

Milford

HIGH SCHOOL

HOME *of the* BUCCANEERS

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Milford, DE 19963

Phone: (302) 422-1610

mhs.milfordschooldistrict.org



WELCOME TO MILFORD HIGH SCHOOL

Milford High School's foremost priority is to provide every student with the skills to pursue their post-secondary college and career dreams. Our mission is clear:

Milford High School will create a safe, nurturing, and academically stimulating environment that will inspire excellence in teaching and life-long learning so that each student will possess the skills and attitudes essential to participate in a diverse and changing world. In partnership with home and community, our mission is to develop citizens who respect themselves and others, value cultural diversity, set goals with a positive attitude, think critically to solve problems, and can adapt to the changing needs of a global society.

Students at *Milford High School* benefit from a broad range of career majors and celebrated academic opportunities, which includes college prep coursework for all students, honors programs in all core areas of study, and opportunities to earn college credit. In addition, students have the advantage of a wide range of athletics, clubs, activities, volunteer opportunities, and a community spirit which is unmatched in Delaware.

To be a Milford Buccaneer is to be part of a tradition and community that will shape your life forever.

#wearemilford



*Quality Education
Right in Your Neighborhood*



Milford School District is an Equal Opportunity Employer and does not discriminate in employment or in educational programs, services, or activities on the basis of race, color, national origin, sex, sexual orientation, age, disabilities, marital status, genetic information or Veteran Status. Contact the Title IX Coordinator or the District 504 and ADA Coordinator, 906 Lakeview Avenue, Milford, Delaware 19963. Telephone 302-422-1600.

JUST A FEW OF OUR
Recent Graduates



Allison Benton
Wake Forest University



Cannon Cline
Cornell University



Deena Johnson
University of Delaware



Kevin Lin
Delaware State University



Moses Martinez
University of Delaware

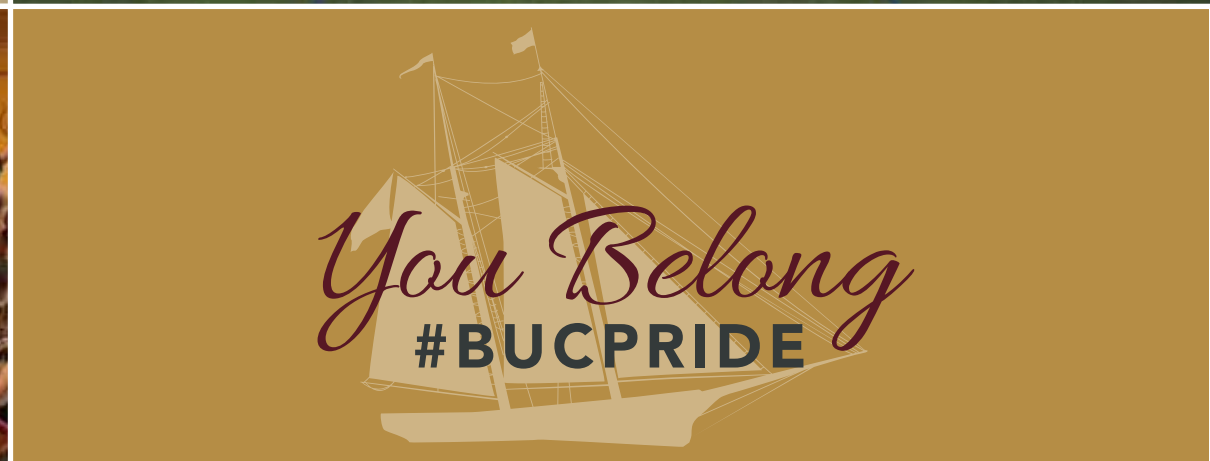




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GRADUATION MAJORS

-  School of Agriscience
-  School of Business, Management, & Hospitality
-  School of Education & Career Studies
-  School of Health Sciences
-  School of Art & Design
-  School of Science, Technology, Engineering, & Math

What is a graduation major?

Students must complete a major to graduate. Each major has a required set of three (3) courses that are beyond the core courses required for graduation. In addition to the course requirements, students will have opportunities to choose additional coursework. Students should work with their parents and school counselors to select the best major for graduation, preparing them for college and a career.

Milford High School's program of study includes four components:

1. Sequential college prep coursework in all core areas of study: English, math, social studies, science, world language, and physical health.
2. Three-course major in a specific college or career area.
3. Opportunities for Dual Enrollment, Advanced College Standing, Articulated College Credit, and/or Advanced Placement (AP) courses.
4. Opportunities for industry certifications and actual career experience through off-campus work-based learning employment or internship experiences.

GRADUATION REQUIREMENTS

Graduation Requirements

The Milford School District has rigorous requirements for our students in order to ensure they are prepared for college and career success. Program specifics are on the following pages and outline the options students have to complete their requirements. A major is a set of three courses that prepares a student for college and career success.

Incoming freshmen will select a major as part of their enrollment in *Milford High School*. Students are encouraged to work with parents, school counselors, teachers, and administrators to select the major that best prepares them for college and career readiness. When making this choice, there are two important factors to consider: Are these choices consistent with your career plans, and are these choices commensurate with your academic abilities and performance? If the answer is yes to both questions, this is the right major for you!

Minimum Graduation Requirements

Career Major	3 credits
English	4 credits
Mathematics	4 credits
Social Studies	3 credits
Science	3 credits
World Languages	2 credits
Physical Education	1 credit
Health Education	.5 credit
Electives	3.5 credits
TOTAL	24 CREDITS



COURSE LEVELS

College Preparatory (CP)

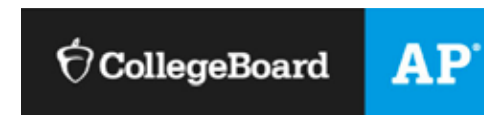
College Preparatory courses are designed to provide a rigorous curriculum aligned with state standards and connected to the student's major. These classes prepare a student for a variety of post-secondary experiences including higher education and/or the workforce.

Honors (H)

Honors courses are designed to prepare students for the rigors of AP and Dual Enrollment courses in various subjects. These courses move at an accelerated pace and often have more outside reading and homework requirements. All students are encouraged to apply to these programs.

Advanced Placement (AP)

AP courses prepare students for college work and are equivalent to freshman courses at a university. These courses teach students to think more deeply about complex college concepts. Successful completion of the course offers students the opportunity to sit for the Advanced Placement exam for college credits. Most exams are worth 3 college credits, but can count for up to 8 college credits. While the acceptance of these scores varies from school to school, all colleges consider strength of schedule in the admissions process. AP courses help distinguish a student in this process. Students who take AP courses are required to take the exam to receive the weighted credit for the course in their cumulative GPA. Tests are in May and financial aid is available for students who qualify.



Milford High School AP Courses

- | | |
|---------------------------------------|-------------------------------|
| AP Biology | AP Human Geography |
| AP Calculus AB | AP Physics 1 |
| AP Computer Science A | AP Psychology |
| AP Computer Science Principles | AP Spanish Language & Culture |
| AP English Language and Composition | AP Statistics |
| AP English Literature and Composition | AP U.S. Government & Politics |
| AP Environmental Science | AP U.S. History |
| AP European History | |

EARN COLLEGE CREDIT IN HIGH SCHOOL

1. Earn college credit while enrolled at Milford High School

Dual Enrollment courses are college courses taught by *Milford High School* faculty. MHS faculty act as adjunct professors and teach the college course during the school day. Students taking Dual Enrollment courses earn high school and college credit at the same time. Students receive a transcript from the partnering college once credit is earned.

2. Earn articulated credit in a Milford High School course

Articulated credit is awarded when a student takes a course or series of courses at *Milford High School*, earns at least an 85%, and then enrolls in the partnering institution. Students who enter college in remedial courses do not receive the articulated credit.

3. Take a course at a local college or university

Local area institutions of higher education offer special programming for students interested in taking college courses on campus prior to high school graduation. Such courses can be taken during summer months, after school hours, or during school with special arrangement for school release. Such an experience can be valuable for students.

DSU Early Bird Program

<https://www.desu.edu/admissions/other-admissions-types/early-bird-program>

Requirements: Letter of Recommendation, 3.0 GPA, 6 free credits maximum, or 2.5 GPA, 6 credit maximum, pay full tuition

Wilmington University Pre-College Credit Program

<https://www.wilmu.edu/precollege>

Requirements: 2.7 GPA, commitment to hard work, \$32 per credit + \$25 registration fee, submit application

Delaware Technical Community College: Visiting Student Program

<https://www.dtcc.edu/academics/hs>

Requirements: Must be 16 years of age, pay full tuition

4. Academic Challenge

Academic Challenge is a specialized program through Delaware Technical Community College. Students apply for admission at the end of 7th grade and begin taking courses at the Owens Campus in Georgetown during 8th grade. Milford School District provides transportation, and counselors work with students to schedule courses during the school day. Academic Challenge students earn college credit for courses taken in the Academic Challenge program.

BECOME COLLEGE READY

PSAT & SAT

All *Milford High School* students take College Board exams in 9th, 10th, and 11th grade. The fall administration of the PSAT in 11th grade enables students to be eligible for the National Merit Scholarship. These exams are administered free of charge. Students can upload their scores to Khan Academy to receive individualized tutoring activities.



BECOME CAREER READY

Work-based Learning

Students who complete a Career Technical Education (CTE) major are eligible for work-based learning. Students in work-based learning secure internships and/or paid employment in their field of study. They are released to work during school hours and earn high school credit for their work experience. Work-based learning students provide their own transportation. Students' employers rate their performance and students must validate their work experience through records and assignments. The work-based learning coordinator monitors students and assigns a grade. Work-based learning experiences are a great addition to any resume.

BE A STUDENT ATHLETE

Academic Eligibility Requirements for Athletics

Delaware Interscholastic Athletic Association (DIAA) governs all Delaware athletics. In order to participate in high school athletics, the student must pass at least five (5) credits, two (2) of which must be core courses in English, math, social studies, science, and/or world language. All seniors must be passing every class they need for graduation. At the beginning of the year a student must have passed five (5) credits, two (2) of which must be core classes from the previous school year.



SCHOOLS AND MAJORS



School of Agriscience

Animal Science & Management

Foundations of Animal Science (FAS)
Growth & Development of Domestic Animals (GDDA)
Domestic Animal Management (DAM)

Food Science

Foundations of Food Science
Technology of Food Processing
Food Safety and Sanitation

Plant Systems

Foundations of Plant Science (FPS)
Plant & Soil Systems (PSS)
Plant Systems Management & Sustainability (PSMS)

Agricultural Structures & Engineering

Fundamentals of Agricultural Structures & Engineering (FASE)
Structural Systems in Agriculture (SSA)
Essential Skills in Agricultural Structures & Engineering (ESASE)



School of Business, Management, & Hospitality

Academy of Finance

Fundamentals of Finance
Principles of Accounting
Financial Services

Hospitality & Tourism Management

Introduction to Hospitality & Tourism Management (IHTM)
Lodging Management (LM)
Food & Beverage Management (FBM)



School of Education & Career Studies

College Scholars

A combination of three AP or Dual Enrollment courses above the requirements for graduation.

Jobs for Delaware Graduates

JDG 9
JDG 10
JDG 11
JDG 12

K–12 Teacher Academy

Human Growth & Development
Teaching as a Profession
Foundations of Curriculum & Instruction



School of Health Sciences

Allied Health

Fundamentals of Health Science
Essentials of Health Careers
BIO 110: Essentials of Anatomy & Physiology
BIO 120: Anatomy & Physiology I

Public & Community Health

Fundamentals of Health Sciences (FHS)
Essentials of Public & Community Health (EPCH)
HLT321: Personal Wellness (PW)

Sports & Health Sciences

A combination of three of the following courses:
Fundamentals of Health Science
Essentials of Health Careers
Anatomy & Physiology
Strength Training
Fitness Training
Team Sports



School of Art & Design

Digital Communication Technology

Foundations of Digital Design (FDD)
Processes of Digital Production (PDP)
Applications of Digital Design (ADD)

Performing Arts

A combination of three performing arts courses including band, choir, and drama.

Visual Arts

A combination of three visual arts courses including art, digital design technology, and yearbook.



School of Science, Technology, Engineering, & Math

Computer Science

Exploring Computer Science
AP Computer Science Principles
AP Computer Science A

Engineering

Introduction to Engineering
Principles of Engineering
Engineering Design & Development



Animal Science & Management

COURSE SEQUENCE

Foundations of Animal Science (FAS)
Growth & Development of Domestic Animals (GDDA)
Domestic Animal Management (DAM)

STUDENT ORGANIZATION



Students compete at Delaware State Fair and National FFA Conventions.

Supervised Agricultural Experience (SAE) includes: entrepreneurship, placement, agriscience research, agricultural service learning, exploratory, improvement, supplemental and directed school laboratory.

FUTURE CAREERS

- Veterinarian
- Horse Breeder
- Zoologist
- Animal Rescue
- Farmer
- Wildlife Manager
- Veterinary Technologist



SUMMARY OF MAJOR

The *Animal Science & Management* program is a three (3) course, hands-on program of study that explores animal production and management, physical restraint and handling, conducting health exams, evaluation of behavior, principles of genetics and reproduction, animal selection through evaluation, anatomy and physiology, animal nutrition, basic veterinary practices, global food systems, ethics of food animal production, and current agricultural issues in order to foster an understanding of the steps involved in producing and marketing products for consumers. Students practice decision-making and research skills through classroom instruction, laboratory activities, and practical experiences.

