQUISITE: Successful completion of English Literature & Composition 9*

## **12500 English 10 Literature & Composition Honors**

**5 credits**

*PREREQUISITE: A current average of 75% in English Literature and Composition 9 Honors OR a current average of 90% in English Literature and Composition 9*

### **COURSE OPTIONS FOR GRADES 11 AND 12**

Students electing to take either **COLLEGE PREP OR HONORS ENGLISH** in their Junior and/or Senior year have the opportunity to choose one of two thematically organized courses each year to satisfy their graduation requirement for English. Students are encouraged to read the course descriptions below and choose the course they find most appealing.

All courses are designed to continue the development of critical reading, writing and thinking skills through engagement with a variety of texts. Students in all classes will develop reasoning and evidence collection/research skills that are essential for success in college, career and life. All courses are offered at the College Prep, Honors and AP level.

#### **13001 English 11: The Moral of the Story 5 credits**

What makes a good story? It entertains. It has characters in whom we can see ourselves or share an identity. It strikes a chord and evokes our emotions. It explores the truth, makes a noise, opens our eyes, awakens our outrage, demands a change. This course offers a comprehensive exploration of these meaningful ways in which stories impact ourselves and our world. Through the investigation of various literary genres including graphic novels, plays, novels, short stories and more, this course encourages critical thinking, self-reflection, and open dialogue to foster a deeper understanding of these fundamental aspects of human existence.

*PREREQUISITE: Successful completion of English Literature & Composition 10*

#### **13002 English 11: A Thousand Different Ways**

**5 credits**

“There are a thousand different ways to tell the truth, yet each is true.” ~Swami Vivekananda. This course will explore the connections between objective or factual truth, and subjective or personal truth. Through a comprehensive exploration of the relationship between the portrayal of ideas and their interpretation, students will consider concepts of reality, fantasy, and illusion; manipulation and perception of information; and heroism versus villainy. Through the investigation of literary genres, including graphic novels, plays, novels, short stories and more, this course encourages critical thinking, self-reflection, and open dialogue to foster a deeper

understanding of these fundamental aspects of human existence.

*PREREQUISITE: Successful completion of English Literature & Composition 10*

#### **13501 English 11: Reinventing the Canon Honors**

**5 credits**

The term “literary canon” refers to a set of texts that are considered the most important of a particular time period or place in terms of stylistic quality, cultural or social significance, and intellectual value. As times change, however, so must these canonical texts. Students in this honors English course will have the opportunity to explore classic American literature in conjunction with shorter acclaimed works from around the globe--those worthy of consideration for inclusion in an updated, more diverse literary canon. This course is designed to provide students with a deep understanding of the literary traditions that have shaped American culture, while developing essential critical thinking, analytical, and other skills which are essential for academic success.

*PREREQUISITE: A current average of 75% in English Literature and Composition 10 Honors OR a current average of 90% in English Literature and Composition 10*

#### **13502 English 11: The Fate of the Novel Honors**

**5 credits**

This honors English course offers students an opportunity to build reading, comprehension, and critical analysis skills while exploring a balanced curriculum of classic British literature and global contemporary works. From serials to fanfiction to graphic novels, students will study the multifaceted art of the narrative and gain an understanding of how the stories we tell have evolved in content, style, and format. This class fosters a deep appreciation for the written word, preparing students to engage with a diverse range of literature while developing essential skills for academic success.

*PREREQUISITE: A current average of 75% in English Literature and Composition 10 Honors OR a current average of 90% in English Literature and Composition 10*

#### **14001 English 12: Expression and Empowerment**

**5 credits**

Seniors in this English course will explore how different forms of expression can empower individuals to find their voices and assert their rights. Students will engage in creative projects, discussions, and writing activities that will build skills for college readiness and the outside world through the lens of advocacy and autonomy. Through a selection of diverse literary works, students will analyze characters and narratives that showcase the transformative power of self-expression and the pursuit of empowerment.

*PREREQUISITE: Successful completion of a grade 11 English course*

**14002 English 12: Reflections and Perspectives** **5 credits**

If you truly want to understand people, explore the literature of their society. From mythology and folklore, to novels and short fiction, seniors in this English class will explore literary pieces from across time and place to see both the perspectives of others as well as reflections of themselves. The goal of this class is to explore human nature through the lens of morality, motivation, and explanation, with students ultimately gaining an understanding of how different cultures use stories to pass along values, beliefs, and the truth of the world--and humanity--as they see it

*PREREQUISITE: Successful completion of a grade 11 English course*

**14501 English 12: Expression and Empowerment** **Honors** **5 credits**

Seniors in this English course will explore how different forms of expression can empower individuals to find their voices and assert their rights. Students will engage in creative projects, discussions, and writing activities that will build skills for college readiness and the outside world through the lens of advocacy and autonomy. Through a selection of diverse literary works, students will analyze characters and narratives that showcase the transformative power of self-expression and the pursuit of empowerment.

*PREREQUISITE: A current average of 75% in English 11 Honors OR a current average of 90% in English 11 CP OR successful completion of AP Literature and Composition*

**14502 English 12: Reflections and Perspectives** **Honors** **5 credits**

If you truly want to understand people, explore the literature of their society. From mythology and folklore, to novels and short fiction, seniors in this English class will explore literary pieces from across time and place to see both the perspectives of others as well as reflections of themselves. The goal of this class is to explore human nature through the lens of morality, motivation, and explanation, with students ultimately gaining an understanding of how different cultures use stories to pass along values, beliefs, and the truth of the world--and humanity--as they see it

*PREREQUISITE: A current average of 75% in English 11 Honors OR a current average of 90% in English 11 CP OR successful completion of AP Literature and Composition*

**14900 AP Literature and Composition** **5 credits**  
**Open to students in Grade 11 OR Grade 12**, the AP course in English Literature and Composition is designed to engage students in learning how to understand and evaluate works of fiction, poetry, and drama from various genres, periods, and cultures. The course focuses on critical exposition and analysis of challenging literature. Students in this course will be expected to take the AP Literature and Composition examination in May of the year in which they are enrolled in this course.

*PREREQUISITE FOR JUNIORS: A final grade of 85% in English Literature & Composition 10 Honors OR a final grade of 90% in English Literature & Composition 10*

*PREREQUISITE FOR SENIORS: A final grade of 85% in English 11 Honors OR a final grade of 90% in English 11 CP OR successful completion of AP Language & Composition*

**13900 AP Language and Composition** **5 credits**  
**Open to students in Grade 12**, the AP course in English Language and Composition engages students in becoming skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts and in becoming skilled writers who compose for a variety of purposes. Selections from American Literature will also be studied. Students in this course will be expected to take the AP Language and Composition examination in May of the year in which they are enrolled in this course.

*PREREQUISITE FOR SENIORS: A final grade of 85% in English 11 Honors OR a final grade of 90% English 11 CP OR successful completion of AP Literature & Composition*

**15100 Creative Writing Seminar I (s)** **2.5 credits**  
This is a one-semester course in which students explore writing as art. Students will read, analyze, and create works of fiction, non-fiction, drama, and poetry. Throughout the semester, the student will compile a portfolio of his/her best work. The course culminates in presentations of original manuscripts of poetry, prose, and/or criticism that demonstrate the student's growth. This course provides the time, space, materials, instruction, and skills necessary to pursue meaningful creative writing to fulfill academic and/or intrinsic goals.  
*PREREQUISITE: None*

**15200 Creative Writing Seminar II (s)** **2.5 credits**  
In this one-semester course, students further develop as writers do when they read, analyze, and create works of fiction, nonfiction, poetry and drama. In Creative Writing II, students are required to design a focus or theme for their portfolios and submit their work to various publications. Taking both Creative Writing I and

Creative Writing II during the same year is recommended but not required.

*PREREQUISITE: Successful completion of Creative Writing I*

**16100 Literacy Skills Lab 2.5 credits**

This is a 1 credit semester course intended to supplement the core English class focusing on the development of literacy skills essential for success in high school and beyond, including critical reading, formal writing, research functions, etc.

*PREREQUISITE: Recommendation from guidance counselor or teacher*

**18100 Expository Writing Workshop (S1) 2.5 credits**

**18200 Expository Writing Workshop (S2) 2.5 credits**

The purpose of this one-semester course is to provide an intensive writing experience in a workshop environment. The emphasis will be on expository writing including essays, research reports, and transactional writing. Students will receive instruction in the forms and conventions of expository writing and will use the writing process to create fully revised and edited products. Types of writing to be explored will include narrative, descriptive and persuasive. Assessment will be based on, but not limited to rubrics adapted from the PARCC/N.J. State Standards Scoring Rubric.

*PREREQUISITE: None*



## SOCIAL STUDIES

### ADVANCED PLACEMENT/ HONORS COURSE EXPECTATIONS: PLEASE READ CAREFULLY

The AP and Honors courses are designed for students who wish to challenge themselves academically and desire a rigorous course of study. It is important to carefully consider a student's past performance in Social Studies when selecting an appropriate course of study. AP and Honors courses require students to complete additional coursework, read avidly, and widely, and maintain a higher level of independent accountability than non-weighted courses. The Social Studies department offers assistance in placement decisions through teacher recommendations, diagnostic assessments describing cognitive readiness and core competency review materials. It is recommended that students who wish to challenge themselves at the honors level have earned a 90 or better in the College Prep class taken the year prior. In cases where students select a course level that was not recommended, the student and parent/guardian will be required to complete a waiver application that must be approved by the department supervisor pending review. It must also be understood that if a student takes an honors Social Studies course and decides to drop it, the unweighted grade will transfer to his/her new College Prep class. Montgomery High School only administers Advanced Placement exams for students who are currently enrolled in the course at MHS for that exam.

### A NOTE ABOUT MEETING PREREQUISITES AND MAINTAINING ELIGIBILITY: PLEASE READ CAREFULLY

Students must meet the course prerequisite at the time of course selection in order to enroll in a given course, and must continue to meet the prerequisite through the remainder of the current school year in order to remain eligible for the course. The same expectation will be applied to students who are granted waivers into a given course. Student's average must not fall below their average at the time of waiver approval for the remainder of the current school year to remain eligible for a given course. If a student fails to maintain the expected average for a course by the end of the current school year, they will be removed from enrollment in the course.

#### **21000 World Studies 5 credits**

The World Studies course is a full-year course intended for all freshmen. It will fulfill the New Jersey graduation requirement of a one-year study of World History. The course begins with the Italian Renaissance and concludes with an overview of the issues of the 21<sup>st</sup> century.

*PREREQUISITE: None*

#### **21500 World Studies Honors 5 credits**

The World Studies Honors course is a full-year course intended for freshmen who want to explore the course curriculum in more depth. This course will stress critical reading and analytical thinking and writing and encourage students to further develop as independent learners. It will fulfill the New Jersey graduation requirement of a one-year study of World History. The course begins with the Italian Renaissance and concludes with an overview of the issues of the 21<sup>st</sup> century.

*PREREQUISITES: 1) 93% average for Marking Periods 1 & 2 in 8<sup>th</sup> grade Social Studies; 2) 93% average for Marking Periods 1 & 2 in 8<sup>th</sup> grade Language Arts 3) Score of advanced on the high school placement test administered to all 8<sup>th</sup> grade students prior to course selection.*

#### **22000 U.S. History I 5 credits**

This is the first course of a two-year sequence that meets the state and local requirements for graduation. Through extensive use of primary source material this course investigates the American experience from European Colonization to the early 20<sup>th</sup> Century. Featured events include the Foundations and Development of our Nation, the Civil War, the Industrial Revolution and the Progressive Era, and World War I.

*PREREQUISITE: Successful completion of World Studies or World Studies Honors*

#### **22500 US History I Honors 5 credits**

Formerly AP US History I, this course is a study of the American experience from colonial times through the Age of Industry. It follows the College Board AP US History curriculum framework and serves as a preparation for the more rigorous AP U.S. History II class. Students will be introduced to the application of higher level analytical skills in both written expression and class discussion/debate. Students who excel at critical reading and written analysis are encouraged to take the course. The course meets one of the two years of U.S. History required by the state for graduation. Successful completion of this class is a requirement for AP US History II.

*PREREQUISITE: 1) 90% in World Studies or 85% in World Studies Honors 2) 85% in English Literature and Composition 9 Honors or 90% in English Literature and Composition 9. 3) Score of advanced on the AP Historical Thinking placement test administered to all 9<sup>th</sup> grade students prior to course selection*

**23000 U.S. History II****5 credits**

This is the second course of a two-year sequence that meets the state and local requirements for graduation. Through extensive use of primary source material this course investigates the American experience during the past century. Featured events include, the Great Depression, World War II, civil rights movements, the impact of interventionism, modern Middle East policy, as well as trends in popular culture. Students also focus on social and political leadership and events to gain an understanding of present day issues.

*PREREQUISITE: Successful completion of U.S. History I or US History I Honors*

**23900 AP U.S. History II****5 credits**

This course serves as the second year of the AP US History program with a focus on the American experience from the Age of the City through the modern era and is conducted in a similar fashion to a college seminar class. Students enrolled in the course are expected to use the analytical skills learned in US History I Honors and apply them to a greater degree and intensity in part II including extensive discussion and debate skills. All of this serves as preparation for taking the AP U.S. History Exam in May along with additional AP/honors courses in the senior year and beyond.

*PREREQUISITE: A final grade of 70% or better in U.S. History I Honors*

**24900 AP American Government and Politics****5 credits**

By utilizing student-centered discussions, debates, and cooperative learning activities, this college level year-long course teaches students to think critically about the government and politics of the United States in preparation for the AP exam. Students analyze foundational documents, Supreme Court decisions, and other writings to enhance their comprehension of politics. Current political events and other provocative topics are explored through research, analytical writing, and discussions. This course closely examines Congress, the White House and the Supreme Court. Additional studies focus on civil liberties, civil rights, campaigns, elections and a variety of public policies. There are also several research projects focused on civics topics selected by students.

*PREREQUISITE: This course is an elective open to students in grades 11 and 12 who have earned an 90% or higher in their most recent (US I or US II) History course OR 85% or higher in their most recent AP/Honors US History course*

**25900 AP Art History****5 credits**

AP Art History is the study of the past through works of art and architecture. In this class you will learn about

various cultures, societies, and civilizations through the art and architecture that they produced. AP Art History also focuses on the artists and architects responsible for creating specific works of art and styles. Beginning with pre-historic art and ending with contemporary and modern art, students will utilize critical thinking and observational skills to understand, discuss, and make connections between 250 works of art selected by the College Board. Assessments emulate and reflect past AP exams to provide students with a realistic experience of assessment methods prior to taking the exam. This course compliments science and math courses and aligns with STEAM goals. Consider taking this course if you are interested in history, architecture, learning about different societies and cultures, or if you are looking to improve your analytic and observational skillset.

*PREREQUISITE: This course is an elective open to students in grades 11 and 12 who have earned an 90% or higher in their most recent (US I or US II) History course OR 85% or higher in their most recent AP/Honors US History course*

**26900 AP Economics****5 credits**

It is important to note that AP Economics is not a Business or Finance course. The purpose of the AP Economics course is to provide students with a thorough understanding of the principles and applications of microeconomics and macroeconomics. This rigorous college level class will examine topics including (but not limited to): scarcity, cost, marginal analysis, supply and demand, the operations of free markets, externalities, distribution of income, government fiscal and monetary policy, aggregate analysis, the Federal Reserve System, inflation and unemployment, game theory, international trade and the U.S. and world economies. Students taking this course will be prepared for the national AP Microeconomics and AP Macroeconomics Exams. It fulfills the graduation requirement for “financial literacy.”

