

**MONTGOMERY HIGH SCHOOL
GUIDEBOOK
for incoming freshmen**



This abbreviated (and in some areas enhanced) version of the MHS Program of Studies contains general information in addition to freshmen academic course listings. A complete listing of all courses offered at MHS (including all electives) is available online on the high school Counseling/Guidance Department website.

MONTGOMERY HIGH SCHOOL

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Mr. Chris Penna, Interim Director of Athletics

Mr. Scott Pachuta, Vice Principal

Mrs. Heather Pino-Beattie, Vice Principal and Supervisor of Career Education

Ms. Alma Reyes, Supervisor of World Languages

Mrs. Jennifer Riddell, Supervisor of Mathematics

Ms. Karen Stalowski, Supervisor of English

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Mrs. Joanne Tonkin, Supervisor of Pupil Services

Mr. Adam Warshafsky, Supervisor of Visual & Performing Arts

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Mrs. Maureen Conway, School Counselor

Mr. Keith Glock, School Counselor

Mrs. Christine Grossmann, Student Assistance Counselor

Ms. Carla Hampton, School Counselor

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Mrs. Jessica Ritson, School Counselor

Mr. Raheel Saleem, School Counselor

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Dr. Stacey Delbridge, School Psychologist

Mrs. Lori Gaynor, Learning Disability Teacher Consultant

Ms. Karen Krusen, Social Worker

Mrs. Ellen Stein, Social Worker

Mrs. Erica Walker, Learning Disability Teacher Consultant

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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	Class of 2016, and on
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 st 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
ELECTIVES	15 credits
WORLD LANGUAGES	5 credits
21ST CENTURY LIFE AND CAREERS (Family/Consumer Science, Business Administration & Technology, Technology Education)	5 credits
TOTAL CREDITS (State Minimum)	120***

*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 Common Core 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.

Class of 2021 and beyond:

Students will be able to satisfy the state requirement of demonstrating proficiency in English Language Arts and Mathematics by achieving a passing score on the Partnership for the Assessment of Readiness for College and Careers (PARCC) English grade 10 assessment and achieving a passing score on the PARCC Algebra I assessment. If a student does not achieve a passing score on the PARCC ELA grade

10 assessment they will be enrolled in a semester 1 course that is aimed at helping them acquire the skills necessary to demonstrate proficiency on the 2019 Fall Block PARCC ELA 10 assessment. If a student does not achieve a passing score on the PARCC Algebra I assessment they will be enrolled in a semester 1 course that is aimed at helping them acquire the skills necessary to demonstrate proficiency on the 2019 Fall Block PARCC Algebra I assessment. Students who are enrolled in these semester courses will be concurrently enrolled in their previously scheduled course (i.e. English 11 and/or Geometry).

For the most current New Jersey Department of Education graduation requirements, please visit this website: <http://www.state.nj.us/education/assessment/parents/GradReq.pdf>

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 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 guidance 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	

For your reference, a GPA conversion chart for a 4.0 scale is listed below:

4.0	95 +	2.7	82
3.9	94	2.6	81
3.8	93	2.5	80
3.7	92	2.4	79
3.6	91	2.3	78
3.5	90	2.2	77
3.4	89	2.1	76
3.3	88	2.0	75
3.2	87	1.9	74
3.1	86	1.8	73
3.0	85	1.7	72
2.9	84	1.6	71
2.8	83	1.5	70

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 Grades: Although Montgomery High School does not release information regarding class rank for admission purposes, 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.

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	4	328
		19	1618

$1618/19 = 85.15$ Unweighted GPA (rounded to 2 decimal places)

Example: Weighted GPA Computation

Course	Grade	Additional 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	4	328
				19	1668

$1668/19 = 87.78$ 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.