COLLEGE CREDIT

Students who complete the *Animal Science & Management* major receive the following articulated credits:

Delaware Technical Community College

AGS 204: Animal Science

Delaware State University

AGRI 206: Introduction to Animal Science

STATE-OF-THE-ART FACILITY



Milford Agriscience barn and working farm provides students hands-on opportunities.

School of Agriscience

Animal Science & Management Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits	Foundations of Animal Science (FAS)	Growth & Development of Domestic Animals (GDDA)	Domestic Animal Management (DAM)	
Suggested Electives: 3.5 Credit Minimum		Any additional Agriscience Courses	Fundamentals of Health Science	Anatomy and Physiology

ANIMAL SCIENCE & MANAGEMENT COURSE DESCRIPTIONS

FOUNDATIONS OF ANIMAL SCIENCE (FAS)

Level: College Prep
Prerequisite: None

This introductory course focuses on the fundamentals of animal science which include animal origin, domestication and uses, careers in the animal industry, animal safety and sanitation, ways animals help humans, taxonomy and breeds, basic nutrition and health, biosecurity principles and environmental conditions on animals, and animal rights versus welfare. Students are introduced to the foundational leadership skills, responsibility, and cooperation needed to be a successful and productive citizen through a school-based, three-component agricultural education model which includes FFA activities, Supervised Agricultural Experience programs, and career and leadership development events.

Credit: 1

DOMESTIC ANIMAL MANAGEMENT (DAM)

Level: College Prep
Prerequisite: Growth and Development of Domestic Animals (GDDA)

In this course, students will demonstrate their mastery of the content covered in FAS and GDDA and apply their technical knowledge and skills in the field of animal agriculture. Students apply their mastery of biosecurity principles and environmental conditions on animals, global applications of animal agriculture, reproduction and genetics, animal nutrition, animal health care and evaluation, selection and marketing, and legal responsibilities through hands-on activities. Students apply skills gained through Supervised Agricultural Experience programs, FFA leadership activities, and career and leadership development events to better serve the community through a school-based, three-component agricultural education model.

Credit: 1

GROWTH & DEVELOPMENT OF DOMESTIC ANIMALS (GDDA)

Level: College Prep
Prerequisite: Foundations of Animal Science (FAS)

Students will learn to apply animal science principles including biosecurity principles and environmental conditions on animals, nutrition, animal health and management, animal products and processing, laws and sustainable practices, industry standards on the animal selection process, and scientific principles of anatomy, physiology, and reproduction. Students develop leadership skills, increase levels of responsibility, and engage in cooperative activities through FFA activities, Supervised Agricultural Experience programs, and career and leadership development events through a school-based three-component agricultural education model.

Credit: 1

ANIMAL SCIENCE & MANAGEMENT WORK-BASED LEARNING

Credit: 1 or more determined by work hours
Prerequisite: Completion of major

Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.

Students will complete a Supervised Agricultural Experience (SAE) Project and are encouraged to join the FFA, an integral, co-curricular part of the Agriscience Program.



Food Science

COURSE SEQUENCE

Foundations of Food Science
Technology of Food Processing
Food Safety and Sanitation

STUDENT ORGANIZATION



Students compete at Delaware State Fair and National FFA Conventions.

Supervised Agricultural Experience (SAE) includes: entrepreneurship, placement, agriscience research, agricultural service learning, exploratory, improvement, supplemental and directed school laboratory.

FUTURE CAREERS

- Food Scientist
- Quality Assurance Expert
- Food Production Specialist
- Food Safety Inspector
- Biotechnologist



SUMMARY OF MAJOR

This program of study offers career exploration concerning the handling and processing of food, food packaging and labeling, food safety, and issues in food science. Students will receive hands-on instruction that includes dairy product testing, identification of retail cuts of meat, fish processing, and more. A special emphasis is placed upon workforce opportunities for internships and hands-on experience in these industries.

COLLEGE CREDIT

Students who complete the *Food Science* major receive the following articulated credits:

Delaware Technical Community College
FSY 100: Introduction to Food Science
FSY 110: Food Safety and Sanitation



School of Agriscience

Food Science Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits	Foundations of Food Science	Technology of Food Processing	Food Safety and Sanitation	
Suggested Electives: 3.5 Credit Minimum		Any additional Agriscience Courses	Introduction to Hospitality & Tourism Management (IHTM)	Lodging Management (LM) Food & Beverage Management (FBM)

FOOD SCIENCE COURSE DESCRIPTIONS

FOUNDATIONS OF FOOD SCIENCE

Level: College Prep
Prerequisite: None

This course introduces the field of food science and technology with emphasis on the science behind food technology, the importance of food in providing proper nutrition, and the opportunities for employment in the food industry. Students will receive hands-on instruction that includes dairy product testing, identification of retail cuts of meat, fish processing, and more.

TECHNOLOGY OF FOOD PROCESSING

Level: College Prep
Prerequisite: Foundations of Food Science

This course introduces the principles of food processing and food preservation methods to produce a safe, wholesome food product for consumers. Laboratory techniques in dehydration, canning, freezing, fermentation of foods and beverages, food additives, packaging of food products, and sensory evaluation are emphasized.

FOOD SAFETY AND SANITATION

Level: College Prep
Prerequisite: Technology of Food Processing

This course covers food safety and sanitation practices and addresses consumer complaints and public health issues related to food service establishments. The course includes career exploration and builds upon the previous course topics. Students will focus on sustainability from a farm-to-table aspect of the food science industry and will obtain ServSafe certifications.

FOOD SCIENCE WORK-BASED LEARNING

Credit: 1 or more determined by work hours
Prerequisite: Completion of major

Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.

Students will complete a Supervised Agricultural Experience (SAE) Project and are encouraged to join the FFA, an integral, co-curricular part of the Agriscience Program.



Plant Systems

COURSE SEQUENCE

Foundations of Plant Science (FPS)
 Plant & Soil Systems (PSS)
 Plant Systems Management & Sustainability (PSMS)

STUDENT ORGANIZATION



Students compete at Delaware State Fair and National FFA Conventions.

Supervised Agricultural Experience (SAE) includes: entrepreneurship, placement, agriscience research, agricultural service learning, exploratory, improvement, supplemental and directed school laboratory.

FUTURE CAREERS

- Plant Breeder
- Soil and Water Specialist
- Plant Pathologist
- Greenhouse Manager
- Agronomist



SUMMARY OF MAJOR

The *Plant Systems* program of study is a three (3) course Career & Technical Education (CTE) instructional program designed to provide students with knowledge of plant growth and reproduction, as well as the use of plants for food, fiber, and ornamental purposes. The program prepares students for a variety of careers in agronomy, ornamental horticulture, biotechnology, forestry, soil science, and turf management.

COLLEGE CREDIT

Students who complete the *Plant Systems* major receive the following articulated credits:

Delaware State University
 AGRI 219: General Horticulture



School of Agriscience

Plant Systems Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits	Foundations of Plant Science (FPS)	Plant & Soil Systems (PSS)	Plant Systems Management & Sustainability (PSMS)	
Suggested Electives: 3.5 Credit Minimum		Any additional Agriscience Courses	Spanish III	AP Spanish Language & Culture SOC 111: Sociology Work-based Learning

PLANT SYSTEMS COURSE DESCRIPTIONS

FOUNDATIONS OF PLANT SCIENCE (FPS)

Level: College Prep
 Prerequisite: None

Credit: 1

Foundations of Plant Science (FPS) explores the plant industries and food system of the United States in order to foster an understanding of the steps involved in growing crops for food, as well as plants for ornamental and aesthetic purposes. Students study the major characteristics of plant life, plant structures and functions, nutrient needs of plants, fundamentals of soil science, water management, cultural practices, pest management, and explore career options in the horticulture industry through classroom and laboratory instruction. Students are introduced to the foundational leadership skills, responsibility, and cooperation needed to be a successful and productive citizen through a school-based, three-component agricultural education model which includes FFA activities, Supervised Agricultural Experience programs, and career and leadership development events.

PLANT & SOIL SYSTEMS (PSS)

Level: College Prep

Credit: 1

Prerequisite: Foundations of Plant Science
 Plant & Soil Systems (PSS) enables students to build on the knowledge and experiences gained in Foundations of Plant Science. Students apply knowledge and concepts of plant science, soil science, water management, pest management, and various crop production characteristics through hands-on laboratory and experiential learning. PSS uses a combination of classroom and laboratory instruction that includes land labs, greenhouses, landscape beds, floral production, and hydroponics. Students develop leadership skills, increase levels of responsibility, and engage in cooperative activities through FFA activities, Supervised Agricultural Experience programs, and career and leadership development events through a school-based, three-component agricultural education model.

PLANT SYSTEMS MANAGEMENT & SUSTAINABILITY (PSMS)

Level: College Prep

Credit: 1

Prerequisite: Plant & Soil Systems

Plant Systems Management & Sustainability (PSMS) enables students to apply principles of horticulture production and facility maintenance and design. Students learn soil conservation and land management practices, concepts related to integrated pest management and how to properly use and apply pesticides, as well as principles of business management and record keeping. Students explore global economic systems, sustainability of plant life, and the multifaceted role plants play in sustaining and improving the quality of life. Students apply skills gained through Supervised Agricultural Experience programs, FFA leadership activities, and career and leadership development events to better serve the community through a school-based, three-component agricultural education model.

PLANT SYSTEMS WORK-BASED LEARNING

Credit: 1 or more determined by work hours

Prerequisite: Completion of major

Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.

Students will complete a Supervised Agricultural Experience (SAE) Project and are encouraged to join the FFA, an integral, co-curricular part of the Agriscience Program.



Agricultural Structures & Engineering

COURSE SEQUENCE

Fundamentals of Agricultural Structures & Engineering (FASE)
 Structural Systems in Agriculture (SSA)
 Essential Skills in Agricultural Structures & Engineering (ESASE)

STUDENT ORGANIZATION



Students compete at Delaware State Fair and National FFA Conventions.

Supervised Agricultural Experience (SAE) includes: entrepreneurship, placement, agriscience research, agricultural service learning, exploratory, improvement, supplemental and directed school laboratory.

FUTURE CAREERS

- Carpenter
- Welder
- Builder
- Mechanic



SUMMARY OF MAJOR

This major is designed to provide students with the scientific principles and methods required to understand the interrelationships of construction and metal fabrication. Students practice real-world applications and problem-solving skills associated with agricultural designs and engineering principles. Students utilize problem-solving and communication skills to develop engineering concepts and building practices that are sound and reliable. The program prepares students for a variety of careers including carpentry, engineering, architectural design, electrical, plumbing, masonry, construction framing, business management, sales, building maintenance, home improvement, and green energy technologies.



School of Agriscience

Agricultural Structures & Engineering Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits	Fundamentals of Agricultural Structures & Engineering (FASE)	Structural Systems in Agriculture (SSA)	Essential Skills in Agricultural Structures & Engineering (ESASE)	
Suggested Electives: 3.5 Credit Minimum		Any additional Agriscience Courses	Introduction to Engineering	Principles of Engineering and Engineering Design & Development

AGRICULTURAL STRUCTURES & ENGINEERING COURSE DESCRIPTIONS

FUNDAMENTALS OF AGRICULTURAL STRUCTURES & ENGINEERING (FASE)

Level: College Prep

Prerequisite: None

Fundamentals of Agricultural Structures & Engineering (FASE) provides students a variety of experiences in the fields of agricultural structures and engineering. Students engage in hands-on projects reading and developing construction plans and drawings, evaluating site preparation techniques, selecting wood types, constructing buildings, and tool identification, use, and safety. Students participate in project-based instruction and apply principles of agricultural structures and engineering.

Credit: 1

ESSENTIAL SKILLS IN AGRICULTURAL STRUCTURES & ENGINEERING (ESASE)

Level: College Prep

Prerequisite: Structural Systems in Agriculture (SSA)

Essential Skills in Agricultural Structures & Engineering (ESASE) provides students with the scientific principles and methods required to incorporate the skills and knowledge needed to be employed in agricultural structures and related agricultural industries. Students will learn the basic principles of metal and welding fabrication including SMAW, MIG, and TIG. Students will also learn about techniques that are effective to finish agricultural structures and projects.

Credit: 1

STRUCTURAL SYSTEMS IN AGRICULTURE (SSA)

Level: College Prep

Prerequisite: Fundamentals of Agricultural Structures & Engineering (FASE)

Structural Systems in Agriculture (SSA) enables students to build on the knowledge and experiences gained in FASE. Students design, plan, and construct small structures that directly relate to large-scale construction projects. SSA includes hands-on experiences for students to expand their skills in advanced equipment and engineering applications, electrical wiring, and plumbing.

Credit: 1

AGRICULTURAL STRUCTURES & ENGINEERING WORK-BASED LEARNING

Credit: 1 or more determined by work hours

Prerequisite: Completion of major

Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.

Students will complete a Supervised Agricultural Experience (SAE) Project and are encouraged to join the FFA, an integral, co-curricular part of the Agriscience Program.



Academy of Finance

School of Business, Management, & Hospitality

COURSE SEQUENCE

Fundamentals of Finance
Principles of Accounting
Financial Services

STUDENT ORGANIZATIONS



www.bpa.org

TECHNICAL CERTIFICATION

NAFTRACK Certification

A commitment made by world-class companies (AT&T, Cisco, Lenovo, JPMorgan Chase & Co., and others) to give special consideration to NAFTrack certified job applicants.