*PREREQUISITE: This course is an elective open to students in grades 11 and 12 who have earned 1) an 90% or higher in their most recent (US I or US II) History course OR 85% or higher in their most recent AP US History course, 2) at least an 85% average in CP Algebra II, PreCalculus, or Calculus or an 80% in Algebra II Honors, PreCalculus Honors, or AP Calculus*

**27100 Sociology (s)****2.5 credits**

Sociology is the scientific study of society, social institutions, social relationships, and human group behavior. Sociology looks at how groups, societies and social conditions shape the way people act. It examines both people's and groups' personalities and the environment in which situations occur. This course is

offered to students in grades 11 and 12. It is designed to give students an opportunity to explore their own behavior in groups, and study topics that directly affect them in the real world. Some of the topics studied are socialization through the stages of life (infancy/childhood, adolescence, adulthood, and old age) personality development, groups, group behavior, social norms, stereotypes, morals and values, gender identity, families, discrimination, racism, and social issues. The students will participate in an active learning environment that enables them to apply their life experiences to the topics of study. Sociology is a fun and active course that is extremely beneficial to the social development of students.

*PREREQUISITE: This elective is open to students in grades 11 and 12*

#### **27200 Elements of Human Behavior (s) 2.5 credits**

Elements of Human Behavior, is a semester course offered to students in grades 10, 11, and 12. The course is designed to give students an opportunity to explore many interesting topics in an active learning environment. Some of the topics studied include different approaches to psychology, emotion, personality, motivation, memory, sensation and perception, psychological research, stress, and mental disorders. The students will participate in discussions and experiments testing popular theories and applying these theories to real life experiences. Elements of Human Behavior, is a fun and active course that is extremely beneficial to the social development of students.

*PREREQUISITE: This elective is open to students in grades 10, 11 and 12*

#### **27300 Crime and Punishment (s) 2.5 credits**

Crime and Punishment provides a comprehensive overview of the American justice system covering criminal law, procedure and criminology. Students will actively participate in such topics as: current social issues involving crime, gangs, organized crime, police conduct, courts and case process, prison life, juvenile offending and much more. Activities may include field trips, guest speakers, debates, and round-table discussions. Students will explore how crime and punishment impacts their lives. This course will also expose students to various careers related to criminal justice.

*PREREQUISITE: This elective is open to students in grades 11 and 12*

#### **27400 American History & Culture through Film (s)**

**2.5 credits**

This course offers students of all academic levels an alternative way to view how and why America changed over the course of its history. The films selected for this course will be chosen for their specific message, which

typified the time period in which they depict. Through film analysis, students will gain insight into the social climate that existed at the time depicted in the films. Films are chosen for their merit and/or message. Enrolling in this course is done with the understanding that some films shown may carry an R-rating.

*PREREQUISITE: This elective is open to students in grades 10, 11 and 12*

#### **27800 Power, Inequity and the Human Experience (s)**

**2.5 credits**

This course is designed to examine the historical and contemporary impact of power on prejudice, identity, race, class, and gender in American society. Discussions will explore the roots of historical issues such as slavery, racial discrimination, gender roles, sexual orientation discrimination, as well as socio-economic inequality, and relate these to current society. The course will explore these themes through literature, film, music, primary and secondary source documents, debates, and projects.

*PREREQUISITE: This elective is open to students in grades 11 and 12*

#### **27801 A Short History of Everything (s) 2.5 credits**

Where did everything come from? How did we get to where we are now? Where do humans fit in? Where are things heading? These are questions that origin stories of different cultures have addressed for thousands of years. The History of Everything attempts to answer them by examining the entire past of the Universe using the best available ideas from both science and history. Throughout the course, students explore different scales of time and space and view human history from new angles as they learn what we know and what we don't, consider our place in the Universe, and develop their own ideas for what the future may hold.

*PREREQUISITE: This elective is open to students in grades 10, 11 and 12 who have successfully completed their most recent history course.*

#### **27802 Economics (s)**

**2.5 credits**

The *Economics* course will introduce students to an economic way of thinking, incorporate the use of graphical analysis, and allow students the opportunity to apply theoretical concepts to current and historical economic events. Students will analyze microeconomic incentives related to individual consumer and business decision making, and explore macroeconomic considerations including unemployment, inflation, and economic growth. While the *Economics* course is not a prerequisite for *AP Economics*, it is intended to provide a basic foundation for students interested in *AP Economics*.

*PREREQUISITE: This elective is open to students in grades 10, 11 and 12 who have successfully completed their most recent history course.*

## **27501 Contemporary Issues & Leadership Honors (S)**

**2.5 credits**

Throughout the course, students will be expected to engage in critical thinking, drawing from historical context to analyze and evaluate approaches to address present-day issues that impact both the nation and the world. In parallel with our examination of these broader issues, there is an additional focus on civic engagement and leadership. Students will research issues of significance within Montgomery Township, Somerset County, and the state of New Jersey. A key feature of this course is the hands-on and experiential component. It involves active engagement within the community, including interactions with the school community, local leaders, and primary research. These activities aim to empower students to realize that they too can impact the change that they wish to see.

*PREREQUISITE: This course is an elective open to students in grades 11 and 12 who have earned an 85% or higher in their most recent (US 1 or US II) history course OR 80% or higher in their most recent AP/Honors US History course.*

# MATHEMATICS

## Mathematics Prerequisites

Montgomery Township School District is committed to providing a solid foundation for its students in the area of mathematics. Because math skills are sequential, it is essential that prerequisite skills be mastered before complex courses are taken. The prerequisites are firmly based on the proficiency a student demonstrates over the entire year of work in mathematics preceding each course. Montgomery High School only administers Advanced Placement exams for students who are currently enrolled in the course at MHS for that exam.

## The Mathematics Proficiency Tests

The Mathematics Proficiency Tests are used to assess the proficiency of students at various stages in their mathematical education. These tests reflect questions given on Chapter/Unit tests, Quarterly Exams, and/or Final Exams for the various courses offered by the department. The following students **must participate** in the testing process:

- New students who have met the honors course requirements in another school and who wish to continue in honors at MHS
- New students who are entering MHS as a freshman.
- New students whose placement needs to be determined
- Students who wish to advance by means of an approved summer or online external course

*Please note that summer and online courses do not cover the curriculum in as much depth as a full-year course. Therefore, summer or online courses are good for enrichment or review; they are not recommended to be used as a replacement for a full year math course.*

## Prerequisite Averages for course enrollment

Students must meet the course prerequisite at the time of course selection in order to enroll in a given course, and must continue to meet the prerequisite through the remainder of the current school year in order to remain eligible for the course. The same expectation will be applied to students who are granted waivers into a given course. Student's average must not fall below their average at the time of waiver approval for the remainder of the current school year to remain eligible for a given course. If a student fails to maintain the expected average for a course by the end of the current school year, they will be removed from enrollment in the course. The rare exception, not defined in this POS, would be a supervisor, teacher and administrator consultation.

**30100 Math Connections I and II (s) 2.5 credits**

The focus of this course is to enable students to fulfill the state requirement of targeted intervention in mathematics to help them accelerate their learning. The content clusters covered in this course are: 1) Ratios and Proportional Relationships, 2) The Number System, 3) Expressions and Equations, 4) Geometry, 5) Statistics and Probability. Skills and strategies for standardized test taking are developed. Problem solving with mathematical concepts is practiced and expanded upon in the area of Functions and their real life application.

**30400 Math Connections IV - Part 1 (s) 2.5 credits  
Alternative High School Assessment**

This course is required for students who did not pass the math section of the state assessment for graduation. The focus of the course will be differentiated according to the students' needs. It is designed to help students develop proficiency in the course content that is standards aligned they did not previously demonstrate proficiency on for graduation requirements. The application of mathematical concepts through problem solving will be emphasized and the techniques necessary to answer application questions in mathematics at the various DOK levels and Type 1, 2, 3, assessment levels. Calculators will be used as a tool to help students develop confidence in problem solving.

**30500 Math Connections IV - Part 2 (s) 2.5 credits  
Alternative High School Assessment**

This course would be a sequential course to Part 1 if Proficiency is still in question. The focus of this course is to enable students to fulfill the New Jersey state requirement in math for graduation by continuing to complete Assessment Tasks on the applicable content per the students' need. After successful completion, the course offers the study of financial algebra in banking and independent living. A scientific calculator is required.

**31200 Algebra I 5 credits**

Algebra I is the first course in the college preparatory program in mathematics. Emphasis is placed upon the development and understanding of the real number system and the basic structure of Algebra. Also, the course helps students develop an appreciation for logical problem-solving and deductive reasoning as well as precision in the communication of mathematical ideas and its context to real world. A scientific calculator is required.

*PREREQUISITE: Successful completion of Math 8*

**31250 and 31255 Algebra I with Lab 6 credits**

Algebra I is the first course in the college preparatory program in mathematics. This course differs from the Algebra I non Lab class by providing a half of block more

time devoted to Function comprehension, number properties and Linear Equations. It then completes the development and understanding of the real number system and the basic structure of Algebra. Logical problem solving, deductive reasoning and precise communication of mathematical ideas are expanded upon as per the State Learning Standards. A scientific calculator is required.

*PREREQUISITE: Successful completion of Math 7*

**32200 Geometry 5 credits**

Geometry combines the essential elements of plane geometry and the basics of solid geometry. Strong emphasis is placed on deductive reasoning and writing original proofs. In addition, the student is given the opportunity to develop powers of spatial visualization, strengthen basic algebraic skills, and learn to use precise and clear mathematical language. A strong background in Algebra I is required from the beginning of the course. A scientific calculator is required.

*PREREQUISITE: Successful completion of Algebra 1*

**32250 and 32255 Geometry with Lab 6 credits**

Geometry combines the essential elements of plane geometry and the basics of solid geometry. Deductive reasoning, logic in proof writing and physical constructions are emphasized. Students will develop spatial visualization, precision in measurement, and establish language for geometric figures and their properties and characteristics while strengthening algebraic skills.

*PREREQUISITE: Successful completion of Algebra I, priority is given to Algebra I Lab students*

**32500 Geometry Honors 5 credits**

This course is designed for students who want a more challenging approach to geometry and who plan on taking additional mathematics courses in college. It combines the essential elements of plane geometry and the basics of solid geometry. Strong emphasis is placed on deductive reasoning and solving complex original proofs. Additional topics include introductory trigonometry, coordinate geometry and transformations. A strong background in Honors Algebra I will be required from the beginning of the course, and students will be expected to understand the concepts taught in class, as well as to transfer them to novel applications and problem solving situations. A scientific calculator is required.

*PREREQUISITE: 95% in Algebra 1*

**33101 Algebraic Functions and Analysis 5 credits**

This course is offered as the third year math course that reviews terminology, concepts, skills and applications of Algebra I by means of a critical examination of the real number system. It furthers the development of algebraic

concepts with students factoring, simplifying and solving rational expressions and equations, using powers, roots, and radicals. The units of study are Quadratics Functions, Polynomial Functions, Rational Exponents/Radical Functions, Exponential Functions and Logarithmic Functions. This course is offered to juniors and seniors. Students enrolled in this course intend to enroll in Applied Algebraic Extensions.

*PREREQUISITE: Successful completion of Algebra I and Geometry*

### **33102 Applied Algebraic Extensions 5 credits**

This course is the sequential course to Algebraic Functions & Analysis. It continues the review of Algebraic concepts, skills, terminology and applications. It furthers the development of sequences, series, permutations, combinations, probability, statistics, non-linear functions and an introduction to Trigonometry. The units of study are Rational Functions, Data Analysis and Statistics, Counting through Sequences and Series and Trigonometric Functions. Throughout the course, students will use technology as a tool for processing data, performing calculations, and exploring concepts for function comprehension. This course is offered to seniors.

*PREREQUISITE: Successful completion of Algebraic Functions & Analysis*

### **33200 Algebra II 5 credits**

Algebra II is the third course in the regular college preparatory program in mathematics. The course reviews basic terminology, concepts, skills, and applications of Algebra I by means of a critical examination of the real number system. Algebra II furthers the development of working with Algebra I concepts with new major topics expanding the students' knowledge of Algebra and preparing them for higher level mathematics courses. These Major topics include: simplifying and solving rational expressions and equations; solving and graphing non-linear functions; working with powers, roots, and radicals; sequences, series, probability/statistics, applications of new functions and an introduction to trigonometry. Throughout the course, students use scientific and graphing calculators as a tool for processing data, performing calculations, and exploring. Scientific and graphing calculators are required.

*PREREQUISITE: 70% in Algebra I and 70% in Geometry*

### **33500 Algebra II Honors 5 credits**

Algebra II Honors is designed for students who want a more challenging approach to Algebra II and who plan on taking additional honors mathematics courses in the future. The students study the structure of the real and complex number systems, develop the concept of systems

of equations in two and three variables, determinants, polynomial equations and functions, rational expressions, sequences and series, probability/statistics, exponential equations, logarithms, and trigonometry. A strong background in Honors Algebra I and Honors Geometry will be required from the beginning of the course, and students will be expected to understand the concepts taught in class, as well as to transfer them to novel applications and problem solving situations. Scientific and graphing calculators are required.

*PREREQUISITE: 85% in Geometry Honors/UMS Geometry or 95% in Geometry AND 95% in Algebra I*

### **34100 Algebra III 5 credits**

This course is offered as the fourth year course in a four-year sequence that provides students with a modified version of the traditional Algebra I, Geometry, Algebra II, and Advanced Algebra/Trigonometry course sequence. The major part of the course strengthens Algebra skills and concepts. Emphasis is on solving equations and problem solving. Functions studied include polynomial, rational, logarithmic and exponential. Additionally, students start exploration of Trigonometry and the Unit Circle. A graphing calculator is required.

*PREREQUISITE: Successful completion Algebra II and ineligible for Advanced Algebra and Trigonometry*

### **34200 Advanced Algebra and Trigonometry 5 credits**

This course is designed for those students pursuing a four-year college program, who need additional development in Algebra mechanics. The first part of this course further develops those Algebra II skills and concepts. Emphasis is on problem solving. Functions studied include polynomial, rational, exponential, and logarithmic. The second half of the year includes a complete course in Trigonometry. A working knowledge of College Prep level Algebra II is required from the beginning of the course. Scientific and graphing calculators are required.

*PREREQUISITE: 70% -84% in Algebra II*

### **35000 PreCalculus 5 credits**

This college preparatory course covers all the fundamental topics that prepare students for calculus. Emphasis is on problem solving and the study of relations, functions, equation solving, and graphing. The functions studied include polynomial, conics, rational, exponential, logarithmic, trigonometric, and inverse functions. Upon entering this course, students must have a strong working knowledge of the mechanics of Algebra II, and be able to grasp the more theoretical concepts that form the foundation for calculus. Scientific and graphing calculators are required.

*PREREQUISITE: 80% in Algebra II or 75% in Advanced Algebra and Trigonometry or 65% in Algebra II-Honors*

**35500 PreCalculus Honors 5 credits**

This course is a full year PreCalculus course, which presents an in-depth examination of analytic trigonometry, trigonometric functions, exponential and logarithmic functions, polynomial and rational functions, and introduction to limits. The intent is to study and apply advanced mathematical topics while developing the student's abstract and critical thinking skills. A strong background in Honors Algebra II will be required from the beginning of the course, and students will be expected to understand the concepts taught in class, as well as to transfer them to novel applications and problem solving situations. Scientific and graphing calculators are required.