GRADING

Full Year Courses

- No grade may be lower than 50 for marking periods 1, 2, or 3.
- The fourth marking period 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 four marking periods but has a failing average due to the final exam grade, he/she will receive a 60* (provided that the student took the exam and made a diligent effort to pass). The * contains the notation that “the passing grade was issued despite the student’s failing the exam.”
- Physical Education: a student must pass two of the three quarters and have a passing average to receive credit for the course.
- Final exam
 - Equals 12 percent of the final grade
 - Averages with the first, second, third and fourth quarters 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 both marking periods 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.

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. Placements are not finalized until June when all grades have been submitted.

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 him or herself beyond the MHS recommendation, a waiver application must be obtained from the Guidance office and submitted through the appropriate department supervisor for approval. Freshmen may only apply to waive from a College Prep to an Honors level course if they are within 3 points of the prerequisite. The deadline for student waiver submissions to a teacher is May 8th and determinations will be made regarding their status by May 29th. 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. Submission of a waiver application does not guarantee that it will be approved.

Timeline for waivers:

- Obtain waiver application from high school counselor during course request meeting in February or obtain waiver application from UMS counselor prior to May 8th.
- Waiver applications must be submitted to current course teacher by May 8th.
- Teachers complete their section and submit waiver applications to subject area supervisor by May 15th.
- Supervisors make determination by May 29th and inform high school counselors in order to make course changes, where appropriate.
- Master schedule is begun the first week of June and is subject to change once final placements are determined.

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 20th, 2018** 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 the completion of Marking Period 1 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 days for a full year course and 5 days for a semester course.

Level Changes

(e.g., Advanced Placement to Honors, Honors to College Preparatory and College Preparatory to General Ed.)

All level changes should be made in consultation with the department supervisor, school counselor, teacher, and parent(s)/guardian(s). It is imperative that all parties reflect carefully on the proposed changes to determine whether they are in the student's best interest as they might have an influence on the overall student schedule.

All level changes occurring after the completion of marking period 1 will result in a record of WP (Withdrawal Passing) or WF (Withdrawal Failing) on the official transcript and report card. Grades earned at the time of the level change will be transferred to the new course and will be included in the cumulative average.

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 marking period 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 marking period.

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.

ATTENDANCE

Attendance

The Montgomery Township Board of Education recognizes its responsibility to provide a thorough and efficient education for every student within the district in keeping with the prevailing laws of the State of New Jersey. In order for administrators and teachers to successfully fulfill their responsibilities to students, it is essential that all students accept their responsibility to attend school as scheduled, and that parents/guardians support and reinforce their child's regular attendance. Please refer to the current Student Handbook (available online) for further details regarding attendance.

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 New Jersey 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, 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 the recovery course and the respective MHS proficiency assessment have been successfully 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 and 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 of the external course.
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 an application which must include an attached course syllabus/curriculum. The completed application must be given to the Montgomery High School Guidance Department and approved by the content area supervisor and school principal (or designee) **PRIOR** to enrolling in a course. 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.**

Deadlines

For summer courses, Option II applications must be submitted by May 18th and course must be completed by August 6th. For the fall semester, Option II applications must be submitted by September 14th and course must be completed by January 15th. For the spring semester, Option II applications must be submitted by January 11th and the course must be completed by June 1st. For full year courses, Option II applications must be submitted by September 28th and the course must be completed by June 1st.

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

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. Dates available for proficiency testing are August 11th and August 13th. Students must reserve a date in advance. 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.*

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. (See your counselor for a description of the Vocational offerings at Somerset County Vocational-Technical School.)

Students who are interested in attending Somerset County Vocational-Technical High School are to inform their counselor by April of the semester prior to taking courses at Vo-Tech. 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

11000 English Literature and Composition 9

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*

AP and HONORS COURSE EXPECTATIONS - ALL LEVELS:

PLEASE READ CAREFULLY

Honors level courses offered 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 Language Arts 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 new College Prep or Honors class.