FUTURE CAREERS

- Accountant
- Loan Officer
- Payroll Specialist
- Tax Preparer
- Finance Analyst
- Insurance Claims Specialist



SUMMARY OF MAJOR

The *Academy of Finance* (AOF) major engages students with the world of financial services by focusing on banking and credit, financial planning, accounting, and insurance. Students gain career knowledge through a series of work-based learning activities that are conducted in school and outside of the classroom, and a summer internship.

COLLEGE CREDIT

Students who successfully complete the AOF major will receive articulated credits:

Delaware Technical Community College

- BUS 101: Introduction to Business
- SSC 130: Where's My Money
- SSC 131: Are You Credit Worthy?
- SSC 132: Planning for the Beach

Delaware State

- FIN 102: Money Matters
- ELCT990: Free/COB Elective

The Dual Enrollment ACC 101: Accounting I course is available to students at Milford High School upon completion of the major through Delaware Tech.



www.naf.org

The National Academy of Finance (NAF) partners with thirteen (13) colleges and universities across the country to award advanced credit for *Academy of Finance* (AOF) program completion. For more information, please visit www.naf.org.

Academy of Finance Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits	Fundamentals of Finance	Principles of Accounting	Financial Services	
Suggested Electives: 3.5 Credit Minimum	Introduction to Hospitality & Tourism Management	Any additional Hospitality & Tourism Courses	Spanish III	AP Spanish Language & Culture Work-based Learning

ACADEMY OF FINANCE COURSE DESCRIPTIONS

FUNDAMENTALS OF FINANCE

Level: College Prep
Prerequisite: None

Fundamentals of Finance explores the foundation of financial literacy, the function of finance in society, and the role of a financial planner. This course focuses on income and wealth, financial institutions, and the role of finance in organizations. Students research the impact of technology on the financial services field and examine the importance of sound financial planning. An integrated culminating project provides an opportunity for students to demonstrate expertise on issues critical to financial independence.

PRINCIPLES OF ACCOUNTING

Level: College Prep
Prerequisite: Fundamentals of Finance

Principles of Accounting provides students with an understanding of the critical accounting process and how it facilitates decision making by providing data and information to internal and external stakeholders. Technology will be used for internal decision making, planning, and control.

Credit: 1

Credit: 1

FINANCIAL SERVICES

Level: College Prep
Prerequisite: Principles of Accounting

Financial Services provides students with the history of money and banking and the origins of banking in the United States. Students will learn to research and discriminate between investment options through an in-depth study of the financial services industry and are also introduced to the insurance industry and the critical role of insurance in the financial services sector.

ACADEMY OF FINANCE WORK-BASED LEARNING

Credit: 1 or more determined by work hours
Prerequisite: Completion of major

Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.



Hospitality & Tourism Management

School of Business, Management, & Hospitality

COURSE SEQUENCE

Introduction to Hospitality & Tourism Management (IHTM)
Lodging Management (LM)
Food & Beverage Management (FBM)

STUDENT ORGANIZATIONS



DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management. DECA enhances the co-curricular education of members through a comprehensive learning program that integrates into classroom instruction, applies learning, connects to business and promotes competition. DECA's activities assist in the development of academically prepared, community oriented, professionally responsible, experienced leaders. DECA members compete in a statewide competition each year.



SUMMARY OF MAJOR

The *Hospitality & Tourism Management* program of study is a three (3) course Career and Technical Education (CTE) program designed to prepare students for employment in the hospitality industry. Students explore management and technical skills needed for success and practice industry-specific skills that can be used in all aspects of the hospitality and tourism industry. Students also acquire employability skills such as leadership, guest services, accountability, teamwork, and responsibility. The program prepares students for careers such as front office supervisor, front desk associate, director of tourism, and general manager.

COLLEGE CREDIT

Students who successfully complete the *Hospitality & Tourism Management* major will receive articulated credits:

Delaware State University

HTM 100: Introduction to Hospitality
HTM207: Food Safety and Sanitation

Delaware Technical Community College

HRI101: Introduction to Hospitality
FSY110: Food Safety and Sanitation
CUL119: Food Safety and Sanitation

FUTURE CAREERS

- Front Desk Associate/Supervisor
- Event Planner
- Housekeeping Supervisor
- Travel Agent
- Lodging Manager

Hospitality & Tourism Management Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits		Introduction to Hospitality & Tourism Management (IHTM)	Lodging Management (LM)	Food & Beverage Management (FBM)
Suggested Electives: 3.5 Credit Minimum		Any additional Academy of Finance course	Spanish III	AP Spanish Language & Culture Work-based Learning

HOSPITALITY & TOURISM MANAGEMENT COURSE DESCRIPTIONS

INTRODUCTION TO HOSPITALITY & TOURISM MANAGEMENT (IHTM)

Level: College Prep

Prerequisite: None

Introduction to Hospitality & Tourism Management (IHTM) provides an overview of the hospitality and tourism industries. Students learn the importance of the hospitality and tourism industry on the economy and are introduced to the guest cycle and how to ensure guest satisfaction. This course focuses on the scope and complexity of the hospitality industry and the importance of problem-solving, decision-making, planning, delegation, communication, and time-management skills.

LODGING MANAGEMENT (LM)

Level: College Prep

Prerequisite: Introduction to Hospitality & Tourism Management

Lodging Management (LM) enables students to examine operating procedures and systems for managing various types of lodging facilities, including hotels, resorts, and inns. Students practice customer relations, cost controls, marketing, purchasing, inventory, and communication skills through classroom-managed simulated operations. Professional skills needed to effectively manage an organization and engage in customer service are integrated throughout this course.

FOOD & BEVERAGE MANAGEMENT (FBM)

Level: College Prep

Prerequisite: Lodging Management

Food & Beverage Management (FBM) prepares students to apply the principles of cost controls to food and beverage in the hospitality setting. Students learn to design accurate menus and demonstrate critical-thinking and problem-solving skills while continuing to perfect their management skills and improve efficiency and profitability. Global cultures and sustainability, as well as diverse management styles in the hospitality industry, are applied. Students have the opportunity to practice and refine employability skills such as leadership, accountability, teamwork, and responsibility.

HOSPITALITY & TOURISM MANAGEMENT WORK-BASED LEARNING

Credit: 1 or more determined by work hours

Prerequisite: Completion of major

Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.



College Scholars

COURSE SELECTION

A combination of three AP or Dual Enrollment courses above the requirements for graduation.



<https://apstudent.collegeboard.org>

STUDENT ORGANIZATIONS



The National Honor Society (NHS) is the nation's premier organization established to recognize outstanding high school students. It is estimated that more than one million students participate in NHS activities.



AP SCHOLAR AWARDS

The AP Scholar Awards recognize high school students who have demonstrated exemplary college-level achievement on AP Exams. The following academic distinctions are awarded:

- AP Scholar: Granted to students who receive scores of 3 or higher on three or more AP Exams
- AP Scholar with Honor: Granted to students who receive an average score of at least 3.25 on all AP Exams taken, and scores of 3 or higher on four or more of these exams
- AP Scholar with Distinction: Granted to students who receive an average score of at least 3.5 on all AP Exams taken, and scores of 3 or higher on five or more of these exams
- State AP Scholar: Granted to the one male and one female student in each U.S. state and the District of Columbia with scores of 3 or higher on the greatest number of AP Exams, and then the highest average score (at least 3.5) on all AP Exams taken
- National AP Scholar: Granted to students in the United States who receive an average score of at least 4 on all AP Exams taken, and scores of 4 or higher on eight or more of these exams



SUMMARY OF MAJOR

College Scholar majors are encouraged to take the AP or Dual Enrollment level of courses in each of the discipline areas. Students will have the opportunity to take college credit-bearing courses all four years of their high school career. When applying to top universities, strength of schedule is a key component of admissions. These students will have some of the strongest available at any high school in the country. AP courses often have more rigorous levels of work than traditional high school courses and require a significant time commitment. Dual Enrollment courses are college courses offered at Milford High School free of charge that enroll the student in the college granting the credit. Milford High School has partnerships with Delaware Technical Community College, Wilmington University, and Delaware State University.

School of Education & Career Studies

College Scholars Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
English: 4 Credits	English 9 or higher	English 10 or higher	English 11 or higher	English 12 or higher
Mathematics: 4 Credits	Algebra I or higher	Geometry or higher	Algebra II or higher	Choose one: <ul style="list-style-type: none"> • AP Calculus AB • AP Statistics • MAT 152: Quantitative Reasoning • Pre-Calculus
Science: 3 or 4 Credits	Physical Science or higher	Biology or higher	Choose one: <ul style="list-style-type: none"> • AP Biology • Chemistry • Earth Science • AP Environmental Science • Physics • AP Physics 	Choose one: <ul style="list-style-type: none"> • AP Biology • Chemistry • Earth Science • AP Environmental Science • Physics • AP Physics • AP Human Geography • Psychology • AP Psychology • AP U.S. Government & Politics • AP U.S. History • World History • ENG101: Critical-thinking & Writing • ENG:102: Composition & Research • CHM 111: Intro to Chemistry • BIO 110: Essentials of Anatomy & Physiology • BIO 120: Anatomy & Physiology • SOC 111: Sociology • CRJ 101: Survey of Criminal Justice
Social Studies: 3 or 4 Credits	Human Geography or AP Human Geography	U.S. Government & Economics or AP U.S. Government & Politics	U.S. History or AP U.S. History	
Health: 1 Credit	Health/Driver's Education			
Physical Education: 1 Credit	Physical Education			
Spanish: 2 Credits	Spanish I or higher	Spanish II or higher		
Major Requirements: 3 Credits	Additional Dual Enrollment/AP Course			
Suggested Electives: 3.5 Credit Minimum			Spanish III AP Psychology	AP Spanish Language & Culture SOC 111: Sociology



Jobs for Delaware Graduates

School of Education & Career Studies

COURSE SEQUENCE

JDG 9
JDG 10
JDG 11
JDG 12



www.jobsdegrad.org



Jobs for Delaware Graduates Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits	(Take 3 of 4): JDG 9	JDG 10	JDG 11	JDG 12
Suggested Electives: 3.5 Credit Minimum	Students in this major may consider a secondary major to enhance their skills and knowledge.			Work-based Learning

JOBS FOR DELAWARE GRADUATES COURSE DESCRIPTIONS

JDG 9

Level: College Prep
Prerequisite: None

Credit: 1

The 9th grade JDG course includes study skills, personal grooming, goal planning, decision making, choosing a career path, maintaining a positive attitude, coping with change, values clarification, image assessment, writing an autobiography, group dynamics, conflict resolution, and life-skills math.

JDG 10

Level: College Prep
Prerequisite: JDG 9

Credit: 1

The 10th grade JDG course includes problem-solving, teamwork, goal setting, money management, workplace math, courtesy and respect, customer service, workplace diversity, career interests, entrepreneurship, leadership, understanding insurances, and writing job applications.

JDG 11

Level: College Prep
Prerequisite: JDG 10

Credit: 1

The 11th grade JDG course includes career vocabulary, resume writing, sources of jobs, telephone skills, listening skills, stress management, personal budgeting, occupational preferences, career manual, verbal presentations, critical thinking, constructive criticism, and professional ethics.

JDG 12

Level: College Prep
Prerequisite: JDG 11

Credit: 1

The 12th grade JDG course includes time management, letter of application, choosing career attire, employment interview, job survival, performance evaluations, business etiquette, employee rights, pay and benefits, financial planning, career travel, writing a letter of resignation, and career portfolio. Each senior will develop a career portfolio that includes a resume, references, a sample job application, and recommendations.

JOBS FOR DELAWARE GRADUATES WORK-BASED LEARNING

Credit: 1 or more determined by work hours
Prerequisite: Completion of major

Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.

STUDENT ORGANIZATIONS

The **Delaware Career Association** (DCA) of Jobs for Delaware Graduates is a student organization that was established to provide JDG students with opportunities to associate with other JDG members in their schools and in their communities throughout the state and at the national level. As a member of this unique organization, students develop leadership, social, civic, and career skills and potential.

SUMMARY OF MAJOR

The *Jobs for Delaware Graduates* (JDG) major is designed to help students reach academic and career goals. The curriculum includes sixteen (16) school-to-work transition competencies per year. JDG is committed to preparing the students of Milford High School for real-world job experience. Each competency delivers an impactful job skill or soft skill that students will need to be successful in employment. The experiential learning will prepare students for a business, teaching, or marketing major in college. This is an excellent major for students who want to go directly into the workforce after graduation. The JDG Specialist is available to assist students in finding jobs in the career of their choice during the school year, in the summer, and for twelve months following graduation.

2004 GRADUATE OF JOBS FOR DELAWARE

Latoria J. Ellis is a 2004 Milford High School graduate and Jobs for Delaware Graduates (JDG) major. While in high school, she was elected state-wide Vice President of the Delaware Career Association. She attributes JDG with helping her become a better public speaker, improve her communication skills, and have more confidence. Ms. Ellis has since earned several post-secondary degrees and owns her own business. She said, "I am truly thankful for everything JDG has done for me."



CAREER SKILLS

- Organization and Time Management
- Career Attire
- Cover Letter, Resumes, and References
- Employment Interviews
- Business Etiquette
- Employee Rights
- Financial Planning



K-12 Teacher Academy

School of Education & Career Studies

COURSE SEQUENCE

Human Growth & Development
Teaching as a Profession
Foundations of Curriculum & Instruction

STUDENT ORGANIZATION



Educators Rising is a national organization that provides passionate young people with hands-on teaching experience, sustains their interest in the profession, and helps them cultivate the skills they need to be successful educators. Students participate in an annual conference and a state-wide competition in areas such as job interview skills, lesson planning, public speaking, and children's literature.