*PREREQUISITE: 85% in Algebra II Honors or 95% in Algebra II*

**36000 Calculus 5 credits**

The college prep level calculus course provides students with an opportunity to develop a conceptual understanding of calculus and its applications. The course emphasizes a multi-representational approach to calculus with concepts, results, and problems being expressed geometrically, analytically, verbally and numerically. The unifying themes of the course are limits, differentiation, integration and real world applications of these concepts. Graphing calculators and other technology are used to reinforce mathematical relationships, to confirm written work, to implement experimentation, and to assist in interpreting results. A strong background in PreCalculus topics will be required from the beginning of the course. Scientific and graphing calculators are required.

*PREREQUISITE: 80% in PreCalculus or completion of PreCalculus-Honors*

**36910 AP Calculus AB 5 credits**

This course is essentially Calculus Advanced Placement AB as described in the course outline published by the College Entrance Examination Board. It covers limits, derivatives, and applications of both algebraic and transcendental functions as well as methods and applications of integration. The approach used is that of combining the essentials of the theory with practical applications. A strong background in Honors PreCalculus will be required from the beginning of the course, and students will be expected to understand the concepts taught in class, as well as to transfer them to novel applications and problem solving situations. This course is equivalent to a 1<sup>st</sup> semester college calculus course. Graphing calculators are required.

*PREREQUISITE: 85% in full school year PreCalculus Honors course OR 95% in full school year PreCalculus course OR 80% in full school year Calculus course*

**36920 AP Calculus C 5 credits**

Taught as a continuation of Calculus AB, this course covers additional techniques of integration, polar coordinates, series, applications of integrals, parametric graphing and differential equations. The emphasis is on theory and problem-solving techniques. A strong background in AP Calculus AB will be required from the beginning of the course, and students will be expected to understand the concepts taught in class, as well as to transfer them to novel applications and problem solving situations. This course is equivalent to a 2<sup>nd</sup> semester college calculus course. Graphing calculators are required.

*PREREQUISITE: 80% in AP Calculus-AB, taken over a full school year*

**36930 AP Calculus BC 5 credits**

This course is essentially the College Board Calculus BC Curriculum. Students will master material covering two semesters of a college calculus program. Students selected to take this course may elect to take an AP test in math with the possibility of earning one or two semesters' credit at colleges and universities that participate in the College Board program. The course outline is the combination of the Calculus AB description and Calculus C listed above. Students will be expected to understand the concepts taught in class as well as transfer them to novel application and problem solving situations. Graphing calculators are required.

*PREREQUISITE: Open to students in grades 11 and 12 with 95% PreCalculus Honors average and teacher recommendation*

**38000 Discrete Mathematics 5 credits**

Discrete mathematics addresses topics not covered or addressed only lightly in traditional math courses. It is an introduction into areas of mathematics that most students have never thought of before. In this course, the topics have a step-by-step nature rather than a continuous one. This course stresses the connection between contemporary math and the modern society. Students are exposed to problem solving experiences in some or all of the following areas: decision-making in a democracy (election theory), graphs and graph theory (networking), coding information, logic and probability, game theory, and mathematical induction. These topics are often found in a standard mathematics course at the college level for the non-mathematics majors. A course in discrete mathematics is also effective preparation for applied combinatorics and graph theory courses offered as electives for mathematics and science majors at the college level. A working knowledge of Algebra II will be required from the beginning of this course. Graphing calculators are required.



*PREREQUISITE: Successful completion of Algebra II*

*PREREQUISITE: 80% in AP Calculus-C or 80% in AP Calculus-BC*

**37000 Statistics 5 credits**

This course is an introductory, non-calculus based study of statistics designed as an elective math course for Juniors and Seniors only. Students are introduced to major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: Exploring Data, Planning a Study, Anticipating Patterns, and Statistical Inferences. This course would prepare students for AP Statistics or the college course equivalent. A good working knowledge of Algebra II will be required from the beginning of the course. Graphing calculators are required.

*PREREQUISITE: 70% in Algebra II*

**37900 AP Statistics 5 credits**

AP Statistics is an Advanced Placement course, which is equivalent to a one-semester introductory, non-calculus based college course in statistics. It is an elective math course for Juniors and Seniors only. It introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: Exploring Data, Planning a Study, Anticipating Patterns, and Statistical Inferences. A strong background in Algebra II will be required from the beginning of the course. Students will be expected to understand concepts taught in class, and also to evaluate, synthesize and apply them to new applications and problem solving situations as preparation for the AP exam administered by CollegeBoard. Scientific and graphing calculators are required.

*PREREQUISITE: Open to students in grades 11 or 12 with: 85% in Statistics, 80% in PreCalculus, 80% in Algebra II Honors, 90% in Algebra II*

**39500 Honors Math Methods in Engineering and the Sciences \*STEM\* 5 credits**

This course has been designed for the student who is interested in pursuing mathematics at the college level. It will offer a survey of topics that would be covered in four different college courses but in a smaller scope with more emphasis on applications. The first topic, Linear Algebra, will introduce and explore coordinate systems, graphs in three dimensions, vectors, matrices, diagonalization, eigenvectors and basis sets. The second topic, Multivariable Calculus, will explore partial derivatives, vector operators, gradients, and double integral. Differential Equations will explore methods, survey physics equations, functions as basis sets, and calculus of variations. Fourier Analysis will introduce frequency analysis, Fourier Series, Fourier Transforms, Discrete Fourier Transforms, signal processing and Fast Fourier Transforms.

## SCIENCE

Three core science courses are required for graduation. The normal sequence is Integrated Physical, Environmental & Life Sciences (IPELS), Chemistry, and Biology. Modification of the established course sequence requires the approval of the MHS Science Supervisor. A student may replace one of these courses with the corresponding advanced placement course, though it is normally recommended that students take AP courses as their second course in the subject of interest. Montgomery High School only administers Advanced Placement exams for students who are currently enrolled in the course at MHS for that exam.

The MHS Science Program adheres to a Model-Based curriculum in alignment with the NJ Student Learning Standards in Science. The learning standards initiate a shift from a traditional, teacher-centered learning environment to a student-centered environment facilitated by the teacher using learning activities that promote student-student discourse and conceptual inquiry. The 21st Century science classroom learning environment may look very different from classrooms that were previously structured more traditionally.

All students will participate in a comprehensive science assessment, the New Jersey Student Learning Assessment-Science (NJSLA-S), based on the testing schedule assigned by the NJ Department of Education.

**\*\* It is important to carefully consider teacher recommendations as well as a student's past performance in science and mathematics when selecting an appropriate course of study. AP and Honors courses require students to complete additional coursework, utilize advanced mathematical expertise, and maintain a higher level of independent accountability than non-weighted courses. Additionally, Honors and AP-level courses require more developed scientific writing and expect students to engage in more sophisticated experimental design. The MHS Science program does not maintain any minimum grade prerequisites for entrance into various course levels; however, students earning below 75% in the previous year's science course will not be eligible to submit a waiver for a science course the following year. The Department offers assistance in placement decisions through teacher recommendations, diagnostic assessments describing cognitive readiness, and core competency review materials. In cases where students select a course**

**level that was not recommended, the student and parent/guardian will be required to complete a waiver application. Students may only waive into the next level course, unless given special permission by the department supervisor (i.e. CP to Honors, Honors to AP) Students may not jump two levels via the waiver process (i.e. CP to AP is not permitted). Please carefully review the information on page 7 for protocols and requirements related to course-level changes. Waivers submitted past the published deadline will not be considered.**

### **41700 Integrated Physical, Environmental and Life Sciences (IPELS) 5 credits**

Integrated Physical, Environmental and Life Sciences (IPELS) is a college preparatory laboratory science program designed for students taking their first MHS science course. IPELS explores phenomena in the natural world through a combination of science disciplines. Students will approach topics from both a scientific and societal perspective. The course incorporates engineering design principles with a focus on developing scientific models that cut across various scientific disciplines. Students will design lab investigations and use data to investigate cause and affect relationships, generate scientific representations, compare structure and function, construct an understanding of energy storage modes and identify patterns through analysis of proportions and quantities. Students in IPELS will identify questions, plan investigations, analyze data and communicate with other members of the learning community. They will build upon their analytical skills and sharpen critical thinking processes by constructing claim, evidence, and reasoning statements. The appropriate NJ State and National Standards will be addressed so as to raise the level of student discourse and develop essential scientific reasoning skills. IPELS will initiate a theme of energy that will continue in chemistry, followed by biology. This course is open to all students.

### **41800 Integrated Physical, Environmental and Life Sciences (IPELS) Honors 5 credits**

Honors Integrated Physical, Environmental and Life Sciences (HIPELS) is a college preparatory laboratory based science program designed for students taking their first MHS science course. HIPELS explores phenomena in the natural world through a combination of science disciplines. Students will approach topics from both a scientific and societal perspective. The course incorporates

engineering design principles while developing scientific models for students' everyday experiences, through energy in the context of mechanical systems, global climate science and forces and interactions between objects. Students will design sophisticated lab investigations and use data to investigate cause and affect relationships, generate scientific representations, compare structure and function, construct an understanding of energy storage modes and identify patterns through analysis of proportions and quantities. Students in HIPELS will identify questions, plan investigations, analyze data, and communicate with other members of the learning community. The appropriate NJ State and National Standards will be addressed so as to raise the level of student discourse and develop essential scientific reasoning skills. HIPELS will initiate a theme of energy that will continue in chemistry, followed by biology. HIPELS students will be expected to utilize advanced mathematical and scientific writing skills; it is highly recommended that students have demonstrated aptitude in proportional reasoning on math diagnostic and advanced proficiency in algebra before enrolling in this course. This course is open to all students.

#### **41900 AP Physics 1**

**5 credits**

AP Physics 1 is an algebra-based, introductory college-level, laboratory science physics course. Students cultivate their understanding of physics through classroom study, in-class activity, and hands-on, inquiry-based laboratory work as they explore concepts involving systems, dynamics, conservation, fields and waves. The appropriate NJ State Standards are addressed in accordance with the AP standardized curriculum. Due to the increased level of mathematical complexity, additional topics in kinematics, and reduction of in-class guided practice; this course receives honor's weighted credit. Students entering the course will be expected to have advanced mathematical and scientific writing skills. This course is designed to prepare students to take both the AP Physics 1 exam and follows the prescribed College Board curriculum. This course is open to current MHS students who have successfully completed HIPELS. Students entering MHS must be enrolled concurrently or have passed Algebra 2 and passed the course entrance assessments as determined by the MHS Science Department Supervisor to enroll in the class. Alternative course sequences must be approved by the department supervisor.

*\*The course instructor may require a summer assignment to be completed prior to the start of the course (please reference the MHS Science Department website after July 1<sup>st</sup> for updated summer assignments).*

#### **41920 AP Physics C: Mechanics and Electricity & Magnetism**

**5 credits**

AP Physics C is a laboratory science course that forms the first part of a college sequence serving as the foundation in physics for students majoring in the physical sciences or engineering. Methods of calculus are used wherever appropriate in formulating physical principles and in applying them to physical problems. The course is designed for students preparing to study the sciences in a post-secondary setting, especially engineering and physical science majors. The appropriate NJ State and National Standards are addressed. Due to the increased level of mathematical complexity, additional topics in kinematics, and reduction of in-class guided practice, this course receives honor's weighted credit. This course is designed to prepare students to take both the AP Physics C: Mechanics exam and AP Physics C: Electricity and Magnetism Exam. Students must have already taken a calculus course or concurrently be taking calculus. A previous physics course is recommended, but not required.

*\*The course instructor may require a summer assignment to be completed prior to the start of the course (please reference the MHS Science Department website July 1<sup>st</sup> for updated summer assignments).*

#### **42000 General Chemistry**

**5 credits**

General Chemistry is a college preparatory science course cultivating the concepts of physical chemistry. The basic concepts are developed using student discourse and laboratory activities in preparation for college level science studies. The goals of this course are to help students develop an understanding of chemistry, cultivate problem solving and critical thinking skills, apply chemistry knowledge to decision making about scientific and technological issues, recognize the importance of chemistry in daily life, and understand benefits as well as limitations of science and technology. Students are introduced to states of matter, solutions, basic types of chemical reactions and the role of energy in chemistry. This course will build upon the theme of energy developed in HIPELS, continuing in biology. The appropriate NJ State and National Standards will be addressed so as to raise the level of student discourse and develop essential scientific reasoning skills. Permission to enroll in this course will be coordinated through the student's school counselor, current science instructor and the MHS Science Supervisor.

**42200 Chemistry****5 credits**

Chemistry is a college preparatory, laboratory science course designed as a student's second high school science course. The goal of the course is to develop a coherent description of matter at the particle level based on observable evidence collected through experimentation and real world experiences. This course will apply basic mathematical/algebraic equations and skills such as interpreting graphical material, using exponents, significant figures, scientific notation and algebraic ratios to describe the physical world. A study of the structure of the atom and the periodic law leads to an understanding of the organization of the periodic table. This knowledge is used to develop concepts of bonding among atoms as well as writing chemical formulas and equations to quantitatively represent chemical reactions. Students are introduced to states of matter, solutions, basic types of chemical reactions and the role of energy in chemistry. Through hands-on laboratory exercises, detailed observations, critical thinking and articulation students are guided to a deeper understanding of matter on an atomic level. The appropriate NJ State and National Standards will be addressed to raise the level of student discourse and develop scientific reasoning skills. This chemistry course will build upon the theme of energy developed in IPELS, continuing into biology. This course is open to all students.

