2015-2016

Manchester High School

Our Future, Taught Today

COURSE CATALOG

134 East Middle Turnpike, Manchester, CT 06040

Mission Statement

Mission of Manchester High School

All students will develop the tools necessary to become productive, responsible members of society.

As a school community we will:

Provide all students with the highest quality education
Continually improve practices to maximize the learning of all
Foster partnerships among students, parents, families, school personnel and the community
Maintain a safe inclusive school where equity is the norm and excellence is the goal

Academic Expectations for Student Learning

All students will:

- Effectively apply critical and creative thinking skills to solve relevant problems
- Analyze, interpret and evaluate literary, informational and persuasive texts
- Produce written materials that appropriately respond to the varying demands of audience, task, purpose and discipline
- Create, interpret, and evaluate verbal and nonverbal presentations using a variety of tools/media in carried contexts for a variety of purposes
- Access and apply appropriate digital resources, media and other technology in varied contexts for a variety of purposes
- Work collaboratively to solve problems and accomplish goals
- Make appropriate decisions in the areas of health, wellness and physical fitness

Civic and Social Expectations for Student Learning

All students will:

- Treat others with respect regardless of race, ethnicity, class or orientation
- Demonstrate ethical behavior through honesty and integrity
- Be responsible for their words, actions and commitments
- Contribute positively to the community
- Contribute to the school by participating in co-curricular or service activities

Title IX Notice

Title IX is a federal law which states: "No person in the United States shall on the basis of sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving federal assistance."

Manchester's Title IX Coordinator is:

Terri Smith
Manchester Public Schools
45 North School Street
Manchester, CT 06042
Phone: 860-647-3595
Fax: 860-647-3327

The Title IX Coordinator is responsible for monitoring the overall implementation of Title IX for the school district and coordinating the institution's compliance with Title IX in all areas covered by implementing regulations. The major responsibility is the prevention of sexual harassment and discrimination.

It is the policy of the Board of Education that there should be no discrimination as it relates to employment, program participation, or in any matters under it's jurisdiction. The provisions of this policy apply equally to all employees and students in regard to political or labor organization affiliation, age, race, creed, national origin, sex, marital status, physical disability, or mental disability.

TABLE OF CONTENTS

Academic Eligibility for Interscholastic Sports 9-10
Access to School Records 99
Accreditation Statement 7
Alternative Education 19
Art 44-47
Business and Finance 48-53
Career Clusters 32
College Career Pathway Program 15-17
Counseling Services Department 21
Course Selection Guidelines 14
Coursework and Changes 20
Credit Regulations 10
Culinary Hospitality and Entrepreneurship Academy 22-23
Description and Selection of Levels 11-12
Driver Education 19
Education and Public Service Academy 24-25
English 54-56
English Language Learner (ELL) 57
External Credit 13
Family & Consumer Sciences 58-61
Goodwin College Partnership 18
Grading 20
Grading System 10
Graduation & Requirements for Graduation 8
Graduation Requirements (detailed) 102-117
Greater Hartford Academy of the Arts 18
Greater Hartford Academy of Math & Science 19
Health 62
Homebound, Married or Pregnant Students 21
Honor Roll 10
Mathematics 63-67
MCC Partnership Program 18
Medical Careers Academy 26-27
MHS Directory 4
MHS Special Programs 32
Names and Purposes of Tests 17
NCAA Freshman-Eligibility Standards 100-101
Not-for-Rank-in-Class 11
Parent Access 14
Performing Arts 68-73
Performing Arts Academy 28-29
Physical Education 74-76
Rank in Class 11
Report Cards/Progress Reports 13
Requirements for Entrance to Grade 9 8
Scholars and Honor Graduates 11
Scholastic Requirements 8
Science 77-81
Social Studies 82-87
STEMDAC Academy 30-31
Summer School / Summer Tutoring 9
Technology 88-94
World Languages 95-98

MANCHESTER HIGH SCHOOL

ADMINISTRATION:

Jill Krieger, Principal	647-3521
Lindsey Boutillier, Athletic Director	647-3521 ext. 5
James Farrell, Assistant Principal	647-3378
James Fromme, Assistant Principal	647-5094
Katelyn Miner, Assistant Principal	647-3529
Idelisa Torres, Assistant Principal	647-3528
Mark Ruede, Assistant Principal	647-0093
Roy Roberts, Assistant Principal	647-3567

SCHOOL COUNSELING:

David Stetson, Director of School Counseling	647-3537
Denise Batista	647-3533
Colleen Murphy	647-3533
Marie Mieses	647-3556
Brent Mikkelsen	647-3533
Regina Moye	647-3533
Laurie Pels-Roulier (Student Support Center)	645-5354
Sarah Sayers	647-3362
Kristin Phoenix (Bentley)	647-6303
Lee Snuffer	645-3533
Sharon Snuffer	647-3533
Eric Tarnowicz	647-6323
Melane Thomas	647-3563

SOCIAL WORKERS:

Gary Cesca	647-3521 ext. 70099
Marie Michael-Rogers (Student Support Center)	647-3557
Maria Rivera	647-3521 ext. 70012
Jane Wright	647-3545

SCHOOL PSYCHOLOGISTS:

David Moyer	647-5044
Jessica St. Pierre	647-6359
Cathy Williamson	647-3521 ext. 70013

MHS DEPARTMENT CHAIRS AND REPRESENTATIVES:

Art	Pasqua Guzzi	647-3521
Business	Marc DiDominzio	647-3558
English	Marsha Testa	647-3566
Family & Consumer Sciences	Melissa Doherty	647-3521
Health & Physical Education	Robert Healy	647-3521 ext. 73552
Mathematics	Catherine Mazzotta	647-3516
Performing Arts	Keith Berry	647-3546
Science	Stefanie Sebastiao	647-3536
Social Studies	David Maloney	647-3560
Technology Education	Christopher Casey	647-3548
World Languages	Rosemary Stoner	647-3519

COURSE LISTING AT A GLANCE

(Course Numbers and Levels are listed within each department)

Art

Advanced Drawing
Advanced Jewelry/Metals
Advanced Painting
Advanced Placement—Studio Art
Advanced Pottery
Comic Design
Drawing
Explorations in Art & Design
Explorations in Jewelry Making
Illustration 1, 2
Metalsmithing / Jewelry
Painting
Portfolio Preparation
Pottery
Sculpture
Wheel Throwing Pottery

Business and Finance Technology

Advanced Microsoft Word
Career Exploration
College Accounting
Computer Programming
Credit Union Internship
E-Commerce Entrepreneurship
Finance and Investing
Foundations for Success
International Business
Introduction to Accounting
Introduction to Business
Keyboarding & Intro. to Microsoft Word
Management and Leadership
Marketing 1
Microsoft Office Applications
School Store Internship
Sports and Entertainment Marketing
Web Page Design 1
Web Page Design 2

English

Advanced Placement English—Language & Composition
Advanced Placement English—Literature & Composition
American Literature—Grade 11
American Studies—UCONN Early College Experience
Creative Writing
English/Public Speaking
Humanities
Language Arts—Grade 9
Senior English (UCONN Early College)
Senior English—College Readiness
Senior English—MCC English Composition
Sophomore English

Family & Consumer Sciences

Advanced Culinary Arts
Bake Shoppe I, II
International Foods
Introduction to Culinary Arts
Nutrition for Fitness
Senior Career Exploration and ServSafe
Silk City Intern
World of Children I, II
Child Development
Human Services
Human Development & Family Studies (UCONN HDFS 1070 Early College Experience)
Fashion and Design I, II
Textiles Technology Seminar
Fashion Merchandising
Interior Design and Housing
Hospitality & Tourism Management
Introduction to Education and Public Services Academy
Education and Public Service Experience

Health

Freshman Health
Junior Health
Senior Health

Mathematics

A.P. Calculus AB (UCONN 4 credit course)
A.P. Calculus BC (UCONN 4 credit course)
Algebra 1
Algebra 2
Calculus
Consumer Math
Finite Math
Geometry
Math Applications
Pre-Calculus
Problem Solving Strategies in Mathematics
Statistics
UCONN Elementary Concepts of Statistics (UCONN 4 credit course)
UCONN Discrete Mathematics (UCONN 3 credit course)

Performing Arts

Acting
Advanced Guitar
Advanced Percussion Ensemble
AP Music Theory
Audio Production
Beginning Guitar
Chorale
Chorus
Concert Band
Costuming
Creating Music With Computers I, II

COURSE LISTING AT A GLANCE

(Course Numbers and Levels are listed within each department)

Performing Arts (continued)

Dance Ensemble
Guitar Ensemble
Hair and Makeup for the Stage
Introduction to Movement and Dance
Jazz Ensemble
Music Appreciation
Music Theory I
Orchestra
Percussion Ensemble
Piano/Keyboarding
Songwriting
Stage Tech
Theatre Arts

Physical Education

Advanced Team Sports
Adventure Challenge
Fundamentals in Coaching
Grade 10 PE
Grade 11 PE
Grade 9 PE
Individual Sports
Lifeguard Training
Sports Team Management
Team Sports
Unified PE

Science

Animal Behavior
AP Biology
AP Chemistry
AP Environmental Science
AP Physics
Astronomy
Biology
Busting Myths in Science
Chemistry
CNA Preparation
Forensic Science
Human Anatomy & Physiology
Investigations in Health Careers
Marine Science
MCA Seminar
Patient Care
Physical Science
Physics
Scientific Principles of Technology
Science Research 1
Science Research 2
Sports Medicine
Veterinary Science

Social Studies

African-American History
American Maritime Culture
American Studies
AP Modern European History
AP Psychology
AP U.S. History
AP World History
AP US Government and Politics
Criminology
Economics
Humanities
Latin American Studies
Law & Order
Law in American Society
Modern American Music and Film
Modern US History
Modern World History
Participation in American Society
Psychology
Roots of Global Civilization
Sociology

Technology Education

AP Computer Science
Architecture 1, 2
Robotics
Automotive Technology 1, 2
Aviation & Aerospace
Broadcast Journalism
Computer Programming I
Computer Programming and Game Design
Computer-aided Design and Drafting 1, 2
Construction Technology 1, 2
Contemporary Communication Workshop
Contemporary Media
Contemporary Photography
Contemporary Video Production
Desktop Publishing
Electronics Technology 1, 2
Engineering and Design
Mobile Computer Science Principles
Photography Seminar
Scientific Principles of Technology
Small Engines
Sports Broadcasting
Studio Production
Using Tools and Materials 1, 2
World of Technology
Yearbook

World Language

French 1, 2, 3, 4
Italian 1, 2, 3, 4
Latin 1, 2, 3
Spanish 1, 2, 3, 4, 5

ACCREDITATION STATEMENT

Manchester High School is accredited by the New England Association of Schools and Colleges, Inc., a non-governmental, nationally recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering postgraduate instruction.

Accreditation of an institution by the New England Association indicates that it meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer group review process. An accredited school or college is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity is also addressed through accreditation.

Accreditation by the New England Association is not partial but applies to the institution as a whole. As such, it is not a guarantee of the quality of every course of program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend this institution.

Inquiries regarding the status of an institution's accreditation by the New England Association should be directed to the administrative staff of the school or college. Individuals may also contact the Association:

New England Association of Schools and Colleges
209 Burlington Road
Suite 201
Bedford, MA 01730-1433

MANCHESTER HIGH SCHOOL
COURSE CATALOG
2015-2016

REQUIREMENTS FOR ENTRANCE TO GRADE 9

To enroll in Grade 9 at Manchester High School, a student must have passed (in Grade 8) the equivalent of 4 full year courses of which at least three must be from the four major subjects: English, Mathematics, Science and Social Studies.

REQUIREMENTS FOR GRADUATION

Twenty-two credits in Grades 9-12 are required for graduation. This must include a minimum of the following core requirements:

4.0 credits in English
3.5 credits in Social Studies (Grades 9 and 10 - 2 credits in required courses in Global Issues and Modern World History; 1 credit in U.S. History; and 1/2 credit in Grade 12 Participation in American Society course, or Law electives
3.0 credits in Mathematics
2.5 credits in Science (Physical Science, Biological Science and one advanced Science course)
1.25 credits in Physical Education
1.5 credits in Fine Arts (Art, Music) or Vocational Education (Business, Family & Consumer Sciences, Technology Education)
6.25 credits must be earned in addition to the core requirements. (This includes students' obligation under law to successfully complete the required health courses and drug & alcohol study.)

In addition to the above credit requirements, students must meet six performance standards:

- English
- Mathematics
- Social Studies
- Service Learning
- Technology
- Science

Please see pages 102-114 for detailed current requirements.

Please see pages 115-117 for proposed graduation requirements beginning with the Class of 2019

To qualify for a diploma, a student must be in attendance at least the entire second semester of the senior year and must meet all graduation requirements.

GRADUATION REQUIREMENTS FOR SPECIAL EDUCATION STUDENTS

A special education student may earn a regular diploma by:

* satisfying all of the requirements for a regular diploma.
* classes may consist of all mainstream classes or a combination of mainstream and special education classes.

EXCHANGE STUDENTS AND GRADUATION:

* The student who is a senior but does not meet all of MHS graduation requirements will receive an "HONORARY" diploma and will be allowed to participate in the graduation ceremony.
* The student who fulfills all of the graduation requirements will receive a regular diploma, only if the student has not received a high school diploma or its equivalent from another system, including his or her country.

TO PARTICIPATE IN THE GRADUATION CEREMONY:

* The student must have completed all graduation requirements prescribed by the Board of Education.
* All school obligations must be met.

Students who complete all graduation requirements in the Summer School session following their senior year are considered members of the previous June's graduation class; however, they cannot participate in the June graduation ceremony.

Students interested in mid-year graduation must see their school counselor by the end of the junior year.

SCHOLASTIC REQUIREMENTS

Students will not be automatically promoted to grades 10, 11 or 12. The number of credits a student has earned by the end of summer school will be used to determine his/her grade classification.

Grade 10	4 credits
Grade 11	8 credits
Grade 12	14 credits

If you have any questions, please call your student's school counselor at 647-3532.

Students who have not earned the above credits are advised to make them up in the summer if they are eligible. The total number of credits earned as of the end of the previous academic year is indicated on the report card. Students and parents should refer to this when computing credits for graduation.

All students must take at least the equivalent of 5.0 credits per year in addition to Physical Education, Junior Health and Senior Health. However, the school recommends that all students take 6.5 credits, in addition to Physical Education and Health.

SUMMER SCHOOL

The Manchester Summer School program offers students opportunities to make up some courses in which they have been enrolled, but have not received credit. Summer school courses may also be taken to improve grades for a sequential subject. In order to enroll in summer school students must have:

- Earned a minimum final course grade of 40%
- Attended class for a minimum of 60% of the course
- Taken the final exam

Exceptions may be considered by the department's Instructional Leader.

Students who plan to attend a summer school program other than Manchester's must meet the same criteria as above and must seek approval prior to enrollment through the external credit option. See your counselor for details.

SUMMER TUTORING

Students may review a course to improve grades to meet sequential requirements through summer tutoring. Credit for a failed course may be earned through tutoring. In order to apply for this option, students must have earned a minimum final course grade of 40%, they must have attended class for a minimum of 60% of the course and they must have taken the final exam. Exceptions may be considered by the department's Instructional Leader. Applications are available in Room 124. Tutoring cannot begin until school has been dismissed for the summer. Tutors must be certified teachers approved by the Guidance Director. Students will be required to pass an examination prepared by the department at the end of the tutoring. Grades earned for such tutoring will not be included in class rank, but the new grade will be included on the transcript. To receive credit or to upgrade for a sequential course, students must meet the following minimum requirement: A minimum of 20 hours of tutoring must be successfully completed.

ACADEMIC ELIGIBILITY FOR INTERSCHOLASTIC SPORTS (followed by Article IX—CIAC By-laws)

To represent the school in athletics, students must carry at least four (4) units of work and have received a passing mark in at least four units of work at the end of the marking period preceding the contest. (Complete rules for sports eligibility can be obtained from the MHS Athletic Director or Guidance Director.) **Fall sports eligibility requires that 4 credits be earned during the previous year. Credits earned in an approved Summer School program count toward this four credit requirement.**

ADDITIONAL ELIGIBILITY REQUIREMENTS
"C RULE"

Manchester High School is a member of the Connecticut Interscholastic Athletic Conference (CIAC) and follows the eligibility requirements of the CIAC. Under the CIAC academic eligibility, a student must pass four subjects each marking period to be eligible for each sport season. The Manchester Board of Education has requested a higher standard and supports the "Academic Support Plan". It is the expectation of the Manchester Board of Education to recognize the valuable learning experience to be gained by students who participate in interscholastic athletic programs. It is understood, however, that participation is a privilege and that academic success over sports must be stressed.

Goals:

- To assure the mutuality of high academic standards and the participation in sports.
- To establish the framework to set a higher academic standard for eligibility than the CIAC standard.

Objectives:

- Set the eligibility standard at a 2.2 average (C Rule).
- Qualifications for the program will be determined at the same time the CIAC eligibility requirements are being implemented.

Procedures:

- All athletes on freshman, junior varsity and varsity teams are subject to this regulation.
- At the time eligibility is determined all student-athletes whose grade point average falls below 2.2, provided they are otherwise CIAC eligible, will be referred to their head coach. The head coach and the athlete will develop an "academic support plan" to address the course or courses that need additional attention.

C-RULE PROCEDURES CON'T:

- The athletic director and the head coach will collaborate to ensure the academic support plan is followed. An academic review will be conducted three weeks following the implementation of the academic support plan. It is the expectation that students will attend after school tutoring programs and/or make-up sessions a minimum of three days a week, excluding game days.
- As long as these students abide by the tutorial program guidelines, they will be allowed to continue their participation on the team. Failure to comply with the provisions of the program guidelines will result in a meeting with the athletic director, coach, parent and student athlete. The meeting will review the academic support plan and revisit the expectations and guidelines of the "MHS C Rule".
- Failure to follow the student-athletes prescribed academic support plan may result in the following, (the decision made by the head coach and the athletic director)
  - * practice suspension
  - * game(s) suspension
  - * suspension for remainder of the season

Academic support plans will be individualized for each student athlete; the intention of the additional academic requirements is to support our student athletes. Collaboration between the head coach, athletic administration, the student athlete and their families is essential for the implementation and the success of each individualized academic support plan.

CREDIT REGULATIONS

Year Long Courses:
Most academic courses meet for a full year, and credit (1.0) is awarded in June, if the final grade for the entire year is a passing grade.

Semester and Quarter Courses:
Courses that meet for one semester are awarded .50 credit for a passing final grade. Courses that meet for just one marking period (quarter) are awarded .25 credit for a passing final grade.

Grading System:
Grades are given as letters, which show the quality of work.

A - Superior
B - Above Average
C - Average
D - Below Average, but passing
F - Failure, no credit
P - Pass with credit
I - Incomplete
L - Loss of credit due to attendance
N - Not enough grades to evaluate

The above quarter or semester grades may include a plus or minus as follows: A+, A-, B+, B-, C+, C-, D+, D -.

Marks are reported at the end of each quarter (November, January, April, and June), and semester averages are reported in January and June.

Honor Roll is determined by quarter grades. To be eligible for honor roll, a student must be carrying four or more full time courses. Students who have an incomplete (I) are not eligible until the course has been completed.

HONOR ROLL GPA TABLE

A+	4.3	C	2.2
A	4.0	C-	1.9
A-	3.7	D+	1.6
B+	3.4	D	1.3
B	3.1	D-	1.0
B-	2.8	F	0.0
C+	2.5		

Eligibility for HIGH HONORS: 3.5 or higher grade point average.
Eligibility for REGULAR HONORS: 3.1 to 3.499 grade point average.

SCHOLARS AND HONOR GRADUATES
To qualify as a MHS Scholar, a senior must have a cumulative quality point average of 8.400 or higher. To qualify as a MHS Honor Graduate, a senior must have a cumulative quality point average of 7.2 to 8.399. To qualify as ***Valedictorian*** or ***Salutatorian***, a senior must have been in attendance at MHS for at least four of the seven semesters starting in grade 9 and ending in January of the senior year.

The cumulative rank in class at the end of the junior year is a part of the transcript which is sent to colleges. Some colleges which utilize a rolling admissions plan or make decisions prior to receipt of the first semester senior rank in class will use this rank in class at the end of the junior year in evaluating the transcript and making admissions decisions. Other colleges defer decisions until receipt of first semester marks. All colleges, which students attend, will receive the final Manchester High School transcript. College acceptances are conditional upon satisfactory completion of the senior year at the same academic level on which the student's acceptance was based.

RANK IN CLASS is a determination of each student's relative position in the class as determined by the quality of school performance. Quality points are assigned to semester marks and are used to determine rank in class. All subjects taken within the MHS curriculum during the school year for which credit is received or failure recorded will be included in class rank unless the course description states the course is "unleveled."

The following courses taken at other institutions or other educational programs will carry credit if prior approval has been granted but will not be included in class rank: summer study at MHS or other high schools, special study programs, tutoring for make-up credit, independent study, on-line courses, foreign exchange programs and courses taken at colleges. Courses taken at the Greater Hartford Academy of Math and Science will be included in class rank. In the case of transfer students, only courses taken at MHS will be included in class rank.

Not-for-Rank-in-Class - Students may choose a "Not-for-Rank-in-Class" option for two of their courses, provided it is in addition to the required minimum of four courses being taken for rank. ***This option may not be elected for courses which are part of the core requirements for graduation.***

The Not-for-Rank-in-Class option allows students to elect such courses and to receive a quarterly letter grade and credit, but the courses will not impact rank in class. Applications for this option should be submitted to the administration by the end of the first ten days of each semester. Since a letter grade is received for the quarter, Honor Roll is affected. The semester grade will be either a "P" or "F".

Rank In Class - Grade Point Scale

LETTER GRADE	A	B	C	D	F
AP	10.0	8.8	7.6	6.4	0
HONORS	9.6	8.4	7.2	6.0	0
COLLEGE PREPARATORY	8.4	7.2	6.0	4.8	0
POST SECONDARY PREPARATORY	7.2	6.0	4.8	3.6	0

The following grade point scale is used to determine rank in class. For a plus semester grade, .4 quality point is added and for a minus semester grade, .4 point is subtracted. A grade of "F" cannot be assigned a plus or minus. Rank in class is determined solely by courses taken at MHS or by prior approval from the building principal.
SOME COURSES ARE NOT LEVELED AND ARE NOT USED TO COMPUTE CLASS RANK, INCLUDING HOME-BOUND INSTRUCTION AND INDEPENDENT STUDY COURSES.

DESCRIPTION AND SELECTION OF LEVELS
Manchester High School offers a wide variety of courses on four levels of ability: Post Secondary Prep., College Prep., Honors and the Advanced Placement level (A.P.). The differences in the levels are determined by the amount of material covered in the course, and the level of difficulty of the content.

A.P. - Courses offered on the Advanced Placement level are the most challenging courses offered at MHS. Students electing these courses should have a record of high achievement on the Honors level in related courses and be highly motivated. Many colleges will award college credit for successful completion of AP courses, when a student scores a 3, 4, or 5 on the AP exam. See your counselor for details.

Honors - Courses offered at this level may be elected by students who have a record of high achievement and who are strongly motivated in the specific academic areas in which Honors courses are offered. Students in some Honors courses may take the College Board Advanced Placement examinations. All of the UCONN Cooperative courses are also offered on this level.

Students who earn a semester average of "A" in a College Preparatory level course may be eligible to elect Honors courses in the same subject area during the next year.

College Prep - Courses offered at this level are designed for students who have demonstrated above average achievement in the subject area and plan on attending college immediately upon graduation.

Post Secondary Prep - Courses offered at this level are designed for the student planning a post-secondary education. This may include some colleges, community colleges, technical colleges, vocational schools and proprietary schools.

Multi-Level - Courses offered at this level offer students the opportunity to choose the level of study and receive course credit at the honors, college prep, or post secondary prep level. Teacher expectations for student performance at honors, college prep, or post secondary prep levels are presented and discussed with students prior to their selection. Performance expectations at each level are no different than other classes with similar level designations. Multi-level classes tend to be highly individualized where teachers facilitate student learning with a variety of assignments.

Course Selection and Placement:

Placement into grade 9 core courses will be based on test information, grade 8 report cards and grade 8 team member recommendations.

Placement into levels for grades 10 and 11 will be based on academic performance, team or teacher recommendation and parent input.

Alternative methods of placement may be used for transfer students from outside the Manchester school district including ELL students and those transferring from alternative programs.

.

PREREQUISITE AND SEQUENTIAL COURSES

Students should be certain that they meet prerequisite and sequential requirements, which are stated in the course descriptions.

Prerequisite courses are those which provide introductory content and background for another course. A passing grade must be earned in prerequisite courses. MHS recognizes that students grow and mature; therefore, where extenuating circumstances exist, students who do not meet the prerequisite may appeal to the principal or his designee (e.g. department head, guidance counselor) for a special exception to the prerequisite.

Sequential courses are those which provide content and skills necessary for the courses that follow. To meet sequential requirements, students must earn a minimum of "C" for the second semester of a full year course, if they are to move on to the next course in the sequence. However, if a student takes the next sequential course on a lower level, only a passing grade must be achieved.

Students who wish to continue a sequential course on the same level but whose marks do not meet the requirements should plan to raise their marks by attending Manchester Summer School, by following an approved summer program elsewhere, or by repeating the course (for no credit), or through summer tutoring.

Repeating a Course for Credit - some elective courses may be repeated for credit with an emphasis on individual projects. To repeat a course for credit, a student must have earned a "C" or better grade when the course was previously taken, or must have the approval of the department head. Courses that may be repeated for credit are so noted in the course description.

External Credit is intended to enrich the MHS curriculum. Credits may not be earned in lieu of courses required for graduation, unless recommended by the appropriate Department Chair, the Director of Guidance and approved by the Principal,. In no case will external credit be used in determining class rank.

REQUIREMENTS FOR EXTERNAL CREDIT:

1. An application must be completed by the student and submitted within 3 weeks of the beginning of the semester in which the activity is to be undertaken. Applications are available from school counselors.
2. Requirements are to be completed by the end of the year for which approval has been granted.
3. The responsibility for submission of grades and/or community-based learning activity requirements lies with the student. Grades and other required documentation must be submitted by June 1st to the Guidance Director.
4. No more than 1.00 credit can be taken in a semester through the external credit program and no more than a total of 4 credits throughout the high school career.

EXAMPLES OF COMMUNITY SERVICE & VOLUNTEER ACTIVITIES

Some examples of community-based learning activities:

Nursing Home	Police Athletic League
Police Station	Girl Scouts/Boy Scouts
Hospital	Church/Synagogue
Red Cross	Salvation Army
Teacher Aide	

EXAMPLES OF EXTERNAL ACADEMIC CREDIT AT OTHER INSTITUTIONS:

* College and university credits
* Special vocational courses
* Career-related courses
* Summer school
* On-line State of Connecticut approved courses

REPORT CARDS/PROGRESS REPORTS

A **progress report** is posted on-line one time per marking period.

A **report card** is available on-line at the end of each quarter.

Additional reports may be sent if the student's average has dropped by two letter grades, the student receives a grade of D or F, or the student is missing more than 20 percent of his/her homework.

ON-LINE PARENT ACCESS

On-line parent access to grades is available. Parents should contact the main office at 647-3521 for more information on obtaining a secure password for access to the grades of their son or daughter.

COURSE SELECTION GUIDELINES

1. Twenty-two (22) credits are required for graduation.
2. The equivalent of 5 full-time courses all year (plus PE, and/or Health) is required for all students. However, students are encouraged to take 6.5 courses all year.
3. Prerequisite and sequential requirements must be met at the end of some courses to continue in the same area the next semester.
4. In deciding the number of courses to elect, the time required for out-of-class preparation in each course and the time available to do it (including study hall periods and home study) should be considered.
5. Many courses have a limited number of sections, and it is possible that all courses elected by a student cannot be scheduled due to conflicts or closing of courses. An elective course may be cancelled if there is not a sufficient number of students to offer the course.
6. A.P. and Honors elections will be reviewed by department chairs for eligibility requirements.
7. Courses marked with an (*) require a lab fee. While the Board of Education provides a basic amount of materials, many students wish to go beyond these minimums. Materials purchased through fees charged to students are used for projects which ultimately become the property of the student involved.

Foundation for Success - All Students Many colleges give placement tests to freshmen as they enroll for the first semester. The tests are intended to determine whether freshmen have the basic skills needed for success in college level courses. Students who do not demonstrate the necessary skills in math, writing, world languages, and reading will need to spend valuable college time acquiring what they could have acquired in high school. Students who do well on the placement tests can enroll immediately in a full program of courses at the freshman level or above. These students gain an important competitive advantage.

Mathematics - All students should take a mathematics course during their senior year in high school. All students are encouraged to complete a four-year math sequence. Students who wish to pursue careers in the Natural Sciences, Engineering, Computer Science, Business, or Economics should, at a minimum take a math course focusing on Trigonometry, Analytical Geometry, and Mathematical Analysis (Pre-Calculus).

Writing - is a fundamental skill needed in college and the business sector. Writing skills must be applied in all subjects. The Connecticut universities use SAT scores as one measure of writing ability. Placement tests in writing are many times given after admission.

Reading - A large amount of reading is required by colleges and employers. All students must be able to vary their reading speed, identify main ideas, and summarize, analyze, and interpret material read.

MHS SPECIAL PROGRAMS

University of Connecticut Early College Experience (ECE), formerly the UCONN Cooperative Program, offers the opportunity for students to earn high school credit, as well as credit at the University of Connecticut. The courses are taught at MHS by university-approved MHS faculty and follow the UCONN syllabi. Taking these courses enables students to begin college study early and perhaps complete requirements or allow for supplementing their college programs with electives in their special interest area. Credits may be transferred to other colleges, but the transfer of such credits is determined by the policy of each college.

Acceptance into the program is determined by UCONN. ECE courses are identified in course descriptions. There is a per credit fee which is payable directly to UCONN. Students who participate in the free & reduced priced lunch program will have the fee waived.

COLLEGE CAREER PATHWAY PROGRAM
Earn College Credit while Still in High School!

The College Career Pathways program is a partnership between community colleges and high schools that is part of a nationwide, federally funded project designed to link high schools, community colleges and employers. Students in grades 10 - 12 at Manchester High School can explore career opportunities while earning high school and FREE college credit at the same time! Enrolled students take a required sequence of courses, including concentrations in math, science, communications, and a "Career Pathway" area. These community college credits are potentially transferable to other colleges and universities and could possibly save you thousands of dollars. Because of this special partnership, college application fees, tuition, and even the cost of books are waived.

At MHS we currently offer course sequences in the following Pathways: Business Administration, Communication, Culinary Arts, Criminal Justice, Early Childhood Education, Office Technology, and Medical Careers. Students enrolled in a Pathway must fill out a community college on-line application to earn "dual credit" (credit from their high school and college) and are expected to successfully complete courses in their career area in addition to a designated math course, English/communications and/or English Composition course, and science courses (Anatomy & Physiology and/or Chemistry). Students should attempt to take courses in all four areas (one in the Pathway elective area and one in each of the three designated core academic areas).

Necessary forms must be completed by December. Credit cannot be back issued. Students are responsible for submitting all paperwork on time. Completed applications must be submitted to the guidance office by the due dates.

Sophomores, juniors and seniors may enroll in the College Career Pathway program by completing the following procedures:

- Meet with your counselor and register for the appropriate College Career Pathway Program.
- Register for the individual College Career Pathway classes by course number.
- Complete a College Career Pathway permission to apply and the on-line college application which requires the following:
  - A student signature
  - A parent signature
  - A counselor recommendation/signature

What do we expect from you?

- Positive attitude
- Reliability
- Willingness to learn and work with other.

Students who have earned college credit **do not automatically receive official college transcripts once their courses are completed**. Student may go online to view grades or print unofficial transcripts by logging into the website of the community college using the college ID number that will be mailed to them. Official transcripts can be obtained by mailing or faxing an official transcript request form to the college. Students may elect to continue their education at the community college or they may choose to attend another college of their choice and request that the community college credits be transferred. Transfer credit decisions are made by the receiving school.

With the exception of Algebra 2, students in the program who earn a grade of "B" or better, and Business Pathway courses receive a "C" or better, in the articulated course will receive college credit as long as all program requirements are met. To receive credit for math or business courses, students must receive a grade of "B" or higher. Math students must also take a designated math placement test or score at a level of 550 or better on the math portion of the SAT test

To find out more about the College Career Pathways program, please contact your guidance counselor.

College Career Pathways

Business Administration PATHWAY

The Business Administration Pathway program is designed for students interested in a career in business and who may wish to transfer to a Baccalaureate program. The program prepares graduates for careers in banks, small businesses, insurance companies and governmental agencies.

Classes in the Business Administration Pathway include:

1. One of the following Pathway Elective courses:
   A. College Accounting, OR
   B. E-Commerce Entrepreneurship
2. English/Public Speaking OR English Composition
3. Algebra 2 (College Prep)
4. Anatomy and Physiology (College Prep) OR Chemistry (College Prep)

Communication PATHWAY

The **Communication College Career Pathway** program is designed to prepare students interested in 2 and 4 year college programs in Media Productions. Through on-site training, the program will identify, plan, and provide opportunities for students to seek the knowledge and skills required in media. Technical skills like layout, editing, organization, communication, Script Writing, News Reporting, Journalism, Camera Operating and Editing.

COLLEGE CAREER PATHWAYS

Communications Pathway Con't:

Classes in the Communications Pathway include:

Communications Option:

1. One of the following Pathway Elective courses:
   A. Broadcast Journalism, OR
   B. Desktop Publishing (must be taken two semesters), OR
   C. Foundations for Success
2. English/Public Speaking OR English Composition
3. Algebra 2 (College Prep)
4. Anatomy and Physiology (College Prep) OR Chemistry (College Prep)

Construction Technologies PATHWAY

The **Construction Technologies Pathway** program is designed for students with interests in construction, architecture, or buildings and facilities management. Program completion will prepare students to enter professional degree programs in other colleges and universities.

Classes in the Construction Technology Pathway include:

1. Architecture 1 AND Architecture 2
2. English/Public Speaking OR English Composition
3. Algebra 2 (College Prep)
4. Anatomy and Physiology (College Prep) OR Chemistry (College Prep)

Criminal Justice PATHWAY

The **Criminal Justice College Career Pathway** program in designed to prepare students for entry level into 2 and 4 year college programs in criminal justice. Programs in Criminal Justice lead to careers in Corrections, Drug Enforcement, Forensic Science, Law Enforcement, Security, and Probation.

Classes in the Criminal Justice Pathway include:

1. Law and Order
2. English/Public Speaking OR English Composition
3. Algebra 2 (College Prep)
4. Anatomy and Physiology (College Prep) OR Chemistry (College Prep)

Culinary Arts PATHWAY

The **Culinary Arts College Career Pathway** program is designed to prepare students for the one-year certificate or two-year Associate Degree programs in Food Service Management or Hotel-Motel Management at Manchester Community College. The U.S. Labor Department reports that food service is the second fastest growing industry in the United States. Opportunities are available in management, sales, food preparation and executive housekeeping. Culinary Arts students gain practical restaurant experience by operating the Silk City Café at MHS.

Culinary Arts classes include:

1. Culinary Arts
2. English/Public Speaking OR English Composition
3. Algebra 2 (College Prep)
4. Anatomy and Physiology (College Prep) OR Chemistry (College Prep)

Early Childhood/Teacher Education PATHWAY

1. The **Early Childhood/Teacher Education College Career Pathway** program is designed to prepare students for entry into the Manchester Community College Educational Associate Program. Students receive a balance of classroom instruction and practical experiences to prepare them to become teachers or child care professionals. Early Childhood/Teacher

Education students gain valuable practical experiences by job shadowing elementary and pre-school teachers and by working in the MHS pre-school program.

Early Childhood Education classes include:

1. Child Development AND Human Services
2. English/Public Speaking OR English Composition
3. Algebra 2 (College Prep)
4. Anatomy and Physiology (College Prep) OR Chemistry (College Prep)

Medical Careers PATHWAY

1. Investigating Health Careers
2. English/Public Speaking OR English Composition
3. Algebra 2 (College Prep)
4. Anatomy and Physiology (College Prep) or Chemistry (College Prep)

Office Technology PATHWAY

The **Office Technology College Career Pathway** program is designed to prepare students for entry into 2 and 4 year college Business programs. This program will identify, plan, and provide opportunities for students to acquire the knowledge and technical skills for employment and additional training in office administration. Prerequisite technical skills are developed in the areas of legal, executive, and medical secretarial.