FUTURE CAREERS

- K-12 Teacher
- Paraprofessional
- School Counselor
- School Psychologist
- School Administrator
- Librarian



SUMMARY OF MAJOR

The Delaware *K-12 Teacher Academy* engages students in developing a realistic understanding of teaching while exploring the importance and impact of teachers. Students will acquire the knowledge and skills needed to sustain their interest in the profession and cultivate the skills needed to be successful educators, thus creating a pipeline of high-quality students transitioning to the teaching profession. Students will understand the rigors of a career in education and participate in classroom and field experiences relevant to pursuing a degree in education.

COLLEGE CREDIT

Students completing the *K-12 Teacher Academy* major are encouraged to take core area Dual Enrollment and Advanced Placement courses to complement this major area.

Delaware State University

- EDUC204: Philosophical Foundations of Education
- EDUC207: Life Span Development
- EDUC313: Exceptional Children

Delaware Technical Community College

- PSY125: Child Development

TEACH IN MILFORD!

All *K-12 Teacher Academy* graduates who go on to complete a college degree in education and are certified to teach in Delaware will be guaranteed an interview for an available teaching position with the Milford School District.

K-12 Teacher Academy Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits	Human Growth & Development	Teaching as a Profession	Foundations of Curriculum & Instruction	
Suggested Electives: 3.5 Credit Minimum	Coursework related to your content area (For example: An aspiring history teacher should take social studies electives)		AP Psychology	SOC 111: Sociology Work-based Learning

K-12 TEACHER ACADEMY COURSE DESCRIPTIONS

HUMAN GROWTH & DEVELOPMENT

Level: College Prep
Prerequisite: None

This course introduces students to human physical, cognitive, social, and emotional development beginning with conception and ending with early adolescence. Theories supporting current thinking and research on human development are examined, as well as the processes and influences affecting the developing person. Further, students explore challenges to normal growth and development.

TEACHING AS A PROFESSION

Level: College Prep
Prerequisite: Human Growth & Development

This course explores the role of the teacher in the past, present, and future in order to understand the importance of teaching in American society and its historical significance and social impact. Students explore the responsibilities and opportunities of an effective teacher at various grade bands and consider the function of the teacher as a leader. Students also identify personal professional goals to establish a path to becoming a teacher.

Credit: 1

Credit: 1

FOUNDATIONS OF CURRICULUM & INSTRUCTION

Level: College Prep

Prerequisite: Teaching as a Profession

This course explores curriculum delivery models in response to the needs of the learner. Emphasis is placed on the development of a variety of instructional materials that promote learning and a supportive classroom environment. Students analyze the influence of technology on learning. Students develop lesson plans and assessments while practicing appropriate classroom management techniques to maximize the learning process for every student.

Credit: 1

K-12 TEACHER ACADEMY WORK-BASED LEARNING

Credit: 1 or more determined by work hours
Prerequisite: Completion of major

Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.

TECHNICAL CERTIFICATIONS



ParaPro

Paraprofessionals must have the appropriate knowledge and ability to assist in instructing students and be competent in required instructional techniques and academic content areas. The ParaPro assessment is required for Delaware paraprofessional certification for candidates with less than two years of study at an institution of higher education.



Praxis Core Academic Skills for Educators

This assessment measures academic skills in reading, writing, and mathematics. The assessment was designed to measure the skills and content knowledge of candidates entering teacher preparation programs. Delaware's institutions of higher education use the Praxis Core tests to evaluate individuals for entry into teacher education programs. Delaware requires Praxis Core scores as part of their teacher licensing process.



Allied Health

COURSE SEQUENCE

Fundamentals of Health Science (FHS)
 Essentials of Health Careers
 BIO 110: Essentials of Anatomy & Physiology
 BIO 120: Anatomy & Physiology I

STUDENT ORGANIZATION



Health Occupations Student Organization (HOSA) is an international student organization recognized by the U.S. Department of Education. HOSA provides a unique program of leadership development, motivation, and recognition exclusively for secondary students enrolled in a health science education program or who have an interest in pursuing a career in health professions. Students compete in a state-wide HOSA competition each year.

TECHNICAL CERTIFICATIONS



CPR & First Aid

**American Heart Association
 CPR / First Aid Certification**



National Consortium for Health Science Education Assessment

At the completion of the program of study, students complete the National Consortium for Health Science Education Health Science Assessment.
<https://www.healthscienceconsortium.org/assessment>



SUMMARY OF MAJOR

The *Allied Health* program of study is a Career & Technical Education (CTE) instructional program that engages students in open-ended problem-solving where they study topics such as medical terminology and human anatomy and physiology. Through exploration of the National Health Science Standards, students will acquire important skills necessary for healthcare professionals such as medical mathematics, communication, safety practices, legal responsibilities, and teamwork. In addition, students will develop technical skills such as performing a wound culture, measuring vital signs, collecting a throat culture, and performing a strep test. The program prepares students for a variety of careers in healthcare such as respiratory therapist, nurse, physical therapist, dental hygienist, and medical lab technician.

COLLEGE CREDIT

Students who complete the *Allied Health* major receive the following credits at Delaware Technical Community College:

Articulated Credit (Milford High School curriculum):

- BIO 100: Medical Terminology
- BIO 110: Essentials of Anatomy & Physiology

Dual Enrollment Credit (Delaware Tech curriculum):

- BIO 120: Anatomy & Physiology

FUTURE CAREERS

- Respiratory Therapist
- Nurse
- Dental Hygienist
- Medical Lab Technician
- Nursing Assistant
- Physical Therapist
- Radiologist

School of Health Sciences

Allied Health Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits	Fundamentals of Health Science (FHS)	Essentials of Health Careers	BIO 110: Essentials of Anatomy & Physiology BIO 120: Anatomy & Physiology I	
Suggested Electives: 3.5 Credit Minimum			AP Psychology Spanish III Strength Training Fitness Training Team Sports	Anatomy & Physiology Work-based Learning

ALLIED HEALTH COURSE DESCRIPTIONS

FUNDAMENTALS OF HEALTH SCIENCE (FHS)

Level: College Prep **Credit:** 1
Prerequisite: None
 Fundamentals of Health Sciences (FHS) introduces students to careers in healthcare and is a prerequisite to the other Health Science pathway courses. This course focuses on medical terminology which includes Greek and Latin prefixes, suffixes, roots, abbreviations, names of diseases, surgeries, and allied health specialties. In addition, students explore the National Consortium Health for Science Education (NCHSE) Health Science Standards and entry-level healthcare skills. Students begin preparation for the National Health Science Assessment and develop skills focusing on the language of medicine.

ESSENTIALS OF HEALTH CAREERS

Level: College Prep **Credit:** 1
Prerequisite: Fundamentals of Health Science
 This course offers students the opportunity to become effective and efficient healthcare providers as they develop a working knowledge of various healthcare opportunities. As students identify the various areas of Allied Health, they will discuss the potential of education, advancement, employment opportunities, employment sites, and financial rewards. Students will focus on careers in the healthcare field by applying classroom/lab knowledge and skills to clinical settings as they participate in direct or simulated patient care.

BIO 110: ESSENTIALS OF ANATOMY & PHYSIOLOGY

Level: College Prep **Credits:** 1 MHS
 This course includes structure and function of the human body with an emphasis on gross anatomy, as well as all organ systems and their relationship to homeostasis. Coordinated laboratory activities are an integral part of this course.

BIO 120: ANATOMY & PHYSIOLOGY I

Level: Dual Enrollment **Credits:** 1 MHS & 5 DTCC
Prerequisite: Essentials of Health Careers and SAT 480 ERW, Accuplacer Reading 78, Writing 84, or 75% grade in Technical Reading & Writing
 This course introduces students to the anatomy and physiology of humans including the structure and function of cells, tissues, and integumentary, skeletal, muscular, nervous, and endocrine systems. Coordinated laboratory experiments are an integral part of this course. Students learn the physiology of each body system, as well as how to investigate common diseases, disorders, and emerging diseases. The prevention, diagnosis, and treatment of disease are addressed.

ALLIED HEALTH WORK-BASED LEARNING

Credit: 1 or more determined by work hours
Prerequisite: Completion of major
 Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.

Students who would like to enter into the Delaware Technical Community College Nursing program are required to complete BIO 120: Anatomy & Physiology I.



Public & Community Health

COURSE SEQUENCE

Fundamentals of Health Sciences (FHS)
 Essentials of Public & Community Health (EPCH)
 HLT 321: Personal Wellness (PW)



STUDENT ORGANIZATION



Health Occupations Student Organization (HOSA) is an international student organization recognized by the U.S. Department of Education. HOSA provides a unique program of leadership development, motivation, and recognition exclusively for secondary students enrolled in a health science education program or who have an interest in pursuing a career in health professions. Students compete in a state-wide HOSA competition each year.

TECHNICAL CERTIFICATIONS



CPR & First Aid

**American Heart Association
 CPR / First Aid Certification**



National Consortium for Health Science Education Assessment

At the completion of the program of study, students complete the National Consortium for Health Science Education Health Science Assessment.
<https://www.healthscienceconsortium.org/assessment>

SUMMARY OF MAJOR

The *Public & Health* program of study is a three (3) course Career & Technical Education (CTE) instructional program that engages students in a comprehensive approach to health while learning about social determinants such as poverty, discrimination, and inadequate access to resources. Students will learn to view health from medical, behavioral, social, and environmental perspectives. Additionally, students will discover methods for eliminating health inequities and bringing awareness to public policy to determine the distribution of resources needed for healthy communities. Students will explore the fields of health and human services while investigating client needs, services, and the skills and attitudes required of the effective human services worker. Through exploration of the National Health Science Standards, students will acquire important skills necessary for healthcare professionals such as medical terminology, medical mathematics, communication, safety practices, legal responsibilities, and teamwork.

COLLEGE CREDIT

Students who complete the *Public & Community Health* major receive the following credits at Delaware Technical Community College (and Wilmington University):

Articulated Credit (Milford High School curriculum):

- BIO 100: Medical Terminology (3 credits)
- HLT 321: Personal Wellness (3 credits)

School of Health Sciences

Public & Community Health Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits	Fundamentals of Health Science (FHS)	Essentials of Public & Community Health (EPCH)	HLT 321: Personal Wellness (PW)	
Suggested Electives: 3.5 Credit Minimum			AP Psychology Spanish III Strength Training Fitness Training Team Sports	Anatomy & Physiology Work-based Learning

PUBLIC & COMMUNITY HEALTH COURSE DESCRIPTIONS

FUNDAMENTALS OF HEALTH SCIENCE (FHS)

Level: College Prep **Credit:** 1
Prerequisite: None
 Fundamentals of Health Sciences (FHS) introduces students to careers in healthcare and is a prerequisite to the other Health Science pathway courses. This course focuses on medical terminology which includes Greek and Latin prefixes, suffixes, roots, abbreviations, names of diseases, surgeries, and allied health specialties. In addition, students explore the National Consortium Health for Science Education (NCHSE) Health Science Standards and entry-level healthcare skills. Students begin preparation for the National Health Science Assessment and develop skills focusing on the language of medicine.

ESSENTIALS OF PUBLIC & COMMUNITY HEALTH (EPCH)

Level: College Prep **Credit:** 1
Prerequisite: Fundamentals of Health Science
 Essentials of Public & Community Health (EPCH) introduces students to population health and examines the interdisciplinary approach to social and behavioral influences. Students learn the history of public and community health and the multi-disciplinary approach to health, which includes examining various organizations and healthcare delivery systems. Students examine complex public health problems and are exposed to major theories of disease etiology and intervention. Additionally, students explore public health issues related to epidemiology, mental health, disabilities, and substance abuse. Students participate in Mental Health First Aid Certification through the National Council for Behavioral Health (NCBH) and continue preparation for the National Consortium for Health Science Education (NCHSE) National Health Science Assessment.

HLT 321: PERSONAL WELLNESS

Level: Dual Enrollment **Credits:** 1 MHS & 5 DTCC
 Personal Wellness (PW) introduces students to the importance of wellness in relation to the Six Dimensions of Wellness, which include physical, social, intellectual, spiritual, emotional, and occupational wellness. Additionally, students learn basic nutritional requirements for healthy individuals, how exercise affects health, and methods of disease prevention. Students explore factors that predispose individuals to unhealthy behaviors as well as key components of health behavior change. Further, this course is offered as an articulated course through Wilmington University (HLT 321: Personal Wellness). At the completion of the program of study, students complete the National Consortium for Health Science Education (NCHSE) National Health Science Assessment.

PUBLIC & COMMUNITY HEALTH WORK-BASED LEARNING

Credit: 1 or more determined by work hours
Prerequisite: Completion of major
 Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.



Sports & Health Sciences

COURSE SELECTIONS

A combination of three of the following courses:
 Fundamentals of Health Science
 Essentials of Health Careers
 Anatomy & Physiology
 Strength Training
 Fitness Training
 Team Sports

STUDENT ORGANIZATIONS

- Participate on Athletic Team
- Volunteer as Sports Manager
- Varsity Club



Students in the Sports & Health Sciences Major organize the Milford High School blood drive each year.