**42500 Chemistry Honors****5 credits**

Chemistry Honors is a college preparatory, laboratory science course designed for students who seek a conceptual understanding in chemistry and training in 21st century skills. The goal of the course is to develop a coherent description of matter at the particle level based on observable evidence collected through experimentation and real world experiences. The appropriate NJ State and National Standards will be addressed so as to raise the level of student discourse and develop essential scientific reasoning skills. This chemistry course will build upon the theme of energy developed in IPELS, continuing into biology. This course will require fundamental understanding of comparison by ratios, proportionality, percentage, scientific notation, operation of exponents, metric conversions and drawing and interpretation of graphs. Students should demonstrate mastery of basic atomic structure, density, measurement, graphing and physical properties prior to enrolling in this course. A summer review packet, detailing the core competencies students should possess prior to the course, will be provided online and these concepts and skills will be assessed with the first unit of the course. Students enrolled in this course will be expected to have the ability to work independently, drawing on prior chemistry knowledge, as well as

collaboratively. Due to the higher level of critical thinking, and articulation required, this rigorous course receives honor's weighted credit. This course is open to all students. A diagnostic assessment and advanced preparation assignment may be provided to the students electing to enroll in this course. *\*The course instructor may require a summer assignment to be completed prior to the start of the course (please reference the MHS Science Department website to obtain the summer assignment after July 1<sup>st</sup> for updated summer assignments)*

**42900 AP Chemistry****5 credits**

AP Chemistry is a rigorous and demanding college level course that provides an in-depth study of chemistry. It is designed as a first year college course in chemistry for science majors. Advanced Placement Chemistry is a laboratory-oriented course, and to be successful it involves a substantial amount of preparation at home. This course prepares students for the Advanced Placement Examination. The topics covered in the course include: the structure and states of matter, chemical reactions, kinetics, equilibrium, thermodynamics, electrochemistry and descriptive chemistry. Laboratory work emphasizes experiments involving major chemistry concepts and skills, and the subsequent analysis of data and the interpretation and communication of experimental results. The appropriate NJ State and National standards are addressed. Due to the increased level of mathematical complexity, additional topics in kinetics, redox reactions, and organic chemistry, and reduction of in-class guided practice, this course receives honor's weighted credit. This course is designed to prepare students to take the AP Chemistry exam. A previous chemistry course is recommended, but not required. The student requesting AP Chemistry must possess a thorough working knowledge of algebraic principles. This course will require fundamental understanding of comparison by ratios, proportionality, percentage, scientific notation, operation of exponents, metric conversions and drawing and interpretation of graphs. A summer assignment that covers basic atomic models, classification of substances ionic/Molecular, stoichiometry problems needs to be completed before the start of the school year. Students should demonstrate mastery of those topics prior to enrolling in this course on an assessment administered during the first 2 weeks of the class. *\*The course instructor may require a summer assignment to be completed prior to the start of the course (please reference the MHS Science Department website after July 1<sup>st</sup> for updated summer assignments).*

**43000 General Biology****5 credits**

General Biology is a college preparatory, laboratory science course designed for students in the eleventh grade to gain conceptual understandings and skills in biology. The course will build upon a student's prior science knowledge and high school science coursework as they make connections between the concepts of biology and their everyday world. Students are introduced to biological topics including: the unity and diversity of life, the relationship between form and function within organisms, biochemical processes, genetics, evolution, the interdependence and relationships in ecosystems, classification, and biotechnology through biology simulations, readings, and laboratory activities. The appropriate NJ State and National Standards will be addressed so as to raise the level of student discourse and develop essential scientific reasoning skills. Permission to enroll in this course will be coordinated through the student's school counselor, current science instructor and the MHS Science Supervisor.

**43200 Biology****5 credits**

Biology is a college preparatory, laboratory science course designed for students in the eleventh grade to gain conceptual understandings and skills in biology. The course will build upon a student's prior knowledge of chemistry and broader scientific concepts as they make connections between the concepts of biology and their everyday world. Students are introduced to biological topics including: the unity and diversity of life, the relationship between form and function within organisms, biochemical processes, genetics, evolution, the interdependence and relationships in ecosystems, classification, and biotechnology through biology simulations, readings, and laboratory activities. The appropriate NJ State and National Standards will be addressed so as to raise the level of student discourse and develop essential scientific reasoning skills.

**43500 Biology Honors****5 credits**

Biology Honors is a college preparatory, laboratory science course designed for students in the eleventh grade to gain conceptual understandings and skills in biology. This biology course will continue with the themes developed in chemistry and physics including energy transfer and transformation. Students are introduced to biological topics including: the unity and diversity of life, the relationship between form and function within organisms, biochemical processes, genetics, evolution, the interdependence and relationships in ecosystems, classification, and applications in biotechnology through biology simulations and inquiry-based laboratory activities. This course will incorporate

probability and mathematical modeling, relying on multiple representations to describe the physical world. It includes more extensive analytical lab, reading and writing assignments than the college prep biology course. Course assessments will require a sophisticated analysis of the concepts and focus on application of the core ideas. The appropriate NJ State and National Standards will be addressed so as to raise the level of student discourse and develop essential scientific reasoning skills. This course covers the same topics as the college preparatory course, but with more depth and additional math; this course receives honor's weighted credit. This course is open to all students. It is highly recommended that students successfully complete either Advanced Chemistry Honors or demonstrate a superior understanding of College Preparatory Chemistry prior to enrolling in this course.

**43900 AP Biology****5 credits**

AP Biology is a laboratory science course that provides an in-depth study of living systems. It is designed as a first year college course in biology for science majors. The course represents a comprehensive survey of general biology that includes biochemistry, cellular biology, molecular genetics and heredity, biotechnology, diversity, structure and function of organisms, ecology and evolution. Given that this course is the equivalent of a college level course, extensive comprehension and understanding of concepts will be required on the part of the student. This biology course will continue to build on chemistry and physics concepts. The appropriate NJ State and National Standards will be addressed. Due to the increased level of mathematical complexity, additional topics in biochemistry, genetics, evolution and reduction of in-class guided practice, this course receives honor's weighted credit. This course is open to all students. This course is designed to prepare students to take the AP Biology exam. It is highly recommended that students considering AP Biology have taken and successfully completed a previous biology course (i.e. Biology Honors or Biology). Students who wish to take this course without having taken biology before are recommended to have successfully completed either AP Chemistry or Chemistry Honors. Many introductory chemistry concepts are considered prerequisite knowledge according to the College Board.

*\*The course instructor may require a summer assignment to be completed prior to the start of the course (please reference the MHS Science Department website to obtain the summer assignment after July 1<sup>st</sup> for updated summer assignments).*

#### **44900 AP Environmental Science 5 credits**

Environmental Science is a full year capstone, laboratory science course designed to incorporate prior biology, chemistry and physics knowledge as it relates to environmental studies. Topics will include the study of the interrelationships of Social Ecological Systems. Students will be expected to critically analyze transdisciplinary. Strong mathematical skills are highly recommended. As a college-level equivalent course, students will be expected to work independently and collaboratively. Class time will include data analysis, laboratory, and field experiment. Students will complete formal lab reports and review concepts outside of regular class sessions. All students are encouraged to complete necessary coursework in preparation for the AP Environmental Science Exam. As a result of the increased level of mathematical complexity, incorporation of previous course work in IPELS /physics, chemistry and biology, and reduction in-class guided practice this course receives honor's weighted credit.

*\*The course instructor may require a summer assignment to be completed prior to the start of the course (please reference the MHS Science Department website after July 1<sup>st</sup> for updated summer assignments). Students enrolling in this course must have completed freshman science, chemistry, and biology. This course may be taken concurrent with biology.*

#### **iSTEM - Advanced Scientific Investigations**

iSTEM - Advanced Scientific Investigations is a collection of semester-long multidisciplinary course modules open to students who have completed IPELS/ physics, chemistry and biology (biology may be taken concurrently) and 10<sup>th</sup> grade students with permission of the MHS Science Supervisor. Students will explore the connections between Science, Technology, Engineering, and Mathematics through individual inquiry and small group research collaborations. Students will design experiments, gain proficiency with scientific technology, and prepare for local, regional and national science challenge events. The course topics will vary year-to-year and may include optics, electricity and magnetism, green technology, biotechnology and horticulture. The course will make extensive use of computer, digital and engineering instrumentation. Students will select modules from the potential options available for the upcoming academic year. Modules offered each academic year will be based on student interest, availability of teaching faculty, and accessibility to course resources. Additionally, students will be expected to conduct independent and collaborative research, provide and receive critical feedback from peers, instructional staff, and scientists working in the applicable field of

studies. Students may be assigned to present a capstone project in a science conference poster presentation format at the annual MHS STEM Day in June. iSTEM - Advanced Scientific Investigations is open to all students having completed the requisite courses. Students enrolling in the course may be required to complete a summer assignment prior to the start of the school year. As a result of the increased level of mathematical complexity, incorporation of previous course work in IPELS/ physics, chemistry and biology, and a reduction in in-class guided practice several of the course modules are designed for honor's weighted credit. Students are encouraged to select multiple modules and could potentially enroll in multiple iSTEM course modules concurrently during either semester.

#### **45001 Anatomy & Physiology (s) 2.5 credits**

The Anatomy & Physiology module will carefully examine and investigate how systems and body parts work together to sustain life. This module will involve both real-life and online dissections. Prior work in the biological sciences is necessary for an in-depth exploration of the structures and functions of living organisms.

*PREREQUISITE: Biology class or instructor/supervisor approval.*

#### **45002 Astronomy (s) 2.5 credits**

The Astronomy module will explore a fundamental question about both the origins of science starting with observations as well as consider a philosophical viewpoint about how we as a society do science as well. The course will explore how modern scientists make observations and take measurements in space, how objects interact in space and how humans have come to discover events and objects in space both in the past and present from both a Eurocentric viewpoint as well as a global viewpoint.

#### **45003 Environmental Science (s) 2.5 credits**

The Environmental Science module will explore current topics and trends in environmental science with an engineering mindset. The curriculum will be focused on a series of lab activities and explorations that help build a comprehensive understanding of the earth's environmental systems. The module will consider current events and the challenges facing humans as our species cares for and preserves our living environment. Students will be expected to work individually and collaboratively to discuss problems and solutions of the current environmental issues.

#### **45004 Weather and Meteorology 2.5 credits**

The Weather and Meteorology module will build a global weather model. The curriculum will explore the science

behind weather forecasting and how independent weather agencies around the world gather, analyze, and predict weather events. This module will take a deep look at common weather apps to consider the sources and factors influencing weather models.

**45501 Biotechnology Honors (s) 2.5 credits**

Biotechnology is the application of biological concepts to applications such as DNA fingerprinting, RNA vaccines, and CRISPR. Students will learn about the various techniques used and how those techniques connect to real-world applications as well as the ethical implications of biotechnology. Students will be expected to work individually and collaboratively.

*PREREQUISITE: Biology or instructor/supervisor approval.*

**45502 Microelectronics Honors (s) 2.5 credits**

The Microelectronics module explores various electronic circuits and uses puzzles to uncover the mysteries as well as possibilities held within microchips. This module will also examine common DIY microelectronics including Arduino, Raspberry PI, Backyard Brains, SparkFun, and other commercially available microcontrollers. Some computer programming will be involved; however, no prior knowledge in coding languages is required.

**45503 Organic Chemistry Honors (s) 2.5 credits**

The Organic Chemistry module will conduct a series of introductory organic chemistry labs that build a coherent model that will be used for an end-of-module synthesis project. Prior knowledge in chemistry is required. Class time will be used primarily for laboratory investigations with the majority of chemistry content delivered online in a “flipped classroom” format.

**45006 Nutrition and Food Science (s) 2.5 credits**

The Nutrition and Food Science module explores the biochemistry of foods and nutrients with consideration of the physiological effects of specialized diets for specific biological needs. Topics include cultural, religious, and economic factors that influence a person’s acceptance of food and availability of food, as well as nutrient requirements of the various life stages. Upon completion, students should be able to identify the functions and sources of nutrients, the mechanisms of digestion, and the nutritional requirements of all age groups.

**45007 Horticultural and Agricultural Science (s) 2.5 credits**

Horticultural/Agricultural module is an inquiry-driven course designed to introduce students to plant growth and production. As an outdoor classroom, the MHS student garden, along with hoop-house plant bed capacity and indoor greenhouse space provides a place-based learning

environment that will supplement weekly readings and research. Students will gain knowledge and experience with all aspects of basic organic vegetable, flower, and herb production, from propagation to bed preparation and harvest. Students will examine plant biology along with key topics surrounding the history and philosophy of organic agriculture, as well as build a core understanding of local food systems. Topics of nutrition, environmental stewardship, and food justice will have a key role, along with an examination of the controversies over adoption of technologies as well as social justice and ethical considerations. Potential solutions are examined including sustainable agriculture and the role that consumers can have through the food choices they make.

**45008 Data Science (s) 2.5 credits**

The Data Science module will introduce students to the main ideas in data science through digital tools such as Google Sheets, Python, Data Commons, and Tableau. Students will be positioned as data explorers in project-based units, through which they will develop their understanding of data analysis, sampling, correlation/causation, bias and uncertainty, probability, modeling with data, making and evaluating data-based arguments, the power of data in society, and more. At the end of the course students will have a portfolio of their data science work to implement in a capstone project.

**45009 Forensic Science (s) 2.5 credits**

The Forensic Science module introduces the student to the science of crime scene investigation. Students will learn to observe, collect, analyze, and evaluate evidence associated with criminal cases. Through scientific reasoning and critical thinking, students will evaluate the use of scientific principles including physics, chemistry and biology as they apply to criminalistics and various phenomena currently being investigated in the field of forensics. The course will also consider ethical and social justice aspects crucial to the implementation of forensic science in society.

**45200 iSTEMi - Advanced Independent Scientific Investigations Honors 5 credits**

iSTEMi - Advanced Independent Scientific Investigations is a full-year course where students work exclusively on independent science investigations. This course is designed as a follow-up to iSTEM, however students may submit a formal science research proposal to the MHS Science Supervisor for special permission to enroll in the course. All students will be required to submit a draft proposal research project by August 15<sup>th</sup> prior to the start of the school year. Student projects will be required to follow all safety guidelines and each project will require the equivalent of an Institutional

Review Board approval. Students will be responsible for proposing a project budget, maintaining laboratory space, and publishing progress and findings from their work in the MHS Student STEM Board publication, *Tau Magazine*. Students will present a capstone project in a science conference poster presentation format and will be encouraged to submit proposals to various student research conferences. Students who are involved in scientific research during the summer may be eligible to include and continue project work in fulfillment of course requirements. As a result of the increased level of mathematical complexity, incorporation of previous course work in IPELS/physics, chemistry, and biology and reduction in-class guided practice, this course receives honor's weight credit.

*\*The course instructor may require may require a summer assignment to be completed prior to the start of the course (please reference the MHS Science Department website July 1<sup>st</sup> to obtain the updated summer assignments).*



## WORLD LANGUAGES

World Language instruction centers on developing proficiency in World Languages and understanding the perspectives of those related cultures. Language proficiency is developed over time, through sequential building of knowledge and skill practice. Sequential programs starting in grade 9 are offered in French, German, Latin, and Spanish. We strongly encourage students to complete as many years of a language sequence as possible. Students who are uniquely positioned for multilingualism will be encouraged to study multiple languages, to develop full literacy in heritage languages and to pursue the New Jersey Seal of Biliteracy (see Montgomery High School World Languages webpage).

### **Prerequisites**

Program sequences provide skill practice to build communication competencies and students are expected to demonstrate mastery of foundational skills before enrolling in upper level courses. Pre-requisites for courses are firmly based on the proficiency that a student demonstrates over the entire year of work in the preceding course. Montgomery High School only administers Advanced Placement exams for students who are currently enrolled in the course at MHS for that exam.

### **Placement Testing**

Placement tests are used to measure student knowledge and performance along the program continuum for the purposes of determining the course for which that student should register.

The following students must participate in placement testing:

- Students new to the district or to the program whose placement needs to be determined;
- Students new to the district who have met honors course requirements in another school and who wish to continue in honors at MHS.

### **Proficiency Testing**

Language proficiency tests are used to assess student skills at various stages of their World Language education. These tests reflect language structure mastery and vocabulary development as assessed on unit and final exams for various courses offered by the department and measure student proficiency in reading, writing, speaking and listening.

The following students must participate in the proficiency testing:

- Students wishing to study a language with which they have extensive experience in an immersion setting, or of which they are a native or heritage speaker
- Students who wish to advance by means of an accredited course equivalent which has been pre-approved by the department through the Option II application process

**Note 1:** *Summer and online courses traditionally do not cover the curriculum in as much depth as a full-year course. Therefore, although summer or online courses are good for enrichment, they are not recommended as a replacement for a full-year world language course.*

**Note 2:** *Students from the Upper Middle School register for French, German or Spanish Level 1 at Montgomery High School. Students having earned 75% or better in French, German or Spanish part 2 may register for High School level 2.*

## **Seal of Biliteracy**

The New Jersey Seal of Biliteracy is an acknowledgment by the New Jersey Department of Education that a student has achieved mastery of two or more languages. It encourages students to pursue biliteracy, honors the skills they attain, and provides evidence of skills that are attractive to future employers and college admissions offices. A growing number of post-secondary institutions accept the [Seal of Biliteracy for credit](#).