Classes in the Office Technology Pathway include:

1. One of the following Pathway Elective courses:
   A. Advanced Word Processing, OR
   B. Web Page Design 2
2. English/Public Speaking OR English Composition
3. Algebra 2 (College Prep)
4. Anatomy and Physiology (College Prep) OR Chemistry (College Prep)

NAMES AND PURPOSES OF TESTS

Advanced Placement Examinations (AP)
These are three-hour examinations in specific subject areas taken in May for the purpose of securing college credit or obtaining advanced placement. They are based on subject matter covered in the first year of college. Students in advanced placement courses must pay for and take the respective AP exam.

NWEA
Measures of Academic Progress (MAP) tests are taken by grade 9 and 10 students in reading and mathematics three times per year.

SMARTER BALANCE
Tests in mathematics and language arts and are taken in April by grade 11 students.

College Board Testing Accommodations for Students with Disabilities
Please note that students with a documented disability may be eligible for accommodations on College Board tests (AP, PSAT & SAT). The College Board's Services for Students with Disabilities (SSD) Student Eligibility Form must be submitted for each student requesting accommodations. To be eligible, the student must have a disability that necessitates testing accommodations, have documentation on file at the school that supports the need for requested accommodations and meets the College Board's Guidelines for Documentation; and receive and utilize the requested accommodations, due to the disability, on school-based tests. A student who does not meet all the eligibility requirements may appeal the requirement. Forms must be submitted well ahead of the first test date, generally five weeks before, and seven weeks before for appeal cases.

Students who were previously approved by the College Board for accommodations while a MHS student need not apply again unless their need for accommodations has changed. When registering for SAT's, approved students must include their S.S.D. code number with the registration form. Students not previously approved for accommodations and those new to MHS who had been approved at another school must apply for eligibility.

See your counselor, or call the guidance office at 647-3533, for a copy of the form and for further details.

Preliminary Scholastic Assessment Test/ National Merit Scholarship Qualifying Test: PSAT/NMSQT

This is a two-hour and 10 minute version of the Scholastic Assessment Test (SAT) and is given **in October** to all MHS sophomores and juniors. Junior test results are used in the selection of Merit Scholars, Finalists and Commended students in the NMSQT program. Sophomore and junior results are used for individual academic and post high school planning.

Scholastic Assessment Testing Program:
SAT and SAT Subject Tests

The SAT is a three-hour and forty-five minute test consisting of critical reading, mathematics and writing sections. Applicants to most colleges are expected to take the SAT. We recommend that students take it in the spring of junior year and again in the fall of senior year. Colleges generally will use the higher scores.

If a senior is applying as an early decision candidate, all testing should be completed prior to November 1st.

The SAT Subject Tests are one-hour in length. A maximum of three tests may be taken on any one date. While most colleges do not require SAT subject testing, those that do generally ask for two tests. Tests for one -year subjects should be taken in May or June of the year in which the course is completed. Tests in continuing subjects should be taken senior year, generally in November or December (unless applying for Early Decision). See your counselor for further details.

Students must register directly with the College Board (www.collegeboard.com) to take the SAT's. Fee waivers are available, to eligible students, from School Counselors.

Armed Services Vocational Aptitude Battery (ASVAB)

This test is available to all students who are interested in assessing their aptitudes. The ASVAB can assist students in making decisions about career paths based on actual abilities. There is no military obligation. The test will be given at MHS on a date to be announced.

Greater Hartford Academy of the Arts at the Learning Corridor

A primary goal of the Greater Hartford Academy of the Arts is to provide college preparatory arts training to high school students in a diverse, highly challenging environment of professional artists and arts educators.

The Academy, established in 1985, is an integral magnet arts high school that is open through audition to high school students in the Greater Hartford area. Academy students attend their sending school in the morning and the Academy from 1:00 to 4:15 p.m., Monday through Thursday. The students spend 13 intensive hours per week pursuing artistic excellence under the guidance of practicing arts professionals who are the core faculty at the Academy. The arts training program is designed to prepare gifted and talented students to pursue post-secondary studies in music, dance, theatre, creative writing, visual arts, film and TV and theatre design and production.

The curriculum is professionally oriented, highly structured and academically rigorous. An Artist-in-Residence Program brings outstanding artists to the Academy for master classes and presentations. These professional contacts enrich the curriculum as well as provide a realistic perspective on artistic careers. Students interested in applying to the Academy may request an application from the Academy Secretary, at (860) 757-6317.

Manchester Community College Partnership Program offers the opportunity for junior and senior students to earn high school credit, as well as Manchester Community College credit, in courses not offered at Manchester High School. Student tuition and fees are waived for a maximum of two courses for students who qualify. To be eligible, students must be pursuing a college preparatory program, have a "B" average, and have the approval and recommendation of the MHS External Credit Committee. Final acceptance is determined by MCC. Application information is available in the Guidance Office.

Goodwin College Partnership

Seniors may apply to take tuition free courses on a space available basis and receive college credit for successful completion of college level courses. Application information is available from School Counselors.

Greater Hartford Academy of Math and Science at the Learning Corridor and Trinity College

The Greater Hartford Academy of Mathematics and Science at the Learning Corridor is a public, magnet program for grades 9-12 managed by the Capital Region Education Council (CREC). The Academy opened in the fall of 2000. The Learning Corridor is a campus of magnet schools adjacent to Trinity College, Hartford Hospital, the Connecticut Children's Medical Center and the Institute of Living. The Greater Hartford Academy of Mathematics and Science provides students with a specialized honors level curriculum in the natural sciences and mathematics taught by master teachers and practicing scientists. The curriculum is founded in laboratory experiences of physics, chemistry, biology, biochemistry and molecular genetics, earth science, astronomy and electronics and engineering. Mathematics and computer science are taught as disciplines and, more importantly, through applications to scientific experimentation. Upper class students (grades 11 and 12) are afforded opportunities in research at the surrounding institutes of higher education, as well as within students' personal research labs at the Academy. Technology and applications of computer science are a major component of all activities, and the school has been designed for each student to be fully integrated into the world's information network. The magnet school is conducted on half-day sessions with courses in mathematics, computer science, health/biomedicine and natural sciences. Grades 9 and 10 attend the magnet school in the mornings and grades 11 and 12 in the afternoons. All other curricular courses are provided by Manchester High School. In order to be successful at the Academy, students should have completed Algebra I prior to the 9th grade, possess a strong motivation for pursuing math and science and have an aptitude for inquiry based learning.

The Academy works closely with Manchester High School in curriculum coordination and functional operations.

The State of Connecticut and the Manchester Board of Education support a limited number of tuitions. Information regarding admission procedures may be obtained from the Guidance Office. Further information can be obtained by contacting the Greater Hartford Academy of Mathematics and Science, Admissions & Student Services Office, 757-6315.

Driver Education is offered in the afternoon, evening and summer school. Students are required to pay the full instructional cost of the 32 hours of classroom instruction and 8 hours of behind-the-wheel instruction. To enroll, students must be at least 16 years of age at the beginning of the course. Details and enrollment forms are available from the Driver Education Coordinator after May 1 for summer classes and on the first day of school for the classes offered during the school year. Students receive .30 credits for successful completion. ***Applications are available in the Guidance Office.***

ALTERNATIVE EDUCATION

BENTLEY SCHOOL PROGRAM

This program is a regular education alternative program designed for students who cannot perform adequately in the mainstream setting of the high school. The students are eligible to take elective courses in the high school. There is a separate admissions process for the Bentley School Program. Additional information can be secured through School Counselors.

CREDIT DIPLOMA PROGRAM—ADULT EDUCATION

The credit diploma program is a division of the Adult Education Program. Through this program, students can enroll to take classes in the evenings and earn enough credits to obtain an adult education diploma. The student/teacher ratio is beneficial to students who have difficulty in the mainstream setting. Students withdraw from MHS and then enroll in this high school diploma program. Interested students should see their school counselors for details.

COURSEWORK AND CHANGES

Minimum Course Requirements

All students must take a minimum of 5 full time courses although students are encouraged to take 6.5 full time courses, in addition to Physical Education and Health Education courses. Grades 9, 10, and 11 students will be assigned to study halls during unassigned periods.

Change of Course Level:

Most changes in program cannot be made after the last day of school in June. After school opens:

During the first two weeks of the school year - students, teachers, parents and counselors may work together to rectify scheduling errors only.

After the first two weeks - a request to change to a lower level requires administrative approval. Students are expected to take advantage of extra help that is available. See your counselor to discuss options.

If a student moves to a less advanced level (ex: Honors to CP) at the end of the first quarter **and has made up any and all owed work,** ten points will be added to the first quarter's average when calculating the courses final grade. **This consideration applies to changes made in the first quarter of the course only.** Changes made after that point will not carry any grade adjustment.

No level changes or course drops will occur after the midpoint of a course.

All changes, regardless of when they are approved, will be processed at the end of the quarter barring any extenuating circumstances.

Changes to a higher level

Movement to a more advanced level may occur within the first semester of the school year. There will be no adjustment in grade.

Change of teacher within a course (lateral transfer) is not permitted.

Course Drops

When courses are dropped, please keep the following in mind:

- Students must be enrolled in 5 full time courses, in addition to physical education and health education.
- The student must report to the class until it is officially dropped.
- All books/equipment must be returned to the teacher before finalizing change.
- Courses are dropped at the end of a quarter
- Courses may not be dropped after the mid point of the course.

GRADING

Grading System

Grades, which show the quality of work, are given as letters. Plus and minus grades shall be issued where appropriate. An evaluation of a student's academic performance each semester is best expressed as a numerical average ranging from 1 to 100; therefore, the quarter grade is recorded in the grade book as a numerical average between 0 and 100.

A+	= 97 - 100	
A	= 93 – 96	
A-	= 90 – 92	{SUPERIOR}
B+	= 87 – 89	
B	= 83 – 86	{ABOVE AVERAGE}
B-	= 80 – 82	
C+	= 77 – 79	
C	= 73 – 76	{AVERAGE}
C-	= 70 – 72	
D+	= 67 – 69	
D	= 63 – 66	{BELOW AVERAGE BUT
D-	= 60 – 62	PASSING}
F	= 0 - 59	{FAILURE; NO CREDIT}

P = PASS WITH CREDIT
I = INCOMPLETE
L = LOSS OF CREDIT
N = NOT ENOUGH TIME IN CLASS TO EVALUATE

The semester course averages are computed as follows:

Quarter one: = 40% of the semester grade
Quarter two: = 40% of the semester grade
Semester exam: = 20% of the semester grade

The final grade for a year long course is computed as follows:

Semester one: = 50%
Semester two: = 50%

Incomplete grades must be completed no later than 10 school days from the end of the past quarter or a grade of F will be issued. In the case of a long absence or extenuating circumstances, students may request an extension in writing to their administrator no later than the Monday of the third week after the past quarter. If the request is granted, the administration will specify the length of the extension.

COUNSELING SERVICES DEPARTMENT

Services are delivered by **students' counselors as well as the Student Support Center**. The staff seek to help students develop academic, career and wellness goals coupled with a plan for life beyond Manchester High School

The Student Success Plan (SSP) is the foundation of the M.H.S. student experience within the counseling program. SSP which is developed on the Naviance platform, is available through the www.mhsredline.com student/parent portal.

Counselors recognize the uniqueness of individual students and are ready to assist each student in the pursuit of their goals. In addition to assisting students with their present progress in their academic work, counselors also play an important role in helping students to plan for their post high school life. Monitoring academic progress, requesting student reviews, student assistance team meetings or PPT's if appropriate, are examples of the mechanisms counselors may use to assist students. Counselors, together with students and parents, use the SSP to formulate a plan of action as the student moves toward a successful post high school plan. Communication with other counseling services staff or outside agencies may be employed, as appropriate. Individual personal counseling is available to assist students who may be encountering difficulty with adolescent developmental tasks.

The **Student Support Center** provides counseling, crisis intervention, and mediation resources. MHS students can come together as a community to help resolve differences and help each other in time of need. The Center provides individual and group counseling.

Services available:

- Peer Mediation
- Mentoring
- Counseling (individual and group)
- Focus groups for students (academic, behavior, social)
- Transitional Programming for students entering grade 9

The goal of the Counseling Department is to assist all students to ensure success at MHS. Parents may contact their students counselor as needed for further information or help.

School Social Workers are the link between home, school and community. The social worker promotes and supports students' academic and social success by providing specialized services that include: individual and group counseling, crisis prevention and intervention, social development assessments, advocacy for students, parents and the school, as well as home visits. She/he collaborates with community agencies and organizations and provides information and referrals to students and parents. They can provide support groups for students and parents, as well as parent education and training. The social worker works closely with the counselors, administrators, teachers, school psychologists, and other staff to help provide a strong support system for the student.

The **School Psychologists** provide individual consultations and testing, if needed. The psychologists also provide individual psychological testing for students (recommended by a PPT) and interpret test results to parents and staff.

*SPECIAL OPTIONS****

Homebound Instruction

Homebound instruction is intended for long-term absences. State guidelines indicate that homebound instruction cannot be considered for absences of less than three weeks. However, when it is known that the student will be required to be absent more than three weeks due to illness, hospitalization, surgery, or an accident, then homebound instruction may begin *within a period of approximately two weeks after the attending physician recommends the tutoring*. Parents/guardians should make homebound requests through their child's guidance counselor.

Married Students

Married students shall have the same educational opportunities as unmarried students.

Pregnant Students

Support services may be available to pregnant students. Any variation from a student's continuance in regular classes shall be based upon her specific needs.

CHEA

CULINARY • HOSPITALITY • ENTREPRENUERSHIP
ACADEMY @ Manchester High School

Culinary Hospitality and Entrepreneurship Academy

Overview:

CHEA is a great option for students interested in a career in culinary arts, hotel and restaurant management, event planning, or entrepreneurship. The CHEA Academy is also an excellent choice for students who are not yet sure what they want to do. Cooking, excellent customer service skills, and knowledge needed to open up a business are useful and valuable skills for everyone to have!

Program highlights:

- Earn up to 15 FREE MCC College credits while still in high school (in addition to any other AP or UConn courses the student chooses to take in high school).
- Obtain ServSafe Certification, a food and beverage safety training and certificate program administered by the National Restaurant Association. This certification could potentially help you get a great job in high school and beyond!
- Get hands on, real-world experience working in school-based kitchens, restaurants, bakeries, stores, and catering businesses.
- Learn in a fun, hands-on, rigorous environment that encourages students to creatively work together to solve problems and develop economically feasible solutions to global issues that affect us all.

Advantages to joining CHEA:

- Earn internship credit by working in Silk City Café.
- Opportunity to investigate careers in the culinary, entrepreneurship, and hospitality career fields.
- Access to a wide variety of guest speakers and advisory board of Manchester business owners (potential employers).
- Core curricula that focuses on your interests.
- Field trips to a variety of colleges, restaurants, and other related activities.
- Opportunities to work with and be mentored by professionals in the industry.

Senior Career Exploration and ServSafe:

As a senior in the Academy, students will have the option to take Senior career exploration and ServSafe. Enrolled students will continue to develop an **e-portfolio**. Students will present their electronic portfolio for review at the end of the course. Students will participate with CHEA community Advisory Board member meetings. They will complete personality assessments.

1. Students will explore, in depth, various careers within the Culinary, Hospitality, and Entrepreneurship Industries.
2. Resume writing and interview skills will prepare for a **4-6 hour job shadow experience**.

ServSafe:

Learn basic food safety practices for preparing and serving food. The ServSafe Program is a complete solution that delivers consistent food safety training. The program covers five key areas: Basic Food Safety, Personal Hygiene, Cross Contamination & Allergens, Time & Temperature, and Cleaning & Sanitation. This class will include the certificate examination at no fee to the students.

Silk City Interns:

Silk City interns are student leaders who run Silk City Café. Students manage all aspects of managing the café. Major responsibilities of the interns include preparing the food product, display, and sales. They will manage the day to day operations including calculating daily sales by item, inventory management, develop new products and services, café website and catering order preparation. Students will develop career building skills by participating in at least one community event and managing customer relations.

Advisory Boards:

CHEA is enlisting the help of volunteers throughout the community who are business owners, chefs, and employers. They will serve as consultants, judges, and advisors for the students.

Required Academy Coursework:

1.5 credits in pathway of choice: Culinary, Hospitality, or Entrepreneurship

Academy Related Electives:

(All courses have aspects of career exploration)

Culinary Pathway:

Intro to Culinary
Advanced Culinary
Bake Shoppe 1
Bake Shoppe 2
Nutrition for Fitness
International Foods
Silk City Intern
Senior Career Exploration and ServSage

Entrepreneurship Pathway:

Banking Internship
E-Commerce Entrepreneurship
International Business
Introduction to Business
Management and Leadership
Skill for Success
Marketing

Education Public Service Academy (EPSA)

Overview:
The Education Public Service Academy accepts all students who share interests and desire to learn about a specific career path within the realms of Education, Social Work, Psychology, and Criminal Justice.

Students will build a solid foundation to develop skills necessary to pursue an academic degree in any field related to Human Services. Manchester High School will continue partnerships with MCC and UConn, benefiting the students through engagement with collegiate resources as well as earning college credits within the Academy. EPSA students will have opportunities to participate in many clubs and groups at MHS such as "Be the Change," Best Buddies, Unified Sports and FCCLA. The Academy aims to cultivate the great educators, investigators, and human service professionals of tomorrow as well as work together with community members to foster connections within our schools.

* All EPSA students who are interested in serving on the *student advisory board* will be included in decision making and are encouraged to bring new ideas to the academy that will interest the majority of the group.

* EPSA has established a dynamic panel of guest speakers who benefit all students and occupational careers. Some of the favorite guest speakers are from the Hartford Police Department (Special Crimes Unit), Goodwin College Psychology Department, Department of Corrections, and Professional Social Workers in the field.

Advantages to joining Education Public Service Academy:
Course work will be designed to expose students to the various aspects of education and public service fields including areas of demand such as early childhood educators, special education, math and science teachers as well as mental health counselors and police officers. The areas of study will be aligned to National Standards that will meet college admission requirements. Career pathway courses will be chosen based upon the student's personal interest. The Academy students are provided with opportunities for job shadowing, tutoring, and internships to acquaint them with culturally, socially, and intellectually divers groups of people.

Required EPSA Courses:

* **Intro to EPSA**

This course is designed for sophomores and juniors who enter the Academy. The focus of instruction includes student centered activities that examine careers in Education and Public Service. A self-selected Community Service Project is a key component to this introduction course.

* **EPSA Experience**

This experiential course is followed by Intro to EPSA and provides students with opportunities to apply their knowledge in the school and community. Job shadowing will supplement instruction. This course is student driven and enhances leadership and decision-making skills. Digital portfolios are established.

Academy Related Electives:

Education/Social Work—World of Children, Child Development, Human Services (MCC) and UConn HDFS
Psychology—Psychology (both College Prep and AP) and UConn HDFS
Criminal Justice—Criminology, Forensic Science, Law and Order (MCC)

EPSA Team-Building/Leadership field trip for all students

Empower Leadership, Sports, and Adventure Center in Middletown, CT

The mission of this trip is to enhance the notion that people learn best by doing. EPSA is engaged in a powerful and fun action based experience that will propel you to build stronger relationships, self-confidence and promote teamwork. Adventure activities include an obstacle course, scavenger hunt, and much more.

Empower Beliefs: We feel the world needs more positive leadership and so we want to do our part by developing leaders, sharing our powerful adventures, and inspiring our guests to find the very best in themselves at every interaction. We endeavor to EMPOWER you to take a leap of faith so that you can achieve things that may at first seem impossible. We teach teams how to become a team and to achieve better results. In the end, our way of interacting and facilitating is energetic, fun, and inspiring.

Medical Careers Academy

Overview:

The healthcare field contains a tremendous variety of career opportunities, and the majority of them show great growth in demand every year. The Medical Careers Academy is designed to help students interested in any medically related field, or just health care in general, to explore these varied career opportunities. Students in the Academy have shown interests ranging from medicine and nursing, to areas as diverse as veterinary, physical therapy, athletic training, forensics, psychology, cancer treatment, and many more. It is our goal to facilitate the students' development into future healthcare professionals, through hands-on training and one-on-one guidance provided by faculty and staff. Furthermore, the Academy strives to develop the community connections necessary to provide students with meaningful real world experiences, and to be sure our program stays in touch with the needs of our students and the healthcare community.

The Medical Careers Academy is dedicated to developing the academic and non-academic skills necessary to care for others and enter the medical field at any level. Students will develop skills including:

- Science and Mathematics
- Communication
- Technology
- Critical thinking and problem solving
- Professional behavior and ethics
- Teamwork and collaboration
- Time management and perseverance
- Self-awareness and self-efficacy
- Empathy
- Initiative

Advantages to joining the Medical Careers Academy:

- An opportunity to investigate careers in the healthcare field that match student interests and abilities.
- Access to individual speakers and panels from a wide variety of health and related professions.
- Core curricula focused on medically related issues across disciplines.
- Field trips to various medical facilities and other related activities.
- Access to Allied Health related seminars and programs at Manchester Community College.
- Opportunities to work with and be mentored by medical professionals.

MCA Seminar and Job Shadowing:

As a junior in the Academy, students will take the MCA Seminar. This course is designed to develop students' soft skills, such as professionalism, communication, and organization. While completing the course, students will also work with the instructor on job shadowing placement. Ideally, this would be completed in an area of interest for the student, providing the opportunity to see what a day in the life of the professional is like.

Our partners in the medical field are vitally important to the success of our program, and it is important that we maintain these partnerships for future students. Therefore, students who do not pass Investigations in Health Careers, and their parents, will need to meet with the MCA administrator to develop a success contract for the following year. If a student does not meet criteria of the contract, they will not be allowed to complete a job shadowing placement, and will complete an alternate assignment.

MCA Portfolio:

Throughout their time in the Academy, students will compile a digital portfolio detailing the career goal of the student and how his or her experiences in the academy have helped prepare them to pursue that career. The portfolio will include required and student chosen work samples representing their growth and learning over time. The portfolio will be presented to an Academy panel prior to graduation.

Advisory Boards:

The MCA is currently advised by two boards—one involving community members, and one involving students. Community Advisory Board partners currently include Touchpoints in Manchester, Ambulance Service of Manchester, Manchester Public Health Department, Manchester Chamber of Commerce, Capitol Workforce Partners, and we will soon be adding Manchester Memorial Hospital. The Student Advisory Board is voluntary and welcomes any interested students. Projects include planning Academy assemblies, generating new ideas for Academy activities, and providing input and feedback to the teachers and administrators.

Required Academy Courses:

- Investigations in Health Careers—Grade 10
- MCA Seminar—Grade 11

Academy of Related Electives:

- Sports Medicine ***
- Veterinary Sciences ***
- Patient Care ***
- CNA Preparation ***
- Forensics
- Psychology
- Nutrition for Fitness
- Science Research
- Independent Study

*** Preferred admission to MCA students.
See course descriptions for more information about each course.

Performing Arts Academy

Overview:

The Performing Arts are an essential component of a quality education; they represent a commitment to instilling confidence, creativity, collaboration, citizenship, and character. Through the Performing Arts, we share the best qualities of every culture and generation and find a universal language which fosters communication among all peoples. In the Performing Arts Academy, students will gain unfettered access to professional musicians, dancers, designers, and actors, transforming themselves from audience to artist through focused study in performance. Students of the PAA will be encouraged to expand their creativity, take risks, and view challenges as opportunities for advancement and growth.

PAA core classes emphasize the connection between academia and performance. Students are encouraged to demonstrate knowledge of subject matter in active, creative ways. In addition, PAA students take advantage of the wide variety of Performing Arts electives and ensembles. Master classes, backstage tours, special performances, and hands-on study with visiting professionals will be regular occurrences for PAA students.

In developing the skillsets of successful performers, students will also elevate their performance in the classroom, in society, and in whatever career they may choose. The Performing Arts, in particular, foster a deep understanding of:

- Collaboration/teamwork
- Clear and precise communication
- Language and Inference
- Critical thinking and problem solving
- Professional behavior
- Commitment and persistence
- Confidence/poise
- Time management
- Responsibility

Advantages to joining the STEMDAC Academy:

- An opportunity to investigate passions and interests in a safe, welcoming environment
- Access to speakers, local artists, and performers
- Core curricula that integrates communication, kinesthetic activities, and art across disciplines
- Field trips to various performances
- Participation in workshops with professional performers
- Opportunities to visit and speak with students, professors, and deans of local university fine arts programs

PAA Ensembles, Senior Seminar, and Independent Study:

Every year, PAA students will participate in at least one of our performing ensembles, which means that each PAA student performs for an audience. Ensembles are offered in vocal and instrumental performance, acting, and dance.

Senior PAA students have the opportunity to enroll in a Senior Seminar class during their first semester. This class will not only help students with the college admission/audition process, but it will also provide an opportunity for students to research careers that involve the performing arts and collaborate with professionals who work in those careers.

During their second semester, seniors are encouraged to enroll in a PAA Independent Study. Here, students will continue to research possible career paths that involve the performing arts. PAA Independent Study students are also encouraged to either create a digital portfolio of their work or to develop a performing arts outreach project within the school or community.

Leadership Opportunities within the Performing Arts Academy:

In addition to the senior independent study outreach, students of all grade levels are encouraged to take on leadership roles within the PAA. These include tutoring other PAA students (either in a core subject or in an elective), starting a PAA Power Hour club (such as a film club), becoming a member of the PAA Advisory Board (which involves community outreach as well as weekly Power Hour meetings), or simply attending Academy Leadership Meetings on Fridays. By becoming involved with these leadership opportunities, students are able to take ownership of their experience within the academy, assuring that the academy's classes and events are meeting the needs of all PAA students.

Required Academy Courses:

- At least one performing ensemble class per year (Acting**, Chorale, Chorus, Concert Band, Dance Ensemble**, Guitar Ensemble, Orchestra, or Percussion Ensemble)

Academy or Related Electives:

Advanced Guitar
Audio Production**
Beginning Guitar
Costuming**
Creating Music with Computers I & II
Hair and Makeup for the Stage**
Intro to Movement and Dance**
Jazz Ensemble
Music Appreciation
Music Theory
Piano/Keyboarding**
Songwriting**
Stage Tech**
Theatre Arts
Senior Seminar
Independent Study

** Preferred admission to PAA students
See course descriptions for more information about each course.

STEMDAC Academy

(Science, Technology, Engineering, Math, Design and Communications)

Overview:

Technology is moving at unprecedented rates and in constantly changing formats, and the newly merged STEMDAC Academy will prepare students to flourish in this evolving global arena. STEMDAC students will have access to state-of-the-art communications resources, will receive expert training, and will be given regular opportunities to create authentic projects that are directly connected to both their academic instruction as well as the community at large. The STEMDAC Academy focuses on student centered learning, provides experiences that motivate all students, provides a rigorous and technologically enhanced curriculum, and inspires creative, critical, and analytic thinking.

Purpose:

The purpose of the STEMDAC Academy is to provide students with the following opportunities:

- Explore a vast array of careers with high demand for 21st Century Skills.
- Create highly qualified candidates for the Science, Technology, Engineering, Mathematics, Design and Communication fields.
- Provide students with real world STEM, Design and Communication skills through connections with experts and businesses within the local community.

In addition to acquiring content knowledge and practical experience, students will learn to collaborate, solve problems, persevere, and be an effective part of a team.

Advantages to joining the STEMDAC Academy:

To enhance their experience students explore these related disciplines through various hands on, project based courses. Students in this academy benefit from field trips, the expected affiliation with A.C.E. (the Architecture/Construction/Engineering mentorship program), the presence of visiting journalists and more. In addition, students get:

- Priority enrollment in more than 20 STEMDAC-based elective classes.
- An opportunity to investigate careers in STEMDAC that match student interests and abilities.
- Access to individual speakers and panels from a wide variety of these related disciplines.
- Core curricula focused on English and Communication related issues across disciplines.
- Field trips to various facilities and other related activities.
- Opportunities to work with and be mentored by Engineering and Communication professionals.

Advisory Boards:

STEMDAC will be guided by the work of two advisory boards—one focused on STEM and Design interests, and the other on Communications. Each will also include select students who are chosen by academy students and staff. The Communications board includes professional writers, photographers, and videographers from The Hartford Courant, ESPN, NBC, and other journalistic institutions.

STEMDAC Portfolio:

While in the STEMDAC Academy, students will compile a digital portfolio detailing the career goal of the student and how his or her experiences in the academy have helped prepare them to pursue that career. The portfolio will include required and student chosen work samples representing their growth and learning over time. The portfolio will be presented to an Academy panel prior to graduation.

STEMDAC Electives:

Students are encouraged to take either of two elective introductory courses—"Engineering and Design" or "Communications Technology." Also, in order to graduate as a "STEMDAC Scholar," students must successfully earn a B in six separate electives from the menu listed below.

Electives are broken into four strands, but students are welcome to sample electives from different strands. To be a member of the STEMDAC Academy, students must earn at least 1.5 credits in the courses below during their time at MHS:

Mechanical/Aviation Engineering:

- CADD1/CADD2
- Aviation
- Automotives 1/Automotives 2
- Robotics
- Automation and Robotics Seminar

Civil/Environmental Engineering:

- Architecture 1/Architecture 2
- Construction 1/Construction 2
- Architecture Seminar
- Tools and Materials 1/Tools and Materials 2
- Tools and Materials Seminar

Electrical/Computer Science Engineering:

- Computer Programming 1
- Computer Programming and Game Design
- Mobile Computer Science Principles
- Electronics 1/Electronics 2

Contemporary Communication and Design Strand:

- Drawing/Advanced Drawing
- Metal and Wire Design 1
- Interior Design and Housing
- Contemporary Communications Workshop
- Contemporary Video Production
- Video 1 and 2
- Studio Production
- Sports Broadcasting
- Broadcast Journalism
- Desktop Publishing
- Yearbook
- Independent Study (Seniors only)

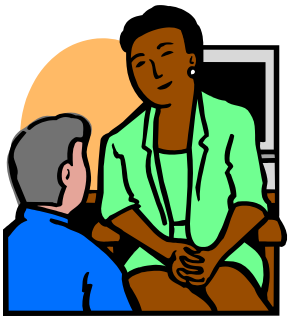
STEM Strand:

- World of Technology
- Using Tools and Materials 1 and 2

Note: Also available are seminar courses in the communications strand.

Career Clusters

The purpose of the following clusters are to provide guidance to students about the course selection process. These clusters are designed to assist in the process of determining courses that lend support to specific career clusters as outlined and should be considered assistive in nature rather than prescriptive. Students will move from one cluster to another as their interests change. The graduation requirements are still the final criteria of what a student needs for a Manchester High School diploma.



Arts and Media

Careers in this area include theater, dance and music, and such behind-the-scenes jobs as set design, lighting and camera work. This cluster also includes the visual arts, such as painting and sculpture, and the management of theaters, museums, art galleries and concert spaces. Also in this cluster are jobs in radio, television, films, newspapers and magazines, which might include announcing, acting, filming, producing, editing and reporting. Advertising is part of this cluster, as are jobs in commercial art, design and photography studies.

Required Courses for Graduation:

English: (4 credits)
- Language Arts
- Sophomore English or Humanities
- American Literature or American Studies*
- Senior English or English/Pub. Speaking Tech. Comm.

Math: (3 credits)
A three-year math program is required; placement is determined by student aptitude and prior course achievement. See guidance counselor for more information.

Health: (1.0 credit)
- Freshman Health Education
- Junior Health Education
- Senior Health Education

Science: (2.5 credits)
- Physical Science
- Biology
- One other advanced science course

Social Studies (3.5 credits)
- Roots of Global Civilization
- Modern World History or Humanities
- United States History or American Studies*
- Participation in American Society, Law and Order, Law in American Society, or AP US Government and Politics

Physical Education: (1.25 credits)
- Grade 9 PE
- Grade 10 PE
- Grade 11 PE

* American Studies is a 2 credit course that fulfills American Literature and US History requirements.

Suggested Electives:

Art
- Drawing
- Advanced Drawing
- AP Studio Art
- Portfolio Preparation
- Sculpture
- Painting
- Jewelry

Business
- E-Commerce Entrepreneurship
- Marketing 1
- Web Design 1 or 2
- Introduction to Business

Family & Consumer Science
- Fashion Design 1 & 2
- Textile Tech Seminar
- Fashion Merchandising
- Interior Design

Performing Arts
- At least two credits in performing ensembles
- Any two other courses

Publications
- Yearbook

Technology
- Video Production 1 & 2
- Broadcast Journalism
- Photography
- Desktop Publishing 1 & 2
- Contemporary Media

College Careers Pathway
Students should consider enrolling in the Career Pathway for Communications to earn college credit for their studies. There are considerations and they should meet with their guidance counselor for more information.

World Language
- 3 or more years of a single language

.

Business and Finance

Careers in this area include: financial managers, public relations managers, administrative managers, personnel managers, bank tellers, secretaries, actuaries, underwriters, systems analysts, computer programmers, bookkeepers, and statisticians.

Required Courses for Graduation:

English: (4 credits)
- Language Arts
- Sophomore English or Humanities
- American Literature or American Studies*
- Senior English or English/Pub. Speaking

Math: (3 credits)
A three-year math program is required; placement is determined by student aptitude and prior course achievement. See guidance counselor for more information.

Health: (1.0 credit)
- Freshman Health Education
- Junior Health Education
- Senior Health Education

Science: (2.5 credits)
- Physical Science
- Biology
- One other advanced science course

Social Studies (3.5 credits)
- Roots of Global Civilization
- Modern World History or Humanities
- United States History or American Studies*
- Participation in American Society, Law and Order, Law in American Society, or AP US Government and Politics

Physical Education: (1.25 credits)
- Grade 9 PE
- Grade 10 PE
- Grade 11 PE

* American Studies is a 2 credit course that fulfills American Literature and US History requirements.

Suggested Electives:

Business
- College Accounting
- Credit Union Internship
- Advanced Microsoft Word
- Management and Leadership
- Computer Programming 1, 2
- E-Commerce Entrepreneurship
- International Business
- Introduction to Business
- Marketing 1
- Sports and Entertainment Marketing
- School Store Internship
- Finance and Investing
- Web Page Design

Performing Arts
- At least one credit in performing ensembles
- Any other course

Social Studies
- Economics
- Sociology
- Psychology

Family & Consumer Science
- Culinary Arts
- Bake Shop 1, 2
- International Foods
- Fashion Merchandising

Technology
- Communication Technology
- Desktop Publishing
- World of Technology

College Career Pathway Program
Students should consider enrolling in the Career Pathway for Business Administration to earn college credits for their studies. There are special considerations and they should meet with their school counselor for more information.

World Language
- 3 or more years of a single language

Mathematics
- Statistics

Construction Technology & Design

Careers in this area include carpenters, plumbers, electricians, bulldozer operators, crane operators and others who work with large machinery and equipment. Also included are land developers, project designers, restoration artists, and construction developers.

Required Courses for Graduation:

English: (4 credits)
- Language Arts
- Sophomore English or Humanities
- American Literature or American Studies*
- Senior English or English/Pub. Speaking Tech. Comm.

Math: (3 credits)
A three-year math program is required; placement is determined by student aptitude and prior course achievement. See guidance counselor for more information.

Health: (1.0 credit)
- Freshman Health Education
- Junior Health Education
- Senior Health Education

Science: (2.5 credits)
- Physical Science
- Biology
- One other advanced science course

Social Studies (3.5 credits)
- Roots of Global Civilization
- Modern World History or Humanities
- United States History or American Studies*
- Participation in American Society, Law and Order, Law in American Society, or AP US Government and Politics

Physical Education: (1.25 credits)
- Grade 9 PE
- Grade 10 PE
- Grade 11 PE

* American Studies is a 2 credit course that fulfills American Literature and US History requirements.

Suggested Electives:

Art
- Drawing
- Advanced Drawing
- Explorations in 2 Dimensional Designs

Family and Consumer Science
- Interior Design

Math
- Precalculus

Performing Arts
- At least one credit in performing ensembles
- Any other course

Science
- Physics
- Scientific Principles of Technology

Business

Introduction to Business
Keyboarding and Introduction to MS Word
Marketing 1
E-Commerce Entrepreneurship
Finance and Investing

Technology
- Architecture 1, 2
- Computer-aided Design and Drafting 1,2
- Construction Technology 1, 2
- Innovation/Engineering/Design
- World of Technology

College Careers Pathway Program
Students should consider enrolling in the Career Pathway for Construction Technology or to earn college credit for their studies. There are special considerations and students should meet with their school counselor for more information.

Education

Careers in this area include teachers at any level and educational administrators.