TECHNICAL CERTIFICATION



CPR & First Aid

American Heart Association
 CPR / First Aid Certification

FUTURE CAREERS

- Athletic Trainer
- Athletic Director
- Physical Therapist
- Sports Marketing
- Sports Psychologist
- Fitness Marketing Specialist



SUMMARY OF MAJOR

A unique combination of coursework gives students the necessary experience to major in the competitive field of sports medicine. Designed to give students a background in human anatomy, fitness, and basic medical knowledge, students who complete this major will have the skills and experience to pursue a variety of college majors ranging from medicine to sports management to athletic training.

COLLEGE CREDIT

Students who complete the *Sports & Health Sciences* major receive the following articulated credit at Delaware Technical Community College:

BIO 100: Medical Terminology



School of Health Sciences

Sports & Health Sciences Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
English: 4 Credits	English 9 or higher	English 10 or higher	English 11 or higher	English 12 or higher
Mathematics: 4 Credits	Algebra I or higher	Geometry or higher	Algebra II or higher	Choose one: • AP Calculus AB • AP Statistics • MAT 152: Quantitative Reasoning • Pre-Calculus
Science: 3 or 4 Credits	Physical Science or higher	Biology or higher	Choose one: • AP Biology • Chemistry • Earth Science • AP Environmental Science • Physics • AP Physics	Choose one: • AP Biology • Chemistry • Earth Science • AP Environmental Science • Physics • AP Physics • AP Human Geography • Psychology • AP Psychology • AP U.S. Government & Politics • AP U.S. History • World History • ENG101: Critical-thinking & Writing • ENG:102: Composition & Research • CHM 111: Intro to Chemistry • BIO 110: Essentials of Anatomy & Physiology • BIO 120: Anatomy & Physiology • SOC 111: Sociology • CRJ 101: Survey of Criminal Justice
Social Studies: 3 or 4 Credits	Human Geography or AP Human Geography	U.S. Government & Economics or AP U.S. Government & Politics	U.S. History or AP U.S. History	
Health: 1 Credit	Health/Driver's Education			
Physical Education: 1 Credit	Physical Education			
Spanish: 2 Credits	Spanish I or higher	Spanish II or higher		
Major Requirements: 3 Credits	A combination of three of the following courses: Fundamentals of Health Science, Essentials of Health Careers, Advanced PE, Strength Training, Anatomy & Physiology			
Suggested Electives: 3.5 Credit Minimum	Fundamentals of Finance	Spanish III AP Psychology Strength Training Fitness Training Team Sports	SOC 111: Sociology Strength Training Fitness Training Team Sports	



Digital Communication Technology

COURSE SEQUENCE

Foundations of Digital Design (FDD)
Processes of Digital Production (PDP)
Applications of Digital Design (ADD)

STUDENT ORGANIZATIONS

- ESports
- Robotics Club



Technology Student Association (TSA) is a national organization of students whose purpose is to take the study of STEM beyond the classroom. TSA gives students the chance to pursue academic challenges among friends with similar goals and interests. Each year students compete in state-wide competitions in areas such as website design, 3D modeling, and radio controlled operation.

TECHNICAL CERTIFICATION



The **Adobe Certified Associate (ACA)** certification allows you to demonstrate proficiency in Adobe digital communications tools.

FUTURE CAREERS

- Broadcaster
- Journalist
- Photographer
- Graphic Designer
- Audio/Video Producer
- Digital Media Designer



SUMMARY OF MAJOR

Career & Technical Education (CTE) instructional program of study requires students to apply the skills and tools of digital designers used in graphic design, pixel-based imagery manipulation, HTML coding, digital video production, vector image manipulation, digital illustration, and digital publishing. Students utilize strategies to solve open-ended problems while learning how to apply technical skills, creative skills, industry knowledge, documentation techniques, and processes using modern, industry-leading technology and software. Client-based learning experiences and industry-mentored projects introduce students to a wide array of related careers in public relations, marketing, web and digital communications, and printing.



School of Art & Design

Digital Communication Technology Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits	Foundations of Digital Design (FDD)	Processes of Digital Production (PDP)	Applications of Digital Design (ADD)	Optional Communication Technology IV
Suggested Electives: 3.5 Credit Minimum	Students in this major should consider additional coursework in Marketing, Computer Science, or Visual Arts.		Spanish III	AP Spanish Language & Culture SOC 111: Sociology Work-based Learning

DIGITAL COMMUNICATION TECHNOLOGY COURSE DESCRIPTIONS

FOUNDATIONS OF DIGITAL DESIGN (FDD)

Level: College Prep
Prerequisite: None

Credit: 1

This course introduces students to the foundational principles, techniques, and skills of visual communications. Students learn the elements and principles of design, color theory, typography, packaging/promotional design, copyright/fair use, and image manipulation techniques along with the communication skills required to work within the media industry and client-based realm. Students begin to develop the capstone cumulative professional portfolio.

PROCESSES OF DIGITAL PRODUCTION (PDP)

Level: College Prep

Credit: 1

Prerequisite: Foundations of Digital Design (FDD)

This course engages students to produce media and design content using the computer as an artistic medium. Students are prepared with the skills to develop digital files in Adobe Photoshop. Students learn raster image manipulation, editing, software application, publishing, digital media literacy, HTML coding, web development, and the delivery of digital products. Using the software, students will see their original design concepts and brainstorming come to actualization in the digital world. Students continue to develop the capstone cumulative portfolio through production of their media and design concepts.

APPLICATIONS OF DIGITAL DESIGN (ADD)

Level: College Prep

Credit: 1

Prerequisite: Processes of Digital Production (PDP)

This course engages students in the use of the computer as an illustrative medium and film as an influential medium. Through the use of Adobe Illustrator and video production software, students prepare work in digital video production, video editing, and broadcasting of digital videos. Students are prepared in Adobe Illustrator with a focus on vector image manipulation, editing, illustration, publishing, and the delivery of digital products. Capstone skills learned from prior coursework are applied for students to develop client-based design work through district and community partnerships with the completion of the capstone cumulative portfolio.

COMMUNICATION TECHNOLOGY IV

Level: College Prep

Credit: 1 (Elective)

Prerequisite: Teacher Approval

Students are expected to complete a multimedia project that has a high degree of complexity. This project can be used as an entry to various state and national competitions. Participation in TSA, the student organization, is required.

DIGITAL DESIGN TECHNOLOGY WORK-BASED LEARNING

Credit: 1 or more determined by work hours

Prerequisite: Completion of major

Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.



Performing Arts

COURSE SELECTION

A combination of three performing arts courses including band, choir, and drama.

STUDENT ORGANIZATIONS

Drama Club

Students in performing arts are encouraged to participate in the fall and spring musicals. Drama students work on a variety of performance skills and can enhance and demonstrate those skills if they participate in the after-school program.



Kelly Tyrrell Gill Night of the Arts

Twice a year, students enrolled in music and art courses showcase their talents during an evening presentation. These nights are an opportunity for students to present their culminating work in 2D and 3D art as well as choir and band performances.

FUTURE CAREERS

- Actor
- Musician
- Singer
- Music Teacher
- Composer



SUMMARY OF MAJOR

The *Performing Arts* major is designed for students interested in pursuing a career in music and performance. Students may choose from a series of courses including band, choir, music theory, and drama. Students may elect to concentrate in one of these areas or take a unique combination customized to their interest. Instrumental and choral students rehearse daily in class in preparation for musical performances throughout the year, both in school and within the community. Students in this major are required to participate in the Kelly Tyrrell Gill Night of the Arts as well as various other performances.

BUCCANEER MARCHING BAND

The marching band begins in August each year during band camp. They perform at sporting events and march in local parades. Marching band practices during the school day.

DELAWARE ALL-STATE ENSEMBLES

Ensembles include state junior and senior concert bands, junior and senior choirs, jazz ensemble, orchestra, and honors guitar. There is also a yearly composition competition for budding young composers. Diligent preparation is a must for the audition requirements including scales, prepared pieces, and sight reading, as well as submission of original works for composers. All-State auditions run November through February, depending on the ensemble. Those selected to these elite ensembles rehearse with guest conductors from across the country in preparation for concerts.



School of Art & Design

Performing Arts Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
English: 4 Credits	English 9 or higher	English 10 or higher	English 11 or higher	English 12 or higher
Mathematics: 4 Credits	Algebra I or higher	Geometry or higher	Algebra II or higher	Choose one: <ul style="list-style-type: none"> • AP Calculus AB • AP Statistics • MAT 152: Quantitative Reasoning • Pre-Calculus
Science: 3 or 4 Credits	Physical Science or higher	Biology or higher	Choose one: <ul style="list-style-type: none"> • AP Biology • Chemistry • Earth Science • AP Environmental Science • Physics • AP Physics 	Choose one: <ul style="list-style-type: none"> • AP Biology • Chemistry • Earth Science • AP Environmental Science • Physics • AP Physics • AP Human Geography • Psychology • AP Psychology • AP U.S. Government & Politics • AP U.S. History • World History • ENG101: Critical-thinking & Writing • ENG:102: Composition & Research • CHM 111: Intro to Chemistry • BIO 110: Essentials of Anatomy & Physiology • BIO 120: Anatomy & Physiology • SOC 111: Sociology • CRJ 101: Survey of Criminal Justice
Social Studies: 3 or 4 Credits	Human Geography or AP Human Geography	U.S. Government & Economics or AP U.S. Government & Politics	U.S. History or AP U.S. History	
Health: 1 Credit	Health/Driver's Education			
Physical Education: 1 Credit	Physical Education			
Spanish: 2 Credits	Spanish I or higher	Spanish II or higher		
Major Requirements: 3 Credits	A combination of three performing arts courses including band, choir, and drama.			
Suggested Electives: 3.5 Credit Minimum		Spanish III	AP Psychology	AP Spanish Language & Culture



Visual Arts

COURSE SELECTION

A combination of three visual arts courses including art, digital design technology, and yearbook.

STUDENT ORGANIZATIONS

- Art Club

Kelly Tyrrell Gill Night of the Arts

Twice a year, students enrolled in music and art courses showcase their talents during an evening presentation. These nights are an opportunity for students to present their culminating work in 2D and 3D art as well as choir and band performances.



FUTURE CAREERS

- Art Educator
- Potter
- Painter
- Artist
- Curator
- Sculptor



SUMMARY OF MAJOR

This program of study allows students to explore a variety of 2D and 3D art media while focusing on the elements of art and principles of design. Students will study art works and genres in the context of culture and history. Students will be encouraged to develop a portfolio over the course of this major for application to art and design schools. Critical-thinking skills will be used during art creation, research, critiques, and discussion. Students will create, discuss, and write about art works. Students are highly encouraged to participate in Art Club and submit work for the Kelly Tyrrell Gill Night of the Arts as well as local, state, regional, and national art contests and art exhibitions.

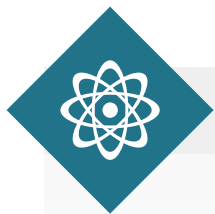


School of Art & Design

Visual Arts Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
English: 4 Credits	English 9 or higher	English 10 or higher	English 11 or higher	English 12 or higher
Mathematics: 4 Credits	Algebra I or higher	Geometry or higher	Algebra II or higher	Choose one: • AP Calculus AB • AP Statistics • MAT 152: Quantitative Reasoning • Pre-Calculus
Science: 3 or 4 Credits	Physical Science or higher	Biology or higher	Choose one: • AP Biology • Chemistry • Earth Science • AP Environmental Science • Physics • AP Physics	Choose one: • AP Biology • Chemistry • Earth Science • AP Environmental Science • Physics • AP Physics • AP Human Geography • Psychology • AP Psychology • AP U.S. Government & Politics • AP U.S. History • World History • ENG101: Critical-thinking & Writing • ENG:102: Composition & Research • CHM 111: Intro to Chemistry • BIO 110: Essentials of Anatomy & Physiology • BIO 120: Anatomy & Physiology • SOC 111: Sociology • CRJ 101: Survey of Criminal Justice
Social Studies: 3 or 4 Credits	Human Geography or AP Human Geography	U.S. Government & Economics or AP U.S. Government & Politics	U.S. History or AP U.S. History	
Health: 1 Credit	Health/Driver's Education			
Physical Education: 1 Credit	Physical Education			
Spanish: 2 Credits	Spanish I or higher	Spanish II or higher		
Major Requirements: 3 Credits	A combination of three visual arts courses including art, digital design technology, and yearbook.			
Suggested Electives: 3.5 Credit Minimum	Visual Arts majors should consider secondary major courses such as Digital Design Technology or Marketing to complement this major.		Spanish III AP Psychology	AP Spanish Language & Culture



Computer Science

School of Science, Technology, Engineering, & Math

COURSE SEQUENCE

Exploring Computer Science
AP Computer Science Principles
AP Computer Science A

STUDENT ORGANIZATIONS



Technology Student Association (TSA) is a national organization of students whose purpose is to take the study of STEM beyond the classroom. TSA gives students the chance to pursue academic challenges among friends with similar goals and interests. Each year students compete in state-wide competitions in areas such as website design, 3D modeling, and radio controlled operation.



SUMMARY OF MAJOR

This major allows students to focus on the conceptual ideas of computing to understand why certain tools or languages might be utilized to solve particular problems. Topics such as interface design, limits of computers, and societal and ethical issues are explored. Students are exposed to problem-solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing.