Interested students must sit for a state-approved language proficiency exam on which they achieve the Intermediate Mid-level according to the American Council on the Teaching of Foreign Languages' Proficiency Guidelines. They also must demonstrate English proficiency by meeting the New Jersey English Language Arts graduation requirement or the appropriate cut score on the ACCESS for English Language Learners.

Information and an application to participate, is distributed to juniors and seniors in the fall by their world language teachers or guidance counselors. Further information may be found on the [NJDOE's official Biliteracy Seal page](#) and on the Montgomery High School World Languages [Seal of Biliteracy webpage](#).

**51100 French 1****5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) novice-mid proficiency. The novice-mid language learner understands and communicates at the word level and can independently identify and recognize memorized words and phrases that bring meaning to text. Course objectives are for students to demonstrate competence in all communication modes using thematic vocabulary with emphasized language structures, which include the present, near future and recent past tenses. Thematic Vocabulary units are Getting to Know One Another; My Family and Home; School and Leisure Time; and Around Town. Major cultural points of focus and projects include the Francophone World, My Family Album and Paris.

*PREREQUISITE: None*

**51200 French 2****5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) novice-high proficiency. The Novice-High language learner has progressed from understanding and communicating at the word level to understanding and communicating at the sentence level and can use words, lists, and simple sentences to identify the main idea and some supporting details when reading; understand the gist and some supporting details of conversations dealing with everyday life; infer the meaning of some unfamiliar words when used in familiar contexts. Course objectives are for students to demonstrate competence in all communication modes using thematic vocabulary with emphasized language structures, which include the present, passe compose and imperfect tenses. Thematic vocabulary units are My Daily Routine; Family Relationships; My Health; and My Childhood.

*PREREQUISITE: Successful completion of MHS French 1 or UMS French 1b with 75% or better*

**51300 French 3****5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) Intermediate-Low proficiency. The Intermediate-Low language learner understands and communicates at the sentence level and can: use simple sentences independently to identify, understand the gist, and infer meaning of the main idea and some supporting details when listening, reading, speaking & writing; initiate, maintain, and end a conversation by asking and answering questions; express

needs, requests and opinions and give reasons and suggestions. Course objectives are for students to demonstrate competence in all communication modes using thematic vocabulary with emphasized language structures: Imperfect, future, conditional and subjunctive tenses. Thematic vocabulary units are: Fairy Tales, Wars, My Future, The Environment.

*PREREQUISITE: Successful completion of French 2*

**51450 French 4 Honors****5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) Intermediate-high proficiency. The Intermediate-high language learner has progressed from understanding and communicating at the sentence level to understanding and communicating at the paragraph level and can use connected sentences and paragraphs independently analyze, synthesize, infer meaning of unfamiliar words in new contexts, identify the organizing principle in oral and written text, infer and interpret an author's intent, and identify some cultural perspectives. Course objectives are for students to demonstrate competence in all communication modes using studied thematic vocabulary with emphasized language structures. ***This on-campus course is mandatory for participation in AP French.***

*PREREQUISITE: Successful completion of French 3*

**51900 AP French****5 credits**

Advanced Placement World Language courses are for students who wish to continue the intensive speaking and writing activities of the previous level while taking up the more challenging reading of literature and the study of culture. Some colleges may award credit based upon the result of the AP exam. The course is based on six thematic units, dictated by The College Board, and utilizes a variety of authentic resources. Total Immersion is expected at this level. The target proficiency is advanced-low, according to the ACTFL proficiency guidelines.

*PREREQUISITE: 85% or better in French 4 Honors.*

*Only seniors that are Heritage speakers and pass the proficiency test and/or receive department approval may waive the French 4 Honors prerequisite.*

**52100 German 1****5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) novice-mid proficiency. The novice-mid language learner understands and communicates at the word level and can independently identify and recognize memorized words and phrases that bring meaning to text. Course objectives are for students to demonstrate competence in all

communication modes using thematic vocabulary with emphasized language structures, which include the present, near future and modal verbs. Thematic Vocabulary units are Getting to Know One Another; My School; A Party!; and On the Weekend.

*PREREQUISITE: None*

### **52200 German 2** **5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) and state standards novice-high proficiency. The Novice-High language learner has progressed from understanding and communicating at the word level to understanding and communicating at the sentence level and can use words, lists, and simple sentences to identify the main idea and some supporting details when reading; understand the gist and some supporting details of conversations dealing with everyday life; and infer the meaning of some unfamiliar words when used in familiar contexts. Course objectives are for students to demonstrate competence in all communication modes using thematic vocabulary with emphasized language structures which include the present perfect, preterite, and future tenses; the accusative and dative cases; present and past tenses of modal verbs. Thematic vocabulary units are: Holidays & Celebrations; Travel Adventures; A Look Back; Technology & Media

*PREREQUISITE: Successful completion of MHS German 1 or UMS German 1b with 75% or better*

### **52300 German 3** **5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards ACTFL intermediate-low proficiency. The Intermediate-Low language learner understands and communicates at the sentence level and can use simple sentences to identify the main idea and supporting details when reading, handle simple transactions related to everyday life, initiate, maintain, and end a conversation, express needs and opinions, and give reasons. Course objectives are for students to demonstrate competence in the 3 modes using thematic vocabulary with emphasized language structures-verb placement with reflexives, relative pronouns, and conjunctions, subjunctive mood, and passive voice. Thematic Vocabulary units are Health and Wellness, Life in a (divided) City, My Future, and Nature and the Environment.

*PREREQUISITE: Successful completion of MHS German 2*

### **52450 German 4 Honors**

**5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) Intermediate-high proficiency. The Intermediate-high language learner has progressed from understanding and communicating at the sentence level to understanding and communicating at the paragraph level and can use connected sentences and paragraphs independently analyze, synthesize, infer meaning of unfamiliar words in new contexts, identify the organizing principle in oral and written text, infer and interpret an author's intent, and identify some cultural perspectives. Course objectives are for students to demonstrate competence in all communication modes using thematic vocabulary with emphasized language structures. ***This on-campus course is mandatory for participation in AP German.***

*PREREQUISITE: Successful completion of German 3*

### **52900 AP German**

**5 credits**

Advanced Placement World Language courses are for students who wish to continue the intensive speaking and writing activities of the previous level, as well as participating in more in-depth research and exposure to the cultures of Germany, Austria, and Switzerland (current events with a focus on Germany's key role in the European Union, the history, and the political system, as well as architecture, art, literature, music, and science). Some colleges may award credit based upon the result of the AP exam. The course is based on six thematic units, dictated by The College Board, and utilizes a variety of authentic resources. Total Immersion is expected at this level. The target proficiency is advanced-low, according to the ACTFL proficiency guidelines.

*PREREQUISITE: 85% or better in German 4 Honors*

*Only seniors that are Heritage speakers and pass the proficiency test and/or receive department approval may waive the German 4 Honors prerequisite*

### **53100 Spanish 1**

**5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) novice-mid proficiency. The novice-mid language learner understands and communicates at the word level and can independently identify and recognize memorized words and phrases that bring meaning to text. Course objectives are for students to demonstrate competence in all communication modes using thematic vocabulary with

emphasized language structures, which include the present tense and reflexives, near future and recent past tenses. Thematic vocabulary units are Let's get Started!; My Family-my Home; In and after school; and What we eat and where?

*PREREQUISITE: None*

### **53200 Spanish 2** **5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) novice-high proficiency. The Novice-High language learner has progressed from understanding and communicating at the word level to understanding and communicating at the sentence level and can use words, lists, and simple sentences to identify the main idea and some supporting details when reading; understand the gist and some supporting details of conversations dealing with everyday life; infer the meaning of some unfamiliar words when used in familiar contexts. Course objectives are for students to demonstrate competence in all communication modes using thematic vocabulary with emphasized language structures, which include the present, preterite and imperfect tenses. Thematic vocabulary units are City and Country, Planes, Trains and Automobiles, Celebrations and The World of Technology.

*PREREQUISITE: Successful completion of MHS Spanish 1 or UMS Spanish 1b with 75% or better*

### **53300 Spanish 3** **5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) intermediate-low proficiency. The Intermediate-Low language learner understands and communicates at the sentence level and can use simple sentences independently to identify, understand the gist, and infer meaning of the main idea and some supporting details when listening, reading, speaking & writing; initiate, maintain, and end a conversation by asking and answering questions; express needs, requests and opinions and give reasons and suggestions. Course objectives are for students to demonstrate competence in all communication modes using thematic vocabulary and the emphasized language structures-the preterite, imperfect and subjunctive tenses. Thematic vocabulary units are Leisure Time Adventures, Nutrition and Wellness, Special Occasions and the Arts.

*PREREQUISITE: Successful completion of Spanish 2*

### **53350 Spanish 3 Honors** **5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1.

Students progress towards American Council of Teachers of Foreign Language (ACTFL) intermediate-mid proficiency. The Intermediate-Mid language learner understands and communicates at the sentence level and can use strings of sentences independently to identify the main idea and some supporting details when reading, infer the meaning of some unfamiliar words when used in familiar contexts, and ask and answer questions related to everyday life. Course objectives are for students to demonstrate competence in all communication modes using thematic vocabulary with emphasized language structures-- the preterite, imperfect and subjunctive tenses. Thematic vocabulary units are Adventures and Memories, Nutrition and Wellness, Special Occasions, Art and Expression. Major assignments include: family album, cultural presentations, public service announcement on health, essays.

*PREREQUISITE: Completion of Spanish 2 with 90% or better*

### **53400 Spanish 4** **5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards ACTFL Intermediate-mid proficiency. The Intermediate-mid language learner understands and communicates at the sentence level and can use strings of sentences independently to identify the main idea and some supporting details when reading, infer the meaning of some unfamiliar words when used in familiar contexts, and ask and answer questions related to everyday life. The course objectives are for students to demonstrate competence in all communication modes using thematic vocabulary with emphasized language structures--the preterite, imperfect and future tenses and the, subjunctive mood. The thematic vocabulary units are Trends and Fads, Technology and Progress, The World of Entertainment and Human Diversity. Some of the major assignments include creative writing pieces and individual speeches.

*PREREQUISITE: Successful completion of Spanish 3*

### **53450 Spanish 4 Honors** **5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards ACTFL intermediate-high proficiency. The Intermediate-high language learner has progressed from understanding and communicating at the sentence level to understanding and communicating at the paragraph level and can use connected sentences and paragraphs independently analyze, synthesize, infer meaning of unfamiliar words in new contexts, identify the organizing principle in oral and written text, infer and interpret an author's intent, and identify some cultural perspectives. Course objectives are for students to

demonstrate competence in all modes of communication using thematic vocabulary with emphasized language structures--the preterite, imperfect, future and conditional tenses and the subjunctive moods. Thematic vocabulary units are Family & Immigration, Contemporary Life--Education, Careers & Relationships, The Environment, Human Rights & the Role of Government. ***This on-campus course is mandatory for participation in AP Spanish.***

**PREREQUISITE:** Completion of Spanish 3 Honors with 85% or better.

**NOTE:** Students from Spanish 3 wishing to enroll in Spanish 4 Honors must do the following:

- Complete Spanish 3 with a minimum grade of 90%
- Independently study Spanish 3 Honors content (Dept. Study Guide)
- Schedule oral and writing proficiency examination with the Spanish Department
- Pass the proficiency examination with 90% or better

### **53499 Spanish 5 5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards ACTFL and state standards Intermediate High proficiency. Students will understand and communicate at the paragraph level and can use connected sentences and paragraphs independently to analyze, synthesize and identify supporting details in written and oral text; Infer meaning of unfamiliar words in new contexts; and identify cultural perspectives. Course objectives are for students to demonstrate competence in all communication modes using thematic vocabulary and all previously studied language structures. This course focuses on a deep cultural exploration of the Latinos in the Americas. Thematic unit titles are: The Contributions of Latinos to the U.S.; The Diversity of the Latin American World; Hispanic Immigration to the U.S.; and Telling our Stories. Major assignments include: research and cultural presentations, class discussions and debates related to examined issues; creating and sharing educational children stories with Village Elementary School Spanish students.

**PREREQUISITE:** Successful completion of Spanish 4

### **53900 AP Spanish 5 credits**

This course uses thematic units to explore the Spanish speaking countries history, social, economic and contemporary issues and their impact on society. Students analyze and discuss contemporary issues in the Hispanic world, by listening to authentic texts such as online stream news, radio reports, documentaries and dialogues. Students read authentic

texts and literature and prepare formal oral and written presentations. Course is student centered and is entirely conducted in the target language. The course prepares students to take the AP test. Some colleges may award credit based upon the result of the AP exam.

**PREREQUISITE:** 85% or better in Spanish 4 Honors  
*Only seniors that are Heritage speakers and pass the proficiency test and/or receive department approval may waive the Spanish 4 Honors prerequisite.*

### **55100 Latin 1 5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) novice-mid proficiency. The novice-mid language learner understands and communicates at the word level and can independently identify and recognize memorized words and phrases that bring meaning to text. Course objectives are for students to demonstrate competence primarily in the interpretive and presentational modes of communication. This introduction to the language emphasizes the acquisition of reading skills and presents basic grammatical structures. It also acquaints the students with the history, culture and literature of the Romans.

**PREREQUISITE:** None

### **55200 Latin 2 5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) intermediate-low proficiency. Course objectives are for students to demonstrate competence primarily in the interpretive and presentational modes of communication. This second-year course emphasizes continued acquisition of reading skills and presents basic grammatical structures, including the passive voice, participles, the future tenses, and the subjunctive mood. It also acquaints the students with the history, culture and literature of the Romans, focusing on conflicts of the late republic.

**PREREQUISITE:** Successful completion of Latin 1

### **55300 Latin 3 5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) intermediate-mid proficiency. Course objectives are for students to demonstrate competence primarily in the interpretive and presentational modes of communication. This intermediate level course completes the introduction to the grammar and syntax of the language, and aims for proficiency in reading extended narrative

passages. Students are also introduced to reading unaltered Latin prose and poetry.

*PREREQUISITE: Successful completion of Latin 2*

#### **55600 Latin 4 Honors**

**5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards American Council of Teachers of Foreign Language (ACTFL) intermediate-high proficiency. Course objectives are for students to demonstrate competence primarily in the interpretive and presentational modes of communication. This course sequentially follows Latin 3 and is designed to give students an intensive experience in reading classical Latin prose and poetry, including Caesar's *De Bello Gallico* and Vergil's *Aeneid*. Students study the political, historical, literary, and cultural background of each author and text. Practical analysis of Latin passages offers students an understanding of the motivation behind the author's choice of language. For the *Aeneid*, students learn how to scan and read Latin meter aloud and study how Vergil uses dactylic hexameter to enhance the text and create effect.

*PREREQUISITE: Successful completion of Latin 3*

#### **57000 Power of Language**

**5 credits**

This course meets state graduation requirements for World Languages and NJ Student Learning Standard 7.1. Students progress towards the American Council on the Teaching of Foreign Languages (ACTFL) Novice-mid proficiency level in Latin. With this unique and enriching learning experience students also explore how culture, society, & power relations affect language. Emphasis is on Indo-European languages esp. Latin, modern Romance and Germanic languages to better position students to continue study of any world language, if desired. This project-based, socio-linguistic learning experience is designed to provide 21st century citizens with deep insight into the world's diversity and its multicultural settings. Inquiry includes: the origin, nature & interconnectedness of language; how language is acquired; how languages evolved and what causes change; how language shapes cultural perspectives and vice-versa; who determines what is "correct" in a language; how language is used to oppress or liberate.