Required Courses for Graduation:

English: (4 credits)
- Language Arts
- Sophomore English or Humanities
- American Literature or American Studies*
- Senior English or English/Pub. Speaking Tech. Comm.
- Advanced Placement English Literature
- UCONN Senior English

Math: (3 credits)
A three-year math program is required; placement is determined by student aptitude and prior course achievement. See guidance counselor for more information.

Health: (1.0 credit)
- Junior Health Education
- Senior Health Education

Science: (2.5 credits)
- Physical Science
- Biology
- One other advanced science course

Social Studies (3.5 credits)
- Roots of Global Civilization
- Modern World History or Humanities
- United States History or American Studies*
- Participation in American Society, Law and Order, Law in American Society, or AP US Government and Politics

Physical Education
- Grade 9 PE
- Grade 10 PE
- Grade 11 PE

* American Studies is a 2 credit course that fulfills American Literature and US History requirements.

Suggested Electives:

Art
- Select any 2

Business
- Finance and Investing
- Web Design 1 or 2
- MS Office Applications
- English/Pub. Speaking Tech. Comm.
- Keyboarding and Introduction to Microsoft Word

Family and Consumer Science
- Individual and Family Development (UConn Credit)
- World of Children 1, 2
- Child Development (MCC Credit)
- Human Services (MCC credit)

Performing Arts
- At least two credits in performing ensembles
- Music Appreciation
- Any two other courses

Science
- Physics or Chemistry
- Scientific Principles of Technology

Social Studies
- Psychology
- Sociology

Technology
- Communication Technology
- World of Technology

College Careers Pathway Program
Students should consider enrolling in the Careers Pathway for Early Childhood/Teacher Education to earn college credit for their studies. There are special considerations and they should meet with their school counselor for more information.

World Language
- 3 or more years of a single language.

Mathematics
- Statistics

Pre-Calculus

Environmental, Natural Resources & Agriculture

Careers in this area include jobs in which workers improve the environment, reduce wastes and byproducts, manage forests and land, produce food from the land and sea, and nurture animals. Many of these jobs are in owner-operated businesses where it is important to understand how all the parts of the businesses operate. In a small business, it may be necessary to take on many different responsibilities. Many jobs also exist in highly regulated industries, under strict government controls.

Required Courses for Graduation:

English: (4 credits)
- Language Arts
- Sophomore English or Humanities
- American Literature or American Studies*
- Senior English or English/Pub. Speaking Tech. Comm.

Math: (3 credits)
A three-year math program is required; placement is determined by student aptitude and prior course achievement. See guidance counselor for more information.

Health: (1.0 credit)
- Freshman Health Education
- Junior Health Education
- Senior Health Education

Science: (2.5 credits)
- Physical Science
- Biology
- One other advanced science course

Social Studies (3.5 credits)
- Roots of Global Civilization
- Modern World History & Humanities
- United States History or American Studies*
- Participation in American Society, Law and Order, Law in American Society, or AP US Government and Politics

Physical Education: (1.25 credits)
- Grade 9 PE
- Grade 10 PE
- Grade 11 PE

* American Studies is a 2 credit course that fulfills American Literature and US History requirements.

Suggested Electives:

Business
- Introduction to Business
- Marketing I
- Keyboarding and Introduction to MS Word
- Finance and Investing
- MS Office Applications
- Management and Leadership

Family & Consumer Science
- Culinary Arts
- Modern Meals
- Nutrition for Fitness

Math
- Problem Solving

Science
- Marine Science
- Animal Behavior
- Chemistry
- Science Research

Social Studies
- Economics
- Sociology
- Psychology

Technology
- Communication Technology
- World of Technology
- Innovation/Engineering Design
- Computer Aided Design Drafting
- Scientific Principles of Technology

World Language
- 3 or more years of a single language

Performing Arts
- At least one credit in performing ensembles
- Any other course

Liberal Arts and Sciences

This cluster is designed for students with a concentration in an academic interest area. It is suggested that students sample electives from many areas so they get an idea of what different areas may have to offer and in what areas they have the greatest strengths.

Required Courses for Graduation:

English: (4 credits)
- Language Arts
- Sophomore English or Humanities
- American Literature or American Studies*
- Senior English or English/Pub. Speaking Tech. Comm.

Math: (3 credits)
A three-year math program is required; placement is determined by student aptitude and prior course achievement. See guidance counselor for more information.

Health: (1.0 credit)
- Freshman Health Education
- Junior Health Education
- Senior Health Education

Science: (2.5 credits)
- Physical Science
- Biology
- One other advanced science course

Social Studies (3.5 credits)
- Roots of Global Civilization
- Modern World History or Humanities
- United States History or American Studies*
- Participation in American Society, Law and Order, Law in American Society, or AP US Government and Politics

Physical Education: (1.25 credits)
- Grade 9 PE
- Grade 10 PE
- Grade 11 PE

* American Studies is a 2 credit course that fulfills American Literature and US History requirements.

Suggested Electives:

Art
- Explorations in 2 Dimensional Design
- Pottery

Business
- Introduction to Business
- Marketing 1
- Finance and Investing
- Keyboarding and Introduction to Microsoft Word
- MS Office Applications

Family & Consumer Science
- Bake Shop 1, 2
- World of Children 1, 2
- Fashion Design 1, 2
- Child Development
- Human Services
- Interior Design

Mathematics
- Statistics
- Pre-calculus

Performing Arts
- At least two credits in performing ensembles
- Any two other courses

Social Studies
- Psychology
- Sociology
- Economics

Technology
- Computer Programming 1, 2
- Using Tools and Materials 1, 2
- World of Technology
- Communications Technology

World Language
- 3 or more years of a single language.

Government and Human Services

Careers in this area include political office holders, government service workers, social workers, psychologists, librarians, public safety workers (police and firefighters), and legal professionals.

Required Courses for Graduation:

English: (4 credits)
- Language Arts
- Sophomore English or Humanities
- American Literature or American Studies*
- Senior English or English/Pub. Speaking Tech. Comm.

Math: (3 credits)
A three-year math program is required; placement is determined by student aptitude and prior course achievement. See guidance counselor for more information.

Health: (1.0 credit)
- Freshman Health Education
- Junior Health Education
- Senior Health Education

Science: (2.5 credits)
- Physical Science
- Biology
- One other advanced science course

Social Studies (3.5 credits)
- Roots of Global Civilization
- Modern World History or Humanities
- United States History or American Studies*
- Participation in American Society, Law and Order, Law in American Society, or AP US Government and Politics

Physical Education: (1.25 credits)
- Grade 9 PE
- Grade 10 PE
- Grade 11 PE

* American Studies is a 2 credit course that fulfills American Literature and US History requirements.

Suggested Electives:

Business
- Keyboarding & Introduction to Microsoft Word
- Introduction to Business
- International Business
- Management and Leadership
- MS Office Applications

Family & Consumer Science
- Child Development
- Culinary Arts
- Bake Shop 1, 2
- World of Children 1, 2
- Human Services

Math
- Problem Solving
- Statistics

Performing Arts
- At least one credit in performing ensembles
- Any other course

Social Studies
- Economics
- Sociology
- Psychology
- Law and American Society

Techology
- Communication Technology
- World of Technology

College Career Pathway Program
Students should consider enrolling in the Careers Pathway for Criminal Justice to earn college credit for their studies. There are special considerations and students should meet with their school counselor for more information.

World Language
- 3 or more years of a single language

Health and Biosciences

Careers in this area include jobs in the health field, such as those found at hospitals, medical laboratories, nursing homes, clinics, medical practices and dental practices. It also includes animal care and veterinary opportunities.

Required Courses for Graduation:

English: (4 credits)
- Language Arts
- Sophomore English or Humanities
- American Literature or American Studies*
- Senior English or English/Pub. Speaking Tech. Comm.

Math: (3 credits)
A three-year math program is required; placement is determined by student aptitude and prior course achievement. See guidance counselor for more information.

Health: (1.0credit)
- Freshman Health Education
- Junior Health Education
- Senior Health Education

Science: (2.5 credits)
- Physical Science
- Biology
- One other advanced science course

Social Studies (3.5 credits)
- Roots of Global Civilization
- Modern World History oro Humanities
- United States History or American Studies*
- Participation in American Society, Law and Order, Law in American Society, or AP US Government and Politics

Physical Education: (1.25 credits)
- Grade 9 PE
- Grade 10 PE
- Grade 11 PE

* American Studies is a 2 credit course that fulfills American Literature and US History requirements.

Suggested Electives:

Business
- Keyboarding & Introduction to Microsoft Word
- Introduction to Business
- Finance and Investing
- Microsoft Office Applications
- Management and Leadership

Family & Consumer Science
- Individual & Family Development (UConn credit)
- Human Services
- World of Children 1, 2
- Modern Meals
- Child Development
- Nutrition for Fitness

Math
- Precalculus
- AP Calculus

Performing Arts
- At least one credit in performing ensembles
- Any other course

World Language
- 3 or more years of a single language

Science
- Chemistry, Physics
- Physics (AP)
- Human Anatomy and Physiology
- AP Biology
- Chemistry
- Science Research
- Investigating Health Careers

Social Studies
- Psychology
- Sociology

Technology
- Communication Technology
- Scientific Principles of Technology
- World of Technology

College Careers Pathway Program
Students should consider enrolling in the Careers Pathway for Medical Careers to earn college credit for their studies. There are special considerations and they should meet with their guidance counselor for more information.

Information Technology

Careers in this area include computer software designers, technical support providers, network developers and supports, and website designers.

Required Courses for Graduation:

English: (4 credits)
- Language Arts
- Sophomore English or Humanities
- American Literature or American Studies*
- Senior English or English/Pub. Speaking Tech. Comm.

Math: (3 credits)
A three-year math program is required; placement is determined by student aptitude and prior course achievement. See guidance counselor for more information.

Health: (1.0 credit)
- Freshman Health Education
- Junior Health Education
- Senior Health Education

Science: (2.5 credits)
- Physical Science
- Biology
- One other advanced science course

Social Studies (3.5 credits)
- Roots of Global Civilization
- Modern World History or Humanities
- United States History or American Studies*
- Participation in American Society, Law and Order, Law in American Society, or AP US Government and Politics

Physical Education: (1.25 credits)
- Grade 9 PE
- Grade 10 PE
- Grade 11 PE

* American Studies is a 2 credit course that fulfills American Literature and US History requirements.

Suggested Electives:

Business
- Keyboarding & Introduction to Microsoft Word
- Microsoft Office Applications
- Advanced MS Word
- Computer Programming 1, 2
- Web Page Design 1, 2
- E-Commerce Entrepreneurship

Family & Consumer Science
- Interior Design and Housing

Math
- Precalculus

Performing Arts
- Creating Music with Computers I and II

World Language
- 3 or more years of single language

Technology
- Communication Technology
- World of Technology
- Broadcast Journalism
- Desktop Publishing
- Electronics Technology 1, 2
- Contemporary Media

College Career Pathway Program
Students should consider enrolling in the Career Pathway for Office Administration to earn college credit for their studies. There are special considerations and they should meet with their school counselor for more information.

Social Studies
- Economics

Retail, Tourism, Recreation & Entrepreneurship

Careers in this area include the people who wait on customers in stores, people who work in hotels, restaurants and tourist attractions, and people who start their own businesses.

Required Courses for Graduation:

English: (4 credits)
- Language Arts
- Sophomore English or Humanities
- American Literature or American Studies*
- Senior English or English/Pub. Speaking Tech. Comm.

Math: (3 credits)
A three-year math program is required; placement is determined by student aptitude and prior course achievement. See guidance counselor for more information.

Health: (1.0 credit)
Junior Health Education
- Senior Health Education
- Junior Health Education

Science: (2.5 credits)
- Physical Science
- Biology
- One other advanced science course

Social Studies (3.5 credits)
- Roots of Global Civilization
- Modern World History
- United States History or American Studies*
- Participation in American Society, Law and Order, Law in American Society, or AP US Government and Politics

Physical Education: (1.25 credits)
- Grade 9 PE
- Grade 10 PE
- Grade 11 PE

* American Studies is a 2 credit course that fulfills American Literature and US History requirements.

Suggested Electives:

Business
- Keyboarding & Introduction to Microsoft Word
- Introduction to Business
- Advanced Microsoft Word
- Management and Leadership
- Marketing 1
- Sports and Entertainment Marketing
- School Store Internship
- Finance and Investing
- E-Commerce Entrepreneurship
- College Accounting
- Web Page Design 1, 2

Performing Arts
- At least one credit in performing ensembles
- Any other course

Social Studies
- Economics

Technology
- Communication Technology
- Desktop Publishing

Family & Consumer Science
- Child Development
- World of Children 1, 2
- Human Services
- Culinary Arts
- Bake Shop 1, 2
- International Foods
- Textiles Technology
- Fashion Merchandising

Physical Education
- Team Sports Elective
- Individual Sports Elective

Technology
- Communication Technology
- Desktop Publishing

World Language
- 3 or more years of a single language

Tech., Manufacturing, Communications & Repair

Careers in this area include technical jobs in manufacturing, the electric utilities, and telecommunications, including telephone and cable companies. This cluster also includes jobs in companies that repair automobiles, airplanes, computers and other technical products.

Required Courses for Graduation:

English: (4 credits)
- Language Arts
- Sophomore English or Humanities
- American Literature or American Studies*
- Senior English or English/Pub. Speaking Tech. Comm.

Math: (3 credits)
A three-year math program is required; placement is determined by student aptitude and prior course achievement. See guidance counselor for more information.

Health: (1.0 credit)
- Freshman Health Education
- Junior Health Education
- Senior Health Education

Science: (2.5 credits)
- Physical Science
- Biology
- One other advanced science course

Social Studies (3.5 credits)
- Roots of Global Civilization
- Modern World History or Humanities
- United States History or American Studies*
- Participation in American Society, Law and Order, Law in American Society, or AP US Government and Politics

Physical Education: (1.25 credits)
- Grade 9 PE
- Grade 10 PE
- Grade 11 PE

* American Studies is a 2 credit course that fulfills American Literature and US History requirements.

Suggested Electives:

Art
- Explorations in 2 Dimensional Design

Business
- Computer Programming
- Management and Leadership
- Finance and Investing
- Introduction to Business
- College Accounting
- Keyboarding & Introduction to MS Word
- Marketing I

Math
- Pre-calculus

Performing Arts
- At least one credit in performing ensembles
- Creating Music with Computers I and II

Science
- Physics or Scientific Principles of Technology

Social Studies
- Economics

World Language
- 3 or more years of a single language

College Career Pathway Program
Students should consider enrolling in the Career Pathway for Communications to earn college credit for their studies. There are special considerations and they should meet with their school counselors for more information.

Technology
- Autos 1, 2
- Aviation and Aerospace
- CAD 1, 2
- Architecture 1, 2
- Robotics
- Communications Technology
- Electronics 1, 2
- Tools and Materials
- World of Technology
- Video Production 1, 2

ART DEPARTMENT

Visual arts are essential to your complete education. Study in the visual arts helps develop your intellect and provides you with the skills necessary for effective communication, and problem solving by teaching you to:

- Create artworks that express concepts as well as your ideas and feelings.
- Respond with understanding to diverse artworks.
- Understand and use materials, techniques, forms and language relevant to visual arts.
- Understand the importance of visual art in expressing and illuminating human experience, beliefs and values.
- Identify works of art and recognize characteristics of art from different historical cultures and periods.
- Develop mastery in at least one art form to continue lifelong involvement as a responder and a creator.
- Develop mastery in preparation for a career.
- Participate in the artistic life of the school and/or community.
- Understand the connection between visual arts and daily life.

Career Opportunities in Art

Digital Media Artist
Illustrator
Designer
Fine Artist/Craftsperson
Gallery/Museum Curator
Arts Administrator/Educator
Animator
Photographer
Architect

Demonstrations of Excellence

Scholastic Arts Awards
Art Scholarships
Community Service
Art Exhibitions

We encourage all students at MHS to take advantage of the many art course offerings we have for beginning and advanced level study.

For students considering going to Art School or considering a career in the arts it is highly recommended that students take the beginning drawing class.

The major goal of the Art Department is to develop the students' creative skills as well as their recognition of the artistic achievements of others. The students will develop and demonstrate an awareness and understanding of the diversities of American and World Cultures through the arts. They will be encouraged to challenge themselves and strive for excellence in their own artwork. The courses will encourage personal growth through the exploration of career goals in the art field.

Courses offered:

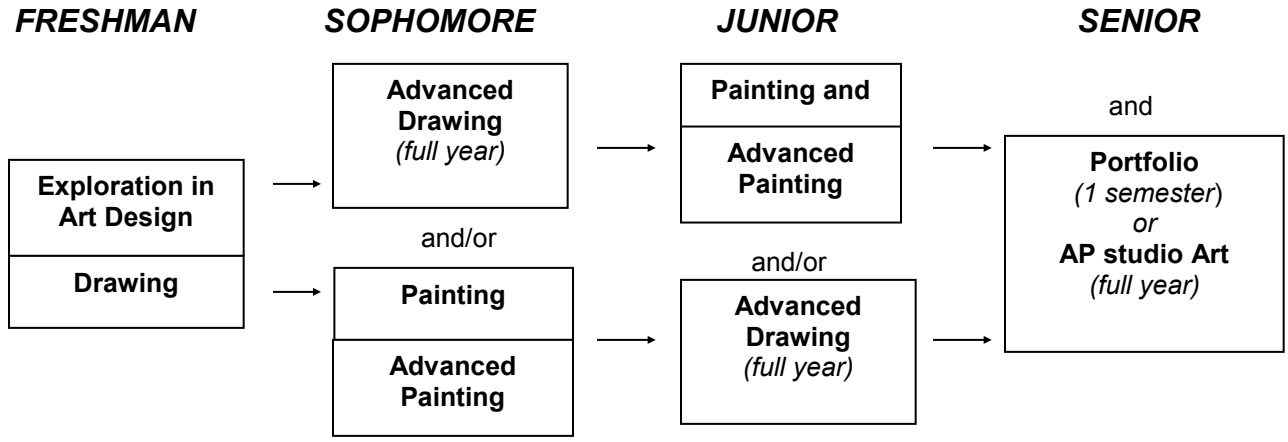
2 Dimensional Art Courses
Explorations in Art & Design*
Drawing*
Advanced Drawing
Painting
Advanced Painting
Advanced Placement Studio Art
Portfolio Preparation
Comic Design
Illustration Part I
Illustration Part II

3 Dimensional Art Courses
Explorations in Jewelry Making*
Sculpture*
Metalsmithing/Jewelry*
Advanced Jewelry/Metals
Pottery*
Advanced Pottery
Wheel Throwing Pottery

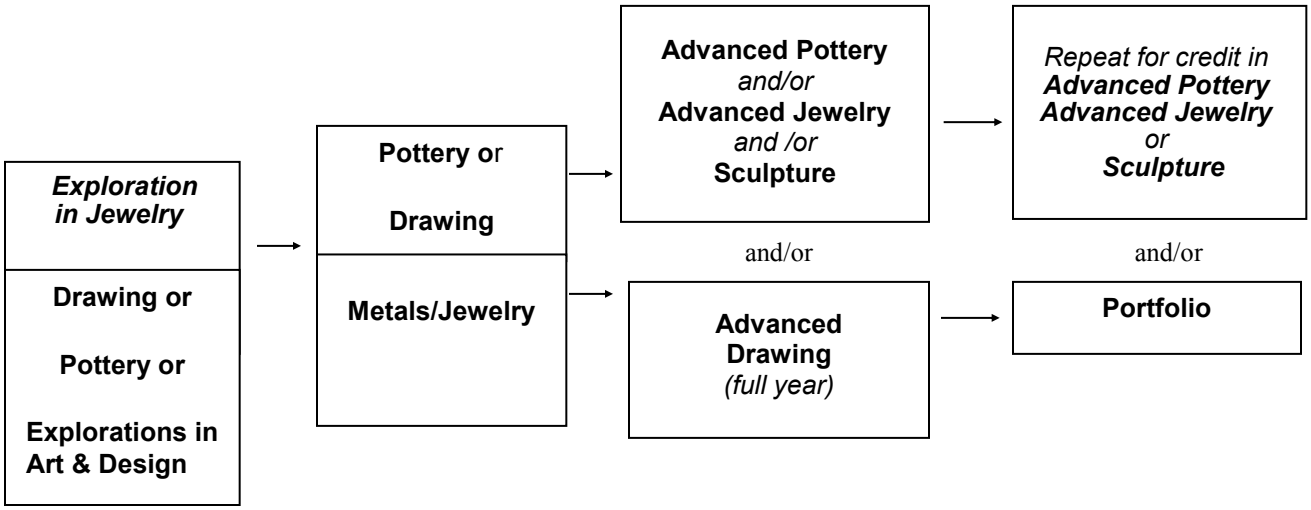
* Courses with an asterisk (*) have no sequential requirements.

Two Possible Sequences for Students Interested in Art Schools After High School:

1.



2.



ART

BEGINNING LEVEL COURSES

AR4115 Explorations in Art and Design—Post Secondary Prep ***1S 9-12 .50 CR***
AR4215 Explorations in Art and Design—Post Secondary Prep ***2S 9-12 .50 CR***
Students will explore the idea of art as a tool of communication. A variety of art making processes and techniques will be explored including drawing, painting, printmaking and collage. Individual projects will be assigned along with the reading and research of a vast array of artists from around the world.

AR4125 Drawing—Post Secondary Prep ***1S 9-12 .50 CR***
AR4225 Drawing—Post Secondary Prep ***2S 9-12 .50 CR***
This course is a prerequisite for **Advanced Drawing and Painting**. It is recommended for all students planning a career in the Fine Arts, commercial arts and architecture. Students will focus on improving observational drawing skills by looking at a variety of objects and drawing them. The self portrait is emphasized as a traditional subject matter. The course focuses on a variety of drawing media, design skills, shading and perspective to create the illusion of three dimensions. **Students may petition for College Prep level credit.**

AR4105 Explorations in Jewelry Making—Post Secondary Prep ***1S 9-12 .50 CR***
AR4205 Explorations in Jewelry Making—Post Secondary Prep ***2S 9-12 .50 CR***
This course is an introduction into creative jewelry making. You will work with sheet metal, wire, glass, beads, and found objects. The techniques include enameling, beading and wire working. Silver soldering is not used in this course. The use of precious metals or beads is at your own expense.

AR4175 Metalsmithing/Jewelry—Post Secondary Prep ***1S 9-12 .50 CR***
AR4275 Metalsmithing/Jewelry—Post Secondary Prep ***2S 9-12 .50 CR***
This course is an introduction to metalsmithing and jewelry design. Students will learn soldering, enameling, stone setting and proper tool use and care. Students will work with a variety of sheet and wire metals. The use of precious metals or stones is at your own expense.

AR4145 Pottery—Post Secondary Prep ***1S 9-12 .50 CR***
AR4245 Pottery—Post Secondary Prep ***2S 9-12 .50 CR***
This is a course in functional and non-functional ceramic design. Basic forming techniques (coil, pinch, slab, and wheel) will be used to make a variety of projects. Firing and glazing techniques will be explored.

AR4315 Wheel Throwing Pottery—Post Secondary Prep (Pending BOE Approval) ***1S 9-12 .50CR***
AR4415 Wheel Throwing Pottery—Post Secondary Prep (Pending BOE Approval) ***2S 9-12 .50CR***
Wheel thrown pottery is pottery created on a potter's wheel. You attach a ball of clay to the wheel, it spins, and the artist sculpts the ball of clay into a pot. It sounds easy, but as any pottery student can tell you, it's pretty challenging. The students must first learn to center the clay, then open the pot and draw up the walls. After they successfully create a pot, they still have to learn to trim, detail, glaze, and sometimes pull & attach a handle. Students will be excited to create utilitarian pieces that are food and dishwasher safe forms such as bowls, mugs, and plates. Potter or advanced pottery classes are not a prerequisite for this class.

AR4165 Sculpture—Post Secondary Prep ***1S 9-12 .50 CR***
AR4265 Sculpture—Post Secondary Prep ***2S 9-12 .50 CR***
This course involves work in non-functional, three-dimensional forms. Sculptures of various media will be created in both additive and subtractive techniques. **Students may petition for College Prep. level credit. This course may be repeated.**

ADVANCED LEVEL COURSES

AR3026 Advanced Drawing—College Prep ***10-12 1.0 CR***
Sequential: Drawing
This is a **full year course** recommended for students who have a strong interest in drawing. A variety of media including colored pencils, graphite, pastels, pen and ink, charcoal and collage is utilized. Mark making techniques are explored through observational and imaginative subject matter. You will need to purchase a sketchbook for homework assignments.

AR3136 Painting—College Prep ***1S 10-12 .50 CR***
Sequential: Drawing
This is an introduction to painting using acrylic paint on canvas. You will learn basic painting techniques and color theory. Subject matter may include the still life, landscape, and abstraction. You will study in depth a number of well known painters. You will need to purchase a sketchbook for homework assignments.

AR3236 Advanced Painting—College Prep ***2S 10-12 .50 CR***
Sequential: Painting
This course is recommended for students who have a strong interest in painting and wish to pursue advanced techniques. Subject matter includes the still life, landscape, and portrait on larger sized canvases. You will need to purchase a sketchbook for homework assignments.

AR4156 Advanced Pottery—Post Secondary Prep ***1S 10-12 .50 CR***
AR4256 Advanced Pottery—Post Secondary Prep ***2S 9-12 .50 CR***
AR4056 Advanced Potter—Full Year—Post Secondary Prep ***10-12 1 CR***
Sequential: Pottery
The students will work on variations of the basic forming techniques in pottery. The planning of projects will involve historical research on design and procedures. Full year pottery course will have an emphasis on learning and mastering the potter's wheel. **The course may be repeated twice for credit with an emphasis on individual and advanced projects**.

AR4186 Advanced Jewelry/Metals—Post Secondary Prep ***1S 10-12 .50 CR***
AR4286 Advanced Jewelry/Metals—Post Secondary Prep ***2S 9-12 .50 CR***
Students with previous experience will be introduced to more advanced jewelry and metal smithing techniques. The projects may include but are not limited to chain making, stone setting, enameling and forming and raising of metal. Demonstrations and discussion support in-class work and experimentation are encouraged. **Individual research of historical and contemporary metal art will inspire work.** The use of precious metals or stones are at the students own expense. Students who desire to do more in-depth work in the course may request college prep level within the first two weeks.

AR3144 Portfolio Preparation—College Prep ***1S 12 .50 CR***
Sequential: Painting or Advanced Drawing
The course is designed for students who are contemplating a career in some field of art. Projects will be done in various two dimensional media, including creative work with computer graphics, mixed media and traditional techniques. It will help them to prepare and organize their work for presentation to prospective employers or for college admission. It is recommended that students electing this course have taken as many additional art courses as possible before their senior year.

AR1007 Advanced Placement—Studio Art ***AP Level 12 1.0 CR***
Sequential: Advanced Painting or Advanced Drawing
This is a rigorous college level experience emphasizing an area of studio art in depth. The work produced is critiqued on the basis of college standards. Throughout the course, criticism and relevant art history information will be addressed. The Advanced Placement Program is a cooperative education endeavor of the College Board. Advanced Placement in Studio Art is a full year program of study. **A minimum of a B average in Drawing, Advanced Drawing, Painting and at least one other studio class, as well as a teacher recommendation are required.** There is a lab fee for this course. **All students are required to complete the AP Portfolio. If you elect not to send it to the College Board, you will receive Honors Level credit. For AP Level credit, you must pay the fee and submit the portfolio to the College Board.**

AR4305 Comic Design—Post Secondary Prep (Pending BOE Approval) ***1S 9-12 .50CR***
AR4405 Comic Design—Post Secondary Prep (Pending BOE Approval) ***2S 9-12 .50CR***
A course in Comic Design will provide the training and framework to stimulate your creativity and develop your artistic and storytelling abilities. There will be teacher demonstrations that teach students numerous formal techniques including proportion, perspective, 3D drawing, and the principles of composition. The focus of this course will encourage your individual artistic style to flourish in an environment designed to guide students through Comic Art using traditional techniques, cartooning, script-writing, character design, and much more.

AR3115 Illustration Part 1—College Prep (Pending BOE Approval) ***1S 9-12 .50CR***
AR3215 Illustration Part 1—College Prep (Pending BOE Approval) ***2S 9-12 .50CR***
An introduction to illustration styles and techniques, students will learn about the steps in approaching the creative process of illustrated artwork with basic techniques application. Additionally, there will be a concentrated focus on the fundamentals of drawing, anatomy, drawing from live models, perspective, visual communication, color theory and psychology of color, black and white balance, halftone, shading theory, chiaroscuro, pencil and ink technique, color pencil and first level of water-based media, and students will also improve their skills on fiction and non-fiction illustration.

AR3125 Illustration Part 2—College Prep (Pending BOE Approval) ***1S 9-12 .50CR***
AR3215 Illustration Part 2—College Prep (Pending BOE Approval) ***2S 9-12 .50CR***
The goal for Illustration 2 is to strengthen the anatomical and perspective skills, while also making students comfortable working with different ink techniques and water painting techniques including Watercolor and Tempura and Liquid Acrylic painting. Students will create a series of illustrations, fiction and non-fiction, challenging their creativity in different areas such as Children's Stories, Historical Themes ranging from the 1200's up to Futuristic (year 3000) and Fantasy themes. Upon the conclusion of this course, students are left with an appreciation of illustration for specific age groups (Pre-school, Elementary, Middle School, Adolescent, Young Adults, and Adults).

Business and Finance Technology Department

Get ready for college! Get ready for life!

The Business and Finance Technology Department offers a variety of courses that prepare students for life after high school. Whether you plan on immediately entering the work force or majoring in Business Administration in college (according to *The Princeton Review* Business Administration is the most popular college major!), we surely have a course that will provide you with business and technology skills that will last a lifetime!

Course Offerings
(Courses marked by an asterisk (*) may be eligible for Manchester Community College Credit)

Accounting and Finance	Business Management	Computer Information Systems	Marketing
College Accounting *	Banking Internship	Computer Programming 1	Marketing 1
Finance and Investing	E-commerce Entrepreneurship*	Keyboarding and Introduction to Microsoft Word*	Sports and Entertainment Marketing
	International Business	Advanced Microsoft Word*	E-Commerce Entrepreneurship*
	Introduction to Business	Microsoft Office Applications	School Store Internship
	Management and Leadership Foundations	Public Speaking – Technology Communications*	
	Skills for Success*	Web Page Design 1	
		Web Page Design 2*	

Career opportunities include:

Accountant	Financial analyst	Restaurant manager
Advertising executive	Hotel manager	Retail manager
Auditor	Insurance claims adjuster	Sales manager
Bank executive	Insurance underwriter	Securities/commodities trader
Bank teller	International marketing	Sports/entertainment manager
Computer programmer	Investment banker	Sports/entertainment marketer
Entrepreneur	Marketing research analyst	Stockbroker
Executive secretary	Public relations specialist	Travel agent
Fashion merchandiser	Real estate broker	Web designer

Departmental extracurricular opportunities include:

- Future Business Leaders of America Club (F.B.L.A.)
- Distributive Education Clubs of America (D.E.C.A.)
- Annual holiday food drive
- M.S. Walk at Manchester Community College

School Based Enterprises

- The Trading Post is the school store located in the cafeteria at Manchester High School. Students that have completed Marketing I with at least a B average, where student leaders manage all aspects of retail store operations including product development, marketing research, sales, promotion, money management, budget preparation, and accounting.
- The Northeast Family Federal Credit Union MHS branch is located in the cafeteria of Manchester High School. Student interns are trained to work as tellers in this fully functional branch of the credit union.

Consider taking one of our exciting business electives!

Accounting and Finance Course Offerings

BU8516 Introduction to Accounting – Multi-Level **1S 9 - 12 .50 CR**
BU8616 Introduction to Accounting – Multi-Level **2S 9 - 12 .50 CR**

Accounting is the international language of business and a necessary skill required for any student planning to pursue a career in business or considering a post-secondary degree in business or finance. This introductory course will provide students with a basic understanding of accounting theory. In addition, it will familiarize students with the basics of the accounting equation and financial statement analysis. Students apply their knowledge of financial decisions in a simulated stock market game. Students who have already received credit for College Accounting may not take this course.

BU8027 College Accounting—Multi-Level **11-12 1.00 CR**
This full year college level course is recommended for students interested in a career in business or pursuing a post-secondary degree in business or finance. The course covers the basic elements of the accounting equation and introduces students to the fundamentals of financial statement analysis for individual businesses and corporations. Students will be introduced to the concepts of assets, liabilities, capitalization, and be provided with an introduction to the use of leverage and financial ratio analysis in determining the health of a company. **Students enrolled in the College Career Pathways Program who take this class in their junior or senior year and earn a "B" or better may be eligible to receive 3 MCC credits which may be transferable to other institutions of higher education.**

BU8536 Finance and Investing—Multi-Level **1S 9-12 .50 CR**
BU8636 Finance and Investing—Multi-Level **2S 9-12 .50 CR**
This course is designed to provide students with the fundamentals of managing and investing their money. Students will learn to develop a financial plan, create a budget, and evaluate credit card debt, apply for loans, purchase health and auto insurance, utilize financial calculators, and determine sound saving practices. Students will participate in popular stock market games that encourage students to compete against other students from high schools throughout Connecticut for the potential of winning prizes and college scholarships. Students will also have the opportunity to use a variety of computer simulations, including the Virtual Business Personal Finance Program, which reflects real market conditions, to practice their finance knowledge.

Business Management and Marketing Course Offerings

BU8004 Credit Union Internship—Multi-Level **12 1.0 CR**
Prerequisite: Internship, Marketing, College Accounting, and/or Finance and Investing or permission of instructor.
Students who meet the prerequisite requirements may apply for this internship. Selected students will work in the Northeast Family Federal Credit Union branch located at Manchester High School. Upon completion of a background check and rigorous employee training, selected students will work with credit union staff members in our fully functional credit union located in the cafeteria of the high school. Student employees will assist customers in everyday transactions including deposits, withdrawals, check cashing, balance inquiries, and opening/closing accounts. The credit union will train interns to perform job duties and may offer after-school and/or summer paid employment opportunities to selected students.

BU8005 E-Commerce Entrepreneurship—Multi-Level **10-12 1.0 CR**
So you want to be a millionaire? How about an "e-millionaire?" In this class, students will develop skills and abilities needed to create and operate an actual online business. Students will learn what it takes to brainstorm viable business solutions, analyze financial and legal constraints, write business plans, and perform marketing activities necessary to achieve financial success. Using a variety of case studies, computer simulations, and other resources, students will collaborate to develop academic, creative thinking, and problem solving skills to create a fully functional online store. **Students enrolled in the College Career Pathways Program who take this class in their junior or senior year and earn a "B" or better may be eligible to receive 3 MCC credits which may be transferable to other institutions of higher education.**

BU8305 International Business—Multi-Level **1S 9-12 .50 CR**
BU8405 International Business—Multi-Level **2S 9-12 .50 CR**
We live in a global economy and it is essential to gain the skills and knowledge necessary to effectively compete in a highly competitive, diverse workforce. In this course students will explore the basics of international business, including international careers, laws and ethics, currency exchanges, communication challenges, and risks involved in global business activities such as terrorism. An emphasis of this course will include exploration and appreciation of cultural differences that impact international trade relationships.

BU8715 Introduction to Business—Multi-level **1S 9-12 .50 CR**
BU8815 Introduction to Business—Multi-level **2S 9-12 .50 CR**
This introductory course will cover such topics as economic systems, marketing, accounting, banking, insurance, forms of business ownership, investing in stocks and bonds, entrepreneurship, and management and consumer/life skills. Students will become aware of the importance of teaming and problem solving in the business world. Various software applications, will be used throughout the course.

BU8527 Management and Leadership—Multi-Level **1S 9-12 .50 CR**
BU8827 Management and Leadership—Multi-Level **2S 9-12 .50 CR**
Future business leaders, this class is for you! The course is intended for students planning to seek a post-secondary degree in business administration, manage their own business, or who simply have a desire to explore career opportunities in business. Students will be introduced to the basic characteristics of a business, social and ethical considerations of business transactions, exploration of how to form a business, and the responsibilities business managers have to safeguard the environment and the study of the impact of going green on business profits. Students will be introduced to theories relating to human motivation and the fundamentals of organizational behavior and apply this knowledge to a realistic business venture.

BU8116 Marketing 1—Multi-Level **1S 9-12 .50 CR**
BU8216 Marketing 1—Multi-Level **2S 9-12 .50 CR**
BU8016 Marketing 1—Multi-Level (full year) **9-12 1.0 CR**
This course should be taken by anyone who desires to pursue a career in business, retail, advertising, sales, display or fashion merchandising. Students will learn about marketing careers, ethics, and fundamental theories in marketing, including product development, pricing, promotion, marketing research, and sales techniques, all with the goal of becoming familiar with what it takes to make a business successful. Fundamental business and leadership skills will be developed through classroom instruction, computer simulations, school store experiences, and participation in DECA (Distributive Education Clubs of America) activities.