COLLEGE CREDIT

Students who complete the *Computer Science* major earn articulated credit from the following college/universities:

Delaware Technical Community College

ITN160: Programming I
ITN101: Intro to IT

Delaware State University

CSCI 110: Computational Thinking I
CSCI 120: Elements of Computer Programming I

Wilmington University

SEC100: Introduction to Computer Hardware & Operation
SEC 290: Introduction to Programming with Python
Computer Science Elective

Computer Science Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits	Exploring Computer Science	AP Computer Science Principles	AP Computer Science A	
Suggested Electives: 3.5 Credit Minimum			Spanish III	AP Spanish Language & Culture

COMPUTER SCIENCE COURSE DESCRIPTIONS

EXPLORING COMPUTER SCIENCE

Level: College Prep
Prerequisite: None

Credit: 1

This course allows students to focus on the conceptual ideas of computing to understand why certain tools or languages might be utilized to solve particular problems. The goal of the course is to develop computational practices of algorithm development, problem-solving, and programming within the context of relevant and authentic problems. Topics such as interface design, limits of computers, and societal and ethical issues are explored.

AP COMPUTER SCIENCE PRINCIPLES (CSP)

Level: Advanced Placement
Prerequisite: None

Credit: 1 (Weighted)

This course allows students to understand the real-world impact of computing applications and programming literacy using a multidisciplinary approach. Students are introduced to creative aspects of programming, using abstractions and algorithms, working with large data sets, understandings of the internet and issues of cybersecurity, and impacts of computing that affect different populations. CSP gives students the opportunity to use current technologies to solve problems and create meaningful computational artifacts.

AP COMPUTER SCIENCE A

Level: Advanced Placement

Credit: 1 (Weighted)

Prerequisite: AP Computer Science Principles

The AP Computer Science A course introduces students to computer science with fundamental topics that include problem-solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem-solving and design. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems.

COMPUTER SCIENCE WORK-BASED LEARNING

Credit: 1 or more determined by work hours

Prerequisite: Completion of major

Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.

FUTURE CAREERS

- Computer Scientist
- Network Specialist
- Software Application Designer
- Systems Engineer
- Web Developer
- Database Administrator



This major includes two Advanced Placement courses and the potential for at least six (6) college credits.



COURSE SEQUENCE

Introduction to Engineering Design (IED)
Principles of Engineering (POE)
Engineering Design & Development (EDD)

STUDENT ORGANIZATIONS

- ESports
- Robotics Club

Technology Student Association



TSA is a national organization of students whose purpose is to take the study of STEM beyond the classroom. TSA gives students the chance to pursue academic challenges among friends with similar goals and interests. Each year students compete in statewide competitions in areas such as website design, 3D modeling, and radio controlled operation.



Odyssey of the Mind

OM is an international creative problem-solving program that engages students in their learning by allowing their knowledge and ideas to come to life in an exciting, productive environment. Participants build self-confidence, develop life skills, create new friendships, and are able to recognize and explore their true potential. Students who participate compete in teams at an annual regional competition in activities such as balsa wood structure, spontaneous problem-solving, and creative performance.



SUMMARY OF MAJOR

This major is designed to expose students to high levels of math and a broad base of scientific principles. This content will be applied to practical situations asking students to solve engineering problems in the real world. Students majoring in pre-engineering should be prepared to advance to calculus or pre-calculus by senior year. This major can be customized to fit the area of interest of the student. Environmental, civil, aeronautical, and biomedical are all areas students in this major can explore. This major prepares students to attend a four year university to study engineering.

COLLEGE CREDIT

The *Engineering* major is made up exclusively of Dual Enrollment coursework. Minimum scores on the SAT or Accuplacer exam are required for enrollment.

Delaware Technical Community College:

EDD171: Introduction to Computer Aided Drafting using Autocad

University of Maryland Eastern Shore:

EDTE121: Principles of T&E Education

FUTURE CAREERS

- Mechanical Engineer
- Civil Engineer
- City Planner
- Environmental Scientist
- Electrical Engineer
- Biomedical Engineer
- Architect

Engineering Major Requirements

The following is a suggested sequence of courses required to successfully complete this major.

	GRADE 9	GRADE 10	GRADE 11	GRADE 12
Major Requirements: 3 Credits	Introduction to Engineering Design (IED)	Principles of Engineering (POE)	Engineering Design & Development (EDD)	
Suggested Electives: 3.5 Credit Minimum			Spanish III	AP Spanish Language & Culture Work-based Learning

ENGINEERING COURSE DESCRIPTIONS

INTRODUCTION TO ENGINEERING DESIGN (IED)

Level: College Prep Credit: 1
Prerequisite: None

Introduction to Engineering Design (IED) provides students with the opportunity to apply the engineering design process as well as math, science, and engineering standards to hands-on projects. Students work both individually and in teams to design solutions to a variety of problems using 3D modeling software and use an engineering notebook to document their work.

PRINCIPLES OF ENGINEERING (POE)

Level: College Prep Credit: 1
Prerequisite: Introduction to Engineering Design (IED)

Principles of Engineering (POE) allows students to explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem-solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.

ENGINEERING DESIGN & DEVELOPMENT (EDD)

Level: College Prep Credit: 1
Prerequisite: Principles of Engineering (POE)

Engineering Design and Development (EDD) is the capstone course for Project Leads the Way (PLTW) Engineering and requires students to identify an issue and then research, design, and test a solution — ultimately presenting their solution to a panel of engineers and professionals throughout the lifecycle of product development. Students apply the professional skills they have developed to document a design process to standards. Completing EDD helps students prepare for and accelerate in a post-secondary program or career.

ENGINEERING WORK-BASED LEARNING

Credit: 1 or more determined by work hours

Prerequisite: Completion of major
Work-based learning provides students an early career experience. Upon completion of the major, students are able to secure a job or internship experience and earn high school credit while working. A work-based learning student leaves school early to go to work or the internship and puts the skills learned from their major to use. Students are supported by a work-based learning coordinator and must complete specific assignments. Students earn a grade and credits while gaining real-life experience on the job. The job or internship must directly relate to the major of study.

Academic Course Descriptions

ENGLISH

ENGLISH 9

Level: College Prep Credit: 1
Prerequisite: None

Aligned to Common Core standards, the 9th grade curriculum offers an in-depth introduction to high school writing expectations and an intense survey of specific literary types. Students will learn to gather evidence from texts and incorporate it in written and oral responses.

HONORS ENGLISH 9

Level: Pre-AP Credit: 1 (Weighted)
Prerequisite: Minimum grade of C in Honors English 8 or qualifying score

Aligned to the Common Core state standards, the 9th grade honors curriculum offers an in-depth study of literary works. Students will continue the acquisition of critical-thinking skills to independently read and analyze literature. Students' writing will focus on the literary analysis of complex works. This course also includes oral presentations, independent readings, and a research paper.

ENGLISH 10

Level: College Prep Credit: 1
Prerequisite: English 9

This course focuses on combining literary analysis and writing skills. Students are introduced to selected longer works and are asked to write increasingly longer papers, primarily the five-paragraph essay, which incorporates analysis of literary elements. The student learns advanced research techniques while studying grammar and mechanics to improve writing skills.

HONORS ENGLISH 10

Level: Pre-AP Credit: 1 (Weighted)
Prerequisite: Minimum grade of C in Honors English 9 or qualifying score; summer reading assignment required

This course is designed to hone the student's speaking, writing, listening, and reading skills. Students will continue a study of literary genres using critical approaches to reader response and reader response writings. Course activities include a research paper and projects relating to the literary and historical background of selected works. Intense writing practice will assist students' preparation for the state assessment and for AP Language and Composition.

ENGLISH 11

Level: College Prep Credit: 1
Prerequisite: English 10

This course includes a study of American literature from the Puritans and early settlers up to modern times. Students learn historical background by reading, discussing, and writing critically about representative short stories, novels, poetry, essays, and drama. Independent readings and a research paper using MLA formatting are required.

ENGLISH 12

Level: College Prep Credit: 1
Prerequisite: English 11

This course prepares college-bound students for the types of writing they will need for success after high school: letters, essays, and literary analyses. The course also develops critical reading skills. Writing instruction emphasizes clarity, aptness, and smoothness of expression. Students study traditional selections of British literature and complete independent readings. The goal of this class is

to help the student use revision strategies independently and to develop critical-thinking skills. Students are required to complete a research paper using MLA format.

AP ENGLISH LANGUAGE & COMPOSITION

Level: Advanced Placement Credit: 1 (Weighted)
Prerequisite: Summer reading and written response

This course prepares students for success on the AP English Language and Composition exam. It enhances the ability of the student to become a skilled reader of various types of prose and to become a skilled writer who composes for a variety of purposes. The focus of the course is an intensive use of the writing process. In addition, there is a close examination of textual material to strengthen reading comprehension. Students taking this course are required to take the AP Language and Composition exam.

AP ENGLISH LITERATURE & COMPOSITION

Level: Advanced Placement Credit: 1 (Weighted)
Prerequisite: Summer reading and written response

This course is an intensive study of the methods and techniques writers use to create valid arguments, often while synthesizing information from multiple sources. Students will read a variety of genres, write and revise essays modeled on different modes of analysis, work to improve the breadth and depth of vocabulary, and prepare for the AP Literature and Composition Exam.

ENG 101: COMPOSITION I

Level: Dual Enrollment Credit: 1 MHS & 3 DTCC
Prerequisite: SAT 480 ERW or Accuplacer Reading 78, Writing 84, or 75% grade in Technical Reading & Writing

This college-level course is designed to teach the concepts of critical-thinking and reading skills in the context of written response and essay writing. The four units cover Personal Essay, Research and Integrating Sources using APA, Summary and Response Writing, and Critical Evaluation. The course requires independent reading skills and strong time management abilities.

ENG 102: COMPOSITION II

Level: Dual Enrollment Credit: 1 MHS & 3 DTCC
Prerequisite: 70% or higher in Composition I

This college-level course builds on Composition I and reinforces critical thinking, research skills, and writing techniques. The four units cover Article Analysis, Informative Research Writing, Argumentative Research Writing, and Oral Presentation of research. The course requires independent reading skills and strong time management abilities.

ENGLISH ELECTIVES

CREATIVE WRITING

Level: College Prep Credit: 1
Prerequisite: None

Students will intensively explore the fundamental aspects of constructing and critiquing creative writing in various forms. Students will write a variety of creative pieces. Students will be expected to write daily.

FILM ANALYSIS

Level: College Prep Credit: 1
Prerequisite: None

In this class, students will study film as a literary genre. Students will also learn the elements of film techniques and how movies are made. Reading original source material will enhance the study of the filmed work.

MATHEMATICS

ALGEBRA I

Level: College Prep Credit: 1
Prerequisite: None

The fundamental purpose of this course is to formalize and extend the mathematics that students learned in the middle grades. The critical focus of the course is to deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data that exhibit a linear trend. Students engage in methods for analyzing, solving, and using linear, exponential, and quadratic functions. Additional topics within data analysis and statistics will be explored. The Mathematical Practice Standards apply throughout the course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

GEOMETRY

Level: College Prep Credit: 1
Prerequisite: Algebra I

Students explore complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Important geometric ideas are explored and formalized including transformations, congruency, similarity, and right triangle trigonometry. The Mathematical Practice Standards apply throughout the course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

HONORS GEOMETRY

Level: Pre-AP Credit: 1 (Weighted)
Prerequisite: Minimum grade of C in Honors Algebra I or qualifying score

Students explore complex geometric situations and deepen their explanations of geometric relationships, moving toward formal mathematical arguments. Important geometric ideas are explored and formalized including transformations, congruency, similarity, and right triangle trigonometry. The Mathematical Practice Standards apply throughout the course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

ALGEBRA II

Level: College Prep Credit: 1
Prerequisite: Geometry

Building on their work with linear, quadratic, and exponential functions from Algebra I, students extend their repertoire of functions to include polynomial, rational, and radical functions. Students work closely with the expressions that define the functions, and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Additional topics within statistics and probability will be explored. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

HONORS ALGEBRA II

Level: Pre-AP Credit: 1 (Weighted)
Prerequisite: Minimum grade of C in Honors Geometry or qualifying score

Building on their work with linear, quadratic, and exponential functions from Algebra I, students extend their repertoire of functions to include polynomial, rational, and radical functions. Students work closely with the expressions that define the functions and continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Additional topics within statistics and probability will be explored. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

PRE-CALCULUS

Level: College Prep Credit: 1
Prerequisite: Algebra II

Pre-calculus is a higher-level academic course designed to prepare students for college calculus by giving them a comprehensive knowledge of functions. Topics include analytic geometry, trigonometric functions, logarithmic and exponential functions, inverse functions, graphing, and sequences and series.

HONORS PRE-CALCULUS

Level: Pre-AP Credit: 1 (Weighted)
Prerequisite: Minimum grade of C in Honors Algebra II or qualifying score

Honors Pre-Calculus is a rigorous, fast-paced course designed to prepare students for AP Calculus AB in their senior year. Topics include all those covered in a college-prep pre-calculus course along with an introduction to the limit concept in calculus. This course is designed for those students who are highly motivated and intend to enroll in AP Calculus AB the following year.

AP CALCULUS AB

Level: Advanced Placement Credit: 1 (Weighted)
Prerequisite: Honors Pre-Calculus

This course is designed to prepare students for the AP Calculus exam in May. This course begins with an introduction to the limit concept and continues with basic differentiation and integration. Functions will be analyzed numerically, algebraically, and graphically, utilizing the graphing calculator as an essential tool in the analysis. Trigonometric functions, as well as real-world applications, are an integral part of this course.