*PREREQUISITE: None*

*This course is open to all students who need a pathway to meet their one-year World Language High School graduation requirement; wish to explore facets of language usually reserved for post-secondary studies; are uncertain of which language to select for study and desire an exploratory experience; are multilingual and/or multi language proficient with a keen interest in*

*sociolinguistics; and are Heritage and/or other advanced speakers at the end of the World Language program sequence.*

## **21<sup>st</sup> CENTURY LIFE AND CAREERS or CAREER TECHNICAL EDUCATION**

The State of New Jersey requires high school graduates to have 5 credits of 21<sup>st</sup> Century Life and Careers or Career Technical Education (CECFLS) and 5 credits of Visual and Performing Arts (VPA). The curricula for the courses described below have been written to comply with the N.J. State Standards in both these areas. Students who wish to take more than the 5 required credits in either of these course groups must plan their elective program carefully. Typically, the senior year has fewer required courses allowing students to take several electives during that year. Students wanting to take four years of either concentration (VPA or CECFLS) could meet the requirement for the other grouping by scheduling the 5 credits (2 one-semester courses or one full year course) in his/her senior year.

### **Career Exploration**

#### **60100 Journalism I (s) 2.5 credits**

Students in Journalism learn how to compose news stories, feature articles, and editorials. Trends in layout, production, and graphics are also examined. The course also aims at developing students' understanding of the impact of high technology on journalism. Students are required to write articles for the school's newspaper and to assist with the yearbook, if necessary.

*PREREQUISITE: Open to all students in grades 9-12 who have received a grade of 75% or better in the required English program*

#### **60200 Journalism II 5 credits**

The Journalism II elective is a self-paced class for those students who have an interest in Journalism and journalistic writing. Students study such topics as layout and design, in-depth reporting, broadcast journalism and copy editing.

*PREREQUISITE: Successful completion of Intro to Literature & Composition, Journalism I with a grade of 75% or better or a letter from the newspaper advisor*

#### **60300 Journalism III-Portfolio 5 credits**

This year long course is designed for students who are seriously interested in further developing the layout, editing, and journalistic writing skills introduced in Journalism I and II. Students in this course are expected to take on an active editorial role in the publishing of the school newspaper, The Paw Print. A portfolio of work will be generated from both the students' work related to The Paw Print as well as from independent, in-class assignments.

*PREREQUISITE: Successful completion of Journalism I and II*

#### **63600 Theater Design, Technology and Stage Management (s) 2.5 credits**

The Theatre Design, Technology, and Stage Management course will aim to develop knowledge of, and experience in, the technical (non-performance) aspects of theatrical production. Examples of areas of focus may include set design, lighting design, properties management, sound design, costumes, hair and make-up, design analysis, stage management, and production management. Students will receive hands on experience through use of the MHS Performing Arts Center facilities and be engaged in creative theatrical design decisions.

*PREREQUISITE: None*

### **Tomorrow's Teachers Program**

The **Tomorrow's Teachers Program** is a two-part elective available to juniors and seniors that is designed to introduce students to the field of education. This course will provide the opportunity to discover, through research and practice, issues in education, teaching methodologies, and classroom experiences. Through this course, students will develop a greater understanding of the history of education in our state and nation; understand and demonstrate what is involved in becoming a teacher; and conclude what role they will play in the future of education as a teacher, parent, or civic leader. All students who complete the program will have automatic membership in the New Jersey Future Educators' Association and will be able to participate in NJFEA conferences and service projects. Students also have an opportunity through Rider University to receive college credit for participating in the Tomorrow's Teachers program.

#### **60001 Tomorrow's Teachers Part 1: Learning/Educational Theory (s) 2.5 credits**

Part 1 of this course is a study of the history, development, organization, and practices of preschool, elementary, and secondary education. Students will delve into the theory behind formal education by exploring topics such as learning styles, special needs, growth & development, ethics, and professionalism.

*PREREQUISITE: None*



## **60002 Tomorrow's Teachers Part 2:**

### **Practical Applications/Internship(s) 2.5 credits**

Part 2 of this course focuses on the practical application of the theories explored in Part 1. Students will work with a cooperating teacher to observe classes, create lesson plans, and eventually co-teach lessons in an internship model.

*PREREQUISITE: Successful completion of Tomorrow's Teachers Part 1*

## **Computer Applications/Computer Science**

### **62200 Introduction to Computer Languages (s)**

#### **\*STEM\* 2.5 credits**

The need for computer programmers is growing in all fields of study for the 21<sup>st</sup> century. This course is for students who want to explore computer programming, or who have had no previous programming experience and want to find out what it's all about. Students will explore three programming languages: Scratch, Visual Basic.Net and C++. They will increase their problem solving skills by writing programs that solve real world/business related problems.

*PREREQUISITE: None*

### **62400 Foundations of JAVA (s) \*STEM\* 2.5 credits**

Java is currently one of the fastest growing computer programming languages used in developing computer programs. Students will learn the fundamental concepts of programming with algorithm design and code implementation. Students will be taught how to write efficient computer programs including graphics. This course consists of interesting individual/group programming projects and case studies that they are likely to encounter in the real world. Students will learn how to build applets and how to write programs that display graphical shapes. This course will satisfy the prerequisite for AP Computer Science.

*PREREQUISITE: None*

### **62500 Game Design & Application Development (s)**

#### **\*STEM\* 2.5 credits**

This one semester course will engage students in a project-based curriculum that teaches the game design and application development process. Game and application design is considered one of the fastest growing, most exciting career areas in computer programming. Students will be introduced to game design and creation software which will allow them to create many different types of games and applications including action, adventure and puzzle.

*PREREQUISITE: None (although it is recommended that students have prior programming experience)*

## **62610 Webpage Design & Development (s)**

### **\*STEM\* 2.5 credits**

This course is an introduction to the design, creation and maintenance of visually dynamic web pages and websites. Students will create polished, professional-looking websites using Adobe Creative Suite featuring Dreamweaver and Flash. Valuable technical and applicable skills will be stressed that can be used throughout one's career in the 21<sup>st</sup> century. A brief review of HTML code will also be covered. Students work in an exciting project based environment.

*PREREQUISITE: None*

### **62900 AP Computer Science - A \*STEM\* 5 credits**

AP Computer Science A is a full year course with emphasis on object oriented programming in JAVA. Students will learn programming methodology with importance on problem solving algorithm development and data structures. This course consists of several interesting programming projects and case studies. Students in this Advanced Placement course will follow a most rigorous curriculum based on the Java programming language.

*PREREQUISITE: Successful completion of Foundations of JAVA*

## **Business Administration**

### **61100 Basic Accounting (s) 2.5 credits**

The field of business is for individuals looking for an exciting career; one that offers earnings potential, pleasant working conditions, and opportunities for advancement. Every industry needs accounting and employment of accountants is predicted to grow faster than all other occupations through 2016. Basic Accounting will introduce students to the accounting cycle, which will serve as a sound background for employment in office jobs, owning your own business, and preparation for post-secondary institutions. Students will be introduced to the computerized accounting cycle stressing skills needed for producing financial statements for both a single proprietorship and a partnership.

*PREREQUISITE: None*

### **61610 Online Financial Literacy**

#### **(Budget Challenge) (s) 2.5 credits**

This Online Financial Literacy course is open to all Grade 10 Students and any Junior or Senior who has yet to complete the Financial Literacy graduation requirement prior to entering the 2024-2025 school year. The course is a self-guided one-semester class where students will learn the skills, knowledge, and behaviors necessary to become financially capable young adults by participating in a

10 week online financial simulation called Budget Challenge. In the simulation, students will manage their budgets like working adults. Students will make important financial decisions, receive income, and pay bills. Students will also attempt to accomplish key financial goals such as setting up an emergency fund, saving for retirement, and paying down debt. This course would fulfill the NJ Financial Literacy credit requirements as per NJ State Graduation Requirements. Montgomery High School students will complete this coursework through the Budget Challenge online platform during their sophomore year. Enrollment procedures and deadlines will be communicated in the fall of each academic year.

*PREREQUISITE: None*

### **61300 Business and Personal Law (s) 2.5 credits**

In Business and Personal Law, students will learn about the basic issues of our legal system that relate to everyday living. Students will learn the fundamental principles of law, the history of our laws, criminal/civil procedures and various torts and crimes; this course helps make students aware of problems facing society today. Students then use critical analysis methods to deal with these problems by using case studies, and small group collaboration.

*PREREQUISITE: This elective is open to students in grades 10, 11 and 12*

### **61400 Introduction to Entrepreneurship (s) 2.5 credits**

Owning your own business is the “American Dream.” An entrepreneur attempts to earn a profit by taking the risk of operating a business. Students will learn about the fastest growing form of business, electronic commerce. Analyzing markets, sales and advertising strategies, obtaining capital, modern management techniques, managing personnel, website creation and much more are taught. The course will inform students of their financial responsibilities as citizens, students, family members, consumers and active participants in the business world. Included are guest speakers and computer simulations. This course will satisfy the 2.5 credits in Financial Literacy mandated by the State of New Jersey.

*PREREQUISITE: None*

### **61500 Sports and Entertainment Marketing (s) 2.5 credits**

Sports and Entertainment Marketing is an exciting, student driven course designed for students who are interested in pursuing a career in business as well as the sports and entertainment industries. This course will emphasize some of the core concepts in marketing/business as they pertain to these two competitive industries. Some of these core concepts include market research, corporate sponsorship,

endorsements, target marketing, etc. Students will develop critical thinking, decision making, and communications skills utilizing real world applications. This course will be extremely beneficial for any student looking to pursue a major in business and an eventual career in business. Outside of the normal classroom activities, students will get the opportunity to listen to a wide variety of guest speakers from the sports and entertainment industries, examine case studies, and visit various sports and entertainment venues, thus, supplementing all of the core concepts that are being discussed in class.

*PREREQUISITE: None*

## **Communication Technology**

### **63100 Television Production I (s) 2.5 credits**

The student is introduced to television techniques and the use of television as a mass communication medium. Working as a member of a production team, each student writes directs, and produces videos for use on the MHS cable television station, in house productions, or special video production for use within the school. Students experience studio practice, camera direction, lighting and editing using special effects. Students gain television production experience using interdisciplinary projects and the development of cooperative problem solving skills as a major focus. Students are expected to produce a minimum of one video every other week.

*PREREQUISITE: None*

### **63200 Television Production II 5 credits**

TV Production II is an advanced course that builds upon concepts and skills taught in TV Production I. Students act as producers and directors of our cable television show. They also develop the plan for morning announcements and various projects throughout the year.

*PREREQUISITE: Successful completion of TV Production I*

### **63300 Television Production III 5 credits**

This course is designed as an independent study for students who want to produce various video products. They act as executive producers of the current shows and help to produce special segments throughout the year. Students apply knowledge learned from TV Production I and TV Production II to complete these projects.

*PREREQUISITE: Successful completion of TV Production II*

### **63400 Radio Broadcasting (s) 2.5 credits**

This semester long course is designed to provide M.H.S. students with experience in radio broadcast delivered to the public via internet streaming. Students will gain experience in the everyday running of an internet based

radio studio utilizing both live as well as pre-recorded formats. Students will develop skills essential to the following positions: on air talent, producer, public relations/marketing, studio engineer, etc. Students will be responsible for programming the day's music/promos as well as developing weekly live broadcast shows revolving around various genres of music, talk show format, and the eventual airing of live M.H.S. sports and events broadcasts. Utilizing a project based, student driven curriculum, M.H.S. students will gain an appreciation for various aspects of radio broadcasting, ultimately realizing how significant these concepts are to all careers within the realm of communications.

*PREREQUISITE: None*

### **Industrial Arts/Pre-Engineering**

#### **65100 Media & Graphic Communication I (s)**

**\*STEAM\* 2.5 credits**

Media & Graphic Communication I will explore the foundations and applications of modern printing, photography, computer graphics and different forms of graphic reproduction. Students will learn the history and development of graphic arts as well as career opportunities related to communication technology. In addition to Lithographic Technology students will be taught screen making, and sketching/typography. Small problem-solving activities will include ways to develop and solve design challenge activities.

*PREREQUISITE: None*

#### **65200 Media & Graphic Communication II**

**\*STEAM\* 5 credits**

Media & Graphic Communication II will explore the applications technical processes of advanced printing, computer graphics, and different forms of graphic reproduction. Students will learn to develop new methods of graphic art technologies as well as participate in career opportunities related to communication technology. In addition to Lithographic Technology students will master screen making and printing. Small problem-solving activities will include ways to learn and develop design challenge activities.

*PREREQUISITE: Successful completion of Media and Graphic Communication I*

#### **66100 Architectural Design I (s)**

**\*STEAM\* 2.5 credits**

Architectural Design I is designed to introduce the fundamentals of architectural design principles and techniques. Students will learn to hand sketch plans and how to use a Computer Assisted Design (CAD) program to do architectural design. A major emphasis is placed on learning how residential and commercial systems are

designed, planned and constructed. This course will engage students in real-world design activities such as designing houses, kitchens and bathrooms.

*PREREQUISITE: None*

#### **66200 Architectural Design II \*STEAM\* 5 credits**

Architectural Design II is designed for students seeking a more advanced course of study devoted to architectural design principles and techniques. Students will make extensive use of a Computer Assisted Design (CAD) program to do detailed architectural design. A major emphasis is placed on learning how residential and commercial buildings are designed, planned and constructed. This course will engage students in real-world design activities such as planning a commercial project, managing a home construction project, and various remodeling projects.

*PREREQUISITE: Successful completion of Architectural Design I*

#### **67100 Engineering Design & Material**

**Fabrication I (s) \*STEAM\* 2.5 credits**

Engineering Design & Material Fabrication I is designed to introduce the fundamentals of material processing techniques. This course emphasizes safety and will engage students in real-world design activities. It is project oriented and designed to teach hand, power, and machine tool skills as well as the knowledge needed to support those skills. Students will become familiar with manual operations and the utilization of automated equipment. This course explores the nature and impact of technology in our everyday lives.

*PREREQUISITE: None*

#### **67210 Engineering Design & Material**

**Fabrication II A (s) \*STEAM\* 2.5 credits**

Engineering Design & Material Fabrication II A continues the exploration of materials processing techniques. This course reemphasizes the importance of safety and how real-world design activities impact us. It is project oriented and designed to teach hand, power, and machine tool skills as well as the knowledge needed to support those skills. Students will design and develop approved projects utilizing skills learned in this specific course. Additionally, this course explores the nature and impact of technology in our everyday lives.

*PREREQUISITE: Successful completion of Engineering Design & Material Fabrication I*

#### **67220 Engineering Design & Material**

**Fabrication II B (s) \*STEAM\* 2.5 credits**

Engineering Design & Material Fabrication II B continues the exploration of materials processing techniques. This course focuses on mastering machines as well as hand tools. Confidence and competency with

tools will increase while safety procedures and protocols are reinforced. In this project based course students will focus on solid wood as a construction medium and will deal primarily with furniture and cabinetmaking methods. Students will design and develop approved projects utilizing skills learned in this specific course.