BU8126 Sports and Entertainment Marketing (Marketing 2)—Multi-Level **1S 10-12 .50 CR**
BU8226 Sports and Entertainment Marketing (Marketing 2)—Multi-Level **2S 10-12 .50 CR**
Sequential: Marketing 1 or instructor permission.
In this second phase of the marketing program, students will participate in a variety of case study simulations and project based activities designed to promote and advertise sports and entertainment events. Students will use technology to implement a marketing/advertising campaign for an actual MHS sporting or entertainment event. Students will be trained for management/internship positions in the school store, and leadership and team building skills will be reinforced by participating in DECA (Distributive Education Clubs of America) activities.

BU8127 School Store Internship—Multi-level **1S 10-12 CR**
BU8227 School Store Internship—Multi-level **2S 10-12 CR**
Pre-requisite: Marketing 1, Grades 10, 11, 12 must pass Marketing with a B or higher.
Marketing interns are student leaders who run The Trading Post, the school store at MHS. Students manage all aspects of school store operations. Major responsibilities of marketing interns include the preparation of financial statements, development of new and improved products and services, conducting marketing research, designing promotional campaigns, and training future interns. Students will develop career-building skills through an increased involvement in DECA (Distributive Education Clubs of America) activities and documenting accomplishments using an electronic portfolio. Students will be primarily assessed as if they were working in an actual retail setting. **This course may be repeated for credit.**

BU8135 Foundations for Success—Multi-level **1S 9-12 .50 CR**
BU8235 Foundations for Success—Multi-level **2S 9-12 .50 CR**
This course should be taken by any student desiring to improve his or her academic performance in high school and beyond. Students will be exposed to techniques and methods designed to improve note taking abilities, study habits, test taking skills, organization, time management, familiarity with one's learning style, attitude, memorization, and communication. A variety of computer programs and simulations will be used to enhance the curriculum. **Students enrolled in the appropriate College Career Pathways Program who take this class in their junior or senior year and earn a "C" or better may be eligible to receive 3 MCC credits which may be transferable to other institutions of higher education.**

Computer Information Systems Course Offerings

BU3185 Computer Programming—College Prep. **1S 9-12 .50 CR**
BU3285 Computer Programming—College Prep. **2S 9-12 .50 CR**
Prerequisite: Algebra I
This course is designed to teach the fundamentals of object-oriented programming using current object-oriented programming languages, such as Visual Basic. Emphasis is placed on designing and creating well-structured programs using the programming process. Students will learn vocabulary, code syntax, and programming logic as they design and code programs.

BU3105 Keyboarding and Intro. to Microsoft Word—College Prep **1S 9-12 .50 CR**
BU3205 Keyboarding and Intro. to Microsoft Word—College Prep **1S 9-12 .50 CR**
In this course, students will utilize a variety of software applications intended to develop and improve keyboarding speed, accuracy, and proper technique. Emphasis will be upon the mastery of alphabetic, numeric and other keyboarding functions, leading to increased computer productivity. During the second half of this course, students will use Microsoft Office Word to format a variety of documents including business and personal letters, memos, and reports. **Students who complete this course with a grade of "C+" or higher are encouraged to take Advanced Microsoft Office Word, which may be eligible for college credit.**

BU8136 Advanced Microsoft Word—Multi-Level **1S 10-12 .50 CR**
BU8236 Advanced Microsoft Word—Multi-Level **1S 10-12 .50 CR**
Sequential: Keyboarding and Introduction to Microsoft Word or permission of instructor
This course is intended to prepare students to successfully complete the core level exam for Microsoft Office in Word. Passing this exam, which may be taken at several locations throughout the state, demonstrates understanding of Microsoft Word to prospective employers. Students will complete advanced applications using Word to complete actual business assignments. **Students enrolled in the College Career Pathways Program who take this class in their junior or senior year and earn a "B" or better may be eligible to receive 3 MCC credits which may be transferable to other institutions of higher education.**

BU3326 Microsoft Office Applications—College Prep. **1S 9-12 .50 CR**
BU3426 Microsoft Office Applications—College Prep. **2S 9-12 .50 CR**
This course will provide students with a basic understanding of the computer applications contained in Microsoft Office, including Word, Excel, PowerPoint, and Access. These applications have become a necessary skill leading to future success in college and in today's technologically based workforce. Upon successful completion of this course, students are strongly encouraged to build computer application skills by taking web page design or computer programming.

BU3706 Web Page Design 1—College Prep **1S 9-12 .50 CR**
BU3805 Web Page Design 1—College Prep **2S 9-12 .50 CR**

This course provides instruction in the principles of web design using HTML and current/emerging software programs. Areas of instruction include Web development, design techniques, HTML tags, software integration, and publishing. Instructional strategies include peer teaching, collaborative instruction, and project-based learning activities. Personal and business websites are designed and created using HTMLl as well as Adobe Dreamweaver, Photoshop and Flash. **Students who complete this course with a grade of C+ or higher are encouraged to take Web Page Design 2, which may be eligible for college credit.**

BU8506 Web Page Design 2—Multi-Level **1S 10-12 .50 CR**
BU8605 Web Page Design 2—Multi-Level **2S 10-12 .50 CR**

Prerequisite: C+ average or higher in Web Page Design 1 or permission of instructor.

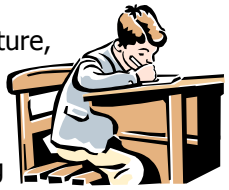
This course builds upon skills learned in Web Design 1. Students will be introduced to Cascading Style Sheets and a scripting language, such as JavaScript. Students will study the concepts of publishing to a Web server by defining, connecting and uploading to a remote server. Students can expect to have adequate skills to intern in a Web design business. **Students enrolled in the appropriate College Career Pathways Program who take this class in their junior or senior year and earn a "C" or better may be eligible to receive 3 MCC credits which may be transferable to other institutions of higher education.**

BU8104 Career Exploration—Multi-Level **1S 11-12 .50CR**
BU8204 Career Exploration—Multi-Level **2S 11-12 .50CR**

Career Exploration offers an opportunity for students to evaluate themselves in such areas as academic skills, employability skills and technical skills required in today's job market. Students will write a resume, cover letter and thank you letters as well as practice various forms of communication. Education and training, characteristics of successful employees, future lifestyle, goals, resources and barriers will be studied. In addition, students will research careers and participate in activities such as interviews, networking and job shadowing. Students will be expected to submit weekly journals and summary of hours, once site work has started: students are placed in job shadows with a community resource (government agency, institution, school or business) to receive practical experience in an area consistent with their career objective.

ENGLISH

The English Program is designed to prepare students for the demands of today, as well as the world of tomorrow. Focus is on the Common Core State Standards in which instruction prepares students to; listen, view, read critically, and to speak and write effectively. Technology is infused and utilized in a variety of assignments and assessments ensuring that students have the means and opportunities to use technology as a tool for learning and communicating ideas in the 21st century.



Students are exposed to a myriad of texts which include: the classics, young adult literature, non-fiction pieces, plays, poetry, and films. In the blending of texts, students evaluate universal themes, explore human nature, and examine concepts evoked by the texts in a variety of assessments. Writing instruction promotes each student's depth of knowledge as chosen artifacts lend themselves to viewing ideas through a variety of lenses. Writing instruction, also, promotes a writing process designed to enhance each student's command of the conventions of the English language.

English courses require students to demonstrate the ability to read closely, communicate ideas clearly and become responsible scholars who actively engage in the learning process. The use of research and technology serves to obtain, organize, and present relevant and current information which supports college and career readiness.

Honors Requirements

Students in Grade 8 will be evaluated for Honors English by the following criteria: results of standardized tests, student achievement, and teacher recommendation. The required sequence for the honors track is suggested: Freshman Honors, Sophomore Honors, Junior Advanced Placement Literature or UCONN American Studies and either UCONN Senior English or Advanced Placement Language and Composition English. Students may also be recommended as qualified candidates for Honors courses by their teacher.

Alternative Courses

Alternative courses to the regular English class offerings are as follows:

- In the junior year, students may elect American Studies
- In the senior year, students may elect Public Speaking
- In the senior year, students who are teacher recommended, may elect Creative Writing
- 10th—12th grade students may take Creative Writing as an elective course

ENGLISH

Summer Reading

All students are expected to read over the summer and will receive instructions prior to the end of the school year. Additionally, the summer reading expectation for each grade will be available on MHS Redline.

Depending on the course, students will either provide evidence of their reading during the summer or upon return to school. Once again, please note that instructions will be available on MHS Redline.

GRADE 9

EN2001 Language Arts—Honors ***9 1.0 CR***
EN3001 Language Arts—College Prep ***9 1.0 CR***
The Freshman English course focuses on language arts foundation skills, emphasizing close reading and academic writing. Students concentrate on the analysis of both fiction and nonfiction texts in order to evaluate and apply evidence to a variety of writing styles. Additionally, ninth grade language arts classes target vocabulary, speaking and listening, collaboration, and independent exploration. Technology is infused and utilized in a variety of assignments and assessments ensuring that students have the means and opportunity to use technology as a tool for learning, communicating ideas, and advancing in the 21st century.

GRADE 10

EN2002 Sophomore English—Honors - This course is designed to introduce pre AP skills ***10 1.0 CR***
EN3002 Sophomore English—College Prep ***10 1.0 CR***
Sophomore English is a World Literature course that builds upon the skills introduced in grade 9. The expectation is for students to improve upon their ability to dissect complex texts by participating in close readings and academic writing. The major resources are the classics, young adult literature, and an anthology. Vocabulary, speaking and listening, and conventions of the English Language are emphasized and expanded upon. Technology is infused and utilized in a variety of assessments ensuring students are kept abreast of the technological opportunities which better prepare them in the 21st century.

EN2022 Humanities-Honors ***10 1.0 CR***
This course examines modern World History through an interdisciplinary model. The course will be team taught by members of the Social Studies and Language Arts faculty. Students will focus on skill development and common core tasks as they examine the origins of the modern world through the past. The course will focus on cultural studies as well as the history and literature of a time period. Students will examine art, architecture, and music to fulfill the interdisciplinary mission of the course.

GRADE 11

EN1003 Advanced Placement - Literature and Composition ***11 1.0 CR***
This course engages students in careful reading and critical analysis of American and World classic/literature. Students develop skills in close reading of complex texts, analysis of rhetorical strategies and deeper understanding of the literary elements. Technology is infused and utilized in a variety of assessments ensuring students are kept abreast of technological opportunities which better prepares them in the 21st century. Students are strongly encouraged to sit for the AP exam in May, potentially earning college credit.

EN2013 UCONN Honors American Studies—Early College Experience ***11 1.0 CR***
American studies is a work intensive, interdisciplinary, team taught course. Students are expected to independently read college level fiction and nonfiction texts and write sophisticated thesis driven essays that synthesize their understanding of American history, literature, and culture. Students meet daily which fulfills the requirements for Junior English (1.00 credit) and U.S. History (1.00 credit). The course offers a variety of learning experiences, including a number of field trips designed to enhance the curriculum. Technology is infused and utilized in a variety of assessments ensuring students are kept abreast of technological opportunities which better prepares them in the 21st century. Students who earn a “C” or better and who register for this course per the University of Connecticut’s guidelines are eligible to receive 3 UCONN credits, which may also be transferable to other institutions. Students must be recommended for this course by both their English teacher and their History teacher.

GRADE 11 CONTINUED

EN3003 American Literature—College Prep ***11 1.0 CR***
EN4003 American Literature—Post Sec. Prep ***11 1.0 CR***
The course of study for juniors emphasizes the analytical study of American literature. The primary focus is on close reading and academic writing in order to convey one's depth of knowledge in a sophisticated manner. This theme based course connects current events with history spanning from the Colonial Period through the Modern Era. Students independently research American topics to support their views of American ideologies. Vocabulary, speaking and listening, and the conventions of English language, are an essential component of junior English courses. Technology is infused and utilized in a variety of assessments ensuring students are kept abreast of technological opportunities which better prepares them in the 21st century.

GRADE 12

Senior English—Advanced Placement, Honors, College Prep, and Post Secondary Prep Offered

EN1004 Advanced Placement English—Language and Composition ***12 1.0 CR***
This course engages students in becoming skilled readers of prose written in a variety of rhetorical contexts and in becoming skilled writers who compose for a variety of purposes. Technology is infused and utilized in a variety of assessments ensuring students are kept abreast of technological opportunities which better prepares them in the 21st century. Students must sit for the AP exam in May, potentially earning college credit (Note: This is a separate and distinct course and exam from AP English—Literature and Composition).

EN2004 UCONN Honors English—Early College Experience ***12 1.0 CR***
Students analyze major topics sparked by literature and nonfiction pieces concentrating on synthesizing ideas from a variety of sources. This course is the equivalent of UCONN English 1011, which is described in the university course catalog as instruction in academic writing through close reading. Assignments emphasize an exploration of a topic and its implications. Revision, instruction on grammar, mechanics, and style are key components. Technology is infused and utilized in a variety of assessments ensuring students are kept abreast of technological opportunities which better prepares them for the 21st century. Students who earn a "C" or better and register for this course per the University of Connecticut's guidelines are eligible to receive 4 UCONN credits, which may also be transferable to other institutions.

EN3004 Senior English—College Prep ***12 1.0 CR***
EN4004 Senior English—Post Secondary Prep ***12 1.0 CR***
The Senior English course is designed to ensure college and career readiness. Its focus is on rigorous college preparatory writing, as well as on developing competency in reading, understanding, and responding to college level texts. Required reading will be drawn from nonfiction, fiction and various multimedia sources. Students will continue to explore reading and writing as processes, with the goals of improving the effectiveness of oral and written communication as well as developing the ability to analyze texts and synthesize information. Technology is used in a variety of assessments ensuring students are kept abreast of technological opportunities which better prepares them in the 21st century.

EN3004 Senior English—MCC English Composition ***12 1.0 CR***
Students are selected for this course based on SAT verbal and/or writing scores. Additionally, students who are close to the qualifying score may take an MCC placement test for possible consideration. This course engages students in becoming skilled readers of college level texts in a variety of rhetorical contexts and in becoming skilled writers who compose for a variety of purposes. Technology is infused and utilized in a variety of assessments ensuring students are kept abreast of technological opportunities, which better prepares them in the 21st century. Students who earn a C or better for the year will receive 3 MCC English credits.

EN3054 Senior English/Public Speaking—College Prep ***12 1.0 CR***
This course is designed to improve students' speaking, writing, and listening skills in order to become more confident and effective communicators. With an emphasis on articulating the conventions of the English Language written essays, speech preparation, topic related research and improved delivery techniques are honed. There is an accompanying technology component that enhances the course keeping students abreast of current technological advancement which support presentations. **This course is not approved by the NCAA as a core English course.**

EN9006 Creative Writing—Unleveled ***10-12 1.0 CR***
This course is designed for students who are serious about expressing their creativity in a variety of written modes. Students are exposed to poetry, script writing, short stories, and other genres. Through work-shopping and revision processes, the writer will develop an ear for dialogue, rhythm, fluency, diction, and tone. Publishing opportunities will be pursued through various venues. Technology is used in a variety of assessments ensuring students are kept abreast of technological opportunities which better prepare them in the 21st century. This course may be taken for English graduation credit in Grade 12 **only** with teacher recommendation.

ENGLISH LANGUAGE DEVELOPMENT

Placement in English Language Development Courses is done using standardized assessments in reading, writing, listening and speaking on a yearly basis. Students attend ELD classes until they reach proficiency on the LAS Links. In the time between reaching proficiency on LAS Links and the CMT or CAPT, students are enrolled in ELL support. In order to exit the ELL program, a student must be proficient on the LAS Links and reach level 2 (Basic) in Reading, Writing and Math on the CAPT. Students are monitored for two years after they are exited from the program.

ES9115
ES9215
Beginning English Language Development (9-12)
A beginning level course for the English Language Learner in all grades. Flexible grouping and differentiated instruction serve the needs of the different levels of the students. Focus is on acquisition of basic vocabulary, grammar, reading, writing and understanding English.

ES9125
ES9225
English Language Development (9-11)
An intermediate level course for the English Language Learner in the ninth and tenth grades. Flexible grouping and differentiated instruction serve the needs of the different levels of the students. Focus is on reading, writing, listening, speaking, grammar and word work. Support also provided for grade level assessments and course work, including CAPT.

ES9135
ES9235
English Language Development (12)
An intermediate level course for the English Language Learner in eleventh and twelfth grade. Flexible grouping and differentiated instruction serve the needs of the different levels of the students. Focus is on reading, writing, listening, speaking, grammar and word work. Support also provided for grade level assessments and course work, as well as applications for post-high school education and career paths.

ZZELLS
ELL Support
This is a support option where an ELL student can take a class for credit or receive support as needed during study halls, lunch or before or after school. Teachers can also use this as a confirmation that a student is an English learner and may be entitled to accommodations that are appropriate to his/her English acquisition level.

FAMILY & CONSUMER SCIENCES

Empowering students with life skills to be successful in the future.

Family and Consumer Sciences Touches Your Future Through the:

- Application of academic skills, critical thinking and communication skills.
- Development of occupational and personal skills required for employment.
- Management and conservation of individual, family and community resources.
- Preparation for parenting and child care responsibilities.
- Exploration of career options including entrepreneurial opportunities.
- Understanding of the interdependence of science, technology and nutrition.
- Development of consumer and career skills involving the creation of fashions.
- Development of an understanding of multi-cultural and multi-generational populations.

The following courses are offered:
(Courses marked by an asterisk(*) can provide Manchester Community College credit.)
(Course marked by a (U) can provide UCONN credit.)

Fashion and Design
Fashion and Design I
Fashion and Design II
Textiles Technology Seminar
Fashion Merchandising
Interior Design & Housing

Hospitality
Introduction to Culinary Arts
International Foods
Bake Shoppe I
Bake Shoppe II
Culinary Arts*
Nutrition For Fitness

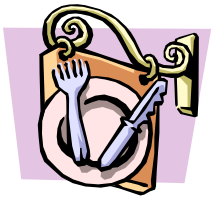
Human Development
World of Children I
World of Children II
Child Development *
Human Services *
Human Development & Family Studies (U)

CAREER OPPORTUNITIES INCLUDE:

Fashion Designer	Dietician	Family Counselor	Clothing Retailer
Food Editor	Pastry Chef	Senior Center Director	Textile Researcher
Restaurant Manager	Social Worker	Fashion Illustrator	Day Care Provider
Tailor/Seamstress	Caterer	Child Life Specialist	Bridal Consultant
Teacher	Cruise Director	Food Technologist	Interior Designer

CLASSROOM AND EXTRACURRICULAR EXPERIENCES INCLUDE:

Community Service Opportunities



- Catering functions at MHS and in the community
- Production of breads and pies
- Participation in our departmental club—FCCLA (Family, Career and Community Leaders of America)
- Participate in Unified Sports
- Manchester High School Best Buds

School and Business Partnerships

* Internships at various Manchester elementary schools, our middle schools and elder care facilities.

School Based Enterprises

* Management of the MHS Nursery School by Human Development classes.
* Staff luncheons prepared by Culinary Arts classes.
* Seasonal food sales by Bake Shoppe I and II classes.
* Juried showcase by the Fashion and Design classes.

START YOUR FUTURE NOW WITH THESE ELECTIVE OPTIONS!

FASHION AND DESIGN

FC8135 Fashion and Design I—Multi-level ***1S 09-12 .50 CR***
FC8235 Fashion and Design I—Multi-level ***2S 09-12 .50 CR***

Students will gain a basic knowledge of clothing and apparel design through the construction of two garments/quilts. Opportunities to learn about fibers and fabrics, care and repair of clothing, use and care of equipment, and consumer issues will be introduced. Careers in clothing and textiles will be explored.

FC8145* Fashion and Design II—Multi-level ***1S 10-12 .50 CR***
FC8245* Fashion and Design II—Multi-level ***2S 09-12 .50 CR***

Prerequisite: Fashion and Design I

The emphasis of this course is on increasing the student's knowledge of clothing construction and textiles. Students must follow a prescribed sequence of projects and learning experiences. Two garments/quilts are constructed. Careers in the fashion industry will be explored. Purchasing of materials is required.

FC8556 Textiles Technology Seminar—Multi-level ***1S 10-12 .50 CR***
FC8656 Textiles Technology Seminar—Multi-level ***2S 10-12 .50 CR***

Prerequisite: Fashion and Design II

This course will allow students to explore more extensively the field of textiles and design. The sequence of projects and learning experiences will be tailored to meet student interests and career needs. This course may be repeated for credit.

FC8117 Fashion Merchandising—Multi-level ***1S 11-12 .50 CR***
FC8217 Fashion Merchandising—Multi-level ***2S 11-12 .50 CR***

Prerequisite: Fashion and Design 1

Fashion Merchandising brings to life the business aspects of the fashion world. It presents the basics of textiles, apparel, and retail economics. After a 4 week orientation, students will work in retail stores in the Manchester community for at least 1½ hours each week as well as meet one class period a week at MHS. Class time will concentrate on preparing students for their internship experiences. Students will be placed at JoAnn Etc. for 7 weeks and in a fashion retail store for 7 weeks. This internship will be supervised by the classroom teacher.

FC8717 Interior Design and Housing—Multi-level ***1S 09-12 .50 CR***
FC8817 Interior Design and Housing—Multi-level ***2S 09-12 .50 CR***

Interior Design is an ever-changing field. Students will learn the elements and principles used in designing personal living environments. This course will cover topics from *Housing Choices* to the *Basics of Design* to *Career Options.* Take this opportunity to explore career possibilities in this occupation.

HOSPITALITY

FC8315 Introduction to Culinary Arts—Multi-level ***1S 09-12 .50 CR***
FC8425 Introduction to Culinary Arts—Multi-level ***2S 09-12 .50 CR***

The main goals of this course are planning and preparation of foods. Use of labor, time, and money-saving techniques are emphasized. This course is recommended as an introductory course for students interested in the culinary field. This course is designed for students who desire to learn about cooking skills. Students will practice a variety of methods of preparation of basic items through extensive laboratory experiences. Creative cooking and working in a group will be an emphasis. Food selection and proper storage will be taught. Students will learn to write menus and plan meals. Food production skills will be integrated into each unit and students will present some foods to sell in Silk City Café.

FC8516 International Foods—Multi-Level ***1S 10-12 .50 CR***
FC8616 International Foods—Multi-Level ***2S 10-12 .50 CR***
This course explores a variety of international cooking techniques and practices emphasizing culture, customs, and nutrition within each unit. A sample includes Mexican, Puerto Rican, Chinese, Italian and soul food, as well as holiday meals, appetizers, garnishes, and buffet service.

FC8136 Bake Shoppe I—Multi-Level ***1S 10-12 .50 CR***
FC8236 Bake Shoppe I—Multi-Level ***2S 10-12 .50 CR***
The Bake Shoppe gives students the opportunity to learn about careers in the baking industry and opportunities for self-employment in the home. Units included are baking, decorating, safety and sanitation, quantity cookery, and careers. The course is especially recommended for those seeking employment in food service or a related occupation.

FC8147 Bake Shoppe II—Multi-Level ***1S 11-12 .50 CR***
FC8247 Bake Shoppe II—Multi-Level ***2S 10-12 .50 CR***
Prerequisite: Bake Shoppe I
This is an advanced course to allow students to learn more about the preparation and marketing of baked goods. Students learn special techniques using fondant, marzipan, and color flow. Students prepare baked goods for the public and merchandise them to meet the needs of a specific clientele. A serious interest in retail food as a career possibility and the ability to work independently are necessary for enrollment in the course.

FC8017 Advanced Culinary Arts—Multi-Level ***10-12 1.0 CR***
Prerequisite: Algebra 1 and (1) prior foods course
This course introduces students to the basic techniques and procedures required to prepare basic foods; with emphasis on identification and methods by which to develop sanitary working habits. Introduce phases of food sanitation, the Connecticut public health laws and development of in-plant sanitation procedures.
Students enrolled in the appropriate College Career Pathways Program who take this class in their sophomore, junior, or senior year and earn a "C" or better may be eligible to receive 3 MCC credits (if they have taken or plan to take Algebra II and English Comp. 101 or Public Speaking.

FC8126 Nutrition for Fitness—Multi-level ***1S 10-12 .50CR***
FC8226 Nutrition for Fitness—Multi-Level ***2S 10-12 .50CR***
This course will explore the six major categories of nutrients and their roles in the performance of a teenage athlete. The Science of nutrition will be applied to the preparation of the foods and the development of healthy lifestyles and eating habits.

FC9104 Senior Career Exploration and ServSafe—Unleveled ***1S 12 .50CR***
FC9204 Senior Career Exploration and ServSafe—Unleveled ***2S 12 .50CR***
Enrolled students will continue to develop an e-portfolio. Students will present their electronic portfolio for review at end of course; students will participate with CHEA community Advisory Board member meetings. They will complete personality assessments. Students will explore various careers within the Culinary, Hospitality, and Entrepreneurship Industries. Resume writing and interview skills will prepare for a 4-6 hour job shadow experience.
ServSafe: Learn basic food safety practices for preparing and serving food. The ServSafe Program is a complete solution that delivers consistent food safety training. The program covers five key areas: Basic Food Safety, Personal Hygiene, Cross contamination & Allergens, Time & Temperature, Cleaning & Sanitation. This class will include the certificate examination at no fee to the student. **All MCC Culinary and Hospitality students are required to take ServSafe and pass to continue onto upper level classes.**

FC9107 Silk City Intern—Unleveled ***1S 11-12 .50 CR***
FC9207 Silk City Intern—Unleveled ***2S 11-12 .50 CR***
Prerequisite: 1 foods class or ServSafe
Silk City interns are student leaders who run Silk City Café. Students manage all aspects of managing the Café. Major responsibilities of the interns include preparing the food product, display, and sales. They will manage the day-to-day operations including calculating daily sales by item, inventory management, develop new products and services, café website and catering order preparation. Students will develop career building skills by participating in at least one community event, and managing customer relations. Students will primarily be assessed as if working in a retail setting. **This course may be repeated for credit.**

FC8115 Hospitality & Tourism Management ***1S 10-12 .50CR***
This course will explore the five major categories in the Hospitality Industry. The study of hospitality will include an in depth look at lodging, food and beverage service, travel and tourism, and meeting planning. This will include a focus on career exploration within the industry. This course prepares students for roles in the hospitality industry and beyond, where job growth is projected to be 3% to 4% per year.

EDUCATION PUBLIC SERVICE ACADEMY

FC9106 Introduction to Education and Public Services Academy—Unleveled ***1S 10-12 .50CR***
This course is for students entering the Education/Public Services Academy. The focus of instruction will include student centered activities that examine careers in Education and Public Service. Students will be exposed to guest speakers from various occupations and engage in panel discussions with many professionals. Exploration will include issues, policies and trends in education and public service as well as topics of diversity and equity, law and ethics. Students will create a portfolio for the EPSA Experience course.

FC9206 Education and Public Service Experience - Unleveled ***2S 10-12 .50CR***
This experiential course follows Intro to EPSA and provides students with opportunities to apply their knowledge in the school and community. The focus will include the examination of proposing, planning and scheduling participation outside of the classroom in the students area of interest. These experiences will include supervised field-implemented instructional activities and job shadowing that will supplement instruction. This course is student driven and enhances leadership and decision-making skills.

HUMAN DEVELOPMENT

FC8175 World of Children I—Multi-level ***1S 09-10 .50 CR***
FC8275 World of Children I—Multi-level ***2S 09-10 .50 CR***
This course provides an exploratory introduction to the study of children and their growth and development. Instructional units include: parenting skills, contraception, pregnancy, and birth. The physical, social, emotional, and intellectual development of infants will be explored. Opportunities to interact with pre-schoolers will be provided in the nursery school. (Students may elect an alternate learning activity for sensitive content topics.)

FC8176 World of Children II—Multi-level ***1S 10-11 .50 CR***
FC8276 World of Children II—Multi-level ***2S 9-11 .50 CR***
Prerequisite: World of Children I
The physical, social, emotional and intellectual development of 1 to 5 year olds will be explored. Some of the topics to be studied are play activities, discipline vs. punishment and the development of small and large motor skills. Community agencies that assist families will be reviewed. Students will have a weekly nursery school experience. (Must pass World of Children I to take World of Children II).

FC8127 Child Development—Multi-level ***1S 11-12 .50 CR***
FC8227 Child Development—Multi-level ***2S 11-12 .50 CR***
Does your future include children? Do you see yourself as a parent, day care provider, elementary school teacher, social worker, or in another child care related occupation? Child Development offers the student the opportunity to work with 12 nursery school children at MHS on a weekly basis. All students will plan and teach a nursery school lesson. Students will study and evaluate the growth and development of children. The multi-level concept provides an avenue for receiving credit ranging from general studies through honors. Students who complete this course with a grade of "C" or higher are encouraged to take Human Services, which may be eligible for MCC college credit. **Students enrolled in the appropriate College Career Pathways Program who take this class in their junior or senior year and earn a "C" or better may be eligible to receive 3 MCC credits which may be transferable to other institutions of higher education.**

FC8234 Human Services—Multi-level ***2S 11 -12 .50 CR***
Prerequisite: Child Development & Permission of Dept. Chair
Have you chosen or are strongly leaning towards a career involving children? Then, Human Services is for you! After a six-week orientation, students will work in the community at an internship site. Class time will concentrate on preparing students for their community internship experiences and furthering their understanding of school age children and educational issues. Students will be placed in a day care facility, nursery school, or public school program, for their internship which will be supervised by the classroom teacher. **For MCC credit through the College Career Pathway program, both Child Development and Human Services must be taken on the College Prep level.**

FC2007 Human Development & Family Studies (UCONN HDFS 1070 ECE) ***Honors Level 11-12***
Full Year Course: 1 MHS Credit
3 UCONN Credits
Prerequisite: Planned Program of study to include Algebra I & II, English, History and Science (Biology, Chemistry, Anatomy & Physiology or Physics)
This course is designed as an introduction to the field of human development, social services and the worlds of teaching and nursing. The course will provide students with an understanding of individual and family development over the lifespan. Job shadows and internships will be key components of this course. Students must provide their own transportation. This course is the equivalent of UCONN HDFS 1070.

HEALTH

Students at Manchester High School take a semester of Junior Health, and one quarter of Freshman & Senior Health.

HEALTH COURSES

HE4111 1Q Freshman Health - Post Sec. Prep 09 .25 CR
HE4121 2Q Freshman Health - Post Sec. Prep 09 .25 CR
HE4231 3Q Freshman Health - Post Sec. Prep 09 .25 CR
HE4241 4Q Freshman Health - Post Sec. Prep 09 .25 CR

Students are introduced to a variety of wellness issues. Personal choices and personal responsibility are emphasized in relation to issues. Topics include: health issues, self-esteem, depression, substance abuse, healthy relationships and human growth and development.

HE4103 (M-Z) Junior Health - Grade 11 - Post Sec. Prep 1S 11 .50 CR
HE4203 (A-L) Junior Health - Grade 11 - Post Sec. Prep 2S 11 .50 CR

A variety of topics are covered in depth in this comprehensive course. Personal choices and personal responsibility are emphasized in relation to health issues.

Topics include: human growth and development, nutrition, disease prevention (includes AIDS education), physical, mental and emotional health, relationships, dating violence and suicide prevention.

Specific community resources are identified and utilized throughout this course.

DE4114 1Q Senior Health - Post Sec. Prep 12 .25 CR
DE4124 2Q Senior Health - Post Sec. Prep 12 .25 CR
DE4234 3Q Senior Health - Post Sec. Prep 12 .25 CR
DE4244 4Q Senior Health - Post Sec. Prep 12 .25 CR

Students will update existing knowledge on issues that impact their personal health and the well-being of the community. Alcohol poisoning, drunk driving, drug abuse, and sexual assault are issues that need to be discussed to ensure individual and communal safety. Students are asked to evaluate their current behaviors and explore the possible consequences of their decisions. Societal problems that result from the above issues are also discussed and the role that each citizen plays in the solution.

Standard First Aid/CPR/AED training is also taught in this course. Students will receive a certificate from the American Red Cross, if they demonstrate competency in these life saving skills.

MATHEMATICS

Mathematics Opens Doors to Productive Futures

GOALS:

To educate students so that they are able to:

* Understand and apply mathematical concepts
* Develop logical thinking and organizational skills
* Apply integrated mathematical problem-solving strategies to investigate, evaluate, and solve problems from within and outside mathematics
* Formulate mathematical definitions and express generalizations discovered through investigations
* Use and value the connections between mathematics and other disciplines
* Prepare while building mathematical literacy to become an educated consumer, and prepare for future mathematical study
* Build a foundation for post-graduate study in related fields
* Use the tools of math inquiry including spreadsheets, graphing calculators and computer programs

MATHEMATICS AT MHS:

Manchester High School math students have demonstrated their excellence by achieving recognition and/ or awards for:

* S.A.T. Performance
* AP Calculus Performance
* National Merit Scholars
* AHSME Examination
* Math Team Competition
* UCONN mathematics and Statistics credit

COMMON CORE MATHEMATICAL PRACTICES:

* Make sense of problems and persevere in solving them
* Reason abstractly and quantitatively
* Construct arguments and critique the reasoning of others
* Model with mathematics
* Use appropriate tools strategically
* Attend to precision
* Look for and make use of structure
* Look for and express regularity in repeated reasoning

CAREER PATHS USING MATHEMATICS:

Mathematics is a critical foundation for all future pursuits and career paths. As students progress in mathematical study, the range of career paths broadens and expands infinitely! Following is a list of possible career paths open to students which necessitate a background and use of mathematical concepts. The following chart illustrates various paths for careers that use mathematics.

Careers that require a solid high school foundation of college preparatory or honors mathematical study		Careers that require a minor in undergraduate mathematics	Careers that require post graduate work in mathematics
Meteorological Technician	Bookkeeper	Chartered Accountant	Pure Mathematician
Computer Technologist	Metallurgical Technician	Business Administrator	Applied Mathematician
Pharmacy Assistant	Landscape Technician	Engineer	Computer Scientist
Respiratory Technologist	Agricultural Technician	Chemist	Statistician
X-Ray Technician	Opthalmic Assistant	Physicist	Actuary
Medical Equip. Maint. Technician	Dental Assistant	Geologist	
Survey Technician	Health Record Admin.	Astronomer	
Draftsman/Woman	Lawyer	Meteorologist	
Cartographer Technician	Geographer	Physician	
Forestry Technician	Urban Planner	Dentist	
Horticulturist	Property Appraiser	Pharmacist	
General Accountant	Cartographer	Medical Lab Technologist	
Commercial Driver	Survey Technologist	Optometrist	
Sports Administrator	Engineering Technologist	Landscape Architect	
Office Clerk	Occupational & Physical Therapist	Forester	
Animal Care Technician	Nuclear Medical Technologist	Veterinarian	
Data Processor	Speech Therapist	Biologist	
Industrial Administrator	Sociologist	Agrologist	
Industrial Designer	Registered Nurse	Interior Designer	
Welder	Elementary Teacher	Surveyor	
Tool and Die Maker	Psychologist	Graphic Artist	
Electronic Technician	Audiologist	Architect	
Farm Equipment Mechanic		Economist	

Successful completion of Algebra I and Geometry in the middle school may be noted on the student's official MHS transcript. All students must, however, meet the graduation requirement of a minimum of three courses in mathematics at MHS and proficient CAPT performance.

The major goals of the Mathematics Department are to provide a curriculum that reflects varied student abilities, interests and needs, and to develop in each student the ability to apply mathematics to solve problems in everyday life, vocations and careers.

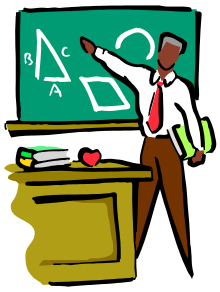
MATHEMATICS

.

The Mathematics Department offers the following courses:

Algebra 1
Algebra 2
Geometry
Math Applications
Problem Solving Strategies in Mathematics
Consumer Math

Pre-Calculus Mathematics
Finite Mathematics
Statistics
Elementary Discrete Mathematics
(UCONN 3 credit course)
Elementary Concepts of Statistics
(UCONN 4 credit course)
A.P. Calculus AB (UCONN 4 credit course)
A.P. Calculus BC



MA2001 Algebra 1—Honors ***9 1.0 CR***
Students who are recommended for this course must demonstrate high academic achievement, mental maturity, superior abstract reasoning ability and independent motivation. The Common Core Algebra 1 curriculum connects students' prior knowledge of numerical operations, algebraic reasoning and working with data to the investigation and application of linear and non-linear functions. The curriculum focuses on strengthening students' ability to model and interpret situations and develop mathematical solutions to problems.