AP STATISTICS

Level: Advanced Placement Credit: 1 (Weighted)
Prerequisite: Pre-Calculus (CP or Honors)

This course is an intensive and rigorous statistics course in which students are introduced to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data, sampling and experimentation, anticipating patterns, and statistical inference.

MATHEMATICS CONTINUED

CONTEMPORARY MATHEMATICS

Level: College Prep
Prerequisite: None

Credit: 1

Core performance objectives for this course include: use set theory to solve application problems, solve application problems involving real numbers, solve application problems using basic algebraic principles, apply introductory statistical concepts to solve application problems, apply ratios, proportions, percentages, simple and compound interest formulas to solve consumer mathematics problems.

MAT 152: QUANTITATIVE REASONING

Level: Dual Enrollment Credits: 1 MHS (Weighted) & 3 DTCC
Prerequisite: SAT 500 Math or Accuplacer Algebra 67

Quantitative Reasoning serves students who are focused on developing quantitative literacy skills that will be meaningful for their professional, civic, and personal lives. Such reasoning is a habit of mind, seeking pattern and order when faced with unfamiliar contexts. In this course, an emphasis is placed on the need for data to make good decisions and an understanding of the dangers inherent in basing decisions on anecdotal evidence rather than data. Students will focus on number, ratio, and proportional reasoning; modeling; probability; and statistics.

SCIENCE

PHYSICAL SCIENCE–INTEGRATED

Level: College Prep
Prerequisite: None

Credit: 1

This course will focus on providing a foundation for subsequent science courses by providing students with fundamental concept knowledge from chemistry and physics. It will present students with experience in chemical reactions, structures and properties of matter, forces and interactions, energy, waves, and electromagnetic radiation. Engineering practices have been integrated into this curriculum, as well as a focus on scientific practices to help students prepare for more expanded studies as they progress through additional science courses.

BIOLOGY

Level: College Prep
Prerequisite: None

Credit: 1

This course will focus on three major units of study: nature of science and evolution, chemical biology, and genetic transmission and biotech. The curriculum will be taught using a wide variety of methodologies including reading and writing in the content area, interactive hands-on lab work, research, problem-solving, and scientific inquiry activities. To be successful, students will need to design and execute experiments, analyze experimental data, and conduct independent research and/or other projects outside of class.

HONORS BIOLOGY

Level: Pre-AP

Credit: 1 (Weighted)

Prerequisite: Minimum grade of C in Honors Physical Science–Integrated or qualifying score

This course will focus on three major units of study: evolution and natural selection, cell theory, and genetics. The curriculum will be taught using a wide variety of methodologies including reading and writing in the content area, interactive hands-on lab work, research, problem-solving, and scientific inquiry activities. To be successful, students will need to design and execute experiments, analyze experimental data, and conduct independent research and/or other projects outside of class. A heavy emphasis will be placed on higher-level understanding of the connections between the experiments and the concepts. This course is suitable preparation for AP Biology.

AP BIOLOGY

Level: Advanced Placement

Credits: 1 (Weighted)

Prerequisite: Completion of the summer assignment

The AP Biology course is designed to be the equivalent of a two-semester college introductory biology course usually taken by biology majors during their first year. This course is designed to prepare students to take the Advanced Placement test and earn up to eight credit hours. Topics in lecture and laboratory include molecules and cells, heredity and evolution, organisms, and populations.

CHEMISTRY

Level: College Prep
Prerequisite: None

Credit: 1

This course will investigate the fundamental concepts of modern chemical laws and theories. These concepts will be established by gathering evidence from both classroom activities and from performing classical and modern laboratory investigations. Some topics include graphing, using laboratory instruments, chemical reactions and the equations that describe them, properties of gases, mole relationships, kinetic molecular theory, acids and bases, and atomic structure and bonding.

HONORS CHEMISTRY

Level: Pre-AP

Credit: 1 (Weighted)

Prerequisite: Minimum grade of C in Honors Biology or qualifying score

Students study the basic concepts of modern chemistry covered in the academic chemistry course, but at a more rapid pace and in greater depth in the study of each concept. These concepts will be developed through hands-on activities and laboratory experiments, mathematical problem-solving, and class discussions of theory. The course is recommended as the second laboratory science in the honors sequence after Honors Biology. It meets the chemistry prerequisite for AP Biology. Students who are good mathematical problem solvers and interested in science, engineering, or medicine as possible careers are successful in this course.

CHM 110: INTRODUCTION TO CHEMISTRY

Level: Dual Enrollment

This course surveys the basic principles of college chemistry and prepares students to enter more advanced courses in college. Organic and physical chemistry concepts are explored in depth.

PHYSICS

Level: College Prep

Credit: 1

Prerequisites: Fluency in Algebra and Trigonometry concepts suggested

An experiential inquiry-based approach to Newtonian mechanics and basic electric circuits. Topics include kinematics, Newton's laws, momentum and collisions, circular motion and gravity, simple harmonic motion, mechanical waves, work and conservation of energy, electrostatics, and basic DC circuits. Fluency in algebra and trigonometry is required.

AP PHYSICS 1

Level: Advanced Placement

Credit: 1 (Weighted)

Prerequisite: Minimum grade of C in Physics or qualifying score

A mathematically rigorous pre-engineering approach to Newtonian mechanics and basics electric circuits with a passing score in the AP Physics 1 exam as the objective. Topics include kinematics, Newton's laws, momentum and collisions, circular motion and gravity, simple harmonic motion, mechanical waves, work and conservation of energy, electrostatics, and basic DC circuits. Fluency in algebra and trigonometry is required.

EARTH SCIENCE

Level: College Prep

Credit: 1

Prerequisite: None

This course will focus on four major units of study: astronomy, meteorology, geology, and oceanography. Emphasis will be on the changing environment and how Earth systems are affected by human activity. The curriculum will be taught using a wide variety of methodologies including reading and writing in the content area, interactive hands-on lab work, research, problem-solving, and scientific inquiry activities. To be successful, students will need to design and execute experiments, analyze experimental data, and conduct independent research and/or other projects outside of class.

AP ENVIRONMENTAL SCIENCE

Level: Advanced Placement

Credit: 1 (Weighted)

Prerequisite: None

The AP Environmental Science course is designed to be the equivalent of an introductory university course in environmental science. It is an interesting, complex, and applicable science that is constantly changing and expanding. Environmental issues are in the news every day, and it is more important than ever to understand the science behind the stories. The course will stress scientific principles, processes, and analysis, while also providing opportunities to explore the many social, political, economic, and ethical issues that are relevant to the environmental topics studied. In both breadth and level of detail, the content of the course reflects what is found in many introductory college courses in environmental science. All students are expected to take the AP Environmental Science exam upon completion of the course.

SCIENCE ELECTIVES

BIO 110: ESSENTIALS OF ANATOMY & PHYSIOLOGY

Level: College Prep

Credit: 1 MHS & 3 DTCC

This course includes structure and function of the human body with an emphasis on gross anatomy, as well as all organ systems and their relationship to homeostasis. Coordinated laboratory activities are an integral part of this course.

BIO 120: ANATOMY & PHYSIOLOGY I

Level: Dual Enrollment

Credit: 1 MHS & 5 DTCC

Prerequisite: Essentials of Health Careers and SAT 480 ERW, Accuplacer Reading 78, Writing 84, or 75% grade in Technical Reading & Writing

This course introduces students to the anatomy and physiology of humans including the structure and function of cells, tissues, and integumentary, skeletal, muscular, nervous, and endocrine systems. Coordinated laboratory experiments are an integral part of this course. Students learn the physiology of each body system, as well as how to investigate common diseases, disorders, and emerging diseases. The prevention and diagnosis of disease and treatment are addressed.

SOCIAL STUDIES

GRADE 9 WORLD HISTORY & GEOGRAPHY

Level: College Prep Credit: 1
Prerequisite: None

This course will examine chronological eras of historical world events through the lens of human geography. Starting in the Middle Ages and ending with the onset of dawn of the Industrial Age, students will explore historical continuity and change, and link past events to modern-day issues and current events. Students will develop the skills to compare and contrast events, analyze primary and secondary sources, interpret historical documents, and gain a deeper understanding of the complex/diverse world around them. Throughout the course, students will apply themes of geography to historical time periods. The different areas of focus include human interaction with the world, how things like disease and information spread throughout the world, different regions of the world, and geographic factors that help cities and towns become successful.

U.S. HISTORY

Level: College Prep Credit: 1
Prerequisite: None

This course begins at the reconstruction of the Civil War. It explores the political, social, and economic development of our country as it builds to a world power in the late 1800s, crashes in a Great Depression of the 1930s, rises to a world police post-World War II, struggles internally within a Civil Rights movement, and fights the Cold War of communism. Students will utilize different methods that historians use to interpret the past, including varying points of view and historical context.

U.S. GOVERNMENT & ECONOMICS

Level: College Prep Credit: 1
Prerequisite: None

The Civics curriculum focuses on the history and foundation of the American government; the American Constitution; the Legislative, Executive, and Judicial branches of government; the political system; state and local government; and citizenship. The course traces colonial history as cause and effect to the Founders' choices in creation of government. Units of study analyze the Constitution in application and as an evolving document of citizenship rights over time, whether by President, Congress, the legal process, and/or political action groups. Civics makes modern-day connections, applies the spectrum of liberal and conservative political views, and provides macro- and microeconomics foundations as applied to policy. The economics curriculum provides an understanding of the principles of economics that apply to an economic system as a whole. Emphasis is placed on the study of the business cycles, taxes as federal and state revenue, the Federal Reserve System, and an understanding of monetary and fiscal policy in America.

AP HUMAN GEOGRAPHY

Level: Advanced Placement Credit: 1 (Weighted)
Prerequisite: None

The purpose of AP Human Geography is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. They also learn about the methods and tools geographers use in their science and practice. The particular topics studied in an AP Human Geography course should be judged in light of the following five college-level goals that build on the National Geography Standards developed in 1994 and revised in 2012. On successful completion of the course, the student should be able to: interpret maps and analyze geospatial data, understand and explain the implications of associations and networks among phenomena in places, recognize and interpret the relationships among patterns and processes at different scales of analysis, define regions and evaluate the regionalization process, and characterize and analyze changing interconnections among places.

AP U.S. HISTORY

Level: Advanced Placement Credits: 1 or 2 (Weighted)
Prerequisite: Minimum grade of C in U.S. Government & Economics or qualifying score. Completion of the summer assignment

The AP U.S. History course is designed to provide students with the analytical skills and enduring understandings necessary to deal critically with the problems and materials in United States history. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college courses. Students will learn to assess historical materials — their relevance to a given interpretive problem, their reliability, and their importance — and to weigh the evidence and interpretations presented in historical scholarship. This course will develop the skills necessary to arrive at conclusions on the basis of an informed judgment and to present reasons and evidence clearly and persuasively in an essay format.

AP U.S. GOVERNMENT & POLITICS

Level: Advanced Placement Credit: 1 (Weighted)
Prerequisite: Completion of the summer assignment

This course provides an analytical perspective on government and politics in the United States. This course involves both the study of general concepts used to interpret U.S. politics and the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. political reality. While there is no single approach that an AP U.S. Government & Politics course must follow, certain topics are generally covered in college courses.

AP PSYCHOLOGY

Level: Advanced Placement Credit: 1 (Weighted)
Prerequisite: Completion of the summer assignment

This course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice.

AP EUROPEAN HISTORY

Level: Advanced Placement Credit: 1 (Weighted)
Prerequisite: None

The study of European history since 1450 introduces students to cultural, economic, political, and social developments that played a fundamental role in shaping the world in which they live. Without this knowledge, we would lack the context for understanding the development of contemporary institutions, the role of continuity and change in present-day society and politics, and the evolution of current forms of artistic expression and intellectual discourse. In addition to providing a basic narrative of events and movements, the goals of AP European History are to develop an understanding of some of the principal themes in modern European History, an ability to analyze historical evidence and historical interpretation, and an ability to express historical understanding in writing.

SOCIAL STUDIES ELECTIVES

SOC 111: SOCIOLOGY (ONLINE)

Level: Dual Enrollment Credit: 1 MHS & 3 DTCC
Prerequisite: SAT 480 ERW, Accuplacer Reading 78, Writing 84, or 75% in Technical Reading & Writing

This course provides an analysis of American social organization and culture through a cross-cultural perspective. Sociology investigates, describes, and analyzes patterns of human behavior in all areas of human experience for the purpose of understanding the human condition.

PSYCHOLOGY

Level: College Prep Credit: 1
Prerequisite: None

This course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice.

CRJ 101: SURVEY OF CRIMINAL JUSTICE

Level: Dual Enrollment (Wilm U) Credit: 1 MHS & 3 Wilm U

This course is a survey of agencies and processes involved in the administration of criminal justice. The survey reviews the functions of the legislature, police, prosecutor, courts, and the correctional system. Problems of law enforcement in a democratic society are discussed. This course ties together all components of criminal justice and includes issues of both the juvenile and adult offender. Register on blackboard in advance.

SPANISH

SPANISH I

Level: College Prep Credit: 1
Prerequisite: None

This is an introductory course which acquaints the student with basic vocabulary and structure of spoken and written Spanish. Reading, pronunciation, speaking, and aural comprehension are emphasized. Customs and other cultural aspects of Spanish-speaking countries are examined.