*PREREQUISITE: Successful completion of Engineering Design & Material Fabrication I*

### **67300 Engineering Design & Material Fabrication**

#### **Portfolio Project 5 credits**

Portfolio Project is a course designed to give experienced students who have taken the prerequisite Engineering Design & Material Fabrication II courses an opportunity to develop a professional portfolio. Students in this course will either choose from existing plans or have the option to create a unique design of their own. Students may create a refined woodworking project for either themselves or the school community. Cost analysis, meeting deadlines, budgeting and production output will be the primary driver of student achievement.

*PREREQUISITES: Successful completion of Engineering Design & Material Fabrication II A and Engineering Design & Material Fabrication II B*

### **PORTFOLIO PROJECTS**

#### **65300 Portfolio Project - Media & Graphics**

##### **Communication 5 credits**

#### **66300 Portfolio Project - Architecture 5 credits**

#### **69300 Portfolio Project - Computer Aided Drafting & Design 5 credits**

Portfolio Project is a course designed to give experienced students who have taken prerequisite Technology Education courses an opportunity to develop a professional portfolio. The student portfolio can have a concentration in areas such as Architectural Design, Robotic Systems, Power & Energy, Graphic Information Systems, or Media & Graphics. This professional portfolio can be used to investigate a potential career or prepare for a college course of study. \*STEAM\*

*PREREQUISITE: One or more Level I courses plus a Level II Technology Education course. Open to 12th grade only*

### **68100 Power, Energy & Transportation**

#### **Technology (s) 2.5 credits**

Power, Energy & Transportation Technology studies a wide view of transportation technologies. Students will learn the history and development of the internal combustion engine. This includes the theory of operation for two and four stroke engines. They will identify basic model series and perform full disassembly and reassembly of their engines. Students will be given small problem solving activities which will include testing

different parts of their engines numerous times throughout the course. Lastly they will paint and test their engines for operation.

*PREREQUISITE: None*

### **69000 Engineering I (s) \*STEAM\* 2.5 credits**

Engineering is designed for students seeking a more specific course of study devoted to the engineering disciplines. Major emphasis is placed on engineering design and fundamentals. Students will start the course by learning isometric sketching skills. There will be an extensive use of 2D and 3D computer aided design and drafting (CADD) programs that are used in industry today. The use of precision measuring equipment will be used in reverse engineering and design projects. This course is designed for the student interested in pursuing Engineering in college.

*PREREQUISITE: None*

### **69100 Engineering II \*STEAM\* 5 credits**

Engineering II is designed for students seeking more information about a career in Engineering. This course will continue where Engineering I ended and will use 3D CADD software to design assemblies consisting of materials, bearings, bushings and gears. Insight into the different types of Engineering will be researched and discussed. The course will prepare students for the first year of an Engineering path. Some areas to be covered are advanced engineering drawing, the use of precision measuring equipment, basic material science, the design process and problem-solving. Students will learn to use a 3D printer to print their designs.

*PREREQUISITE: Engineering*

## **Family & Consumer Sciences/Culinary Arts**

### **64100 Introduction to Culinary Arts (s) 2.5 credits**

The class is designed to familiarize students with the basic techniques of food preparation. Students will prepare appetizers, entrees, side dishes, desserts and snacks that incorporate each of the food groups. Nutrition, meal preparation, food selection, preparation techniques, sanitation and food service will be emphasized. Careers in food service and management will be explored.

*PREREQUISITE: None*

### **64200 Culinary Arts II (s) 2.5 credits**

Building upon the basic concepts of food preparation learned in Introduction to Culinary Arts, students will be exposed to the world of international and ethnic cuisine as part of an individual's cultural identity. Specifically, students will analyze and compare the interrelationship between cuisine and culture. Students will also examine the relationship between a country's cuisine and their climate, agricultural stability, geography, standard of living, religion, etc. Students will learn the culture, history and traditional preparation techniques of foods originating from countries such as: France, Japan, Italy, China, Mexico and others. Also, students will experience the art of garnishing and plate presentation. Incorporating topics of nutrition, safety, sanitation, and food borne illnesses will be ongoing. Culinary, hospitality and food related careers will be highlighted.

*PREREQUISITE: Successful completion of Introduction to Culinary Arts*

### **64500 The Art of Baking (s) 2.5 credits**

This semester long course is designed to provide M.H.S. students with experience in the exciting culinary world of cake making and decorating. With the popularity of shows like *Cake Boss* and *Cupcake Wars*, decorative baking has become an extremely popular niche within the culinary world. Students will gain experience in baking specific desserts as well as decorating them. Students will develop skills essential to being a successful baker. Furthermore, these skills can easily be transferred into the everyday lives of anyone that simply enjoys baking. Students will be responsible for researching various types of cakes, baking them to industry standard, and decorating them. Utilizing a project based, student driven curriculum, M.H.S. students will gain an appreciation for various aspects of baking and cake decorating, ultimately realizing that they are easily able to transfer these skills into their everyday lives.

*PREREQUISITE: None*

### **64600 Life Skills (s) 2.5 credits**

The course is designed to prepare students for self-sufficiency and independence. Units of study will include: career selection, resumes, obtaining a job, consumer skills, housing, insurance, available resources and ethical choices. Each of the areas of study will incorporate good decision making skills that will help them to manage their life and successfully meet the challenges of inter and intra personal relationships.

*PREREQUISITE: This elective is open to students in grades 10, 11 or 12*

## VISUAL AND PERFORMING ARTS

### VISUAL ART

#### **70000 Introduction to Studio Art (s) 2.5 credits**

This is a semester course designed to provide a foundation in the visual arts and design. Students will explore their creativity while learning how to paint, draw, and sculpt as well as use other exciting media. This class is designed to provide beginning students with guided experiences in materials, media, and basic art concepts. Because the intention of this course is to introduce students to the world of making art, grades are based upon students' willingness to experiment with new skills and explore their creativity. Come explore your creativity!

*PREREQUISITE: NONE*

#### **70100 Studio I (s) 2.5 credits**

Studio I introduces students to new materials and techniques through guided concepts and assignments. Students will be given concepts and allowed to explore them through their own individual voice. Studio I is a semester course that helps the student develop their own visual literacy. This is the introductory course to the studio sequence. Upon completion of this course, students will be prepared to move forward to Studio II.

*PREREQUISITE: Successful completion of Introduction to Studio Art at MHS or recommendation of art teacher from UMS or MHS.*

#### **70200 Studio II (s) 2.5 credits**

Studio II students are given the opportunity to polish their technical skills and explore various themes that interest them personally. At this level, students are encouraged to gather inspirational materials independently and to keep a sketchbook. Students will explore advanced media, art-history, contemporary trends and develop works of art through proposed questions and themes. Students will also explore career opportunities which will enhance their knowledge of the art world. The course will provide portfolio guidance and direct students toward technical competence, visual understanding, and the ability to communicate ideas and concepts.

*PREREQUISITE: Successful completion of Studio I*

#### **70400 Honors Portfolio 5 credits**

This year-long course is designed for students who are seriously interested in developing a college portfolio that showcases the wide range of their technical and conceptual achievements. The levels of work expected

of students in this course are synonymous with that of college art majors. Students will participate in the annual Visual Arts Extravaganza. This course prepares students for AP Studio by fostering independent growth with peer feedback and guidance from the teacher.

*PREREQUISITE: Successful completion of Studio II*

#### **AP Art Studio Concentrations:**

Montgomery High School only administers Advanced Placement exams for students who are currently enrolled in the course at MHS for that exam.

#### **70910 AP Studio Art or 2D Portfolio 5 credits**

In this year-long course students will develop a consistent, theme-based body of 12 pieces which will be displayed at the Art Extravaganza, gallery style. Students investigate a theme deeply and produce a polished series of paintings or works of art that are stylistically unified and recognizable. Students are given a high level of responsibility and accountability and are expected to bring their own influences, references and skills to the table. AP Studio students produce a portfolio for college applications, the Arts Extravaganza solo exhibit, and for an optional evaluation by the College Board. This course requires a high degree of commitment and self-discipline due to the rigorous curriculum and the individualized course structure.

*PREREQUISITE: Interview with art faculty for concentration placement approval as well as successful completion of either honors portfolio or Advanced Photography.*

#### **71100 Photography I \*STEAM\* (s) 2.5 credits**

Photo I is a semester course designed to provide a foundation in 35mm black and white analog photography while giving students a strong foundation in visual arts. Signature experiences will be tempered by smaller assignments, technical lessons and demonstrations. This course introduces the four major areas of study in the fine arts: Themes and Forms, Core Concepts, Techniques and Tools, and Culture & History. A 35mm manual camera is not required but strongly recommended.

*PREREQUISITE: None*

**71200 Photography II \*STEAM\* (s) 2.5 credits**

Photo II is a semester course designed to provide a foundation in digital photography and post processing with Adobe Lightroom while giving students a strong foundation in visual arts. Signature experiences will be tempered by smaller assignments and larger projects, technical lessons and demonstrations. Independent problem solving will be expected to complete conceptual artworks. The four major areas of study are synthesized in each project: Themes and Forms, Core Concepts, Techniques and Tools, and Culture & History. A Digital camera is not required but strongly recommended.

*PREREQUISITE: Successful completion of Photography I*

**71310 Photography III - Part A (s) 2.5 credits**

Photo III Part A is an advanced level semester course that focuses on student-centered conceptual projects and visual communication and is designed to provide further technical experiences through the introduction to advanced studio lighting and Adobe Photoshop techniques. This course is a digital photography course and students will be using DSLR cameras to complete their work. Projects are designed to give students a choice in subject matter and theme and encourage students to use symbolism to create a visual narrative. Individual instruction will be provided to each student based on the technical and aesthetic needs of their specific projects. Students are expected to engage in running critical dialogues and self-critique. They will rely on their peers as a constant source of formal and informal feedback throughout the class period and during Community Critiques. Students will start creating artworks that can be used within a college portfolio. The highlight of the advanced photo courses is the showcase of their work in a personal solo exhibit at Art Extravaganza at the end of the year. Both Photography III courses are designed to set students up for success with the AP Studio Art 2D Design Course.

*PREREQUISITE: Successful completion of Photography II (In order to advance to AP Photography, both parts A and B must be completed)*

**71320 Photography III - Part B (s) 2.5 credits**

Photo III Part B is an advanced level semester course that focuses on student-centered conceptual projects and visual communication and is designed to provide technical experiences in analog alternative processes. Students will learn about cyanotypes, photo transfers, advanced darkroom techniques, and more. Projects are designed to give students a choice in subject matter and theme and they will be encouraged to synthesize their ideas with their materials and processes. While not

required, it is recommended that students first complete Photography III Part A to have a stronger technical background before completing part B. Individual instruction will be provided to each student based on the technical and aesthetic needs of their specific projects. Students are expected to engage in running critical dialogues: to self-critique. They will rely on their peers as a constant source of formal and informal feedback throughout the class period and during Community Critiques. Students will start creating artworks that can be used within a college portfolio. The highlight of the advanced photo courses is the showcase of their work in a personal solo exhibit at Art Extravaganza at the end of the year. Both Photography III courses are designed to set students up for success with the AP Studio Art 2D Design Course.

*PREREQUISITE: Successful completion of Photography II (In order to advance to AP Photography, both parts A and B must be completed)*

**AP Art Studio Concentrations:**

Montgomery High School only administers Advanced Placement exams for students who are currently enrolled in the course at MHS for that exam.

**70920 AP Photo/2D Portfolio \*STEAM\* 5 credits**

This year long course is designed for students who are seriously interested in the practical experience of art-making through photography, including the creation of a college portfolio. The core of this course consists of intensive, guided exploration of media, demonstrations, reference gathering, formal group critiques, reflections, and frequent sketch booking. Students experience a variety of concepts, techniques and approaches designed to help them demonstrate their abilities as well as their versatility with techniques, problem solving, and conceptualization. This course requires a high degree of commitment and self-discipline. Students are expected to perform at the highest level of understanding in the use of four major areas of study in the fine arts: Themes and Forms, Core Concepts, Techniques and Tools, and Culture & History. The highlights of this course are the production of a portfolio for college applications and for an optional evaluation by the College Board, as well as a personal solo exhibit at the Arts Extravaganza.

*PREREQUISITE: Interview with art faculty for concentration placement approval as well as successful completion of either honors portfolio or Advanced Photography*

### **73000 Introduction to Digital Art and Drawing**

**\*STEAM\* (s)**

**2.5 credits**

This semester course provides a foundation in Digital and Digital-Hybrid Studio Art. Students will explore their creativity while learning basic art techniques and concepts. In short, students will learn to draw, build their confidence, and have the opportunity to try some of the powerful digital tools available online and in the classroom. Beginning students will have guided lessons that combine media such as printmaking, collage, drawing, scanner art, VR, and the Adobe suite.

*PREREQUISITE: None*

### **70600 Ceramics (s)**

**2.5 credits**

Ceramics is a semester course that explores hand built and wheel-thrown ceramics. Students will develop their awareness of the Elements and Principals of Design as they apply to the sculptural form, bas relief and pottery. They will experience additive, subtractive, wheel thrown and glazing methods. This course introduces the four major areas of Study in the fine arts: Themes & Forms; Core Concepts; Techniques & Tools; and Culture & History.

*PREREQUISITE: None*

### **70610 Ceramics II (s)**

**2.5 credits**

Ceramics II challenges students that want to progress in the ceramic arts. As a 3D class, students will be expected to create sculptural forms, while being exposed to experimental techniques. Student will also have the opportunity to further their skill on the potter's wheel, develop their own artistic style, explore concepts and begin to develop their artist voice in clay. This is a semester course that further explores the four major areas of study in the fine arts: Themes and Forms; Core Concepts; Techniques and Tools; and Culture & History.

*PREREQUISITE: Ceramics*

### **70620 Advanced Ceramics (s)**

**2.5 credits**

In Advanced Ceramics students are encouraged to develop an individual style of wheel thrown and hand built ceramic forms with explorations in surface treatment. This continuation of ceramic studies will emphasize on the development of unique, creative skills in hand building, fabrication, slip casting and wheel throwing. Students will explore and investigate contemporary concepts through the development of their own unique series. This is a semester course that further explores the four major areas of study in the fine arts: Themes and Forms; Core Concepts; Techniques and Tools; and Culture & History.

*PREREQUISITE: Ceramics II*



## MUSIC

### **75000 Symphonic Band**

**5 credits**

Symphonic Band is for students in 9<sup>th</sup> through 12<sup>th</sup> grade. The objectives of the course are to increase individual instrumental proficiency skills; increase ensemble skills pertaining to the concert band idiom; deepen students' understanding of their musical intelligence and knowledge; enhance appreciation of music; enhance self-awareness and self-esteem; increase self-reflection and creative thinking skills; stress individual and group responsibility through membership in a democratic organization; foster pride in Montgomery High School; develop self-discipline through the study and performance of demanding music; and to develop poise and self-confidence through public performance. The Symphonic Band performs a minimum of three times per year. Repertoire performed is normally grade III and IV. Marking period grades are determined by a number of factors, to include successful presentation of mandatory concerts, individual repertoire playing assessments, individual pedagogical benchmark assessments, student-graded rehearsals and concerts, homework completion, and class preparation.