MA3001 Algebra 1—College Prep ***9 1.0 CR***
The Common Core Algebra 1 curriculum connects students' prior knowledge of numerical operations, algebraic reasoning and working with data to the investigation and application of linear and non-linear functions. The curriculum focuses on strengthening students' ability to model and interpret situations and develop mathematical solutions to problems..

MA4032 Algebra 1—Post Secondary Prep ***9 1.0 CR***
This course is designed for grade 9 students who have had difficulty mastering middle school mathematics as they study high school curriculum. The Common Core Algebra 1 curriculum connects students' prior knowledge of numerical operations, algebraic reasoning and working with data to the investigation and application of linear and non-linear functions. The curriculum focuses on strengthening students' ability to model and interpret situations and develop mathematical solutions to problems. Students enrolled in Algebra 1 PSP are required to also enroll in the Math Enrichment course. This Algebra 1 course satisfies one credit of the mathematics requirement for graduation.

MA2026 Algebra 2—Honors ***9-11 1.0 CR***
Prerequisite: Geometry Honors or College Prep
Sequential: Algebra 1 Honors
Students who are recommended for this course must demonstrate high academic achievement, mental maturity, superior abstract reasoning ability and independent motivation. The Common Core Algebra 2 curriculum connects students' prior knowledge of function analysis, geometric reasoning and working with data to the investigation and application of more complex algebraic and trigonometric functions. The curriculum focuses on strengthening students' ability to model and interpret complex situations and develop and defend mathematical solutions to problems.

MA3026 Algebra 2—College Prep ***10-12 1.0 CR***
Prerequisite: Geometry
Sequential: Algebra 1 College Prep.
The Common Core Algebra 2 curriculum connects students' prior knowledge of function analysis, geometric reasoning and working with data to the investigation and application of more complex algebraic and trigonometric functions. The curriculum focuses on strengthening students' ability to model and interpret complex situations and develop and defend mathematical solutions to problems.

MA4026 Algebra 2—Post Secondary Prep ***11-12 1.0 CR***
Prerequisite: Geometry
The Common Core Algebra 2 curriculum connects students' prior knowledge of function analysis, geometric reasoning and working with data to the investigation and application of more complex algebraic and trigonometric functions. The curriculum focuses on strengthening students' ability to model and interpret complex situations and develop and defend mathematical solutions to problems. Students enrolled in Algebra 2 PSP are required to also enroll in the ALEKS course.

MG2015 Geometry—Honors ***9-11 1.00 CR***

Sequential: Algebra 1 Honors

Students who are recommended for this course must demonstrate high academic achievement, mental maturity, superior abstract reasoning ability and independent motivation. The Common Core Geometry curriculum connects students' prior knowledge of algebraic reasoning, function analysis and working with data to the investigation and application of geometric relationships and formulas. The curriculum focuses on the study of coordinate geometry, congruence and similarity relationships, and connections from algebra and functions. It also strengthens students' ability to model and interpret situations, and use deductive reasoning to develop mathematical solutions to problems.

MG3015 Geometry—College Prep ***9-11 1.0 CR***

Sequential: Algebra 1 CP

The Common Core Geometry curriculum connects students' prior knowledge of algebraic reasoning, function analysis and working with data to the investigation and application of geometric relationships and formulas. The curriculum focuses on the study of coordinate geometry, congruence and similarity relationships, and connections from algebra and functions. It also strengthens students' ability to model and interpret situations, and use deductive reasoning to develop mathematical solutions to problems.

MG4016 Geometry—Post Secondary Prep ***10 1.0 CR***

Sequential: Algebra 1

The Common Core Geometry curriculum connects students' prior knowledge of algebraic reasoning, function analysis and working with data to the investigation and application of geometric relationships and formulas. The curriculum focuses on the study of coordinate geometry, congruence and similarity relationships, and connections from algebra and functions. It also strengthens students' ability to model and interpret situations, and use deductive reasoning to develop mathematical solutions to problems. This course requires an additional half block of instruction for the development of skills and further instruction of the curriculum topics. Students enrolled in Geometry PSP must also enroll in the ALEKS course.

MA4037 Problem Solving Strategies in Math—Post Secondary Prep ***11-12 1.0 CR***

Prerequisite: Geometry

This course is designed to develop and improve the problem solving strategies for school and the world of work. Students will work cooperatively in groups and develop communication skills. They will learn to select appropriate strategies for a wide variety of math problems and improve test-taking skills including those needed for SATs.

MC2007 Pre-Calculus—Honors ***10 -12 1.0 CR***

Sequential: Algebra 2 Honors

This course presents important concepts and methods from Algebra, Analytic Geometry, and Trigonometry. It illustrates how they may be used in concert to attack significant, theoretical and practical problems. Emphasis is placed on Trigonometry and function theory to provide the foundation for the study of college level mathematics.

MC3007 Pre-Calculus—College Prep ***10 - 12 1.0 CR***

Sequential: Algebra 2

This course provides a solid preparation for students who may wish to continue the study of mathematics. The major emphasis is the integration of Algebra and Analytic Geometry with other topics in mathematics by an approach that stresses functions. Special attention is given to the study of Trigonometry.

MM2117 UCONN Discrete Mathematics—Honors ***1S 11-12 .50 CR***

Sequential: Algebra 2 College Prep.

Under the University of Connecticut Cooperative Plan, three college credits may be earned for satisfactory completion of this course. It is equivalent to Math 103Q at UCONN. This is a practical mathematics course for the college bound student. It includes a study of problem solving, simultaneous linear equations, counting and probability, graph theory, deductive reasoning, the axiomatic method and finite geometries and number systems. There are applications to business and economics. This course is not eligible for UConn credit if calculus has been passed.

MM2214 UCONN Elementary Concepts of Statistics—Honors ***2S 11-12 .50 CR***

Sequential: Pre-Calculus Math -College Prep. Level

Under the University of Connecticut Cooperative Plan, four college credits may be earned for successful completion of this course. It is equivalent to Stat 110V at UCONN. This course is a study of standard and nonparametric approaches to statistical analysis, exploratory data analysis, elementary probability, sampling distributions, estimation and hypothesis testing, one-and two -sample procedures, regression and correlation.

MC1004 A.P. Calculus AB—A.P. Level ***11-12 1.0 CR***

Sequential: Pre-Calculus - Honors level

This course includes limits, derivatives, anti-derivatives, indefinite and definite integrals of algebraic, trigonometric, logarithmic and exponential functions. Indeterminate forms and improper integrals along with infinite series will be covered. Applications in the science, business and engineering fields are included. Students are required to take the AP Exam and pay the fee. (Students may earn credit for Math 1131Q at UCONN.)

MC1014 A.P. Calculus BC—A.P. Level ***12 1.0 CR***

Sequential: AP Calculus AB

This course is an extension of the Calculus AB curriculum with enhancement of prior topics included. Topics include derivatives and integrals or parametric and polar functions with applications, advanced techniques of anti-differentiation, and exploration and analysis of sequences and series. Students are required to take the AP Exam and pay the fee.

MC2077 Honors Calculus—Honors Level ***11-12 1.0 CR***

Sequential: Pre-Calculus – College Prep. level

This course is designed to provide highly motivated students the opportunity to study Calculus topics as a preparation for their college career. Topics include limits, derivatives, anti-derivatives, and indefinite and definite integrals. A study of transcendental functions is included, as well as infinite sequences and series. Emphasis will be placed on application of Calculus topics and integration of graphing calculators to solve problems.

MM4027 Consumer Math—Post Secondary Prep ***12 1.0 CR***

This elective course puts numerical reasoning skills to practical consumer use. Students will study different mathematical aspects of housing, budgeting, transportation, and banking; as they investigate the personal finances of an adult consumer.

MM4003 Math Applications—Post Secondary Prep ***12 1.0 CR***

Innovative approaches will be used to develop mathematical concepts including applications of math to employment situations and recreation. Students will only be placed in this course on the recommendation of their guidance counselor and the department chair. Upon review of the Math Department, successful completion of this course may be used to show proficiency in order to complete the District Performance Standard in Mathematics.

MM3014 Finite-Math—CP ***12 1.0 CR***

Sequential: Algebra 2

This course is designed for the junior or senior student who wants to continue their study of math and intends to major in a non-scientific area such as business or liberal arts. Applications are stressed and techniques of problem solving are explored in the areas of sets and counting, number theory, probability and other advanced algebra topics. Students who have successfully completed a pre-calculus course may not earn credit for this course.

MM3007 Statistics—CP ***11 - 12 1.0 CR***

This elective course is designed for students who wish to continue their study of mathematics through an introduction to statistics and data analysis. The course is a study of standard approaches to statistical analysis, exploratory data analysis, elementary probability and sampling distributions.

MM9106 ALEKS—Unleveled ***1S 9-12 .5 CR***
MM9206 ALEKS—Unleveled ***2S 9-12 .5 CR***

This computer based curriculum provides diagnostic and tutorial support for students as they prepare for success on college placement exams. It is an elective credit which must be taken by students enrolled in PSP level Geometry and Algebra 2.

SE9195 Every Day Math ***1S 9-12 .5 CR***
SE9295 Every Day Math ***2S 9-12 .5 CR***

The course teaches basic math skills and concepts necessary to function in the community as independently as possible. Admission is through the PPT process only.

SE9005 Alternative Math ***9-12 1.0 CR***

This course teaches math application and math computation skills to students who are preparing to pass the CAPT. Admission Is through the PPT process only.

ND9771 Math Enrichment—Unleveled

This course supports grade 9 students as they strengthen their skills and understanding of middle school math concepts through various activities and applications. The curriculum also includes a unit of Statistics aligned with the Common Core State Standards. The course is an elective credit which must be taken by grade 9 students enrolled in PSP level Algebra 1.

PERFORMING ARTS

The primary goal of the MHS Performing Arts Department is to offer all students the opportunity to explore and express their creativity and artistic development. Skill development rooted in a strong emphasis on the basics is at the heart of the Performing Arts program. Students may choose to participate in performing ensemble classes or classroom studies. There is an honors credit option available to all students participating in a performing ensemble.

Vocal Performing Ensembles
Chorus & Chorale

String Instrument Performing Ensembles
Orchestra
Guitar Ensemble

Band Instrument Performing Ensembles
Concert Band, Jazz Ensemble, Percussion Ensembles

Classroom Subjects
Music Theory I & AP Music Theory
Theater Arts
Beginning Guitar & Advanced Guitar
Creating Music with Computers I & II
Music Appreciation

Performing Arts Clubs (co-curricular) include:
Chamber Orchestra, Handbell Choir, Jazz Choir, Marching Band, MHS Spring Musical, Roundtable Singers, Sock-'n-Buskin drama club, Santa Band, Spring Musical, Stage Band, String Quartets

Students enrolling in a performing ensemble class must accept the obligation to participate in all scheduled performances and rehearsals, many of which may occur outside the regular school day. All members of performing groups participate in regular evaluation and assessment ranging from weekly lessons to individual skill reviews. These assessments account for a percentage of the student's classroom grade. Enrichment activities for all members of MHS performing ensembles are encouraged. Among these suggested activities are: private music instruction, auditions for Connecticut Regional and All-State Music Festival, and other local musical activities.

BENEFITS OF THE PERFORMING ARTS EXPERIENCE:

* It is fun.
* Research shows a strong connection between sustained arts involvement and academic achievement.
* Develops creative and critical thinking skills.
* Enhances cultural development.
* Ensemble experiences promote teamwork and cooperative learning.
* Lifetime skills.
* Appreciation of the role of the arts in society.

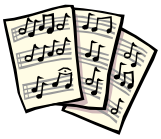
HIGHER EDUCATION AND PERFORMING ARTS:

* Colleges seek students with sustained involvement in the arts.
* Colleges seek creative and original thinkers.
* Career opportunities in performing arts, arts management, recording industry, retail, and many other arts related fields.

PERFORMING ARTS AT MHS:

Manchester High School students have received recognition for excellence and have been involved with the community in the following ways:

* School concerts
* Major community events: Memorial Day Parade, Board of Directors Swearing in, Martin Luther King Day, Holiday on Main, events at the Manchester Senior Center
* Local trips: concerts in local schools, UCONN, statewide festivals and competitions
* Regional and National Trips to: Florida, New York, Boston, The Big "E", Virginia Beach, Washington, DC
* Guest Artist Concert Series: The United States Marine Band, The US Navy Sea Chanters Chorus, The US Air Force "Airmen of Note" Jazz Ensemble, Maynard Ferguson, Louie Bellson, Boston Brass, The Buddy Rich Alumni Band with Dave Weckl, Steve Smith and Jon Pattitucci, The United States Navy Concert Band, The U.S. Navy "Commodores" Jazz Ensemble, Doc Severinsen, Barrage



EXTRA OPPORTUNITIES SUGGESTED FOR ADVANCED MUSICIANS:

All-State, Regional and All-New England Music Festival, and private music instruction, Honors level ensemble credit

PERFORMING ARTS

PA3001 Chorale—College Prep ***9-12 1.0 CR***

Chorale is a performing ensemble designed specifically for treble voices. Those women in grades 9 -12 may take this class in addition to, or as a substitute for, Chorus. This ensemble is designed to introduce techniques of vocal production and reading skills, as well as a wide variety of musical styles and composers. Members will perform in concerts as a separate ensemble and combined with the MHS Chorus. Students may apply to receive honors level credit for this course. In addition to the regular curriculum, students fulfill a set of honors requirements each marking quarter. This option is available by arrangement with the instructor.

PA3006 Chorus—College Prep ***9-12 1.0 CR***

Chorus is a performing ensemble designed to develop the vocal, choral, and overall musical experience of its members. It is a 4-part vocal ensemble open to all men and women in grades 9-12 and members are evaluated on basic music reading skills, as well as performance practices. The group performs a wide variety of musical styles, ranging from the 1600's up to today. Students may apply to receive honors level credit for this course. In addition to the regular curriculum, students fulfill a set of honors requirements each marking quarter. This option is available by arrangement with the instructor.

PA3031 Concert Band—College Prep ***9-10 1.0 CR***

Concert Band is an instrumental performing ensemble that includes all wind instruments. Individual skill development is a high priority. Emphasis is also placed on the study and mastery of the fundamentals of music using a variety of band literature. All Concert Band members are required to perform in scheduled school and community concerts. Members of the Concert Band will be required to attend 3-4 scheduled after-school dress rehearsals prior to each concert. Students also have the option of applying for honors credit in band through an arrangement with the instructor.

PA3036 Concert Band—College Prep ***11-12 1.0 CR***

Concert Band is an instrumental performing ensemble that includes all wind instruments. Individual skill development is a high priority. Emphasis is also placed on the study and mastery of the fundamentals of music using a variety of band literature. All Concert Band members are required to perform in scheduled school and community concerts. Members of the Concert Band will be required to attend 3-4 scheduled after-school dress rehearsals prior to each concert. Students also have the option of applying for honors credit in band through an arrangement with the instructor.

PA3025 Jazz Ensemble—College Prep ***9-12 1.0 CR***

Jazz Ensemble is a performance organization which includes saxophones, trombones, trumpets, and rhythm section. The focus of Jazz Ensemble is the study of music fundamentals, improvisation, and the performance of standard jazz literature. Auditions are held in the spring. Membership in concert band is required for all wind players. Rhythm section members must be enrolled in either Percussion Ensemble or another large ensemble Performing Arts Department class. Students may apply to receive honors level credit for this course. In addition to the regular curriculum, students will fulfill a set of honors requirements each marking quarter. This option is available by arrangement with the instructor.

PA3011 9th Grade Orchestra—College Prep ***9 1.0 CR***
PA3027 10th Grade Orchestra—College Prep ***10 1.0 CR***
PA3026 11th-12th Grade Orchestra—College Prep ***11-12 1.0 CR***

Orchestra is a performing ensemble open to all students who play a string instrument - violin, viola, cello and string bass. This class will emphasize advanced string techniques, music history, and music theory. A variety of music will be studied and performed at concerts throughout the school year. Students will be assigned to an orchestra section by grade level. Students may elect to receive honors level credit for this course. In addition to the regular curriculum, honors level students will fulfill an additional set of requirements each quarter. This option is available by arrangement with the instructor.

PA2105 Music Theory I—Honors ***1S 11-12 .50 CR***

Music Theory I (Fundamentals) is a one-semester course designed to prepare Juniors and Seniors for the AP Music Theory class. This course is meant for the serious music students who wish to advance their musical skills through the study of music theory and composition. Course work includes music reading, part writing, ear training, sight singing, critical listening, historical research, composition and MIDI.

PA1205 AP Music Theory—Advanced Placement ***2S 11-12 .50 CR***

Sequential: Music Theory I or permission of instructor

AP Music Theory is a course designed for the advanced music student. Course work will include music composition, orchestration, musical styles (including non-western and ethnic forms), and advanced ear training. Students will also do extensive work with synthesizers, sequencers and computer-assisted composition. This course is recommended for students wishing to continue musical study beyond high school. The course provides preparation for the AP Exam in Music Theory, and students are expected to take this exam.

PA3125 Theatre Arts—College Prep ***1S 9-12 .50 CR***
PA3225 Theatre Arts—College Prep ***2S 9-12 .50 CR***

Theatre Arts is a project-oriented survey course in theatrical practices. Students are expected to prepare speeches, monologues and small theatrical scenes for in-class performances. In addition, students will complete a production project in: theatrical business, graphic design, sets, costumes and props, as well as analyze four full-length plays. Students are required to spend six hours as theatrical interns and attend and critique a live theatrical performance each quarter.

PA4105 Beginning Guitar—Post Secondary Prep ***1S 9-12 .50 CR***
PA4205 Beginning Guitar—Post Secondary Prep ***2S 9-12 .50 CR***

Beginning Guitar is a one semester course for students in grades 9-12 who are interested in the study of the guitar in a classroom setting. No prior experience is necessary. This course covers basic guitar skills which will include music reading, playing techniques, open position melody and chord forms, blues song form and improvisation, basic music theory, a survey of guitar styles and equipment. Method books and acoustic guitars are provided for use in class. Students may bring their own guitar to class.

PA3305 Advanced Guitar—College Prep ***1S 10-12 .50 CR***
PA3405 Advanced Guitar—College Prep ***2S 9-12 .50 CR***

Sequential: Beginning Guitar or permission of instructor

Advanced Guitar is a one semester course for students in grades 10-12 (9 in Semester 2) who have successfully completed Beginning Guitar and are interested in the further study of guitar in a classroom setting. Basic music reading skill is required. This course continues the skill set achieved in Beginning Guitar. Topics include music reading, playing techniques, melody and movable chord forms, Blues and Rock repertoire, song form and improvisation, music theory, and a survey of guitar styles and equipment. Method books and acoustic guitars are provided for use in class. Students may bring their own guitar to class. This course may be repeated for credit with permission of instructor.

PA3095 Guitar Ensemble—College Prep ***10-12 1.0 CR***

Sequential: Advanced Guitar or permission of instructor

Guitar Ensemble is a full year course for students in grades 10 - 12 who have successfully completed the Beginning Guitar and Advanced Guitar curriculum. Music reading skill is required. Topics include reading in positions with movable scale patterns; movable chord forms; Blues, Rock, Classical and Jazz guitar repertoire and improvisation; guitar equipment; collegiate music Preparation and music careers. A select student ensemble will have the opportunity to perform in the Spring orchestra concert. Method books and acoustic guitars are provided for use in class. Students may bring their own guitar to class. Students should have a guitar at home for practice. This course may be repeated for credit with permission of the instructor.

PA3505 Creating Music With Computers I—College Prep ***1S 9-12 .50 CR***
PA3605 Creating Music With Computers I—College Prep ***2S 9-12 .50 CR***
This one semester course will be taught in MHS's "state-of-the-art" MIDI lab. Students will use music/computer workstations to learn how to create and compose music. Using the latest digital technology, students will use the concepts taught to broaden their musical knowledge. Students will practice musical skills by completing regular tutorial challenges and larger comprehensive projects.

PA3705 Creating Music With Computers II—College Prep ***1S 10-12 .50 CR***
PA3805 Creating Music With Computers II—College Prep ***2S 9-12 .50 CR***
Sequential: CMC
CMC II is for the student who is both serious about music and technology. CMC II is designed to give students a hands-on experience in the process of music composition, recording, editing and mastering. Students will work at individual MIDI stations composing and arranging music, as well as completing tutorials designed to give them a better understanding of the theoretical workings of music and basic piano skills. In addition, students will work in live recording situations, which will include recording, mastering and mixing music using ProTools Software.

PA9116 Audio Production—Unleveled ***1S 10-12 .50CR***
PA9216 Audio Production—Unleveled ***2S 10-12 .50CR***
Prerequisite: Creating Music With Computer I
This course introduces students to the fundamentals of multi-track audio production. Students will explore recording techniques, including the choice of microphones and their placement, as well as mixing multi-track audio utilizing equalization, compression, reverb, and planning. With an emphasis on acoustics and music theory, class projects will focus on producing audio for music distribution, radio, computer gaming, and filming.

PA3015 Percussion Ensemble—College Prep ***9-12 1.0 CR***
Designed specifically for the continuing percussionist, this course combines the fun of playing percussion instruments with the development of solid technical and musical skills to prepare beginning percussionists for a role in the MHS Band program. Proper playing technique, music literacy, and basic percussion skills will be the focus. Preparing to perform at school concerts and other events is one of the class goals. **Students who enroll in this course must have experience performing with a school music ensemble and have the permission of the instructor**.

PA3005 Advanced Percussion Ensemble—College Prep ***10-12 1.0 CR***
Sequential: PA3015
This course is a percussionist's dream! It has been designed to focus entirely on the skill development and issues related to performing on percussion instruments. Concepts covered range from the study of solid technical fundamentals to advanced techniques on mallet and auxiliary percussion instruments. Class time will be apportioned to include both full class and small ensemble activities. Members of the percussion ensemble class have the added bonus of performing as a group and as members of the Concert Band. Students will be expected to attend three after school dress rehearsals prior to every concert. ***This course is by audition only.*** Students may apply to receive honors level credit for this course. In addition to the regular curriculum, students will fulfill a set of honors requirements each marking quarter. This option is available by arrangement with the instructor.

PA3117 Music Appreciation—College Prep ***1S 9-12 .50 CR***
PA3217 Music Appreciation—College Prep ***2S 9-12 .50 CR***
Music Appreciation explores the world of music from Bach to Rock. This course is designed for all students interested in learning about and listening to music. Students will study a wide range of musical styles including Classical, Blues, Jazz, and Rock and will learn about the famous musicians from the past to the present who have influenced the music of today.

PA9105 Acting—Unleveled ***1S 10-12 .50CR***
PA9205 Acting—Unleveled ***2S 10-12 .50CR***
This repeatable, semester long class is differentiated to suit individual acting needs and skill levels. Members will learn and practice techniques in stage presence and movement, improvisation, scene study, and character analysis. Students will study great active performances as well as perform monologues and short scenes. Students have the option of applying for honors credit in acting through an arrangement with the instructor.

PA9115 Introduction to Movement and Dance ***1S 10-12 .50CR***
PA9215 Introduction to Movement and Dance ***2S 10-12 .50CR***
This semester long course combines a classroom study of various performances and styles of dance with practice in different forms. Perfect for beginners, this class will prepare performers for movement on stage.

PA9316 Costuming—Unleveled ***1S 10-12 .50CR***
PA9416 Costuming—Unleveled ***2S 10-12 .50CR***
Prerequisite: Fashion and Design I
"Fashion and Design II: Costuming" is an academy elective taken within the Fashion and Design II course. Students will design and create costumes to support performing arts plays (fall show, spring musical).

PA9106 Hair and Makeup for the Stage—Unleveled ***1S 10-12 .50CR***
PA9206 Hair and Makeup for the Stage—Unleveled ***2S 10-12 .50CR***
This semester long course explores makeup technique and the hairstyles of different historical eras. Students will get hands-on practice with styling hair and applying stage and special effects makeup for stage and film.

PA9305 Piano/Keyboarding—Unleveled ***1S 9-12 .50CR***
PA9405 Piano/Keyboarding—Unleveled ***2S 9-12 .50CR***
This is a repeatable semester elective. This is a good class for beginners who want to learn piano or improve their piano skills. It will involve a combination of keyboarding via computer software and one on one instruction on the piano (with a teacher).

PA9136 Songwriting—Unleveled ***1S 10-12 .50CR***
PA9236 Songwriting—Unleveled ***2S 10-12 .50CR***
This is a repeatable course in which students will learn the fundamentals of music and lyrics composition. Beginning to advanced musicians welcome.

PA9125 Stage Tech—Unleveled ***1S 10-12 .50CR***
PA9225 Stage Tech—Unleveled ***2S 10-12 .50CR***
Provides students with the foundation skills required to begin working in the live entertainments industry. The program focuses on stagecraft, lighting and sound production for theatre, concerts, dance and industrial theatre.

PA9035 Dance Ensemble—Unleveled ***10-12 1.0CR***
This course is designed for those who have some dance experience. Ensemble instructors will choose the style focus for each quarter (it is okay if you do not have experience in that particular style). Students will need appropriate dance clothes and/or shoes for the style being studied.

Performing Arts Co-Curricular Clubs

Chamber Orchestra
The Chamber Orchestra is an advanced string ensemble open to any student registered for an MHS orchestra class. Members are selected through an audition process at the beginning of the school year. The Chamber Orchestra rehearses one evening a week for 1 1/2 hours and also has a weekly after school section rehearsal. The Chamber Orchestra performs at school concerts, and special events.

Roundtable Singers
Roundtable Singers is a select group of singers with advanced vocal and music reading skills. Membership is dependent upon audition, and it is considered a year-long commitment. Auditions are held in June for the following year, with supplemental auditions in the fall. Auditions for Roundtable Singers will be given to current members of Chorus and Chorale. Members who are not enrolled in Chorus or Chorale will be expected to participate as members in those organizations during concerts.

Roundtable Singers are expected to participate in several performances outside of high school concerts. Roundtable Singers rehearse for 1 1/2 - 2 hours each week - rehearsal times are after school. In addition to regular rehearsal times, a weekly sectional rehearsal is required. Sectional rehearsals are scheduled in September. Members should expect to participate in all performances, including overnight trips. This often requires participation in both group and individual fundraising activities.

Jazz Choir
Jazz Choir is a small ensemble of 12-16 students who are interested in singing Jazz and Popular styles of music. Auditions for this group are held in December or January. The group meets once each week after school. The Jazz Choir travels with the Roundtable Singers and participates in competitions and festivals. Members should expect to participate in all performances, including overnight trips. This often requires participation in both group and individual fundraising activities.

Handbell Choir
A Handbell Choir is made up of several performers playing 54 bronze bells. The ensemble meets once each week after school. An understanding of rhythm is necessary, but no other musical experience is required. The group performs in two high school concerts and also travels to a day-long festival in the area each year. During the holiday season, the Handbell Choir is often invited to perform in the community. The handbell choir also travels with the Roundtable Singers for their Spring tour. This requires participation in both group and individual fundraising activities.

Marching Band
Marching Band is great fun! The Manchester High School Marching Band is one of the school's most active organizations. Students learn to combine the skills of music performance and movement to produce the band's annual halftime show. The Marching Band begins the school year with a one week 'pre-season' program held prior to the first day of school. This 'pre-season' band program is essential to the success of the organization. It is also cited by parents and students as an important transition period from 8th grade into MHS.

A typical Marching Band season lasts through the Thanksgiving football game and includes performances at home football games, out-of-town band festivals, the "Big E" parade, and community service events.

During the course of the season, the marching band has full group rehearsals every Monday and Friday and some Wednesday afternoons from 2:30— 4:30 p.m. The Colorguard and Percussion sections have an additional, separate weekly rehearsal.

This activity is designed for every band member (both wind and percussion instruments) and any student who wishes to perform in the colorguard. Students in grades 9—12 have the option to join Marching Band.

Sock-'n-Buskin (drama club)
Sock-'n-Buskin, the MHS Drama Club, is open to all students of MHS with an interest in theatre. SnB produces two live theatrical performances each school year, as well as participates in the Homecoming Parade. SnB also plans a trip to New York City for a Broadway show each year.

Spring Musical Production
The Spring Musical Production is a "Broadway style" production of a popular piece of American Musical Theatre. Auditions for the production are in December. Music and staging rehearsals begin after the December holiday break. Rehearsals are generally Monday - Friday from 3:15 - 5:30 with some evenings included as scheduled. In early March, the rehearsal schedule becomes more involved, culminating in three performances in Mid-March.

Santa Band
The Santa Band is a community service ensemble that prepares holiday music for a variety of events in our Manchester community. This ensemble rehearses once per week from November through December.

Stage Band
The Stage Band is Manchester High School's second jazz ensemble. The Stage Band is open to any instrumental music student with an interest in learning about jazz. This ensemble meets once a week for 90 minutes starting in late November. Performances at both school and community events are typical.

String Quartets
String quartets are comprised of students from the Chamber Orchestra who seek an even more advanced and independent musical experience. These small, student-directed ensembles perform frequently at community and school events.

PHYSICAL EDUCATION

Departmental Goals:

* Exposure to a variety of individual and team sports
* Understanding the positive benefits of Physical Education
* Confidence and knowledge to participate in fitness activities for a lifetime

Essential Skills:

* Leadership
* Problem Solving (Group and Individual)
* Communication
* Self Initiative
* Individual and Team Work
* Sport and Individual Skillwork

Career Paths:

* Athletic Training
* Teaching
* Coaching
* Recreation
* Officiating
* Personal Training
* Leisure Studies
* Sports Management

PHYSICAL EDUCATION

Grades are based on points accumulated during each class meeting. Students are expected to attend class, change into PE clothes and be prepared to participate in the class activity. Written tests, quizzes and other assignments may also be used to determine the grade.

Course Offerings:

The physical education courses will be determined by grade level so all students will have opportunities to participate in a wide range of activities. Below is the list of five PE tracks or categories that students may choose from this quarter/semester. Each track has a varied menu of sport skills and activities. The activities are subject to change depending on enrollment, teaching space, equipment and weather. Students will sign up for a first choice and second choice on their registration form. Students are **not** guaranteed their first choice although every attempt will be made to give students their preferred track. Read the overview for each track before making your selections.

Track # 1 - Team Sports

Students choosing this track should enjoy activities that promote team play and good sportsmanship. Students in this track will be given the opportunity to compete against their peers. The following team sports may be included in this track:

- Flag Football
- Flag Rugby
- Soccer
- Lacrosse
- Volleyball
- Basketball
- Speedball
- Floor Hockey

Track #2 - Individual and/or Lifetime Sports

Students choosing this track should enjoy activities that focus more on individual skills and / or lifetime sports that can be played well into their adult lives. The following activities may be included in this track:

- Tennis
- Golf
- Badminton
- Paddle Tennis
- Frisbee Golf
- Track and Field
- Table Tennis (Ping Pong)
- Softball

Track #3 - Recreation / Leisure Activities

Students choosing this track should enjoy **non-competitive** activities that will place emphasis on social recreation and leisure play. The following activities may be included in this track:

- Archery
- Frisbee Games
- Walking / Hiking
- Bocce
- Bowling
- Adventure Games
- Orienteering
- Snowshoeing
- Horseshoes
- Shuffleboard
- Cooperative Games

Track #4 - Personal Fitness / Weight Training

Students choosing this track should enjoy personal fitness and the numerous benefits it presents to one's overall health and wellness. The activities will not be competitive but instead will place emphasis on body shaping activities to improve personal fitness levels. The following activities may be included in this track.

- Strength training (variety of exercises with or without weights)
- Aerobic Activities
- Yoga
- Pilates
- Tae Bo
- Personal Defense
- Zumba
- Dance

Only students who are excused from regular physical education by a physician will be exempt from classes. For any prolonged illness or injury, the physician must submit the necessary school forms to the nurse. A determination is then made concerning placement for the student.

All Physical Education classes are offered on the PSP level.

Required Courses:

PE4311 Intro to PE ***Q1 09 .25 CR***
All grade 9 PE students will begin their high school experience with this introductory class. Students will be introduced to a variety of activities that will involve team sports, individual sports, recreation/leisure, and personal fitness.

PE4361 Track #1 9 Team Sports	***Q2, Q3, Q4 .25 CR***
PE4521 Track #2 9 Individual Sports	***Q2, Q3, Q4 .25 CR***
PE4561 Track #3 9 Recreation/Leisure	***Q2, Q3, Q4 .25 CR***
PE4721 Track #4 9 Personal Fitness	***Q2, Q3, Q4 .25 CR***
PE4116 Track #1 10-12 Team Sports	***Q1, Q2, Q3, Q4 .25 CR***
PE4316 Track #2 10-12 Individual Sports	***Q1, Q2, Q3, Q4 .25 CR***
PE4516 Track #3 10-12 Recreation/Leisure	***Q1, Q2, Q3, Q4 .25 CR***
PE4716 Track #4 10-12 Personal Fitness	***Q1, Q2, Q3, Q4 .25 CR***

Electives:
(These do not count toward the 1.25 P.E. graduation requirement)

PE4176 Lifeguard Training ***1S 10-12 .50 CR***
PE4276 Lifeguard Training ***2S 10-12 .50 CR***
Prerequisite: Student must be an advanced swimmer.
Prerequisite skills include: 1) swimming continuously for 300 yards, 2) doing a surface dive to a depth of 9 feet and bring a 10 lb. brick to surface, 3) swimming underwater 20 yards, 4) student must be at least 15 years old.

The lifeguard training class is certified by the American Red Cross. After having completed this course and having passed both a written test and a practical test, the student will be a trained lifeguard. **Fee course: Approximately $60—$85 for book and face-mask.**

PE4115 Unified PE ***Q1 9 - 12 .25CR***
PE 4125 Unified PE ***Q2 9 - 12 .25CR***
PE 4235 Unified PE ***Q3 9 - 12 .25 CR***
PE 4245 Unified PE ***Q4 9 - 12 .25 CR***
This co-taught course is designed to unite regular education students with special education classmates that have a variety of different learning challenges that may be physical, social or intellectual. The Unified PE class is often a step towards joining the Unified Sports team that competes interscholastically. Activities may include: team and individual sports, dance, music and a wide variety of recreational activities. The course may be repeated for credit.

Upper Class Electives

The following courses REQUIRE the prerequisite of meeting the 9th and 10th grade physical education requirements. Scheduling priority will be given to 12th graders and then to 11th graders. ***These courses are electives and DO NOT fulfill the Physical Education requirements for graduation. These classes can be taken two times per year for credit.***

Advanced Team Sports - This course will give students the opportunity to experience some high intensity team games. Students will be exposed to a variety of team sports, which may include basketball, volleyball, football, and rugby.

Adventure Challenge - This course is designed to encourage and assist students to think, problem solve and work together to solve a challenge. Most of the challenges will require some physical as well mental abilities to achieve success for the group as well as for every individual. Teamwork, brainstorming and positive peer support will be emphasized in this class. This course is designed to take advantage of several Adventure Challenge opportunities that are located at MHS as well as throughout the Town of Manchester. A prerequisite safety test will be given to students.

1st Quarter ***11-12 .25 CR***

PE4717 Advanced Team Sports Elective

3rd Quarter ***11-12 .25 CR***

PE 4637 Adventure Challenge

4th Quarter ***11-12 .25 CR***

PE 4847 Advanced Team Sports Elective
PE 4647 Adventure Challenge

PE9306 Fundamentals in Coaching—Unleveled ***10-12 .25 CR***
This course will cover the essential aspects of effective coaching, knowledge of the sport, effective instruction, and motivation. Each student will focus on a sport where they have interest and a desire to learn more. We will use video analysis, sports psychology, as well as biochemical analysis to gain greater understanding of what coaching really is. Students will lead group discussions and activity where the class will participate in a variety of sports.

PE9506 Sports Team Management ***10-12 .25CR***
This .25 credit course will occur after school during the teams practice and competition. Students will meet with course instructor on a weekly basis to review the progress of the season, offer analysis and feedback of the experience. It is not recommended that athletes take this course during their season. This is like a “job shadow”. Students will assist coaches with a wide variety of responsibilities. This will very by coach and sport. The student will gain an understanding of the other side of the sport. Management, organization planning, film, statistics, injuries, game day responsibilities, etc.

Science

The general field of science offers opportunities for careers, some of which are traditional, some of which are new and some of which don't even exist now! A solid background in the physical and biological sciences allows students to position themselves for entry into many science careers or to pursue the higher education needed to enter these fields.