HONORS COURSE PREREQUISITES:

11500 English Literature and Composition 9 - Honors

5 credits

PREREQUISITES: 1) 93% average for Marking Periods 1 & 2 in 8th grade Language Arts and 2) Score of Advanced on 8th Grade Common Assessment

18100 Expository Writing Workshop (Semester 1)

2.5 credits

18200 Expository Writing Workshop (Semester 2)

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

HONORS/ADVANCED PLACEMENT 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. 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.

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 21st 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 21st century.

PREREQUISITES: 1) 93% average for Marking Periods 1 & 2 in 8th grade Social Studies; 2) 93% average for Marking Periods 1 & 2 in 8th grade Language Arts; 3) Score of Advanced on 8th grade Common Assessment

MATHEMATICS

Math 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.

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.

30100 Math Connections I

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.

31250 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 Pre-Algebra*

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 Algebra I, Part 1*

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*

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: *85% in Algebra I Honors or 95% in Algebra I taken over a school year*

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 absolute value, inequalities, linear equations, and systems of equations and inequalities, all topics introduced in the first level of Algebra. Major topics are then covered that expand the students' knowledge of Algebra and prepare them for higher level mathematics courses that include: simplifying and solving rational expressions and equations; solving and graphing polynomial functions; working with powers, roots, and radicals; sequences, series and probability and graphing second degree equations. 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 1 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 linear functions and relations, inequalities, systems of equations in two and three variables, determinants, polynomial equations and functions, rational expressions, conic sections, sequences and series, exponential equations and logarithms. 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 or 95% in Geometry AND 85% in Algebra I-Honors or 95% in Algebra I*

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

SCIENCE

Three core science courses are required for graduation. The normal sequence is Physics, Chemistry, and Biology. Modification of the established course sequence requires 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.

**** It is important to carefully consider 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. The MHS Science program does not maintain any minimum grade prerequisites for entrance into various course levels; however students earning below a 70% in the previous year's science course will not be eligible for a waiver into a higher level 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 course level that was not recommended, the student and parent/guardian will be required to complete a waiver application. Please carefully review the information on page 10 for protocols and requirements related to course level changes. Waivers submitted past the published deadline will not be considered.**

41200 Physics

5 credits

Physics is a college preparatory, laboratory science course designed for students in the ninth grade who seek a conceptual understanding and skills in physics. This course will incorporate basic mathematical applications, relying on multiple representations to describe the physical world. Students will be expected to utilize basic arithmetic, proportional reasoning, graphing and algebra to represent physical situations mathematically. 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 physics course will initiate a theme of energy that will continue in chemistry, followed by biology. This course is open to all students.

41700 Integrated Physical, Earth and Life Sciences

5 credits

A new course is being designed as an alternative pathway for freshmen science. More information will be provided prior to March 5th in sufficient time for students to choose their freshmen courses.

41500 Physics Honors

5 credits

Physics Honors is a college preparatory, laboratory science course designed for students in the ninth grade who seek a conceptual understanding and skills in Physics. This course will incorporate advanced mathematical applications (extensive algebra and introductory trigonometry), relying on multiple representations to describe the physical world, making use of more extensive algebraic representations. 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 physics course will initiate a theme of energy that will continue in chemistry, followed by biology. 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. A diagnostic assessment and advanced preparation assignment will be provided to students electing to enroll in this course. It is highly recommended that students have demonstrated aptitude in proportional reasoning and advanced proficiency in algebra before enrolling in this course.

WORLD LANGUAGES

World Language instruction centers on developing proficiency in languages other than English 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 district website).

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. Prerequisites for courses are firmly based on the proficiency that a student demonstrates over the entire year of work in the preceding course.

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 summer or online 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 85% or better in French 1b, German 1b, and Spanish 1b may register for level 2.

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 85% or better*

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 85% or better*

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, The World of Technology.

PREREQUISITE: *Successful completion of MHS Spanish 1 or UMS Spanish 1b with 85% or better*

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*