*PREREQUISITE: Successful completion of band in the previous year or successful audition with permission of the director*

### **75100 Symphonic Winds**

**5 credits**

Symphonic Winds is a select, auditioned ensemble, primarily for 10<sup>th</sup> to 12<sup>th</sup> grade students. 9<sup>th</sup> grade students may choose to audition for symphonic winds in the spring of their 8<sup>th</sup> grade year. The objectives of the course are to increase individual instrumental proficiency skills; increase ensemble skills pertaining to the wind band idiom; deepen students' understanding of their musical intelligence and knowledge; enhance appreciation of music; enhance self-awareness and self-esteem; increase self-reflection and creative thinking skills; stress individual and group responsibility through membership in a democratic organization; foster pride in Montgomery High School; develop self-discipline through the study and performance of demanding music; and to develop poise and self-confidence through public performance. The Symphonic Winds perform at least three times per year. Symphonic Winds students are expected to perform to a high level, performing grade III - V repertoire. Participation is governed by a rigid consideration for proper instrumentation and balance. Marking period grades are determined by a number of factors, to include successful presentation of mandatory concerts, individual repertoire playing assessments, individual pedagogical benchmark

assessments, student-graded rehearsals and concerts, homework completion, and class preparation.

*PREREQUISITE: Successful completion of band in the previous year as well as a successful audition with permission of the director*

### **75200 Wind Ensemble**

**5 credits**

Wind Ensemble is open to 9<sup>th</sup> through 12<sup>th</sup> grade students and is the highest skill level curricular band class. Students in the wind ensemble will engage in a rigorous study of advanced wind band repertoire that is normally performed at the collegiate or professional level. The objectives of the course are to teach students advanced levels of instrumental pedagogy skills; achieve collegiate level ensemble skills that pertain to the wind band idiom; deepen students' understanding of their musical intelligence and knowledge; enhance appreciation of music through exposure to and performance of quality repertoire; enhance self-awareness and self-esteem; increase self-reflection and creative thinking skills; stress individual and group responsibility through membership in a democratic organization; foster pride in Montgomery High School; develop self-discipline through the study and performance of demanding music; and to develop poise and self-confidence through public performance. The Wind Ensemble performs a minimum of four times per year, usually more. Students may also be asked to attend a few weekend or evening rehearsals during the school year. Wind Ensemble students are expected to work to their highest levels with grade level IV - VI repertoire being performed. Participation is governed by a rigid consideration for proper instrumentation and balance. Marking period grades are determined by a number of factors, to include successful presentation of mandatory concerts, individual repertoire playing assessments, individual pedagogical benchmark assessments, student-graded rehearsals and concerts, homework completion, and class preparation.

*PREREQUISITE: Successful completion of a curricular band in the previous year as well as a successful audition with the director*

### **75500 Wind Ensemble Honors**

**5 credits**

Honors Wind Ensemble is open to students in 12<sup>th</sup> grade. This course meets at the same time as wind ensemble. In addition to the requirements of wind ensemble, students in Honors Wind Ensemble must prepare for and participate in at least one chamber music performance as well as research our repertoire and prepare historical notes for the concerts.

*PREREQUISITE: Students must be in their senior year to enroll in this course. Additionally, students must successfully audition with the band director and receive permission to register*

### **76000 Concert Orchestra**

**5 credits**

Concert Orchestra is for students in 9th through 12th grade. The objectives of the course are to increase individual instrumental proficiency skills; increase ensemble skills pertaining to the string orchestra idiom; deepen students' understanding of their musical intelligence and knowledge; enhance appreciation of music; enhance self-awareness and self-esteem; increase self-reflection and creative thinking skills; stress individual and group responsibility through membership in a democratic organization; foster pride in Montgomery High School; develop self-discipline through the study and performance of demanding music; and to develop poise and self-confidence through public performance. The Concert Orchestra performs a minimum of three times per year. Repertoire performed is normally grade III and IV. Marking period grades are determined by a number of factors, to include successful presentation of mandatory concerts, individual repertoire playing assessments, individual pedagogical benchmark assessments, student-graded rehearsals and concerts, homework completion, and class preparation.

*PREREQUISITE: Successful completion of orchestra in the previous year or successful audition with permission of the director*

### **75300 Symphonic Orchestra**

**5 credits**

Symphonic Orchestra is a select, auditioned ensemble, primarily for 10<sup>th</sup> to 12<sup>th</sup> grade students. The objectives of the course are to increase individual instrumental proficiency skills; increase ensemble skills pertaining to the orchestral idiom; deepen students' understanding of their musical intelligence and knowledge; enhance appreciation of music; enhance self-awareness and self-esteem; increase self-reflection and creative thinking skills; stress individual and group responsibility through membership in a democratic organization; foster pride in Montgomery High School; develop self-discipline through the study and performance of demanding music; and to develop poise and self-confidence through public performance. The Symphonic Orchestra performs at least three times per year. Symphonic Orchestra students are expected to perform to a high level, performing grade III - V repertoire. Participation is governed by a rigid consideration for proper instrumentation and balance. Marking period grades are determined by a number of factors, to include successful presentation of mandatory concerts, individual repertoire playing assessments, individual pedagogical benchmark

assessments, student-graded rehearsals and concerts, homework completion, and class preparation.

*PREREQUISITE: Successful completion of a curricular orchestra in the previous year as well as a successful audition with permission of the director*

### **76100 Chamber Orchestra**

**5 credits**

Chamber Orchestra is open to students in the 9th through 12th grades and is the highest skill level curricular orchestra class. Students in the chamber orchestra will engage in a rigorous study of advanced string orchestra and full orchestra repertoire that is normally performed at the collegiate or professional level. The objectives of the course are to teach students advanced levels of instrumental pedagogy skills; achieve collegiate level ensemble skills that pertain to the orchestra idiom; deepen students' understanding of their musical intelligence and knowledge; enhance appreciation of music through exposure to and performance of quality repertoire; enhance self-awareness and self-esteem; increase self-reflection and creative thinking skills; stress individual and group responsibility through membership in a democratic organization; foster pride in Montgomery High School; develop self-discipline through the study and performance of demanding music; and to develop poise and self-confidence through public performance. The Chamber Orchestra performs a minimum of four times per year, usually more. Students may also be asked to attend a few weekend rehearsals during the school year, schedule permitting. Chamber Orchestra students are expected to work to their highest levels with grade level IV - VI repertoire being performed. Participation is governed by a rigid consideration for proper instrumentation and balance. Marking period grades are determined by a number of factors, successful presentation of mandatory concerts, successful individual repertoire playing assessments, individual pedagogical benchmark assessments, student-graded rehearsals and concerts, homework completion, and class preparation.

*PREREQUISITE: Successful completion of a curricular orchestra in the previous year as well as a successful audition with the director*

### **76500 Chamber Orchestra Honors**

**5 credits**

Honors Chamber Orchestra is open to students in 12th grade. This course meets at the same time as chamber orchestra. In addition to the requirements of chamber orchestra, students in Honors Chamber Orchestra must prepare for and participate in at least one chamber music performance as well as research our repertoire and prepare historical notes for the concerts.

*PREREQUISITE: Students must be in their senior year to enroll in this course. Additionally, students must*

*successfully audition with the orchestra director and receive permission to register*

### **77000 Concert Choir 5 credits**

This course welcomes students to a dynamic and challenging musical environment. Through a myriad of vocal music genres, students will strengthen their ability to vocalize and develop their fluency of vocal art music. Objectives of this course are to increase vocal skills, develop an appreciation and knowledge of ensemble singing, promote individual and communal growth, create a sense of self-discipline and confidence in using their voice, and create a solid foundation of musicianship. Participation in performances is a course requirement. Marking period grades are determined by a number of factors, to include successful presentation of mandatory concerts, individual repertoire singing assessments, individual pedagogical benchmark assessments, graded sectionals and concerts, homework completion, and class preparation.

### **77200 Chorale 5 credits**

This course is a full-year ensemble that focuses on the breadth of challenging vocal music written for soprano and alto voicing. Participation is open to 10<sup>th</sup> through 12<sup>th</sup> grade students by audition. Singers enrolled will learn advanced vocal technique, sight-reading, musicianship and ensemble practice through rehearsals and performances of literature from various styles, genres, cultures and eras. Marking period grades are determined by a number of factors, to include successful presentation of mandatory concerts, individual repertoire singing assessments, individual pedagogical benchmark assessments, graded sectionals and concerts, homework completion, and class preparation.

*PREREQUISITE: Successful completion of choir in the previous year as well as audition and permission of director*

### **77100 Chamber Choir 5 credits**

Chamber choir is open to 10<sup>th</sup> through 12<sup>th</sup> grade students. Acceptance into this ensemble offers an opportunity for students who display outstanding vocal skills and musicianship to participate in a smaller, advanced level vocal group. Students will be responsible for performing advanced high school, collegiate, and professional level repertoire. The size and distribution of the parts of the ensemble will be determined by the balance needs for the group on a year-by-year basis. Members will study a wide variety of rigorous and rewarding literature while honing vocal and ensemble skills. Active participation in concerts, festivals and other performance venues are a requirement of this course. Participation is governed by a rigid consideration for proper vocal balance. Marking period grades are

determined by a number of factors, to include successful presentation of mandatory concerts, individual repertoire singing assessments, individual pedagogical benchmark assessments, graded sectionals and concerts, homework completion, and class preparation.

*PREREQUISITE: Successful completion of an audition and recommendation of the director*

### **77500 Chamber Choir Honors 5 credits**

Honors Chamber Choir is open to students in 12<sup>th</sup> grade. This course meets at the same time as chamber choir. In addition to the requirements of chamber choir, students in Honors Chamber Choir must prepare for and participate in at least one chamber or solo music performance as well as research our repertoire and prepare historical notes for the concerts.

*PREREQUISITE: Students must be in their senior year to enroll in this course. Additionally, students must successfully audition with the choir director and receive permission to register*

### **78001 Guitar (s) 2.5 credits**

Students in this course will have the opportunity to learn, play, and perform on the acoustic guitar. Students of all levels are encouraged to enroll in this course. If you have no experience on the guitar and are looking to learn, this is a perfect place for you! If you have been playing the guitar for years and would like time to advance your skills, work in a mentorship capacity, and perform publicly, this is also a perfect place for you! No matter your level of experience, you'll learn about music and enjoy playing the guitar. Students will be introduced to both melodic and chordal playing as well as learn important music theory concepts that are applicable to guitar performance.

*PREREQUISITE: None*

## **THEATER ARTS**

### **73400 The Actors' Studio (s) 2.5 credits**

A class devoted to students with an interest or passion for acting and performing! In the Actor's Studio, students will gain the skills necessary to rock their next audition, perform a monologue, and rehearse and perform scenes from plays and musicals. Students will understand acting technique through learning given circumstances, pursuing an objective, developing character point of view, playing conflict, and analyzing scripts.

*PREREQUISITE: None*

### **73500 Children's Theater Play Production (s) 2.5 credits**

Students will learn the entire process of play production from beginning to end through choosing, casting, rehearsing, building, and performing a children's theater show for younger students. Students will go on a "tour" of the school district performing their rehearsed Children's Theater show for younger audiences. This is a great class for students interested in learning more about acting and the technical side of theater.

*PREREQUISITE: None*

### **73600 Improv Troupe! (s) 2.5 credits**

A fun and high energy course designed for the student that wants to learn the fundamental skills of improvisation, comedy, working as an ensemble, and thinking quickly on your feet. Through warmups, ensemble building activities, performance improv games, and short form scene work, students will learn how to be strong scene partners, work more spontaneously, and exercise their imaginations.

*PREREQUISITE: None*

# HEALTH, SAFETY AND PHYSICAL EDUCATION

## Health/Physical Education

**5 credits**

The aim of the Comprehensive Health, Safety and Physical Education program at Montgomery High School is to develop the students' knowledge, skills, and attitudes necessary to lead an active, healthy lifestyle. The program provides an equitable opportunity for all students to realize the benefits of participation in physical activity. A highlight of the Comprehensive Health, Safety and Physical Education program is an outstanding aquatic experience that allows students to either learn how to swim or strengthen their swimming ability, in addition to the traditional sports, games, and fitness-directed activities.

The high school program is designed to prepare students to reach fitness goals and maintain a healthy level of physical health long after they graduate. The curriculum is complimented by a variety of lifetime and team sports offerings. All students are required to take three quarters of physical education and one quarter of health education each school year.

Health courses are designed to empower students with relevant information to help them make responsible decisions regarding their physical, social, and mental/emotional wellness. Health is a most prized possession and an integral part of every phase of life. The state of our health affects our ability to learn, live, and relate to others. The knowledge gained from the Health Education curriculum establishes a foundation for healthful productive living.

## Adolescent Wellness

**(Grade 9 Health)**

This course is designed to develop knowledge, concepts, skills, behaviors, and attitudes related to the six categories of risk behaviors in teens. Students learn and implement decision making skills and communication skills for everyday situations they experience as adolescents. We also discuss topics related to substance awareness, drug/alcohol education, coming of age, family life education and wellness/mental health.

## Drivers Education

**(Grade 10 Health)**

The emphasis of the Driver's Education course is learning the rules of the road and practical driving. Students will apply their driving knowledge through group work and small projects which emphasize driver safety and rules of the road. Practical driving concepts teach future drivers how to assess and manage the risks involved when behind the wheel of a vehicle.

Students will also address how certain mental, physical, and emotional factors can affect their driving ability. Our goal is to mentally prepare MHS students to become safe, responsible, licensed drivers. Students will prepare for and be administered the New Jersey State Written Drivers Exam at the end of the course.

## Mental, Emotional and Social Health

**(Grade 11 Health)**

Eleventh grade health is designed to teach students skills necessary to enhance knowledge of mental health awareness and strategies for healthy living. Boosts student's knowledge of nutritional health and provide CPR training with the intent to obtain certification in CPR/AED from the American Red Cross. Students will examine societal influences and the factors that weaken or strengthen relationships. Through a variety of structured classroom experiences, students will learn problem-solving strategies to utilize when confronted with different situations. (Topics can include: healthy or unhealthy relationships, death, harassment, drugs, and diseases). Students will also explore personality development and feelings of positive self-worth. Through a variety of exercises involving the decision making process, students will increase their coping skills in such areas as stress, peer pressure, substance abuse, suicide, and risk situations of sexual assault and abuse.

## Human Sexuality and Family Living

**(Grade 12 Health)**

This course is designed to enhance a student's understanding of relationships and basic concepts related to human sexuality. Class discussion and group projects related to current topics such as communication, gender identity, relationships, dating violence, disease prevention, contraception, pregnancy, suicide prevention skills and coping with loss are an integral part of the class. Students will be expected to analyze and develop skills to make healthy decisions as teenagers while preparing to transition into adulthood.

## 85000 Peer Leadership Program (Peer I) 5 credits

The Peer Leadership Program trains selected juniors and seniors to work with small groups of freshmen to aid in the transition to high school and develop a sense of community among our diverse student body. Throughout the school year, Peer Leaders will plan and facilitate lessons to groups of ninth graders focusing on increasing self-awareness, improving communication skills, and exploring typical adolescent issues while helping to empower each student to reach their maximum potential

and develop life values that enhance social responsibility. Students are selected based on a vigorous application and interview process and are required to attend training.

**85100 Peer II**

**5 credits**

This course is offered to those students who have successfully completed Peer I. Peer II will focus on advanced group facilitation skills and community outreach projects that are centered around transitional experiences, social-emotional learning, and transferring the knowledge that fosters a sense of self-awareness, communication skills, and the exploration of typical adolescent issues. Peer II students are selected based on a rigorous application and interview process and are required to attend training.

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