A Sampling of Careers in Science

* Doctor
* Nurse
* Geologist
* Engineer
* Research Scientist
* Teacher
* Phlebotomist
* Forensic Pathologist
* Environmentalist
* Pharmacist
* Climatologist

* Meteorologist
* Gemologist
* Laser Technologist
* Operating Room Technician
* Firefighter
* Archeologist
* Environmental Lawyer
* Hydrologist
* Geneticist
* Biotechnologist

The Science Department believes that science and technology affect every aspect of our lives and that everyone needs to know about the nature of science, how it works, what it can and cannot achieve. Fundamental to this proposition is the need for all students to develop, communicate, and apply the basic knowledge and skills of scientific reasoning. Parents and teachers have a shared responsibility for helping students learn and apply this knowledge in making decisions and solving problems.

Students can best acquire this knowledge in the biological and physical sciences by participating in an inquiry-oriented, hands-on, integrated science program. Science teachers will employ a variety of teaching techniques to help students better understand the scientific world and maximize their understanding of the content and processes of science.

The end product of the Manchester High School science program is a scientifically literate citizenry infused with the lifelong habit of developing scientific reasoning and applying it to everyday life.

Students are required to take Physical Science and Biology and one-half credit in an advanced science course. All students are encouraged to further their science education by including advanced courses in physics, biology, and chemistry; this is essential for all students who wish to major in science in college.

It is important that students are appropriately placed as a level change may present problems for a student because the texts and course pacing vary from one level to the next.

SCIENCE

Courses offered are:

BIOLOGICAL SCIENCES
Biology
AP Biology
Marine Science
Animal Behavior
Human Anatomy and Physiology
Sports Medicine
Science Research 1
Science Research 2
Veterinary Science

PHYSICAL SCIENCES
Astronomy
Busting Myths in Science
Physical Science
Forensic Science
Chemistry
AP Chemistry
Physics
AP Physics B
AP Physics C
Scientific Principles of Technology

MEDICAL CAREERS ACADEMY
Investigations in Health Careers
CNA Preparation
Patient Care
MCA Seminar

PHYSICAL SCIENCE

SC2001 Physical Science—Honors ***9 1.0 CR***
SC3001 Physical Science—College Prep ***9 1.0 CR***
Students have the opportunity to study the interplay of matter and energy involving the basic principles of physical, chemical, and life sciences. Topics include energy transfer and transformations, properties of matter, and earth cycles. Science, technology, and society components relate the topics to the students' lives with the goal of producing a scientifically literate citizenry. This course is aligned with State standards in preparation for the CAPT experience in the spring of grade 10.

BIOLOGY

SC2032 Biology—Honors ***10 1.0 CR***
SC3032 Biology—College Prep ***10 1.0 CR***
SC4032 Biology—Post Secondary Prep ***10 1.0 CR***
Prerequisite: Physical Science
All students taking Biology will have the same core course material, studying the topics of biochemistry, cell structure and function, genetics and evolution. The curriculum is aligned with State standards for science. All levels of biology emphasize a hands-on, minds-on approach to increase student involvement in their learning. Labs and activities are done to illustrate the conceptual material. CAPT-like activities are done throughout the year to help students prepare for the CAPT.

SC1032 AP Biology—AP ***11-12 2.0 CR***
Sequential: Biology Honors or CP Level & Chemistry Honors or CP Level
This course is for students planning to major in natural or physical sciences in college or for students with a natural curiosity or interest in a college biology course who have demonstrated previous ability in science. Principles and processes underlying the molecular and evolutionary basis of life, ecology, genetics, plant and animal physiology, and diversity are emphasized. Laboratory work investigates problems dealing with enzyme activity, molecular genetics, photosynthesis, cell biology, and evolution of vertebrate systems. Dissections are a minimal part of this course. A summer reading assignment is required. **All students are required to take the AP exam and pay the fee**.

SC3107 Animal Behavior—College Prep ***1S 11-12 .50 CR***
Prerequisite: Biology
The behaviors that help animals survive are studied. Topics include camouflage, territoriality, learning, and signaling. Students study the activities of groups of specific animals such as whales, gorillas, ants, and bats.

SC3217 Marine Science—College Prep ***2S 11-12 .50 CR***
Prerequisite: Biology
This study of sea water, waves, currents, tides, and the topography of the sea floor introduces the student to the oceans and their various habitats. A study of infauna, epifauna, nekton, and plankton underscores the relationships present in the ocean ecology.

SC2027 Human Anatomy and Physiology—Honors ***11-12 1.0 CR***
SC3027 Human Anatomy and Physiology—College Prep ***11-12 1.0 CR***
Prerequisite: Biology
Human Anatomy and Physiology provides an in-depth understanding of human organ systems, their structures, functions, and malfunctions. Topics covered in the first semester include a review of cells, tissues, skin, and skeletal, muscular, and nervous systems. Laboratory work will deal with the structure, function, and diagnostics of each system. During the second semester, topics covered include the structure, function, and malfunction of the following body systems: blood and cardiovascular, lymphatic, endocrine, reproductive, digestive, respiratory, and urinary. Emphasis is placed on laboratory skills with some dissection required. **Successful completion of Human Anatomy and Physiology by sophomores, juniors and seniors enrolled in the Allied Health Career Pathways Program may result in 4 MCC credits.**

SC4027 Human Anatomy and Physiology—Post Sec. Prep ***11-12 1.0 CR***
Prerequisite: Biology
This course provides students with an overview of the major organ systems of the human body. First semester topics include the skin, skeletal, muscular, endocrine, and nervous systems. The focus of the course is on understanding the integration and coordination of the systems and the development of lab skills. The focus of the second semester is on the integration of the respiratory, digestive, and cardiovascular systems, as well as reproductive systems and human development. Focus is on assessment of laboratory skills and career options in Allied Health. **This course <u>does not</u> meet the requirement of MCC credit through the Allied Health Career Pathways Program.**

PHYSICAL SCIENCES

SE9025 Alternative Science ***9 - 12 1.0 CR***
This course teaches application of Science skills for students who are preparing to pass the CAPT. Admission is through the PPT Process.

SC3317 Astronomy—College Prep (pending B.O.E. approval) ***1S 11-12 .50 CR***
SC3417 Astronomy—College Prep (pending B.O.E. approval) ***2S 11-12 .50 CR***
Prerequisite: Algebra I
Skills developed in Algebra I will be used to investigate topics of current interest such as formation of stars, planets, our solar system, origin of chemical elements, novae and supernovae, white dwarfs, neutron stars, black holes, active galaxies, quasars, asteroids, meteors, distances in space and explore the possibility of life outside of Earth. The topics listed above may vary due to current events in astronomy.

SC3116 Busting Myths in Science—College Prep (pending B.O.E. approval) ***1S 10-12 .50 CR***
SC3216 Busting Myths in Science—College Prep (pending B.O.E. approval) ***2S 10-12 .50 CR***
Prerequisite: Physical Science OR Biology
This is a project and lab based course based on the hit T.V. show MythBusters. By utilizing the scientific method students will prove or debunk advertising claims, online videos and myths in science. Students will communicate their findings in numerous ways, including: video presentation, PowerPoint presentation and written reports. Specific content/myths covered may change based on current events in science and student interest.

SC1007 AP Chemistry—AP ***11-12 2.0 CR***
Sequential: Algebra 2, Honors level, or by permission of the department instructional leader
AP Chemistry places emphasis on atomic theory, bonding, chemical calculations, mathematical formulation of principles, and a laboratory component stressing qualitative and quantitative analysis. **Students are required to take the AP Exam and pay the fee**.

SC2007 Chemistry—Honors ***11-12 1.0 CR***
Sequential: Algebra 1 - Honors or College Prep level
SC3007 Chemistry—College Prep ***11-12 1.0 CR***
Sequential: Algebra 1 - College Prep level
SC4007 Chemistry—Post Secondary Prep ***11-12 1.0 CR***
Sequential: Algebra 1 - Post Secondary Prep level
Prerequisite: Physical Science and Biology
All students taking Chemistry will have the same core course material. Topics include the mole, formula writing, principles of chemical reactions, quantitative measurements of reactions, a study of energy change, rates of reactions, atomic theory, chemical bonding, acids and bases, and organic chemistry. Supplementary topics may be added by the instructor based on time available and student interests. The curriculum is to be aligned with National standards for science. The depth of content and the independence at which the students work determines the level of the course which should be selected. All levels of chemistry emphasize a student-centered activity approach to increase student involvement in their learning. Labs are done on a weekly basis with lab write-ups required.

SC9018 CNA Preparation—unleveled (pending B.O.E. approval) ***12 1.0 CR***
Prerequisite: Investigations in Health Careers or permission of Academy Director
This course will prepare students to take the Certified Nurse Assistant exam. Students will be taught the proper ways to move patients and the basics of patient care, feeding and bathing. Other skills covered include taking vital signs (temperature, pulse, breathing and blood pressure) and how to respond to patient emergencies like choking or falling. As a Certified Nurse Assistant, students will have the knowledge and skills necessary to provide quality health care for residents in nursing homes, assisted-living facilities, to hospital patients and clients in their homes.

SC1006 AP Environmental Science—AP ***10-12 1.0 CR***
Prerequisite: Biology / Corequisite: Chemistry
This course follows the guidelines put forth by the College Board in order to prepare students for the Advanced Placement exam in Environmental Science. Topics include principles, concepts and methodologies required to understand the interrelationships of the natural world, to identify and analyze both natural and human made environmental problems, to evaluate the relative risks associated with these problems and to examine alternative solutions for resolving and/or preventing them. **All students are required to take the AP exam and pay the fee.**

SC3137 Forensic Science—College Prep ***1S 10 - 12 .50 CR***
SC3237 Forensic Science—College Prep ***2S 10 - 12 .50 CR***
Prerequisite: Biology
Forensic Science will address many topics: evidence collection and preservation, emission spectra of elements, DNA analysis, chemical reactions, arson investigations, estimating time of death, rates of accumulation and elimination of drugs, fracture patterns, soil analysis, projectiles, skeletal features, and others. The course will link principles of chemistry to real world situations in the area of law enforcement, providing an avenue for students to understand the role of science and technology in their lives.

SC9006 Investigations in Health Careers—Unleveled ***10 1.0 CR***
Prerequisite: Acceptance to the Medical Careers Academy or permission of Academy Director
This course will give students a chance to research various careers in the medical field, including speakers from a variety of health care fields. The teachers will work closely with the students to identify the careers and pathways that are best suited to the talents and strengths of each of them. Course topics also include medical ethics, personal health, basic anatomy and physiology and public health.

SC9127 Patient Care—Unleveled ***1S 11-12 .50CR***
SC9227 Patient Care—Unleveled ***2S 11-12 .50CR***
This course is designed to give students hands on training in the variety of skills needed to evaluate and care for patients. Topics can include communicating with patients, taking a patient history, taking vital signs, transporting patients, splinting and bandaging, first aid, and other skills necessary for the fields students are interested in pursuing. The opportunity may be available to receive Red Cross certification(s).

SC9107 MCA Seminar—Unleveled ***1S 11-12 .50CR***
SC9207 MCA Seminar—Unleveled ***2S 11-12 .50CR***
The MCA Seminar course offers an opportunity for students to prepare for the workplace by improving soft skills, building and writing resumes, cover letters and thank you letters, and developing interviewing skills. In addition, students also have the opportunity to gain knowledge more specific to working in the medical field. Students will be required to complete (1) six hour job shadow in a health career to receive practical experience in their field of interest.

SC9117 Sports Medicine—Unleveled (pending B.O.E. approval) ***1S 11-12 .50 CR***
Prerequisite: Investigations in Health Careers or permission of Academy Director
Students are introduced to the discipline of kinesiology and recreation. They will study the effects of physical activity on human beings. Topics will include exercise physiology, biomechanics, motor behavior and socio/psychological perspectives of participation in activity through the lifespan. Students will also investigate how the discipline can be applied professionally.

SC1017 AP Physics B—AP ***11-12 2.0 CR***
Sequential: Algebra II – Honors or College Prep Level
This course follows the guidelines put forth by the College Board in order to prepare students for the Advanced Placement Examination in algebra-based physics which is administered during the month of May. The course is designed to be equivalent to the physics course that is taken by many students majoring in the biological or some physical sciences during their first or second year of college. Laboratory investigations are an integral part of the course. From the analysis of collected data, students learn how to derive the equations that are then applied to physics problems. Topics include kinematics, dynamics, projectile motion, uniform circular motion, simple harmonic motion, planetary motion, kinetic molecular theory, thermodynamics, electrostatics, electric current, magnetism and electromagnetism, electromagnetic waves, sound, geometric optics, the wave nature of light, nuclear reactions, and relativity. **Students are required to take the AP exam and pay the fee.**

SC1027 AP Physics C—AP ***11-12 2.0 CR***
Corequistie: Calculus or by permission of department instructional leader
This course is designed to be equivalent to the physics course usually taken by students majoring in the physical sciences or engineering during the first college semester. Methods of calculus are used whenever appropriate in formulating physical principles and in applying them to physics problems. **The subject matter is principally mechanics. Study of electricity and magnetism proceeds as time permits. Students are required to take the AP Exam and pay the fee.**

SC2017 Physics—Honors ***11-12 1.0 CR***
Sequential: At least Algebra 2 Honors
Corequisite: At least Pre-Calc. or permission of department instructional leader
SC3017 Physics—College Prep ***11-12 1.0 CR***
Sequential: Algebra 2 College Prep minimum
Corequisite: Finite Math or Pre-Calculus or permission of department instructional leader
SC4017 Physics—Post Secondary Prep ***11-12 1.0 CR***
Sequential: Algebra 1 and Geometry or permission of department instructional leader
All students taking Physics will have the same core course material. Topics include scalars, vectors, kinematics, dynamics, conservation of energy and momentum, universal gravitation and planetary motion, simple harmonic motion, light, optics, static electricity, current electricity, electric circuits, electromagnetism and introductions to electronics, radioactivity and nuclear physics. Supplementary topics may be added by the instructor based on time available and student interests. The curriculum is aligned with National standards for science. The depth of content and the independence at which the students work determines the level of the course which should be selected. All levels of physics emphasize a hands-on, minds-on approach to increase student involvement in their learning.

SC3037 Scientific Principles of Technology—College Prep ***11-12 1.0 CR***
Prerequisite: Algebra 1
Taught cooperatively by the Science and Technology Education Departments for science credit, this is an applied physical science course designed for students who plan technical careers and those wishing to expand their knowledge of the principles of modern technology. It stresses a hands-on approach to learning the principles of mechanical, electrical, fluid, and thermal systems. This course has been accepted by major universities as meeting the laboratory science entrance requirement.

SC2006 Science Research 1—Honors ***10-12 1.0 CR***
This course is a one-year elective introducing students to the process of scientific research. Students choose a topic and search for journal readings to develop their knowledge of the topic. Students will create and present scientific posters and research papers based on their findings. Students may choose to pursue further during Science Research 2. Completion of this course satisfies the independent research requirement for Science Scholars.

SC2027 Science Research 2—Honors ***11-12 1.0 CR***
Prerequisite: Science Research 1
This course is a two-year elective in which students continue their research and develop an original research project on that topic. The students will find a mentor, plan the project, and see it through to its conclusion. During their senior year, students are required to present their research findings at competitions and symposia. Students may elect to take the course for college credit, for a total of up to twelve credits from the State University of New York.

SC3327 Veterinary Science—College Prep ***1S 11-12 .50 CR***
SC3427 Veterinary Science—College Prep ***2S 11-12 .50 CR***
Prerequisite: Introduction in Health Careers OR Permission of Academy Director
This course will focus on the study of disease, treatment, nutrition, as well as proper handling techniques of domestic animals and livestock. An introduction to general anatomy and physiology and comparative anatomy will be covered, when relevant. This course will prepare the students for potential job shadowing opportunities in a veterinary clinic.

SOCIAL STUDIES

"The only good is knowledge, and the only evil is ignorance."
-Herodotus

The Social Studies department of Manchester High School focuses instruction on three areas. Classes teach students the ***skills*** they will need to succeed inside and outside the school walls. Secondly, the Social Studies Department exposes students to ***content*** from areas such as, History, Geography, Economics, Culture and Political Science. Lastly, students are instructed and encouraged to apply these skills and content knowledge in practical ***applications***.

Students who wish to graduate from Manchester High School are required to earn 3.5 credits in Social Studies. In addition to credit requirements, **all students must complete two Board of Education requirements:**

1. In the junior year all students will complete a History Day project in either the Modern United States History, American Studies, or AP United States History classes. Failure to complete this project will prevent the student from graduating with a diploma.

2. In the senior year all students will complete a Service Learning project in one of the following classes, Participation in American Society, Law & Order, Law & American Society or AP United States Government & Politics. Failure to complete this project will prevent the student from graduating with a diploma.

Students follow the course of study below. The required courses are:

Grade 09—Roots of Global Civilization (1.0 credit)
Grade 10—Modern World History, Humanities or AP World History (1.0 credit)
Grade 11—Modern United States History , American Studies or AP U.S. History (1.0 credit)

Students must pick ONE of the courses below in the senior year to earn their remaining .50 credit. They may also choose to take more than one of these courses as an elective. The choices are:

Grade 12—Participation in American Society (.50 credit)
Grade 12—Law & Order (.50 credit)
Grade 12—Law & American Society (.50 credit)
Grade 12—Advanced Placement United States Government & Politics (.75 credit)

In addition to the required courses, the Social Studies Department offers the following Elective Courses:

UCONN Advanced Placement United States Government and Politics
Advanced Placement European History/UCONN Western Civilization
African-American History
Advanced Placement Psychology
UCONN American Maritime Culture
Modern American Music & Film
Latin American Studies
Law & Order
Law & American Society
Sociology
Psychology
Economics
Criminology

Social Studies elective courses are designed to provide concentrated study on specialized topics, to meet student interests and needs, and to acquaint students with employment opportunities in related Social Studies fields.

Required courses for the 9th, 10th, 11th grades are offered on all levels. Elective courses are also offered at a variety of levels.

Social Studies Required Courses

9th Grade

SS2001 Roots of Global Civilization—Honors ***9 1.0 CR***
SS3001 Roots of Global Civilization—College Prep ***9 1.0 CR***
This course begins with an introduction to the areas of Social Studies. Students will explore topics in history, economics, culture, government, and geography during the first quarter of the school year. Students will then begin a survey of World History. From the origins of man until the formation of empires around the world, students will explore world history using skills developed in the first part of the course. Students will also focus on making connections from the past to the present. Students are also introduced to the format and skills that are required to complete the CAPT Interdisciplinary
Writing Test in the 10th grade.

ND9111 Understanding Our Global Community—Unleveled ***9 0.25 CR***
Many historians believe that you have been raised in a vastly different world than the generations that came before you. You have unprecedented access to technology in a diverse and ever-changing world. The town of Manchester is rapidly changing around you everyday! This class will help you examine and analyze the forces of change that surround you. We will discuss contemporary issues that center on identity, culture, race, sex, and privilege. Students will be expected to actively participate in mature discussions and respect the opinions and backgrounds of their classmates.

10th Grade

SS1012 AP World History—AP Level ***10 1.0 CR***
Prerequisite: An "A" in freshman honors level social studies or written recommendation of the instructor
The purpose of the Advanced Placement World History course is to develop greater understanding of the evolution of global contacts and processes, in interaction with different types of human societies. This understanding is advanced through a combination of selective factual knowledge and appropriate analytical skills. Focused primarily on the past thousand years, the course emphasizes cultural, institutional, and technological events, along with geography of the empires of China and Mesoamerica; the expansion of Islam, Mongol dominance, and the period of new political units in Africa and Europe. **Students are required to take the AP exam in May and pay the fee for this exam.** Students will complete extensive reading in both primary and secondary sources, as well as numerous written assignments. Students in the program also practice the format and skills that are required to complete the CAPT Interdisciplinary Writing Test given in March of the 10th grade.

SS2022 Humanities—Honors ***10 1.0 CR***
This course examines modern World History through an interdisciplinary model. The course will be team taught by members of the Social Studies and Language Arts faculty. Students will focus on skill development and common core tasks as they examine the origins of the modern world through the present. The course will focus on cultural studies as well as the history and literature of a time period. Students will examine art, architecture, and music to fulfill the interdisciplinary mission of the course.

SS2012 Modern World History—Honors ***10 1.0 CR***
SS3012 Modern World History—College Prep ***10 1.0 CR***
Prerequisite: Grade 9 Social Studies

The focus of this course is to examine the interaction of the Western and non-Western world from 1500 to the present. Developments in the West will be a major focus of the 10th grade requirement; in addition, focus will be placed on non-western cultures prior to and independent of their interaction with Europe, giving the students a truly worldwide view of history. Students also practice the format and skills that are required to complete the CAPT Interdisciplinary Writing Test given in March of the 10th grade.

11th Grade

SS1023 UCONN Advanced Placement United States History—AP Level ***11 1.0 CR***
Prerequisite: An "A" or "B" in AP World History or an "A" in Modern World History Honors level or written recommendation of the instructor
This course is an intensive chronological examination of United States History. The course surveys the political, economic, and cultural life of the nation from early European exploration to the 21st century. The first semester focuses on the origins of the United States through the Age of Imperialism. The second semester completes the survey to present day and prepares students to take the AP Exam in May. **Students are required to take the AP Exam and pay the fee for this exam.** Students will complete extensive reading in both primary and secondary sources as well as numerous written assignments. Students in this class will be given the opportunity to complete the History Day requirement. Students who elect for UConn credit must pay a fee and complete UConn requirements.

SS2013 UCONN American Studies—Honors ***11 1.0 CR***
Prerequisite: Grade 9 & 10 Social Studies
This course is offered in conjunction with the University of Connecticut's Early College Experience program. Students study American History and Literature. The course also places a heavy emphasis on American cultural studies, such as art, architecture and music. Students in this course will be given the opportunity to complete the History Day requirement. The course meets for one block everyday. The student earns a credit which fulfill the U.S. History requirement as well as a credit for one year of English coursework. **Students who elect for UConn credit must pay a fee and complete UConn requirements**. See your Guidance Counselor for specific program requirements.

SS3023 Modern US History—College Prep ***11 1.0 CR***
SS4023 Modern US History—Post Secondary Prep ***11 1.0 CR***
Prerequisite: Grade 9 & 10 Social Studies
The goal of this course is an in-depth analysis of key events, people and issues in late nineteenth and twentieth century United States History, with special emphasis on key themes, concepts, and skills. The course is arranged chronologically and begins with the United States centennial of 1876. The first semester examines American politics, culture, foreign policy and economics. The second semester follows the United States through the Great Depression of the 1930s until present day. Students in this class will be given the opportunity to complete the History Day requirement.

12th Grade

****Students must take ONE of the following four courses****

SS9104 Participation in American Society—Unleveled ***1S 12 .50 CR***
SS9204 Participation in American Society—Unleveled ***2S 12 .50 CR***
The goal of this course is to get students actively involved in the world around them and convince them of the importance of being an active and contributing member of American society. The emphasis is on participation which might include simulations, case studies, position papers, mock trials and debates, interviews, polls, field trips, guest speakers, community service, and shadow experiences. Students in this class will be given the opportunity to complete the Service Learning requirement.

SS8124 Law and Order—CP ***1S 12 .50 CR***
SS8224 Law and Order—CP ***2S 12 .50 CR***
Prerequisite: Grade 11 Social Studies
This course is designed to teach the Criminal Justice System as it relates to the average citizen. It is team-taught at the police station with a police officer (MPD educational coordinator). The course includes field trips to Hartford Superior Court and State of Connecticut correctional facilities. The class includes numerous "practical" field tests for students. Those students who enroll in the Criminal Justice Pathways Program can take this course for MCC credit.
Students in this class will be given the opportunity to complete the Service Learning requirement.

*****To be eligible for enrollment and to maintain enrollment in the course, each student must pass a background check by the Manchester Police Department. In addition, a background check will be done by the Department of Corrections, which may prevent the student from participating in a field trip. Further, it is expected that your child will abide by the laws set forth in the Connecticut General Statutes. If there are any violations of said laws during the semester, your child may be removed from the course.**

SS8314 Law in American Society—Multi-level ***12 .50 CR***
SS8414 Law in American Society—Multi-level ***12 .50 CR***
Prerequisite: Grade 11 Social Studies
This is a course for students interested in all aspects of law. Units deal with constitutional law, housing law, domestic situations, consumer protection, and civil law. Legal research, case readings, field trips to court, guest speakers, and mock trials are utilized to give the student a better view of the complexity of the justice system. Students in this class will be given the opportunity to complete the Service Learning requirement.

SS1024 Advanced Placement United States Government and Politics—AP Level ***12 1.00 CR***
Prerequisite: Successful completion of AP US History or American Studies
This is an intensive three quarter long introduction to US Government and Politics. The six topics of the course are Constitutional Underpinnings of United States Government; Political Beliefs and Political Behaviors; Political Parties, Interest Groups, Institutions of the United States Government and Mass Media. The course provides students with practice in analyzing and interpreting data and other information relevant to U.S. government and politics. Students will focus on supplemental readings, including primary source materials and contemporary news analyses that strengthen student understanding of the curriculum. The course requires students to answer analytical and interpretive free- response questions on a frequent basis to prepare for the test. **Students are required to take the AP exam and pay the fee for this exam.** Students in this class will be given the opportunity to complete the Service Learning requirement.

Social Studies Electives

SS9104 Participation in American Society—Unleveled ***1S 12 .50 CR***
SS9204 Participation in American Society—Unleveled ***2S 12 .50 CR***
The goal of this course is to get students actively involved in the world around them and convince them of the importance of being an active and contributing member of American society. The emphasis is on participation which might include simulations, case studies, position papers, mock trials and debates, interviews, polls, field trips, guest speakers, community service, and shadow experiences. Students in this class will be given the opportunity to complete the Service Learning requirement.

SS1014 Advanced Placement European History / UCONN Western Civilization—AP Level ***12 1.0 CR***
Prerequisite: Grade 11 Social Studies
This is a year long course. This course is an intensive chronological examination of Modern European History from early modern times to the present. The course surveys the political, economic, cultural and social life of Europe from the start of the Northern Renaissance around 1450 to the 1990's. The first semester focuses on the origins of modern Europe from the discovery of the New World to the Napoleonic era. The second semester completes the survey through the 1990's and prepares the students for the AP exam in May. Students will complete extensive reading in both primary and secondary sources as well as numerous written assignments. **Students are required to take the AP exam and pay the fee for this exam.** This course is also offered in conjunction with the University of Connecticut's Early College Experience program. **Students who elect for UConn credit must pay a fee and complete UConn requirements**. See your Guidance Counselor for specific program requirements.

SS1004 Advanced Placement Psychology—AP Level ***12 1.0 CR***
Prerequisite: Grade 11 Social Studies
This is a year long course. Students in this course will explore various theories of psychology, as well as physiological and scientific aspects of psychological development. Students in this course will be expected to do substantial independent research on topics in psychology. **Students are required to take the AP exam and pay the fee for this exam.** To enroll in this course, a student must have a recommendation from either his/her eleventh grade social studies teacher.

SS1204 Advanced Placement United States Government & Politics—AP Level ***12 1.0 CR***
Prerequisite: Successful completion of AP US History or American Studies
This is an intensive one semester introduction to US Government and Politics. The six topics of the course are Constitutional Underpinnings of United States Government; Political Beliefs and Political Behaviors; Political Parties, Interest Groups, Institutions of the United States Government and Mass Media. The course provides students with practice in analyzing and interpreting data and other information relevant to U.S. government and politics. Students will focus on supplemental readings, including primary source materials and contemporary news analyses that strengthen student understanding of the curriculum. The course requires students to answer analytical and interpretive free- response questions on a frequent basis to prepare for the test. **Students are required to take the AP exam and pay the fee for this exam.**

SS2114 UCONN American Maritime Culture—Honors—UCONN MAST 1200 1S ***12 .50 CR***
American Maritime Culture is a semester course that gives the student opportunity to earn 3 semester hours of credit from the University of Connecticut. Students will be expected to read, write and conduct research at the college level during the course of the semester. This course will explore maritime history with attention to international linkages afforded by the ocean, the distinctive cosmopolitan culture created at sea, and the literature that resulted as humans interacted with the ocean**. Students who elect for UConn credit must pay a fee and complete UConn requirements. Fee waivers are available to students who participate in the free/reduced priced lunch program.** See your Guidance Counselor for specific program requirements.

SS8104 Psychology—Multi-level 1S ***12 .50 CR***
SS8204 Psychology—Multi-level 2S ***12 .50 CR***
Psychology is the study of human behavior. Students selecting this course will learn more about themselves by exposure to topics such as Stress Management and Attitude Formation, Normal vs. Abnormal Behavior, Altered States of Consciousness, Human Sexuality and Personality Development Theory. Good reading, listening and writing skills are needed. Students electing psychology at the honors level will also do extensive research in a specific area of psychology chosen by the student and the instructor.

SS8106 Sociology—Multi-level 1S ***12 .50 CR***
SS8206 Sociology—Multi-level 2S ***12 .50 CR***
Sociology is the scientific study of the patterns of human group life. This class looks at patterns of human behavior by studying the membership groups people belong to. The class will examine concepts in sociology such as norms, values, status, ranking and roles. The class will also explore the societal problems of crime, aging, environment, urbanization, and terrorism from the perspective of a sociologist. Students will read and write on assigned topics. The class will also help the student master technology and problem solving skills.

SS8314 Law in American Society—Multi-level ***12 .50 CR***
SS8414 Law in American Society—Multi-level ***12 .50 CR***
Prerequisite: Grade 11 Social Studies
This is a full year course for students interested in all aspects of law. Units deal with police procedures, constitutional law, housing law, domestic situations, consumer protection, and criminal law. Legal research, case readings, field trips to court, guest speakers, and mock trials are utilized to give the student a better view of the complexity of the justice system. Students in this class will be given the opportunity to complete the Service Learning requirement.

SS8124 Law and Order—CP 1S ***12 .50 CR***
SS8224 Law and Order—CP 2S ***12 .50 CR***
Prerequisite: Grade 11 Social Studies
This course is designed to teach the Criminal Justice System as it relates to the average citizen. It is team-taught at the police station with a police officer (MPD educational coordinator). The course includes field trips to Hartford Superior Court and State of Connecticut correctional facilities. The class includes numerous “practical” field tests for students. Those students who enroll in the Criminal Justice Pathways Program can take this course for MCC credit.

****To be eligible for enrollment and to maintain enrollment in the course, each student must pass a background check by the Manchester Police Department. In addition, a background check will be done by the Department of Corrections, which may prevent the student from participating in a field trip. Further, it is expected that your child will abide by the laws set forth in the Connecticut General Statutes. If there are any violations of said laws during the semester, your child may be removed from the course.**

SS8134 Economics—Multi-level 1S ***12 .50 CR***
SS8234 Economics—Multi-level 2S ***12 .50 CR***

Economics is more than the study of money. This one semester course examines the social science of economics from three directions. The course begins with an introduction to the basic concepts of the American economic system. The emphasis then shifts to examine the role of business in the economy. The last section of the course deals with the consumer and their role in the economy. Students will explore topics such as supply and demand, inflation and unemployment, labor and unions, stocks and investments that will lead them to effective decision-making and responsible citizenship. Students will experience a variety of teaching methods and be exposed to a number of guest speakers.

SS8107 African-American History—Multi-level 1S ***12 .50 CR***
SS8207 African-American History—Multi-level 2S ***12 .50 CR***

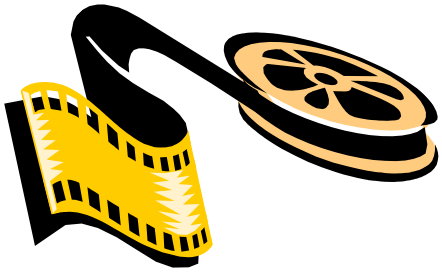
This is a one semester survey of Africans in America from their arrival as slaves in Virginia to modern times. The class takes a detailed and comprehensive study of the historical, social, political, and cultural development of African-Americans. Special emphasis is placed on the origins and nature of slavery, Reconstruction and the Era of Jim Crow, the Harlem Renaissance, and the struggle for Civil Rights. Students also make connections to the modern day struggle for equality, freedom, and dignity of African Americans in the contemporary world. This class is offered at the Multi-level which means students arrange with the instructor the level of work they will attempt.

SS8114 Latin American Studies—Honors 1S ***12 .50 CR***
SS8214 Latin American Studies—Honors 2S ***12 .50 CR***

This is a one semester course that offers students the opportunity to earn 3 semester hours of credit from the University of Connecticut through the UConn ECE program. It examines the contributions of the many cultural/racial groups of the Americas, with specific reference to Latin Americans in the United States. Students will examine and use primary and secondary sources to critically evaluate the historical development of Latin America, and judge the impact in both the past and the future. Students will also examine the culture of the area through a study of literature, art, architecture, music and other folkways. Students will be expected to apply prior knowledge, critical thinking skills, and imagination to explore issues both past and present in Latin America.

SS9306 Criminology—CP ***1S 10-12 .50 CR***

This course is an introduction to the fundamental principles of criminal behavior. Students explore the nature, existence and causation of crime. Concepts of deviance and justice will be examined as it related to cross-cultural perspectives.



SS8306 Modern American Music and Film—Multi-Level 1S ***12 .50 CR***
SS8406 Modern American Music and Film—Multi-Level 2S ***12 .50 CR***

Using music and film, this course will explore various cultural trends and changes that have taken place in America since 1900. Students will view films and listen to music from the early 1900's up to present day. Students will gain an appreciation of American culture as well as explore the vast diversity of these two forms of American culture. Music to be studied will include jazz, the blues, folk, grunge, and rap. Films will include "classics" from each decade as well as modern day trends. Students need to be intelligent watchers of film and intelligent listeners of music. Interdisciplinary projects and presentations are required. **This course is not approved by the NCAA as a core course.**

TECHNOLOGY EDUCATION

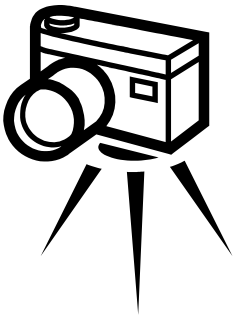
Technology courses provide students with experiences in the application of technology, an appreciation of the impacts of technology on our society, and the opportunities technology provides. The program develops technological skills and provides opportunities for career exploration within technological fields. Students participate in exciting, hands-on activities while achieving these goals.

Program Features:

* **Career Pathways Programs:** Students receive Manchester and Capitol Community College credit for courses taken at MHS. See diagram page.
* **Technology Student Association:** Our technology club competes annually at the TSA state conference and has been particularly successful in Computer Aided Design, Architectural Design, Manufacturing Design, Structural Engineering, and other events.
* **Communications Technology** classes produce printed and silk-screened products for the community.
* **Architecture** classes have designed houses for Habitat for Humanity, and their architectural drawings have been used in planning renovation projects at MHS.
* **Tools and Materials** classes have built and installed cabinets and computer desks at MHS.
* **Scientific Principles of Technology** classes have built, piloted and raced full size hovercrafts.
* **Automotive Technology** students have designed and built alternative energy vehicles and raced them in statewide competition.
* **World of Technology** students take part in the West Point bridge design contest.
* **Construction** classes build a scale model house, learn how to read blueprints or help build a full size storage shed using the latest tools and construction techniques.
* **Robotics** students build real robots and test them in various challenges.

In Technology Education courses, students learn many real world skills, such as:

* *Program a robot*
* *Create a CADD model*
* *Design a house*
* *Weld metal*
* *Write a computer program*
* *Cut, drill and saw wood*
* *Build a model plane*
* *Use an oscilloscope*
* *Replace an exhaust system*
* *Produce a TV program*
* *Write a news article*
* *Design an electronic product*
* *Design business cards*
* *Make a circuit board*
* *Operate a CNC milling machine*
* *Build a rocket*
* *Silkscreen a shirt*
* *Solder electronic parts*
* *Design an electronic car*
* *Make a blueprint*
* *Operate a printing press*
* *Repair a transmission*
* *Use a computer*
* *Design a robotic vehicle*
* *Use a digital camera*
* *Build a bookcase*
* *Learn Physics*
* *Measure voltage*
* *Build a model house*
* *Build an amplifier*
* *Balance a tire*
* *Read a blueprint*
* *Design, build and Race an electric car*
* *Design a website*



Choosing Careers:
Technology courses provide career related experiences for students for careers in a wide range of fields. Students are exposed to career possibilities in class and in job shadowing experiences and field trips. Most careers require college or other post-secondary training. Some of the career fields chosen by our students are:

* Technology Education
* Engineering (all types and levels)
* Computer Science
* Automotive Technology
* Computer Technology
* Electronics Technology
* Building Trades
* Broadcasting (all phases)
* Manufacturing
* Architecture
* Graphic Communications
* Industrial Design
* MHS School Newspaper

Multi-level courses allow students to elect the level (honors, college prep, post-secondary prep) on which to be evaluated early in the course.

