

Marine Academy of Science and Technology

305 MAST Way · Highlands, New Jersey 07732-4004

732-291-0995 • FAX 732-291-9367 •

www.mast.mcvsd.org

C.E.E.B. Code: 310412

Dr. Charles Ford, Superintendent of Schools

Earl Moore, Principal

Marcy Kay, Guidance Counselor

Lindsay Oppito, Guidance Counselor

School Community: Established in 1981 and administered by the Monmouth County Vocational School District, the Marine Academy of Science and Technology is located in the historic Fort Hancock District within the Sandy Hook Unit of Gateway National Recreation Area. The school campus, adjacent to the Sandy Hook lighthouse, is comprised of 13 renovated buildings, which include four science labs, three computer labs, and a distance-learning center. A research facility is located in the James J. Howard Marine Sciences Laboratory, Sandy Hook. Welcoming students in grades 9-12, MAST emphasizes **innovative teaching techniques**, creative use of the surrounding environment on Sandy Hook, a professional approach to the successful delivery of the school's mission, and a quality education for all. Our course offerings compare favorably in level, rigor, comprehensiveness, scope and sequence with neighboring schools. Although not designated as honors, **all courses are taught at the honors level.**

Student Body: All applicants apply and participate in a **selective admissions process** that considers middle school grades, standardized test scores, and MCVSD developed assessments in writing and math. Students must successfully earn **160 high school credits prior to graduation.** The number of applicants to MAST has increased each year since the school's inception in 1981, and each subsequent year reflects a strong competition for a limited number of seats. The **class of 2020** has been accepted to a wide variety of colleges and universities throughout the nation and **was offered \$14,729,779 in four-year merit based scholarships and \$5,940,000 in ROTC and Service Academy Scholarships.**

Enrollment as of September, 2019: Grade 9: 70 Grade 10: 72 Grade 11: 70 Grade 12: 66

Class of 2020

College Experience		AP Test Results	SAT / ACT Scores	
Size of Class	66	95% of 2020 class participated in AP exams	Highest Mean Score- SAT	690 CR 686 MATH
Four Year Colleges	100			
Two Year Colleges	%	78% of AP exam scores were 3 or above	Highest Mean Composite Score- ACT	31
	0 %			
Military Scholarship Offers	12%			
ROTC/Service Acad.	\$16,001,670			
	\$2,160,000			

Grading System

MAST does not distinguish the level of courses within the school. **Grades are not weighted. Class rank is not computed.** GPAs are calculated as follows: each final grade is multiplied by the number of credits for that course. These calculations are added together and divided by the total number of earned credits.

Grading Scale

92 – 100	Superior Proficiency
85 – 91	Above Average
77 – 84	Proficiency
70 – 76	Proficient
55 – 69	Partial Proficiency
	Not Proficient / No Credit

Honor Roll Designation

Honor Roll and High Honor Roll are calculated quarterly according to the following criteria:

High Honor Roll: All quarter grades must be 92 or higher.

Honor Roll: All quarter grades must be 85-91.

Student Schedules

Additional Educational Requirements

MAST operates on an **alternating day schedule** in which courses are scheduled in **blocks of up to 80 minutes**. An activity/lunch period of one hour is devoted to tutoring, club activities, study programs, and/or unstructured time. Several students participate in athletics at their hometown school.

MAST students participate in science and technology research, competitions, and mentorships. The school owned vessel, *Blue Sea*, is used as a research laboratory by all students in their science courses. **All students are members of the Naval Junior Reserve Officer Training Corps (NJROTC).**

Student Activities, Clubs, and Organizations

National Honor Society	Key Club	Mock Trial
Spanish Honor Society	Environmental Science/Marine Science Club	Creative Arts Club
Academic Team	Physics Olympics	Technology Student Association
Masthead (newspaper)	Drill Team	Color Guard
Tradewinds (yearbook)	Ocean Bowl	

Course Options

Freshman Year		40 Credits
Credits	Geometry, Algebra II/Trig	
	5	
English I		
5		
Marine Biology		10
World History		5
Spanish		
5		
Naval Science I & Health I		
4,1		
Computer Aided Design		5
Sophomore Year		40 Credits
Credits	Geometry, Algebra II/Trig, Pre-Calculus, Pre-Calculus/Calculus	
	5	
English II		
5		
Marine Chemistry		
10		
Technology		5
Naval Science II & Health II		
4,1		
Spanish		
5		
US History I		5
Junior Year		40 Credits
Credits		

Algebra II/Trig		5	
Pre-Calculus, Pre-Calculus/Calculus			
5			
English III		5	
Marine Physics		10	
Systems Engineering I		5	
Naval Science III & Health III			
4,1			
Spanish			
5			
US History II			
5			
American History-SUPA		5	
Senior Year		40 Credits	Credits
Pre-Calculus, Calculus I, AP Statistics			
5			
AP Calculus AB or BC			10
Calculus III-SUPA			
5			
English IV, AP Lit and Comp			
5			
Exploring Issues Economics/ Sociology			
2.5			
Systems Engineering II			10
AP Physics C, AP Physics 2			
5			
Directed Field Research			10
Oceanography			5
Naval Science IV & Health IV			
4,1			
Spanish			
5			
Marine Research			
10			
Environmental Science			5
Financial Literacy			
2.5			
Sustainable Society			
5			

All students are enrolled in the same course of study with the exception of senior year. **Seniors may enroll in Systems Engineering II or Oceanography. All students are scheduled for and earn 40 credits per year. All students must fulfill a visual and performing arts requirement for graduation. Students enrolled in Oceanography,**

Environmental Science, and Sustainable Society have the option of dual enrollment with Brookdale Community College for ENVR 111, ENVR 107 and ENVR 108. Students enrolled in Calculus III, Spanish 4, and American History have the option of dual enrollment with Syracuse University for SUPA designated classes.

Exemplary Programs

Mentorship - Seniors are required to participate in a Capstone science course, with many working side-by-side with a mentor, doing scientific research or technological studies. At the conclusion of their course of study, each student delivers a multimedia presentation in a colloquium of peers and mentors, summarizing the formal and informal learning process.

Selected Academic Awards for Students

National Merit Commended Scholars	7
National Merit Scholarship Winners	1
NROTC Scholarships	17
Academy Appointments	8

MAST is a member of the National Consortium of Specialized Secondary Schools of Mathematics, Science, and Technology (NCSSSMST).

Selected Recognition for M.A.S.T

U.S. Dept. of Education National Blue Ribbon School (2 awards)
U.S. Dept. of Education New American High School
NJ Dept of Education STAR School (3 awards)
NJ Dept of Education Best Practice Awards (8 awards)
National Ocean Sciences Bowl (1 st in NJ, 2 nd nationally)
NJROTC Distinguished Unit with Honors (Awarded 33 times)
Top 10% NJROTC National Academic Competition (650 schools)
NJ Association of Supervision and Curriculum Development Award/Recognition for Exemplary Classroom Practice (Awarded 6 times)
Recognized as a 5 Star Exemplary Technology Education Program
NJ Governor's School of Excellence