SPANISH II

Level: College Prep Credit: 1
Prerequisite: Spanish I

In Spanish II, vocabulary and grammatical forms are developed through elementary reading material and related writings. A deeper investigation of the cultural aspects of Spanish-speaking countries is a vital part of this course. Practical, real-life situations are studied by the students and used to learn the language through the use of scenarios and compositions.

SPANISH III

Level: College Prep Credit: 1
Prerequisite: Spanish II

In Spanish III, vocabulary and grammatical forms are developed through reading and discussion of more comprehensive material. Oral and written communication are emphasized through writing assignments, vocabulary lists, and class-paced grammar review. The study of civilization and of culture is expanded. All instruction is held primarily in Spanish.

AP SPANISH LANGUAGE & CULTURE

Level: Advanced Placement Credit: 1 (Weighted)
Prerequisite: Minimum grade of C in Spanish III or the option to test in

The AP Spanish Language & Culture course covers the equivalent of a college course in advanced Spanish composition and conversation. This course emphasizes oral communication, composition, and grammar. All activities are conducted in Spanish. The AP Spanish program allows the opportunity to earn college credit in a foreign language.

PERFORMING ARTS

BAND

Level: College Prep **Credit:** 1
Prerequisite: At least three (3) years training (or equivalent) on a woodwind, brass, or percussion instrument
This course is designed to expose students to a diversity of musical styles through a variety of performance venues. During the first semester, members will participate in the marching and concert bands. Performances include all football games, annual Christmas concert, and various parades and community performances. All performances, as well as summer band camp, are mandatory. The second semester focuses on concert band and ensemble playing, leading toward a spring concert and preparation for the spring band trip. All students are required to do individual practice or private lessons on their own. Advanced students are eligible to audition for the Delaware All-State Band.

JAZZ BAND

Level: College Prep **Credit:** 1
Prerequisite: Audition and at least three (3) years (or equivalent) of training on a brass, woodwind or percussion instrument
This course focuses on performance of instrumental jazz literature. This course will help students evaluate, appreciate, and perform jazz music as an original American art form. Instrumentation is limited to select rhythm, brass, and woodwind instruments. Members must audition to be a part of the ensemble. This ensemble will perform regularly throughout the community during the school year.

BAND FRONT

Length: Semester (Fall Only) **Credit:** 1
Prerequisite: Audition
This class is open to students who wish to offer a visual presentation of music performed by the marching band. Students interested in the squad must audition in the spring. Students learn basic field/marching technique, as well as fundamental routines. Performances include all football games and various parades. Students are expected to attend scheduled practices throughout the summer, as well as band camp. Band front members are required to attend rehearsals and performances throughout the marching season. Since this is a performance-based class, students who play a band instrument are required to rehearse with the concert band following the marching season.

CONCERT CHOIR

Level: College Prep **Credit:** 1
Prerequisite: None
Concert Choir is a vocal performance class focusing on the techniques of singing, music reading, and group performance. Students will study and perform diverse styles of music from several music history periods. Regular attendance and active participation during rehearsals and performances is mandatory. Performances include various school and community functions, as well as the Winter & Spring Night of the Arts. Advanced participants are eligible to audition for the Delaware All-State Choir.

CHAMBER CHOIR

Level: College Prep **Credit:** 1
Prerequisite: None
Chamber Choir is an advanced level choir for singers who have a strong choral background. Interested students must be in the MHS Concert Choir for at least one entire school year to be considered for this ensemble. Open to grades 10, 11, and 12 only with audition.

MUSIC TECHNOLOGY

Level: College Prep **Credit:** 1
This semester-long course will introduce students to the theory and fundamentals of using software and hardware tools for producing music (including digital music editing, multi-track recording, computer notation software, sound design, and electronic music history). The class will stress application and creative content using a series of project-based learning activities which includes student exposure to performing with electronic instruments and vocal recording, multi-track recording (both MIDI sequencing and live instruments), music arranging, and electronic music history. Music Technology is a project-based class that will require independent work and time management skills. This course is a hands-on, applied class delivering to students an experience with digital music and video editing/recording software applications including, but not limited to, Soundtrap, Audacity, Noteflight, and SoundCloud.

DRAMA

Level: College Prep **Credit:** 1
Prerequisite: None
In the drama course description—change to say “This drama class is intended to teach the basics of acting technique including characterization, movement, and vocal variety. Students will perform monologues, partner scenes, and group skits in front of the class. Students will learn using improvisation, reader’s theatre, and performance viewing. Theatre history, design, and careers may also be taught.”



VISUAL ARTS

INTRODUCTION TO VISUAL ART

Level: College Prep **Credit:** 1
Prerequisite: None
Introduction to Visual Art will allow students to explore a variety of two- and three-dimensional art media while focusing on the art elements and principles of design. Students will study art works and periods in the context of culture and history. Critical-thinking skills will be used during art creation, research, critiques, and discussion. Students will be expected to create, discuss, and write about art works.

DRAWING AND PAINTING

Level: College Prep **Credit:** 1
Prerequisite: Introduction to Visual Art
This course builds upon the foundation established in Introduction to Visual Art with immediate emphasis on advanced drawing and painting techniques. The student is required to create numerous works utilizing more challenging and original subject matter to communicate multiple layers of visual information.

ADVANCED DRAWING AND PAINTING

Level: College Prep **Credit:** 1
Prerequisite: Drawing and Painting
This course encourages the exploration of individual directions in various art processes with an open syllabus and studio environment. The student will enhance drawing and painting skills, expressing high quality in all work including presentation and display. Works in this course may be used to build their art portfolio.

CERAMICS AND SCULPTURE

Level: College Prep **Credit:** 1
Prerequisite: Introduction to Visual Art
This course builds upon the foundations established in Introduction to Visual Art using more challenging sculptural media and techniques emphasizing ceramics. Subject matter and media manipulation will be advanced and push student creativity to solve challenging visual arts problems while perfecting techniques and skills.

ADVANCED CERAMICS AND SCULPTURE

Level: College Prep **Credit:** 1
Prerequisite: Ceramics and Sculpture
This class pushes the advanced sculpture student to create art works displaying highly refined skills in studio art and depth of content knowledge through research on a variety of artists. Students will be expected to create a legacy project which will remain at MHS beyond graduation. Students will be expected to write a concise and clear artist statement to accurately define theme and style choices made throughout the semester.

ART PORTFOLIO

Level: College Prep **Credit:** 1
Prerequisite: Introduction to Visual Art and two other Visual Art courses
This course is for the high school senior who has completed three credits of visual art with a suggested grade of C or higher. This student will have chosen a career field in the visual arts. The student will review and rework a portfolio for college application. The senior will research post-secondary options, create a digital portfolio, compete in scholarship-based competitions, and prepare for college interviews during the semester.

PHYSICAL & HEALTH EDUCATION

PHYSICAL EDUCATION

Prerequisite: None **Credit:** 1
Physical education provides opportunities for healthful and vigorous activities. Instruction is given for a large variety of activities including soccer, football, field hockey, basketball, volleyball, tennis, and others. Team and individual strategies are taught and game situations are used for practical application.

HEALTH

Prerequisite: None **Credit:** .5
Health is a program based on state objectives that prepares students to make healthy choices. Personality, emotional health (include stress), abstinence-based education, and substance abuse education are some of the topics studied.

PHYSICAL & HEALTH ELECTIVES

STRENGTH TRAINING

Prerequisite: Minimum of C in PE **Credit:** 1
This class is designed to improve general knowledge of weight training techniques for safety and effectiveness, as well as how to implement and design a weight training program for present and future use. Students should be able to physically demonstrate proper lifting techniques and be able to explain how to build a strength training program that includes the proper usage of sets, reps, and order of exercises.

FITNESS TRAINING

Prerequisite: Minimum of C in PE **Credit:** 1
This course is designed to give students the opportunity to learn fitness concepts and conditioning techniques used for obtaining optimal physical fitness. Fitness activities may include aerobics, flexibility training, jogging, Pilates, toning, yoga, speed walking, and cross training activities.

ADVANCED TEAM SPORTS

Length: Semester **Credit:** 1
Prerequisite: Must take Physical Education or Lifetime Wellness. Student/athletes may get written permission from PE dept. 10th-12th
This course provides opportunities for healthful and vigorous team activities. This course is design for higher-skilled individuals who wish to develop their techniques in a team setting. Team and individual strategies are taught and game situations are used for practical application. Students will participate in various team sports. Each student will be asked to take on a role within their group. Students will be asked to perform to their level whether it is skill related, critical-thinking, rule enforcement, or strategic planning. Students will be introduced to safety and sport rules for each introduced team sport. Students will learn concepts needed to participate appropriately in a competitive team sports setting. They will learn the basic skills and rules and procedures of various team sports. They will also analyze their current skill levels and gain an understanding of how to improve their skills.

ADDITIONAL COURSE OFFERINGS

DELAWARE VOLUNTEER CREDIT

Prerequisite: None **Credit:** 1
The Delaware Volunteer Credit allows students in grades 9–12 to earn one elective credit towards graduation upon completing 90 hours of community service during two semesters. The semesters do not have to be consecutive or in the same calendar year. Hours must be performed outside the student's regularly scheduled school day. Volunteer hours completed as part of a service group requirement may also be used towards the Delaware Volunteer Credit. Volunteer activity cannot be political or advocacy in nature. Hours must be performed at a non-profit agency in Delaware. Service must be approved by the State Office of Volunteerism. Please inquire with your school counselor for more details.

HONORS RESEARCH

Prerequisite: Enrollment in three or more Honors, AP, or Dual Enrollment courses **Non-Credited**
This is a course to enhance student's studies in honors and AP courses. A specific structure will be provided for class time with checks for understanding and periodic conferencing to assist students with monitoring their progress in these courses. This course is graded pass/fail.

SENIOR OPTION OR WORK-BASED LEARNING

Prerequisite: Application Required **Credit:** 1
Senior Option offers students the opportunity to further their education in a career area, demonstrate and extend career major competencies, and/or provide a service to the community. Students must apply to school counselors for acceptance and meet all requirements. Senior Options includes: college coursework, volunteer service, internship, cooperative work experience, or senior project.

STUDY SKILLS

Prerequisite: None **Credit:** 1
This is a support class designed to instruct students in proper study technique, as well as provide previewing and support for core content classes.

DRIVER'S EDUCATION

Level: Grade 10 **Credit:** .5
Prerequisite: Must be classified as a 10th grader in August of sophomore year
Classroom study precedes driving lab. All students must be academically eligible to participate in the "on the road" training portion of this course. Only grade 10 students who meet the criteria may be enrolled. Students are scheduled according to the date of their sixteenth birthday and academic record. At the completion of this course, students will be prepared to enter the Delaware Graduated Driver's License Program.

YEARBOOK I, II, III, IV

Level: College Prep **Credit:** 1
Prerequisite: None
This course is designed to instruct students in the various tasks that go into producing a yearbook by providing instruction and hands-on experience. Students will write copy, design layouts, take photographs, crop photographs, and sell ads. The remainder of the course requires students to use these skills to finalize the *Milfordian* for the coming year.

ESSENTIALS OF ENGINEERING

Prerequisite: None **Credit:** 1
Engineering Essentials introduces students to engineering concepts that are applicable across multiple engineering disciplines and empowers them to build technical skills through the use of a variety of engineering tools, such as geographic information systems (GIS), 3-D solid modeling software, and prototyping equipment. Students learn and apply the engineering design process to develop mechanical, electronic, process, and logistical solutions to relevant problems across a variety of industry sectors, including health care, public service, and product development and manufacturing.

ENGLISH AS A SECOND LANGUAGE

THESE COURSES DO NOT FULFILL GRADUATION REQUIREMENTS FOR ENGLISH, BUT DO GRANT GENERAL ELECTIVE CREDIT TOWARD GRADUATION.

ENGLISH AS A SECOND LANGUAGE I

Prerequisite: None **Credit:** 1 (Elective)
This course is for non-English-speaking students. Listening, speaking, reading, and writing skills will be developed around basic vocabulary needed for the student to survive in an English-speaking environment.

ENGLISH AS A SECOND LANGUAGE II

Prerequisite: None **Credit:** 1 (Elective)
This course is for limited English proficient students who need to continue developing their English language skills. Vocabulary will be expanded, and reading and writing will be strongly emphasized.

ENGLISH AS A SECOND LANGUAGE III*

Prerequisite: None **Credit:** 1 (Elective)
This course is for limited English proficient students who need to practice all areas of English acquisition, including speaking and listening, but also focus more on reading and writing to prepare them for success in the mainstream classroom.

* Once students complete this course they may continue receiving tutorial assistance in completing their work requirements for other scheduled classes. Credit can still be obtained for elective purposes.

MHS GRADUATION REQUIREMENT CHECKLIST

This checklist can be used to track your progress towards meeting the minimum graduation requirements.

	1	2	3	4
English: 4 Credits Total				
Mathematics: 4 Credits Total				
Science: 3 Credits Total				
Social Studies: 3 Credits Total				
Foreign Language: 2 Credits Total				
Health/PE: 1.5 Credits Total	Health (.5)	Physical Education (1)		
Pathway/Graduation Major: 3 Credits Total				
Electives Credits: 3.5 Credits Total				

*Students may complete more than the minimum number of credits required for graduation by the time they complete their senior year.

• ACADEMICS • ARTS • EXTRACURRICULARS • COMMUNITY •

Milford



HIGH SCHOOL

HOME of the BUCCANEERS

#wearemilford

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