MHS TECHNOLOGY COURSES

INTRODUCTION TO TECHNOLOGY

- World of Technology
- Tools and Materials

COMMUNICATION TECHNOLOGY

- Contemporary Communication Workshop
- Yearbook
- Contemporary Photography
- Desktop Publishing

↑ College Credit

- Contemporary Video Production
- Sports Broadcasting
- Contemporary Media
- Broadcast Journalism
- Studio Production

↑ College Credit

TRANSPORTATION TECHNOLOGY

- Automotives
- Aviation/ Aerospace

College credit is available through the Advanced Placement program of the College Board or the Career Pathways program at Manchester and Capitol Community Colleges.

ENGINEERING & DESIGN

- Automation & Robotics
- Computer Programming
- Innovation/ Engineering/ Design
- AP Computer Science
- Computer-aided Design and Drafting

↑ College Credit

ENERGY SYSTEMS

- Principles of Technology
- Electronics Technology

CONSTRUCTION TECHNOLOGY

- Construction Technology
- Architecture

TECHNOLOGY EDUCATION

INTRODUCTION TO TECHNOLOGY

TI8105 World of Technology—Multi-Level ***1S 09-12 .50 CR***
TI8205 World of Technology—Multi-Level ***2S 09-12 .50 CR***
Students will complete a variety of projects while using computer software programs and workshop tools/equipment to discover concepts of communication, construction, transportation, manufacturing, design, and engineering. Class activities include Internet Research, Basic understanding of the Computer, Bridge Design, Architecture, Laser Manufacturing, Magnetic Levitation, Robotics and more.

TI4115 Using Tools and Materials 1—Post Secondary Prep ***1S 09-12 .50 CR***
TI4215 Using Tools and Materials 1—Post Secondary Prep ***2S 09-12 .50 CR***
This course is designed to acquaint students with the hand and machine tools and techniques of working with various materials, including wood. Students learn to design, build, and finish various types of products. Emphasis is placed on safety, design, and quality.

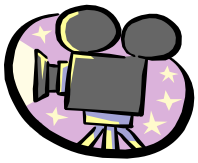
TI4126 Using Tools and Materials 2—Post Secondary Prep ***1S 10-12 .50 CR***
TI4225 Using Tools and Materials 2—Post Secondary Prep ***2S 09-12 .50 CR***
Sequential: Tools and Materials 1
This course is a continuation of Using Tools and Materials. Students will continue to use hand and machine tools in more advanced projects and techniques of working with various materials. Emphasis is placed on design and execution.
Students wishing to further their experiences in this subject should register for the appropriate Seminar in Technology Education.

CONTEMPORARY COMMUNICATIONS TECHNOLOGY

TC8135 Contemporary Communication Workshop—Multi-Level ***1S 09-12 .50 CR***
TC8235 Contemporary Communication Workshop—Multi-Level ***2S 09-12 .50 CR***
This multi-level course is recommended for students interested in exploring the areas of communication technology. Students are introduced to computer graphic design, web site design, desktop publishing, photography and video production. There is an emphasis on authentic project-based learning, and student work will be published on school websites, yearbook, and elsewhere. **This course is recommended as a starting point, to be taken prior to Photography, TV Production, or Desktop Publishing courses.**

TC8515 Contemporary Video Production 1—Multi-Level ***1S 9-12 .50 CR***
TC8615 Contemporary Video Production 1—Multi-Level ***2S 9-12 .50 CR***
Pre-requisite for Broadcast Journalism, Studio Production, and Sports Broadcasting
This course introduces students to basic video field and studio production. This course is a project driven class. Students will work in small groups and individually on teacher-approved segments (projects) throughout the course of the semester. Students will write and tell a story through the use of industry standard editing programs and field production equipment. Scripts and storyboards are created for a multitude of projects.

TC8315 Studio Production—Multi-Level ***1S 10-12 .50 CR***
TC8815 Studio Production—Multi-Level ***2S 9-12 .50 CR***
Sequential: Video Production 1
This course is designed to give students hands-on experience operating a television studio. Students will be taught how to direct, mix audio, operate a camera, and many other skills to produce studio productions.



TC3145 Sports Broadcasting—College Prep ***1S 10-12 .50 CR***
TC3245 Sports Broadcasting—College Prep ***2S 9-12 .50 CR***
Sequential: Video Production 1
This course gives students the opportunity to create sports broadcasts and segments of Manchester High School Athletic competitions. Students will learn professional standards of the industry and master various effects and techniques while developing productions for the web and for television. Production time after school is necessary to record athletic events for class projects. *Students may apply to receive honors level credit for this course. In addition to the regular curriculum, students fulfill a set of honors requirements each quarter. This option is available by arrangement with the instructor.*

TC8016 Broadcast Journalism—Multi-Level ***10-12 1.0 CR***
Sequential: Video Production I
This course allows students to plan, shoot, and edit their own news stories, take on roles in the studio as camera operator, script writer, director, sound engineer, graphic designer, editor, lighting technician, and anchor for Manchester Television News. This course will require studio/field reporting work after school in the community. **MCC college credit may be earned when taken as part of the College Career Pathway program as a 10th, 11th, or 12th grade student**. *Students wishing to further their experiences in this subject should register for the appropriate Seminar in Technology Education.*

TC8126 Desktop Publishing—Multi-Level ***1S 10-12 .50 CR***
TC8226 Desktop Publishing—Multi-Level ***2S 10-12 .50 CR***
This course allows students to advance their skills in computer graphic design. Students learn In-Design and Photoshop and apply these industry standards in a challenging business like setting. Students design and print jobs for clients in the MHS Community. Project examples include t-shirts, posters, business cards, newsletters, commercials, signs and any products your clients may need. *This course is a prerequisite for Yearbook. MCC college credit may be earned as part of the College Career Pathway program in grades 11 or 12.*

TC8146 Contemporary Photography—Multi-Level ***1S 10-12 .50 CR***
TC8246 Contemporary Photography—Multi-Level ***2S 10-12 .50 CR***
This is an introductory course in amateur photography. Students plan, shoot and use a computer to manipulate and enhance the quality of the pictures they take. Students are instructed in the correct use of a digital camera, advanced functions and features of digital cameras, photo composition techniques, digital photo retouching and image merging using Photoshop software. Students are expected to work independently after school with their camera. This course is a pre-requisite for photo seminar and the yearbook photography seminar.

TC8046 Contemporary Media—Multi-Level ***10-12 1.0 CR***
Students enrolled in the Contemporary Media class will be responsible for providing content for all elements of MHSRedline, which has multiple platforms including a web site and also publishes a print newspaper, The Harbinger. Students also will be responsible for ensuring that MHSRedline is a communications hub, drawing from and promoting work done by Red Productions, the SOMANHIS yearbook, and other entities within the high school—including administration, staff, alumni, the PTSA, community organizations and other stakeholders. Students in this class will write and edit copy, shoot and edit photos, design and layout digital and print pages, film and edit video, produce graphics, create promotional announcements and sell advertisements, conduct polls, surveys and contests using varied strategies. Students will occasionally be expected to do outside of school reporting at school events using the school's equipment. Students taking this class must be self-motivated, responsible, and have high interest in media and have strong organizational skills. ***Students must be interviewed by the instructors for admission to this class***.

TC8057 Yearbook—Multi-Level ***11-12 1.0 CR***
Prerequisite: B average or higher in Desktop Publishing, Computer Keyboarding, Intermediate Word Processing, Management, Marketing, or instructor permission. ***Students must be interviewed by the instructors for admission to this class***.
This team taught course is designed to produce the high school yearbook SOMANHIS and an end of the year supplement. Students will attend off-site workshops in the summer to learn the aspects of layout, management, sales and production. This course integrates a number of skills such as marketing, business, finance, technology, writing, photography management, and all activities related to publishing a yearbook. A two-year commitment beginning in the junior year is expected. The focus of the second semester will be on the publication of a spring supplement and the training of underclassmen.

CONSTRUCTION TECHNOLOGY

TN4315 Construction Technology 1—Post Secondary Prep ***1S 09-12 .50 CR***
TN4415 Construction Technology 1—Post Secondary Prep ***2S 09-12 .50 CR***
This course provides the student with an overview of structures such as walls, trusses, beams, towers, dams, bridges, and the forces acting upon them. Various materials that are used in the construction process are studied. Destructive testing will be employed to verify structural design and assembly of models. Students will expand their working knowledge of basic math. Students will improve skills such as reading a ruler, using fractions and applying simple geometric concepts, and work with construction specific power tools.

TN8326 Construction Technology 2—Multi-Level ***1S 10-12 .50 CR***
TN8425 Construction Technology 2—Multi-Level ***09-12 .50 CR***
Sequential: Construction Technology 1 (grade C– or better)
This course deals with the various components of the U.S. infrastructure, including houses, bridges, highway systems, buildings etc. Emphasis is placed upon light construction, residential building, creating and reading blueprints and shed construction. Students enrolling in Construction 2 are expected to be proficient in basic math. They should be able to read a ruler, use fractions and have an understanding of geometry. Students may select one component of the infrastructure and build a scale model based upon individual research. Students wishing to further their experience in Construction should register for Construction Seminar, provided they received a grade of C- or better in Construction 2.

TN8315 Architecture 1—Multi-level ***1S 9-12 .50 CR***
TN8415 Architecture 1—Multi-level ***2S 9-12 .50 CR***
This course provides a working knowledge of the fundamental concepts of architectural drafting and introduces students to using computers to create construction documents. This focus is learning to create scaled and dimensioned floor plans, elevation views, and photo-realistic 3D renderings. Students will complete a variety of projects that require them to visualize how space can best be used and develop solutions within specific guidelines. Architectural projects focus on residential construction.

TN8327 Architecture 2—Multi-level ***1S 10-12 .50 CR***
TN8426 Architecture 2—Multi-level ***2S 9-12 .50 CR***
Sequential: Architecture 1
This course builds upon the experience in Architecture 1. Students will address the more advanced concepts of design, structural efficiency, and aesthetics. Focus will be placed on presenting design ideas, specifying building materials and components and incorporating schedules and detail drawings into the design process. These concepts will be incorporated into student constructed scale models and CAD drawings. *Students wishing to further their experiences in this subject should register for the appropriate Seminar in Technology Education.*

ELECTRONICS & ENERGY SYSTEMS

SC3037 Scientific Principles of Technology—College Prep ***11-12 1.0 CR***
Prerequisite: Algebra 1
Taught for science credit, this is an applied physical science course designed for students who plan technical careers and those wishing to expand their knowledge of the principles of modern technology. It stresses a hands on approach to learning the principles of mechanical, electrical, fluid, and thermal systems. This course has been accepted by major universities as meeting the laboratory science entrance requirement.

TE8116 Electronics Technology 1—Multi-Level ***1S 9-12 .50 CR***
TE8216 Electronics Technology 1—Multi-Level ***2S 9-12 .50 CR***
This course is designed for students who plan to pursue engineering or other technical careers. Students are introduced to the basic concepts of household wiring, electricity/electronics and their applications. The course features hands on lab work which employs electronic test equipment in the building and testing of experimental circuits. Students will apply basic assembly skills in producing a variety of circuits.

TE8137 Electronics Technology 2—Multi-Level ***1S 11-12 .50 CR***
TE8236 Electronics Technology 2—Multi-Level ***2S 9-12 .50 CR***
Sequential: Electronics Technology 1
This course covers semiconductors for digital circuits, digital logic circuits and digital integrated circuits; introduces Boolean Algebra, flip-flops and registers, sequential logic circuits and combinational logic circuits. Students learn how digital circuits are used in semiconductor memories. Some AC wiring and switching is covered as well as some basic computer maintenance and networking topics. Students wishing to further their experiences in this subject should register for the appropriate Seminar in Technology Education.

ENGINEERING & DESIGN

TD3106 Robotics—College Prep ***1S 9-12 .50 CR***
TD3206 Robotics—College Prep ***2S 9-12 .50 CR***
Recommended for students interested in robotics, engineering, or other technical careers. This course provides an introduction to the basics of robotics structure and control. Students will construct several different robots for different scenarios. Students will experience hands-on building, personal driving, and software programming of the robot. Students wishing to further their experiences int his subject should register for the Robotics Seminar course or participate in the award winning MHS Robotics Team.

TD8115 Computer-aided Design and Drafting 1—Multi-Level ***1S 09-12 .50 CR***
TD8235 Computer-aided Design and Drafting 1—Multi-Level ***2S 09-12 .50 CR***
Designed for students planning to pursue engineering or other technical careers, this course introduces the basic techniques of drafting, using Computer-aided Drafting and Design (CADD) software. Students create three-dimensional models of real world objects such as a sports bottle, coffee mug and CD storage box. They will also create multi-part assemblies and animations. Geometric construction, sketching, and dimensioning are major components of the course.

TD8116 Computer-Aided Design and Drafting 2—Multi-Level ***1S 10-12 .50 CR***
TD8215 Computer-Aided Design and Drafting 2—Multi-Level ***2S 09-12 .50 CR***
Sequential: ***Computer-aided Drafting and Design*** *1*
This is a continuation of ***Computer-aided Drafting and Design 1***, providing additional skills in problem solving using CADD software. Semester 2 increases skills with multi-bodied solids, sweeps, lofts, surfaces and material analysis. Sample projects include
An offset screwdriver, tire iron, hard hat and crane hook. *Students wishing to further their experiences in this subject should register for the appropriate Seminar in Technology Education.*

BU3185 Computer Programming I—College Prep ***1S 9-12 .50 CR***
BU3285 Computer Programming I—College Prep ***2S 9-12 .50 CR***
Prerequisite: Algebra 1, College Prep. Level
This course is designed to teach the fundamentals of computer programming using Visual BASIC. Emphasis is placed on the creative design of well-structured programs. Students will learn the vocabulary and the process for designing and running a windows-based program.

TD3101 Computer Programming and Game Design—College Prep ***1S 10-12 .50 CR***
TD3201 Computer Programming and Game Design—College Prep ***2S 9-12 .50 CR***
Sequential: Computer Programming I or approval of Department Chair
This course is designed to further the study of computer science. The course incorporates theory, language, and the architecture of computer game design into the challenge of dealing with the complete design and programming of a computer game. Emphasis on software design and programming will be stressed by using Game Maker Pro. Graphic design will incorporate Autodesk 3D Max. Multiple platforms are used.

TD1006 ***AP Computer Science—AP Level*** ***10-12 1.0 CR***
Prerequisite: Computer Programming II or Teacher approval
This course emphasizes the design issues that make programs understandable, adaptable, and reusable. The development of useful computer programs and program modules is used as a context for introducing other important concepts in computer science, including the development and analysis of algorithms, the development and use of fundamental data structures, and the study of standard algorithms and typical applications. The course teaches students to read and understand a large program consisting of several classes and interacting objects, and enables students to read and understand the current AP Computer Science Case Study posted on AP Central that is a required part of the AP Computer Science curricula. Students are responsible for checking with their specific colleges for exact AP course acceptance.

TD8126 Engineering and Design—Multi-Level ***1S 9-12 .50 CR***
TD8226 Engineering and Design—Multi-Level ***2S 9-12 .50 CR***
Students will design a variety of projects which reinforce STEM (Science, Technology, Engineering, and Mathematics) concepts. These projects will allow students to work with our latest technology such as: 3D printers, laser engraver/cutter, and CNC router. Students will also have a hands-on experience with robotics, electronic circuits and computer hardware to build an understanding of Mechanical Engineering, Electrical Engineering, and Computer Engineering.

TD8136 Mobile Computer Science Principles—Multi-Level ***1S 10-12 .50 CR***
TD8236 Mobile Computer Science Principles—Multi-Level ***2S 10-12 .50 CR***
Students in this course will learn computer science topics by building socially useful mobile apps. In addition to programming and computer science principles, this project based course emphasizes writing, communication, collaboration and creativity. Students who enroll in this course will be eligible to apply for the Mobile Apps for Hartford internship offered by Trinity College over the summer, where students are able to work with various businesses and organizations developing apps.

TRANSPORTATION TECHNOLOGY

TT8105 Aviation & Aerospace—Multi-Level ***1S 09-12 .50 CR***
TT8205 Aviation & Aerospace—Multi-Level ***2S 09-12 .50 CR***

Aviation and Aerospace provides an introduction and overview of flight technologies. Students will study the parts of an airplane, power for flight, and rocket *technology*. The principles of flight will be examined and applied using scaled gliders, powered aircraft, and rockets. Satellites, space travel, and aerospace careers will also be explored. Students will exhibit their piloting skills using a flight simulator program. *Students wishing to further their experiences in this subject should register for the Aviation and Aerospace Seminar in Technology Education.*

TT4106 Automotive Technology 1—Post Sec. Prep ***1S 09-12 .50 CR***
TT4206 Automotive Technology 1—Post Sec. Prep ***2S 09-12 .50 CR***

This course is a basic, introductory class in automotive technology including the fundamentals of automobile operation and maintenance. Emphasis is placed on safety in the auto tech lab and the workplace, as well as the safe and proper use of tools and equipment. The modern automobile is studied as a transportation system, with emphasis placed on the basic operation of the vehicle's engine and its other sub-systems. Students will actively participate in basic and routine maintenance procedures in an automotive workshop.

TT4117 Automotive Technology 2—Post Sec. Prep ***1S 11-12 .50 CR***

TT4216 Automotive Technology 2—Post Sec. Prep ***2S 10-12 .50 CR***

Sequential: ***Automotive Technology 1***

This advanced course allows the student to develop a more thorough understanding of the automobile as a transportation system. This course includes in-depth activities with automobiles with an increased emphasis on safe work habits and proper use of tools and equipment in the workshop. Activities include the diagnosis, inspection, service, and repair of automotive systems. Students will explore the use of alternate energy sources for transportation systems, including the design and building of operating vehicles for interscholastic competitions. *Students wishing to further their experiences in this subject should register for the appropriate Seminar in Technology Education course.*

TT4305 Small Engines—Post. Sec. Prep ***1S 09-12 .50 CR***
TT4405 Small Engines—Post Sec. Prep ***2S 09-12 .50 CR***

This course will introduce will introduce students to the fundamentals of small gas engine repair and maintenance. Units of study will include safety, tools, and measuring instruments, principles of engine operation, engine disassembly, cleaning, inspecting, and measuring engine parts, engine reassembly, general engine troubleshooting, fuel system service, and ignition system service. Various applications of small gas engines will be discussed such as mini-bikes, lawn mowers, snow throwers and go karts.

SEMINAR COURSES

The following courses are designed for students who have completed all of the available courses in the sequences provided. These seminars allow students to explore more advanced concepts, materials, and processes related to that field of study with an emphasis on product design and implementation. Performance and effective completion of projects will be emphasized. Projects and performance measures will be customized to meet individual student needs. All Seminar in Technology Education courses are sequential from the previous level of that same subject area. Sequential grade requirements (C-) must be met at the previous course level to participate in a Seminar course.

Computer Programming Seminar
CP ***TD8315, TD8225***

Tools and Materials Seminar
PSP ***TI4315, TI4415***

Broadcast Journalism Seminar
Multi-Level ***TC8316, TC8416***

Desktop Publishing Seminar
Multi-Level ***TC8915, TC8215***

*Photography Seminar**
Multi-Level ***TC8715, TC8415***

Construction Seminar
Multi-Level ***TN8715, TN8615***

Seminar in Architecture
Multi-Level ***TN8915, TN8815***

Seminar in Electronics
Multi-Level ***TE8715, TE8815***

Automation and Robotics Seminar
CP ***TD8515, TD8615***

Drafting/Design Seminar
Multi-Level ***TD8715, TD8815***

Seminar in Innovation/Engineering/Design
Multi-Level ***TD8915, TD8415***

Aviation and Aerospace Seminar
Multi-Level ***TT8715, TT8815***

Automotives Seminar
PSP ***TT4715, TT4815***

****Photography Seminar TC8015—Year Long***

Photography for the Yearbook for students who have time to attend school functions - sports, dances, school activities. Students qualify for this course by earning a "B" or better in Photography 1 and through an application and interview process.

****Photography Seminar TC 8415—Spring Semester - Careers in Photography***

Students explore advanced studio ad photography, nature photography, job shadow in an area of choice and produce a multi media presentation using their own written and photographic works all done in the artistic style. Students simulate careers using SLR cameras in studio photography, wedding photography, sports photography, freelance photography, photojournalism and create a multi-media production of original work. Students will present and market their best work in a general art gallery.

WORLD LANGUAGES

The major goal of the World Language Department is to teach students to communicate through oral and written expression. Listening, speaking, reading and writing skills are developed. Fostering an understanding of other cultures in our multicultural world is an integral part of all courses.

Students are given the opportunity to explore, develop and practice communication strategies and critical thinking skills as well as the language and culture studied. Each course incorporates the Five Cs of Foreign Language Learning:

1.) Communication - to engage in conversation, provide & obtain information, express feelings and exchange emotions,
2.) Cultures - to understand the traditions, practices and perspectives of the culture studied,
3.) Comparisons - of their own language and the language studied,
4.) Connections - between the language studied and other disciplines,
5.) Community - using language beyond the school setting.

REQUIREMENTS

At this time World Languages are not a requirement for MHS graduation. However, most 4-year colleges require a two-to-three year sequence of study of another language as an entrance requirement.

French 1, 2, 3, 4
Italian 1, 2, 3, 4
Latin 1, 2, 3
Spanish 1, 2, 3, 4, 5

SEQUENTIAL POLICY:

In order for a student to remain at the same level in the following year of world language study, the student must pass the class and achieve a second semester average of C- or better on quizzes, tests, and performance tasks. The second semester scores are used because the content covered in the second half of the year is most important for success in the following year.

Example: French 2, CP level

1st Semester quizzes, tests, and performance tasks = D
2nd Semester quizzes, tests, and performance tasks = B
Final Grade for year = C
In this example, the sequential requirements **have been met**

1st Semester quizzes, tests, and performance tasks = B
2nd Semester quizzes, tests, and performance tasks = D
Final Grade for year = C

In this example, the sequential requirements **have not been met**

Options for the student who does not meet sequential requirements:

- Take French 3 on a lower level (PSP in this example)
- Go to summer school and meet sequential requirements
- Hire a tutor for the summer at your own expense
- Take the first year of a different language in the next year
- Take French 2 again in the next year for NO CREDIT and meet sequential requirements in order to take French 3 in the year after.

WORLD LANGUAGES

FRENCH

FF2015 French 1—Honors ***9-12 1.0 CR***
FF3015 French 1—College Prep ***9-12 1.0 CR***

For first year French classes, there are two levels of study: Honors and College Prep. **The college prep level is appropriate for students who normally take either College Prep or Post Secondary Prep levels in the first year.** Emphasis is placed on the communication skills of listening and speaking. Students gain basic skills in reading and writing. Culture is an integral part and present throughout the entire course.

FF2025 French 2—Honors ***10-12 1.0 CR***
FF3025 French 2—College Prep ***10-12 1.0 CR***
FF4025 French 2—Post Secondary Prep ***10-12 1.0 CR***
Sequential: French 1
French 2 reinforces and builds on the listening, speaking, reading, and writing skills which were developed in French 1. On the Honors and College Prep levels, the course is designed to increase effective reading and writing skills. Oral proficiency and culture are an integral part of the course.

FF2036 French 3—Honors ***11-12 1.0 CR***
FF3036 French 3—College Prep ***11-12 1.0 CR***
FF4036 French 3—Post Secondary Prep ***11-12 1.0 CR***
Sequential: French 2
French 3 emphasizes oral proficiency and gives the student an opportunity to interact in French. The readings concentrate on the cultures of various French-speaking countries. On the Honors and College Prep levels, writing focuses on the development of skills in original compositions. On the Post-Secondary Prep level, writing focuses on the development of contemporary themes.

FF2047 French 4—Honors ***12 1.0 CR***
FF3047 French 4—College Prep ***12 1.0 CR***
Sequential: French 3
Listening, comprehension, and reading skills are stressed. Writing skills are improved through compositions on topics of general interest. Speaking skills are strengthened through discussions of material chosen by the teacher and students, and by the oral presentation of short reports on cultural items.

FF4047 French 4—Post Secondary Prep ***12 1.0 CR***
Sequential: French 3
French 4 is designed to increase the students' listening and speaking skills. At the same time, reading and writing skills are also improved. Topics discussed will help students to communicate in everyday situations.

ITALIAN

FI2015 Italian 1—Honors ***9-12 1.0 CR***
FI3015 Italian 1—College Prep ***9-12 1.0 CR***
For first year Italian classes, there are two levels of study: Honors and College Prep. **The college prep level is appropriate for students who normally take either College Prep or Post Secondary Prep levels in the first year.** Emphasis is placed on the communication skills of listening and speaking. Students gain basic skills in reading and writing. Culture is an integral part and present throughout the entire course.

FI2026 Italian 2—Honors ***10-12 1.0 CR***
FI3026 Italian 2—College Prep ***10-12 1.0 CR***
FI4026 Italian 2—Post Secondary Prep ***10-12 1.0 CR***
Sequential: Italian 1
Italian 2 reinforces and builds on the listening, speaking, reading and writing skills which were developed in Italian 1. On the Honors and College Prep levels, the course is designed to increase effective reading and writing skills. Oral proficiency and culture are an integral part of the course

FI2037 Italian 3—Honors ***11-12 1.0 CR***
FI3037 Italian 3—College Prep ***11-12 1.0 CR***
FI4037 Italian 3—Post Secondary Prep ***11-12 1.0 CR***
Sequential: Italian 2
Italian 3 emphasizes oral proficiency and gives the student an opportunity to communicate in Italian. Reading and writing focuses on various cultural topics chosen by the teacher and students.

FI2044 Italian 4—Honors ***12 1.0 CR***
FI3044 Italian 4—College Prep ***12 1.0 CR***
FI4044 Italian 4—Post Secondary Prep ***12 1.0 CR***
Sequential: Italian 3
This course is designed to expand on the knowledge base acquired in the previous three years of study. There is a strong emphasis on application and demonstration of ability. The curriculum is designed to expose students to the real world applications of the language in the fields of business, law enforcement, medicine and social services.

LATIN

FL2015 Latin I—Honors ***9-11 1.0 CR***
FL3015 Latin I—College Prep ***9-11 1.0 CR***

Prerequisite: **B– in English or B– in other World Language Course**
The Latin I Honors and Latin I College Prep courses are open to **all high school students** meeting the prerequisites. Emphasis is placed on vocabulary, basic grammar, reading and writing skills. The connections between Roman culture and Western civilization, English word etymology, mythology and commonly used Latin expressions are taught.

FL2025 Latin II—Honors ***10-12 1.0 CR***
FL3025 Latin II—College Prep ***10-12 1.0 CR***
Sequential: Latin 1
Latin II reinforces and builds on the forms, grammar, writing and translation skills learned in Latin I. More emphasis is placed on translation and a deeper insight into Roman history, Roman culture and its influence on Western civilization. The Greek alphabet, Greek word roots and philosophers are presented. Mythology, the etymology of English words and commonly used Latin expressions are also taught.

FL2035 Latin III—Honors ***11-12 1.0 CR***
FL3035 Latin III—College Prep ***11-12 1.0 CR***
Sequential: Latin II
Latin III continues to reinforce the use of the forms, grammar and syntax learned in Latin I and II and introduces more complicated grammatical concepts needed to translate “Jason and the Argonauts”, the “Odyssey” and the “Twelve Labors of Hercules”. Quarterly projects, Mythology, Latin expressions and classical Roman engineering and its influence on Western civilization are taught.

SPANISH

FS2015 Spanish 1—Honors ***9-12 1.0 CR***
FS3015 Spanish 1—College Prep ***9-12 1.0 CR***
For first year Spanish classes, there are two levels of study: Honors and College Prep. **The college prep level is appropriate for students who normally take either College Prep or Post Secondary Prep levels in the first year.** Emphasis is placed on the communication skills of listening and speaking. Students gain basic skills in reading and writing. Culture is an integral part and present throughout the entire course.

FS2026 Spanish 2—Honors ***9-12 1.0 CR***
FS3026 Spanish 2—College Prep ***9-12 1.0 CR***
FS4026 Spanish 2—Post Secondary Prep ***9-12 1.0 CR***
Sequential: Spanish 1
Spanish 2 reinforces and builds on the listening, speaking, reading and writing skills which were developed in Spanish 1. On the Honors and College Prep. levels, the course is designed to increase effective reading and writing skills. Oral proficiency and culture are an integral part of the course.

FS2037 Spanish 3—Honors ***10-12 1.0 CR***
FS3037 Spanish 3—College Prep ***10-12 1.0 CR***
FS4037 Spanish 3—Post Secondary Prep ***10-12 1.0 CR***
Sequential: Spanish 2
Spanish 3 emphasizes oral proficiency and gives the student an opportunity to interact in Spanish. The readings concentrate on the cultures of various Spanish-speaking countries. On the Honors and College Prep. levels, writing focuses on the development of skills in original compositions. On the Post Secondary Prep. level, writing focuses on the development of contemporary themes.

FS2044 Spanish 4—Honors ***11-12 1.0 CR***
FS3044 Spanish 4—College Prep ***11-12 1.0 CR***
FS4044 Spanish 4—Post Secondary Prep ***11-12 1.0 CR***
Sequential: Spanish 3
Spanish 4 aims to help the student achieve a comfortable conversational level on familiar topics and to lead the student toward a greater degree of independent self-expression. A solid grammar base, good reading and writing skills are stressed.

FS2054 Spanish 5—Honors ***12 1.0 CR***
Sequential: Spanish 4 Honors
Spanish 5 encompasses and emphasizes aural/oral skills, reading comprehension, grammar and composition skills that have been studied in previous years. Students taking this course use Spanish to communicate on a variety of topics in a variety of ways. Students taking this course may earn three UConn credits for a grade of C or higher. This is equivalent to Spanish 278 at UConn.

FS3054 Spanish 5—College Prep ***12 1.0 CR***
FS4054 Spanish 5—Post Secondary Prep ***12 1.0 CR***
Sequential: Spanish 4
This course is designed to expand the knowledge base acquired in the previous four years of study. There is a strong emphasis on application and demonstration of ability in all five areas of language study. The curriculum is designed to expose students to real world application of the language in a variety of fields.

ACCESS TO SCHOOL RECORDS

The "Education Amendments Act", also known as the "Family Education Rights and Privacy Act" requires each local school district to notify parents and eligible students, at least annually, of the following information:

The types of educational records maintained by the local school system and the persons who have access to the student records and purposes for which they have access.

TYPE OF RECORD	LOCATION OF RECORDS	RECORD CUSTODIAN	ACCESSIBILITY
ADMINISTRATIVE RECORDS	Individual Schools	School Principal	These records are available to certified school personnel with legitimate educational reasons.
SPECIAL RECORDS This category includes standardized testing program scores, guidance counselor files, health records, etc.	Individual Schools	School Principal	These records are available to certified school personnel with legitimate educational reasons.
CLASSIFIED RECORDS This category includes psychological reports, pupil planning placement team findings, and special medical reports.	Individual Schools	School Principal	These records are available to certified school personnel with legitimate educational reasons.

PROCEDURES FOR REVIEWING AND EXPUNGING THE STUDENT RECORDS

Educational Policy #5125-STUDENT RECORDS, authorizes the record custodian to periodically review all data contained in the student records and to further remove and discard inappropriate or useless data. Only material that is considered pertinent and appropriate in planning a student's educational program is maintained. This policy further permits access by authorized school personnel, parents and/or guardians. Such request is to be made in writing to the record custodian. The school system will then make available qualified personnel to assist with explanation and/ or interpretations of the student record.

APPEAL PROCEDURE

The opportunity will be afforded to parents or adult students to challenge the content of the student record to insure that the records are not inaccurate, misleading, or otherwise in violation of the privacy or the other rights of the student. The parent or adult student shall have the right to challenge the validity of any data contained herein.

INFORMAL PROCEDURES

Parents or adult students have the right to request a conference with the custodian of the records to make their objections known.

If the problem is not resolved at this time, a request in writing for a hearing should be made to the Superintendent of Schools.

FORMAL PROCEDURES

A review panel established by the Superintendent of Schools will convene to hear the challenge and render a decision within two weeks after being notified of such appeal by the record custodian, unless the parent or adult student requests a delay.

If the decision is in favor of the parents, the Superintendent will promptly take steps as may be necessary to implement the decision.

In the event the decision rendered by the review panel is not satisfactory to the parents, they then shall have the right to appeal to the Manchester Board of Education. Requests for such appeal shall be in writing to the Chairperson of the Manchester Board of Education.

Parents and adult students are entitled to be represented by an advocate of their choosing.

Appeal from the decision of the Manchester Board of Education shall be to the Court of Common Pleas.

PROCEDURES FOR OBTAINING COPIES OF RECORDS

Copies of records may be obtained from the record custodian at a nominal cost. Please request in writing.

LOCATION AND AVAILABILITY OF RELEVANT FEDERAL, STATE, AND LOCAL POLICIES

Copies of federal and state laws concerning student records, along with the local board policy, are on file in the office of the Superintendent of Schools and are available for review.

NCAA ELIGIBILITY CENTER QUICK REFERENCE GUIDE

NCAA Eligibility Center

Divisions I and II Initial-Eligibility Requirements

Core Courses

- **NCAA Divisions I and II require 16 core courses.** See the charts below.
- **Beginning August 1, 2016, NCAA Division I will require 10 core courses** to be completed **prior to the seventh semester** (seven of the 10 must be a combination of English, math or natural or physical science that meet the distribution requirements below). These 10 courses become "locked in" at the start of the seventh semester and cannot be retaken for grade improvement.
  - *Beginning August 1, 2016, it will be possible for a Division I college-bound student-athlete to still receive athletics aid and the ability to practice with the team if he or she fails to meet the 10 course requirement, but would not be able to compete.*

Test Scores

- **Division I** uses a sliding scale to match test scores and core grade-point averages (GPA). The sliding scale for those requirements is shown on Page No. 2 of this sheet.
- **Division II** requires a minimum SAT score of 820 or an ACT sum score of 68.
- The SAT score used for NCAA purposes includes **only** the critical reading and math sections. The writing section of the SAT is not used.
- The ACT score used for NCAA purposes is a **sum** of the following four sections: English, mathematics, reading and science.
- **When you register for the SAT or ACT, use the NCAA Eligibility Center code of 9999 to ensure all SAT and ACT scores are reported directly to the NCAA Eligibility Center from the testing agency. Test scores that appear on transcripts will not be used.**

Grade-Point Average

- **Be sure** to look at your high school's List of NCAA Courses on the NCAA Eligibility Center's website (www.eligibilitycenter.org). Only courses that appear on your school's List of NCAA Courses will be used in the calculation of the core GPA. Use the list as a guide.
- **Division I** students enrolling full time **before August 1, 2016,** should use Sliding Scale A to determine eligibility to receive athletics aid, practice and competition during the first year.
- **Division I** GPA required to receive athletics aid and practice **on or after August 1, 2016,** is 2.000-2.299 (corresponding test-score requirements are listed on Sliding Scale B on Page No. 2 of this sheet).
- **Division I** GPA required to be eligible for competition **on or after August 1, 2016,** is 2.300 (corresponding test-score requirements are listed on Sliding Scale B on Page No. 2 of this sheet).
- **The Division II** core GPA requirement is a minimum of 2.000.
- Remember, the NCAA GPA is calculated using NCAA core courses only.

DIVISION I 16 Core Courses	
4	years of English.
3	years of mathematics (Algebra I or higher).
2	years of natural/physical science (1 year of lab if offered by high school).
1	year of additional English, mathematics or natural/physical science.
2	years of social science.
4	years of additional courses (from any area above, foreign language or comparative religion/philosophy).

DIVISION II 16 Core Courses	
3	years of English.
2	years of mathematics (Algebra I or higher).
2	years of natural/physical science (1 year of lab if offered by high school).
3	years of additional English, mathematics or natural/physical science.
2	years of social science.
4	years of additional courses (from any area above, foreign language or comparative religion/philosophy).

Sliding Scale A

Use for Division I prior to August 1, 2016

NCAA DIVISION I SLIDING SCALE

Core GPA	SAT Verbal and Math ONLY	ACT
3.550 & above	400	37
3.525	410	38
3.500	420	39
3.475	430	40
3.450	440	41
3.425	450	41
3.400	460	42
3.375	470	42
3.350	480	43
3.325	490	44
3.300	500	44
3.275	510	45
3.250	520	46
3.225	530	46
3.200	540	47
3.175	550	47
3.150	560	48
3.125	570	49
3.100	580	49
3.075	590	50
3.050	600	50
3.025	610	51
3.000	620	52
2.975	630	52
2.950	640	53
2.925	650	53
2.900	660	54
2.875	670	55
2.850	680	56
2.825	690	56
2.800	700	57
2.775	710	58
2.750	720	59
2.725	730	59
2.700	730	60
2.675	740-750	61
2.650	760	62
2.625	770	63
2.600	780	64
2.575	790	65
2.550	800	66
2.525	810	67
2.500	820	68
2.475	830	69
2.450	840-850	70
2.425	860	70
2.400	860	71
2.375	870	72
2.350	880	73
2.325	890	74
2.300	900	75
2.275	910	76
2.250	920	77
2.225	930	78
2.200	940	79
2.175	950	80
2.150	960	80
2.125	960	81
2.100	970	82
2.075	980	83
2.050	990	84
2.025	1000	85
2.000	1010	86

For more information, visit the NCAA Eligibility Center website at www.eligibilitycenter.org.

Sliding Scale B

Use for Division I beginning August 1, 2016

NCAA DIVISION I SLIDING SCALE

GPA for Aid and Practice	GPA for Competition	SAT	ACT Sum
3.550	4.000	400	37
3.525	3.975	410	38
3.500	3.950	420	39
3.475	3.925	430	40
3.450	3.900	440	41
3.425	3.875	450	41
3.400	3.850	460	42
3.375	3.825	470	42
3.350	3.800	480	43
3.325	3.775	490	44
3.300	3.750	500	44
3.275	3.725	510	45
3.250	3.700	520	46
3.225	3.675	530	46
3.200	3.650	540	47
3.175	3.625	550	47
3.150	3.600	560	48
3.125	3.575	570	49
3.100	3.550	580	49
3.075	3.525	590	50
3.050	3.500	600	50
3.025	3.475	610	51
3.000	3.450	620	52
2.975	3.425	630	52
2.950	3.400	640	53
2.925	3.375	650	53
2.900	3.350	660	54
2.875	3.325	670	55
2.850	3.300	680	56
2.825	3.275	690	56
2.800	3.250	700	57
2.775	3.225	710	58
2.750	3.200	720	59
2.725	3.175	730	60
2.700	3.150	740	61
2.675	3.125	750	61
2.650	3.100	760	62
2.625	3.075	770	63
2.600	3.050	780	64
2.575	3.025	790	65
2.550	3.000	800	66
2.525	2.975	810	67
2.500	2.950	820	68
2.475	2.925	830	69
2.450	2.900	840	70
2.425	2.875	850	70
2.400	2.850	860	71
2.375	2.825	870	72
2.350	2.800	880	73
2.325	2.775	890	74
2.300	2.750	900	75
2.275	2.725	910	76
2.250	2.700	920	77
2.225	2.675	930	78
2.200	2.650	940	79
2.175	2.625	950	80
2.150	2.600	960	81
2.125	2.575	970	82
2.100	2.550	980	83
2.075	2.525	990	84
2.050	2.500	1000	85
2.025	2.475	1010	86
2.000	2.450	1020	86
	2.425	1030	87
	2.400	1040	88
	2.375	1050	89
	2.350	1060	90
	2.325	1070	91
	2.300	1080	93

Requirements for Graduation from Manchester High Schools

To graduate from the Manchester Public Schools a student must have earned a minimum of twenty two (22) credits and must have met the credit distribution requirement. Beginning with the Class of 2005, all students must take the Connecticut Academic Performance Test in grade 10. Beginning with the Class of 2006, students must also meet three performance standards: English, Mathematics, and Technology. Beginning with the Class of 2008, students must meet four performance standards: English, Mathematics, Technology, and Social Studies. Students in the Class of 2009 must meet five performance standards: English, Mathematics, Technology, Social Studies, and Science.

Twenty two credits in Grades 9-12 are required for graduation in Manchester. This must include a minimum of the following core requirements:

4.0 credits in English (to include Freshman English, Sophomore English, Junior English, and Senior English)

3.5 credits in Social Studies (Grade 9 and 10 - 2 credits in required courses in Global Issues and Modern World History;

1 credit in U.S. History; and ½ credit in Grade 12 Participation in American Society course, or Law electives)

2.5 credits in Science (to include Earth Science, Biological, and Physical Science)

3.0 credits in Mathematics)

1.25 credits in Physical Education

1.5 credits in Fine Arts (Art, Music) or Vocational Education

6.25 credits must be earned in addition to the core requirements. (This includes the student's obligation under law to successfully complete the required health courses and drug and alcohol study.)

Beginning with the Class of 2006, students must have met the three performance standards: the English Performance Standard, the Mathematics Performance Standard, and the Technology Performance Standard. Students in the Class of 2008 must meet four performance standards: English, Mathematics, Technology, and Social Studies. Students in the Class of 2009 must meet five performance standards: English, Mathematics, Technology, Social Studies, and Science.

GRADE LEVEL DETERMINATION: Students will not be automatically promoted to the next grade. The number of credits a student has earned by the end of summer school will be used to determine his/her grade classification:
Grade 10 - 4 credits
Grade 11 - 8 credits
Grade 12 - 14 credits

The Manchester Public Schools High School Graduation Performance Standards

ENGLISH

Credit Distribution Requirements

4 credits in coursework and successful completion of the district performance standard.
Model for Performance-Based High School Graduation Requirements-English

English

Reading Across the Disciplines - Writing Across the Disciplines

Reading for Information

Response to Literature

Interdisciplinary Writing

Editing and Revising

ENGLISH STANDARD: Student will score in one of the top three score bands on the CAPT.

I. Required English Performance Skills for Graduation

A. The student will read a piece of literature and demonstrate an understanding through interpretation, connection, and critical stance.
B. The student will respond to articles on a current issue and write a persuasive response that is focused, organized, elaborated, and edited for standard English conventions.
C. The student will demonstrate control of basic editing skills.

II. Assessment Options for English - The student **MUST** take the Connecticut Academic Performance Test in grade 10 and will achieve a grade standard that demonstrates competency in reading and writing through one of the following assessment options:

A. Achieve the district established standard on the Connecticut Academic Performance Test (CAPT) Reading Across the Disciplines and Writing Across the Disciplines.
B. Achieve the district established standard on CAPT Reading Across the Disciplines and a score at least equivalent to the previous year's national average on SAT II Writing.
C. Achieve a score at least equivalent to the previous year's national average on SAT II Writing and SAT II Literature.
D. Achieve the district established standard on a district-assembled and administered test, comprised of secured, released items from the CAPT Reading Across the Disciplines and Writing Across the Disciplines.
E. Achieve a grade standard in an additional, specified English course in the senior year. The focus of this course will be on using a portfolio to demonstrate student work which meets the standards over time.

III. Instructional Opportunities to Meet Requirements

A. Regular classroom instruction with curriculum inclusion of CAPT-based strategies.
B. After-school tutoring program.
C. Summer school CAPT strategies course. The focus of this course will be on using a portfolio to demonstrate student progress to meet the standards.
D. Required course in senior year for students who have not met requirements. The focus of this course will be on using a portfolio to demonstrate student work which meets the standards over time.

IV. Administration of Assessments

A. CAPT assessments will be administered according to State of Connecticut guidelines.

B. SAT assessments will be administered according to SAT guidelines.

C. Teachers will administer secured, released CAPT Reading Across the Disciplines and Writing Across the Discipline and/or MHS-developed Reading Across the Disciplines and Writing Across the Discipline assessments according to a plan developed by MHS administration.

1. A committee will score papers of students who have not met any of the graduation performance standards.

a. Papers will be scored without student names.

b. Two teachers who do not have the student will score the paper using the CAPT rubrics. In the event of a discrepancy (two scores more than one number apart), a third scorer who does not have the student will resolve the discrepancy.

c. Scorers will pass a score reliability test.

d. The Assistant Superintendent, in consultation with the district supervisors and the high school principal, will appoint scorers.

D. A grade standard in an additional English course in the senior year will be a basis for meeting the performance standards. The focus of this course will be on using a portfolio to demonstrate student work which meets the standards over time.

Mathematics

Credit Distribution Requirements

3 credits in coursework and successful completion of the district performance standard.

Model for Performance-Based High School Graduation Requirements- Mathematics

CONTENT

Number and Quantity
Geometry, Measurement and Shape
Statistics, Probability and Data
Relations, Functions and Algebra

PROCESSES

Problem Solving and Reasoning
Communicating
Computing and Estimating

MATHEMATICS STANDARD: Students must achieve a score in one of the top three score bands in mathematics as outlined in the Connecticut Academic Performance Test.

I. Required Mathematics Performance Skills for Graduation

- The student must satisfactorily complete three out of four multi-step mathematical problems that require demonstra tion of basic math operations, including fractions and decimals, and conceptual understandings in mathematics. Stu dents will be provided with any required formulas and may use a calculator in completing the task.
- For each of the answers given to these multi-step problems, students must explain in writing or in a pictorial, graphi cal, or algebraic representation, how he/she arrived at each answer or justify each answer.

II. Assessment Options for Mathematics - The student MUST take the Connecticut Academic Performance Test in grade 10 and will achieve a grade standard that demonstrates competency in mathematics through one of the following assessment options:

A. Achieve a score in one of the top three score bands on CAPT Mathematics.
B. Achieve a score at least equivalent to the previous year's national average on SAT I Math.
C. Achieve a score at least equivalent to the previous year's national average on SAT II Math.
D. Achieve the district goal standard (High Proficiency) on a district-assembled and administered, comprised of items from secured, released CAPT Mathematics.
E. Achieve proficiency over time in an additional, specified mathematics course that is project-based.

III. Instructional Opportunities To Meet Requirements:

A. Regular classroom instruction and support with curriculum inclusion of CAPT-based strategies.
B. Additional support such as CAPT-review software programs, distance learning programs, etc.
C. Course in senior year (second, third and/or fourth quarter).
D. Summer school for students (junior or senior) who have not met requirements.

IV. Administration of Assessments:

Beginning in their sophomore year, students have several opportunities to meet one of the performance standards:

A. CAPT assessments will be administered according to the State of Connecticut guidelines.
B. SAT I and SAT II Math will be administered according to the Educational Testing Service SAT guidelines
C. Mathematics teachers will administer the secured, released CAPT Mathematics and/or MHS developed Mathematics assessments according to a plan developed by MHS administration.
D. A grade standard in an additional project-based mathematics course will be a basis for meeting the performance standards.

SOCIAL STUDIES

Credit Distribution Requirements

- 3.5 credits in coursework (Grade 9—1 credit in Roots of Civilization; Grade 10—1 credit in AP World History, World Studies or Modern World History; Grade 11—1 credit in AP U.S. History, American Studies or Modern US History; and Grade 12—1/2 credit in either Participation in American Society, Law & Order, Law & American Society or AP US Government and Politics).
- and successful completion of the district performance standard.

Model for Performance-Based High School Graduation Requirements

Social Studies

Beginning with the Class of 2008, Manchester High School students must successfully complete a performance-based project in order to earn a diploma.

The State of Connecticut has not included social studies testing in the Connecticut Academic Performance Testing Program, unlike English, math, and science. Therefore, Manchester students will demonstrate competency for the social studies graduation requirement through two projects:

- In the eleventh grade, students will complete a History Day Project (as defined by state and national History Day Standards).
- Students must complete a Citizen Action Project in the mandatory grade 12 Citizenship Course (Citizenship Courses are: Participation in American Society, Law and Order, or Law and American Society).

The History Day Project will greatly improve teaching and learning in social studies for all students. The expectation is that students and teachers will combine skills and content when completing these projects. The project emphasizes reading, writing, critical thinking, and development of historical knowledge. Demonstrated mastery of content is imperative to completion of the History Day Project. A number of essential social studies skills must also be utilized to complete this project. These projects will also improve assessment, as they will allow teachers to assess a student's proficiency in both skills and content within the context of a single project.

TO COMPLETE THE SOCIAL STUDIES GRADUATION REQUIREMENT:

I. In Grade 11: complete a History Day Project, which is always based on state and national standards and is assessed using the rubrics developed by the National History Day Committee.

STANDARDS: Each year the theme of this project is provided by the National History Day, which is recognized as an exemplary program at the state and national level. The theme changes each year. Annual themes always expect students to create authentic links between history and the present day (past themes included "Technology and Society", "Rebellion, Revolution, and Reaction", and "Rights and Responsibilities in History").

Annual History Day themes have reflected many of the ten strands, identified in the **Social Studies Standards**, developed by the National Council for the Social Studies. Themes of the last five years have allowed students to incorporate the following standards strands:

- Culture: Social studies programs should include experiences that provide for the study of culture and cultural diversity.
- Time, Continuity, and Change: Social studies programs should include experiences that provide for the study of the ways human beings view themselves in and over time.
- People, Places and Environments: Social studies programs should include experiences that provide for the study of people, places, and environments.
- Individual Development and Identity: Social studies programs should include experiences that provide for the study of individual development and identity.
- Individuals, Groups and Institutions: Social studies programs should include experiences that provide for the study of interactions among individuals, groups, and institutions.

- Power, Authority and Governance: Social studies programs should include experiences that provide for the study of how people create and change structure of power, authority, and governance.
- Science, Technology and Society: Social studies programs should include experiences that provide for the study of relationships among science, technology, and society.
- Global Connections: Social Studies programs should include experiences that provide for the study of global connections and interdependence.
- Civic Ideals and Practices: Social studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in a democratic republic.

The requirements for History Day projects are rigorous. Students completing a project must be able to answer the following **essential questions:**

- How is my topic important?
- How was my topic significant in history in relation to the History Day theme?
- How did my topic develop over time?
- How did my topic influence history?
- How did the events and atmosphere (social, economic, political, and cultural aspects) of my topic's time period influence history?

IMPLEMENTATION: Students may meet this requirement by completing a project in one of the following categories:

- Paper (individual only)
- Individual Exhibit
- Group Exhibit
- Individual Performance
- Group Performance
- Individual Documentary
- Group Documentary
- Individual Website
- Group Website

It is expected that Honors and College Preparatory students will be able to complete these projects semi-independently, while students in Post-Secondary Prep classes will be very carefully monitored and assisted by their teachers when working on these projects.

Some students may complete their social studies graduation requirement before their junior year. This should not be discouraged.

ASSESSMENT: History Day Projects will be assessed using the Manchester History Day Projects rubrics. Foundational rubrics are provided by National History Day. Social studies teachers in Manchester will review these rubrics, to jointly create "Manchester-specific" rubrics to determine which projects demonstrate competency for the Manchester Social Studies Graduation Requirement.

Students do not have to enter town wide or regional History Day competition, although this should be encouraged. Students who do not successfully complete a History Day Project must meet the graduation requirement during Grade 12.

II. Grade 12: Complete a Citizen Action Project. This would be completed within the context of a student's citizenship/ government class. A Citizen Action Project examines an issue in the town or the school and includes proposes and carries out steps to solve the problem. This directly relates to the mission of the Social Studies Department at Manchester High School: to encourage students to **participate** in society in a democratic way. (The skateboard park near Robertson School in Manchester is an example of a town decision that resulted from a Citizen Action Project done by a Manchester High student. Petitions were gathered supporting the construction of the park and the students involved presented their petitions during a formal presentation they gave at a Board of Education meeting.) These projects allow students to be active citizens in the community; for many, these have provided a first, and authentic, glimpse of how town government actually works.

A requirement concerning Citizen Action Projects also reflects several of the strands identified in the national standards created by the National Council of the Social Studies. These include:

- People, Places and Environments: Social studies programs should include experiences that provide for the study of people, places and environments.
- Individual Development and Identity: Social studies programs should include experiences that provide for the study of individual development and identity.
- Individuals, Groups and Institutions: Social studies programs should include experiences that provide for the study of interactions among individuals, groups and institutions.
- Power, Authority and Governance: Social studies programs should include experiences that provide for the study of how people create and change structures of power, authority and governance.
- Production, Distribution, and Consumption: Social studies programs should include experiences that provide for the study of how people organize for the production, distribution, and consumption of goods and services.
- Civic Ideals and Practices: Social studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in a democratic republic.

Assessment: Rubrics already exist for projects currently being completed in Participation in American Society and Law and Order classes. Teachers from the Social Studies Department will review these, and will then create a separate rubric to determine which Citizen Action Projects pass in terms of a graduation requirement and which do not.

Model for Performance-Based High School Graduation Requirements - Technology

The Manchester technology graduation requirement requires students to solve an authentic, complex problem using appropriate technology. Students must design the solution to the problem, select the appropriate technology, and use the technology independently to research the problem. Appropriate use of technology is taught in courses noted in the appendix.
The project/problem will be, at minimum, a major performance project of several weeks duration. Students must pass the project and the course in order to earn the credit for the technology graduation requirement.

Students may meet this requirement in several different ways as they take courses that include defined projects. For example, they may choose to meet the requirement with a focus in Sciences and Technology, Humanities, or Fine and Performing Arts. Completion of the project will be noted in the final exam column for the courses listed.

The essential elements of a technology graduation requirement project are defined as:

a) An authentic "real world" complex problem parallel to the course in which it is offered.

b) Sufficiently challenging to require work equivalent to a semester project.

c) Described and accompanied by a rubric.

Teachers in designated courses design their project, with the following minimum elements:

I) A statement that this project would fulfill the technology graduation requirement.

II) Definition of project, or method for identifying the problem.

III) A statement that technology must be used independently.

IV) Overall requirements for completion of the project.

V) Due date and assessment rubric.

Students must complete all aspects of the assigned project with competency. Projects will be designed to incorporate all six standards. Each teacher should submit to the department curriculum leader, at the end of the course, a copy of the instructions and rubric. Students will submit a copy of their project on diskette or CD-Rom.

Teachers will thus monitor and maintain a level of challenge and rigor that will ensure our graduates leave the Manchester Public Schools with the appropriate skills.

MANCHESTER HIGH SCHOOL GRADUATION REQUIREMENTS

COMPUTER TECHNOLOGY COMPETENCY STANDARDS FOR STUDENTS

STANDARD 1: Operations and Concepts

A. Students demonstrate a sound understanding of the nature and operation of technology systems
B. Students are proficient in the use of technology

ASSESSMENT:

- Make informed choices among technology systems, resources and services.
- Demonstrate ability to use basic features of personal productivity software and performance units within courses required for graduation.
- Develop strategies for solving common hardware and software issues within the classroom.

INSTRUCTIONAL OPPORTUNITIES:

- Classroom instruction in technology integrated units
- After school open lab tutorial
- Senior year summative project/portfolios

STANDARD 2: Social and Ethical Issues

C. Students understand the ethical, cultural and societal issues related to technology.
D. Students practice responsible use of technology systems, information and software.

ASSESSMENT:

- Analyze advantages and disadvantages of widespread use and reliance on technology in the workplace and in society as a whole
- Demonstrate (and advocate for) legal and ethical behaviors among peers, family, and community regarding the use of technology and information
- Observe all ethical and legal restraints in copying or using material from any print, non-print or electronic resources
- Demonstrate an understanding of the process for copyrighting/protecting their original work
- Observe local, state and national laws and policies and procedures regarding the use of computers, other technologies and networks

INSTRUCTIONAL OPPORTUNITIES:

- Classroom instruction in technology integrated units
- After school open lab tutorial
- Senior year summative project/portfolios

STANDARD 3: Technology Productivity Tools

E. Students use telecommunications to collaborate, publish and interact with peers, experts and other audiences.
F. Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

ASSESSMENT:

- Create written, oral, numeric and visual communications using appropriate applications (spreadsheet database, hypermedia, etc.) to construct, organize, analyze and interpret ideas and data, and present conclusion
- Real-world applications and simulations will be demonstrated

INSTRUCTIONAL OPPORTUNITIES:

- Classroom instruction in technology integrated units
- After school open lab tutorial
- Senior year summative project/portfolios

STANDARD 4: Technology Communication Tools

G. Students use technology tools to process data and report results.
H. Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.

ASSESSMENT:

- Evaluate technology-based options including distance and distributed education, for lifelong learning.
- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications and productivity
- Select and apply technology tools for research, information, analysis, problem-solving, and decision-making in content learning
- Demonstrate the ability to solve problems by collecting, analyzing and interpreting data through the use of data management software (database, spreadsheets, etc.)

INSTRUCTIONAL OPPORTUNITIES:

- Classroom instruction in technology integrated units
- After school open lab tutorial
- Senior year summative project/portfolios

STANDARD 5: Technology Research Tools
I. Students use technology tools to process data and report results.
J. Students evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.

ASSESSMENT:

- Evaluate technology-based options including distance and distributed education, for lifelong learning.
- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications and productivity
- Select and apply technology tools for research, information, analysis, problem-solving, and decision-making in content learning
- Demonstrate the ability to solve problems by collecting, analyzing and interpreting data through the use of data management software (database, spreadsheets, etc.)
- Investigate and apply expert systems, intelligent agents and simulations in real world situations

INSTRUCTIONAL OPPORTUNITIES:

- Classroom instruction in technology integrated units
- After school open lab tutorial
- Senior year summative project/portfolios

STANDARD 6: Technology Problem-Solving and Decision-Making Tools

K. Students use technology resources for solving problems and making informed decision.
L. Students employ technology in the development of strategies for solving problems in the real world.

ASSESSMENT:

- Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications and productivity
- Investigate and apply expert systems, intelligent agents and simulations in real world situations
- Collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce, and disseminate information, models and other creative works
- Independently use technology to search for and identify potential work, career or study opportunities in content learning

INSTRUCTIONAL OPPORTUNITIES:

- Classroom instruction in technology integrated units
- After school open lab tutorial
- Senior year summative project/portfolios

COURSES THAT SATISFY THE TECHNOLOGY REQUIREMENT

While many Manchester High School courses incorporate use of contemporary technology, the following courses satisfy the Manchester technology graduation requirement upon successful completion of the course and the specified project:

Art
Explorations in 3-D Design

Business
Computer Applications
Advanced Computer Applications
English/Technology Communications
Business and Technology Applications
Marketing internship

Career Services
Internship
Tech Prep Pathways (12 choices)

English
English/Technology Communications
Sophomore English
American Literature

Family and Consumer Sciences
Fashion Merchandising
Culinary Arts II

Mathematics
Algebra II Connections
Pre-calculus Mathematics
Calculus

Performing Arts
Music Theory
Creating Music with Computers

Science
Marine Biology
Environmental Earth Science
Scientific Principles of Technology

Social Studies
Economics
Law and Order
Participation in American Society

Technology
Communications Technology
Architecture 2
Scientific Principles of Technology
Computer Programming II
/AP Computer Science
CAD Drafting/Design 2

World Languages
French 4
Italian 4
Spanish 4

Additional courses will be added as a result of curriculum and instructional change in both design and delivery. Manchester views this list as a dynamic list which will change to best meet students' needs.

Manchester Public Schools High School Graduation Performance Standards

SCIENCE

Credit Distribution Requirements

2.5 credits in coursework and successful completion of the district performance standard. Credits to include Earth Science, Biology and Physical Science.

Model for Performance-Based High School Graduation Requirements - Science

- **Content:** The content is drawn from three major areas: Life Science: ecosystems, genetics and evolution, cells, human biology
- Physical Science: structure of matter, reactions and interactions, forces and motion, energy sources and transformations
- Earth Science: astronomy, earth's natural resources, meteorology, earth history and dynamics
-

Processes:

Conceptual understanding and application of scientific knowledge:

- Describe natural phenomena with appropriate scientific terms
- Explain natural phenomena with scientific concepts
- Predict future events based on scientific knowledge
- Apply scientific reasoning and knowledge
- Interpret and communicate scientific information using words, equations, graphs and charts
-

Experimentation:

- Recognize and define problems for scientific investigations
- Design appropriate procedures to solve the problem
- Predict the results based on knowledge of problem-related content
- Conduct investigations, collect data and record observations
- Interpret data, draw conclusions and assess their validity
-

SCIENCE STANDARD: The student will score in one of the top three score bands on the CAPT.

I. Required Science Performance Skills for Graduation

- The student will be able to demonstrate science literacy in the fields of earth science, biology and physical science by being able to critically analyze current information in these areas.
- The student will be able to demonstrate the ability to investigate a problem by designing an experiment with controlled variables.
- The student will be able to collect and analyze date from experiments and draw a reasonable conclusion.
- The student will be able to demonstrate the ability to read and develop CAPT-like activities from critical reading of a problem in a portfolio maintained through his core science subjects.

II. Assessment Options for Science - The student must take the Connecticut Academic Performance Test (CAPT) in Grade 10 and achieve a grade standard that demonstrates competency through one of the following assessment options:

A. Achieve the district-established standard on the Science portion of the Connecticut Academic Performance Test (CAPT) by scoring in one of the top three score bands.

B. Demonstrate proficiency over time in a portfolio of science activities. Two science activities must be completed per course semester. Eight out of ten activities assigned must receive passing scores.

C. Achieve a passing score on a district generated science test of secured released CAPT-like questions. The student will be offered this opportunity the second semester senior year, after completing a self-study package of relevant material.

III. Instructional Opportunities to Meet Requirements

A. Regular classroom instruction and support with inclusion of CAPT-based strategies.

B. Ninth grade CAPT simulation.

C. Student portfolio of CAPT-like activities completed in each science course.
D. The opportunity to complete additional portfolio activities in a senior year course to bring the portfolio to a passing standard. The student will sign up for a quarter long course and complete the number of projects necessary to bring his total to eight passing. Five projects will be offered each of the first two quarters in the senior year. A second quarter may be required if the student enters the senior year and has not successfully completed eight projects.

Note: Students who failed to score within the top three score bands on the CAPT in grade 10 are required to take CAPT Science in grade 11.

IV. Administration of Assessments

Beginning in the freshman year, students have several opportunities to meet one of the performance standards:

A. CAPT assessments will be administered according to the State of Connecticut guidelines during grade 10.
B. Teachers of students in grades 9, 10, and 11 will administer two CAPT-like activities per course semester that will be maintained in a student portfolio.
C. Science teachers will administer a secured, released CAPT Science and/or MHS developed Science assessment during the second semester of senior year according to a plan developed by MHS administration.

NOTIFICATION:

Of Teachers: At the beginning of the school year, the Manchester High School Guidance Department or the administration at Manchester Regional Academy and Bentley Alternative School will provide to junior and senior teachers (in subject areas with required performance tasks) a list of all seniors who have not met a standardized test goal in their areas. Teachers will also be notified of the junior CAPT scores upon their receipt at the school.

Of Students: The middle schools' Guidance Department will include with the student's Connecticut Mastery Test scores an explanation of the high school performance standards for high school graduation. The counselors will explain that the mastery test scores might predict the student's future achievement on the Connecticut Academic Performance Test. The Manchester High School Guidance Department or the administration at Manchester Regional Academy and Bentley Alternative School will write to juniors who do not meet the CAPT goal to remind them of the performance standard requirements for graduation. At the beginning of the school year, each senior shall be notified by his/her guidance counselor of his/her status relative to meeting the performance standards for graduation. Opportunities for assistance will be included with each notification. A student's achievement of the district performance standards will be noted in the student's cumulative record. Students will receive in writing the Appeals Process.

Of Parents: The middle schools' Guidance Department will include with the student's Connecticut Mastery Test scores an explanation of the high school performance standards for high school graduation. The counselors will explain that the mastery test scores might predict a student's future achievement on the Connecticut Academic Performance Test. Parents will also receive an explanation of the assistance the student is receiving to improve achievement. After each assessment that the student takes during high school, the Manchester High School Guidance Department or the administration at Manchester Regional Academy and Bentley Alternative School will also notify in writing, through Return Receipt Requested Certified Mail, the parents of junior and seniors who have not met the performance standard goal in a given area and thus must pass one or more of the district performance tasks. Opportunities for assistance will be included in each notification. Parents will receive in writing the Appeals Process.

EXEMPTIONS/MODIFICATIONS:

Transfer Students: If a student has completed three years in an out-of-state high school, the student may be exempted from Manchester High School's performance standards for graduation.

Special Education Students: All students, with the exception of those with severe intellectual limitations, are required to participate in the performance standard evaluation at least twice. Those students who are unsuccessful and identified under IDEA with a disability which impacts learning **may**, through action of a Planning and Placement Team, then be exempted from one or more of the performance standards or one or more of the criteria on the rubric that measures a performance standard. This only occurs following two unsuccessful attempts and after the student's disability is reviewed and it is determined that a change in expectation is appropriate.

English Language Learners: A student whose primary language is not English may be exempted from the district performance standards or a part of those requirements, in accordance with state statute. The need for the exemption must be directly attributable to the language limitations of the student. Exemptions will be determined by the appropriate building administrator.

APPEALS PROCESS:
A. There is no appeal to the scoring of the state-scored CAPT or the Educational Testing Service scored SATs.
B. A student who misses the standard goal by one or two points on assessments scored by Manchester teachers may appeal the score. Students must submit their request for an appeal to the school principal within 20 school days of receiving their score. A student must submit a statement, using the scoring rubric, demonstrating why their score is incorrect. If a student makes an appeal, a teacher, who has not read the paper, will re-score it.
C. The independent assessor will be selected by the Assistant Superintendent for Curriculum and Instruction or his/her designee.
D. The outcome of the independent review will be sent to the principal. The principal will communicate the result of the independent review to the student and parent(s)/guardians(s).
E. Any student may appeal the scoring of their paper in writing within 20 days of receiving the score to the Superintendent if the student believes the process described in these regulations was not followed. The Superintendent will review the case to assure that all regulations were followed. If the Superintendent finds the regulations were not followed, the Superintendent will order a special assessment.

Options If Requirements Are Not Met Prior To Graduation

A. Return in September for additional year(s) of high school.
B. Enroll in summer school and pass the requirement for the performance standards. The focus of this course will be on using a portfolio to demonstrate student work which to meets the standards over time.
C. Arrange re-testing, through the guidance department, to meet the performance standards.

MID-YEAR GRADUATION FOR SENIORS: Students who can complete all graduation requirements by the end of the first semester of the senior year, may leave Manchester High School at that time.

EARLY GRADUATION FOR JUNIORS: It may be possible for some students to satisfy all graduation requirements by the end of their junior year. Although Manchester High School does not encourage students to leave a year early, it is possible, on an individual basis, to apply for this rare option.

To qualify for a diploma, a **TRANSFER** student must be in attendance at least the entire second semester of the senior year and must meet all graduation requirements.

SPECIAL EDUCATION: If special education students do not meet the requirements for a Manchester High School Diploma, they may receive a Manchester High School I.E.P. Diploma, which indicates the student has satisfactorily completed the special education curriculum approved by the Board of Education.

Reference:
5127.1 Specific Unit Requirements for Graduation from Manchester High School
5127.11 External Credit Options Meeting Manchester High School Graduation Requirements
Connecticut General Statutes 10-221h (Early Reading Success)
Connecticut General Statutes 10-221a, 10-223
Connecticut General Statutes 10-19 (Teaching about Substance Abuse)
State of Connecticut Common Core of Learning
State of Connecticut K-12 Curriculum Frameworks
State of Connecticut Testing Program

Manchester Board of Education Strategic Plan (Accountability for Success)
Adopted: June 24, 1985
Revised: January 24, 1994
Revised: September 28, 1998
Revised: June 26, 2000
Revised: March 11, 2002
Revised: July 7, 2003
Revised: December 13, 2004

Proposed (Pending B.O.E. Approval)

Requirements for Graduation from Manchester High School

Effective with the Class of 2019, to graduate from the Manchester Public Schools, a student must have earned a minimum of **25 credits** and must have met the credit distribution requirement.

This must include a minimum of the following core requirements:

9.0 Credits in Humanities including not fewer than

4.0 credits in English
4.0 credits in Social Studies, including 1 credit in U.S. History; and at least one-half credit in a Civics and American government course and a half-credit in *Living in a Global Society*
1.0 credit in Fine or Performing Arts

8.0 Credits in Science, Technology, Engineering, and Mathematics including not fewer than

4.0 credits in Math, including Algebra I, Geometry, and Algebra II or Probability and Statistics
3.0 credits in Science, including at least one credit in life science and at least one credit in physical science
1.0 credit in Science, Technology, Engineering, and Mathematics electives

4.0 Credits in Career and Life Skills including not fewer than

2.0 credits in Wellness, including 1.0 credit in Physical Education, 1.0 credit in Health
1.5 credits in career and life skills electives, such as career and technical education, English as a second language, community service, and public speaking
.5 credits in Personal Finance

2.0 Credits in World Language

1.0 Credit in general electives

1.0 Credit demonstration project of its equivalent

Beginning with the Class of 2019, students must meet eight performance standards: Critical Thinking, Reading, Writing, Oral Presentation, Application of Technology, Collaboration, Wellness, and Service Learning. The performance standards are described below.

GRADE LEVEL DETERMINATION: Students will not be automatically promoted to the next grade. The number of credits a student has earned by the end of summer school will be used to determine his/her grade classification:

Grade 10: 5 credits, at least four of which have been completed at Manchester High School and 3 of which must be in the area of English, Math, Science, Social Studies
Grade 11: 11 credits
Grade 12: 17 credits

Proposed (Pending B.O.E. Approval)

Performance Standards

Effective with the Class of 2019, new graduation performance standards will be implemented.

Students at Manchester High School will:

1. Effectively apply critical and creative thinking skills to solve relevant problems.
2. Actively read, analyze, evaluate, and synthesize informational and persuasive texts.
3. Produce written materials that appropriately respond to the varying demands of audience, task, purpose, and discipline.
4. Create, interpret, and evaluate verbal and nonverbal presentations using a variety of tools/media in varied contexts for a variety of purposes.
5. Access and apply appropriate digital resources, media, and other technology in varied contexts for a variety of purposes.
6. Work collaboratively to solve problems and accomplish goals.
7. Make appropriate decisions in the areas of health, wellness, and physical fitness.

In the courses in the departments indicated in the matrix below, students will have designated assignments that measure their ability to meet each of the academic expectations. Performance requirements will be assessed twice yearly (at the end of the second quarter and the end of the fourth quarter) and the student's level of proficiency will be indicated on report cards in the subject areas outlined in the matrix below. To meet the graduation performance standard in each area, a student must score at or about proficient the number of times indicated in the chart below during their sophomore, junior and senior years.

8. Contribute positively to the community.

Students must complete a Service Learning requirement under the supervision of a teacher in the senior year. It is possible for a student to complete this requirement in another discipline and earlier than the senior year, but all projects will be evaluated by senior-year social studies teachers. The purpose of the requirement is to build stronger partnerships with the community, explore career paths, promote active citizenship, and provide real life experiences for students. The Service Learning Project will be scored using a uniform rubric.

Steps for the service learning project

- The student will identify a problem or issue in the "real world."
- The student will list goals for a projects that will further analyze and/or help "solve" this problem.
- The student will research the project and construct a strategy to further evaluate the problem or issue.
- The student will execute the strategy, with input from both the student's teacher and appropriate community representation.

Proposed (Pending B.O.E. Approval)

Academic Expectation Reporting Matrix

Academic Expectations	# of Prof	English	Math	Social Studies	Science	World Lang.	Tech Ed.	Business	F.A.C.S.	Health	P.E.	Art	Music
1. Effectively apply critical and creative thinking skills to solve relevant problems	6	S	P	S	P	S	P	P	S	S	S	P	P
2. Actively read, analyze, evaluate, and synthesize informational and persuasive texts	4	P	S	P	S	S P	S	S	S	S	S	S	S
3. Produce written materials that appropriately respond to the varying demands of audience, task, purpose, and discipline	4	P	S	P	P	S	S	S	S	S	S	S	S
4. Create, interpret, and evaluate verbal and nonverbal presentations using a variety of tools/media in varied contexts for a variety of purposes	4	S	S	S	S	P	S P	P	S	S	S	P	P
5. Access and apply appropriate digital resources, media, and other technology in varied contexts for a variety of purposes	4	P	S	S	S	S	P	S	S	S	S	S	S
6. Work collaboratively to solve problems and accomplish goals	4	S	P	S	S	P S	S	S	P	P	P	S	S
7. Make appropriate decisions in the areas of health, wellness, and physical fitness	4	S	S	S	S	S	S	S	P	P	P	S	S

P = Primary Reporter (indicated on report card) S = Secondary Reporter

Manchester High School
134 East Middle Turnpike
Manchester, CT 06040

Nonprofit Organization
U.S. Postage
Manchester, CT 06040
Permit #189

"Our Future, Taught Today"