



# MARINE ACADEMY OF TECHNOLOGY AND ENVIRONMENTAL SCIENCE

## SCHOOL PROFILE 2023-2024

The Marine Academy of Technology and Environmental Science (MATES) is one of the career academies created by the Ocean County Vocational Technical School District. Opened in September 2001, the school exists to provide a unique, nurturing, and challenging learning environment for college-bound and career-oriented students interested primarily in the fields of math and science. The Ocean County Vocational Technical School District administers the high school and is responsible for recruitment, admissions, and the instructional program.

### STUDENT BODY

MATES is a competitive, specialized high school that selects its 9<sup>th</sup> grade class each year from applicants found within the public and private schools of Ocean County. All students must apply and participate in a selective admissions process that considers middle school grades, standardized test scores, and an admissions test in English, Science, and Math. The students must successfully earn 161.5 high school credits or their college equivalent to graduate. Once enrolled, all students follow the most rigorous course of study offered at MATES.

### EDUCATIONAL OPPORTUNITIES

Students have the opportunity to conduct outside research as well as structured learning experiences.

### SCHOOL

- All Courses are instructed in a block format with 80-minute periods.
- Accreditation: Middle States Association and the National Consortium of Secondary STEM Schools (NCSS)
- Enrollment: 280 as of September 2023
  - Freshmen – 75
  - Sophomores – 72
  - Juniors – 66
  - Seniors – 67
- Staff: 25
- 64% of professional staff have one or more degrees.
- 8% have doctoral degrees.
- CEEB Testing Code: 311473

### 2022-2023 MATES HIGHLIGHTS

- 2 National Merit Finalists
- 3 National Merit Semi-Finalists
- 16 National Merit Commended Scholars
- Rensselaer Polytechnic Institute Medalist - Class of 2023
- Jersey Shore Science Fair – 44 Award Winners
- Delaware Valley Science Fair – 23 Award Winners
- New Jersey Academy of Science – 5 Award Winners
- National Junior Science and Humanities Symposium – 1 Award Winner
- New Jersey Southern Junior Science and Humanities Symposium – 4 Award Winners
- American Junior Academy of Science – 4 Award Winners
- American Junior Science and Humanities Symposium – 1 Award Winner
- Water Environment Association – Stockholm Water Prize, NJ State Winner
- Envirothon – 1<sup>st</sup> Place Team Overall and Category Wins in Aquatics, Soils, Forestry, and Current Issues
- 34<sup>th</sup> Annual NJ DEP Mapping Contest – 3 Award Winners
- Mock Trial – 2<sup>nd</sup> Place in Ocean County

### GRADING SYSTEM

MATES does not distinguish the level of courses within the school. All courses are taught at the honors or college level. **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. Career Education is infused into all coursework.

### GRADING SCALE

A+	95-100
A	90-94
B+	85-89
B	80-84
C+	75-79
C	70-74
D	66-69
F	0-65

### ARTICULATION AGREEMENT

In conjunction with Stockton University, MATES provides students with the opportunity to earn college credits. Students will earn college credits during the course of their school day. The credits and grades earned through this collaborative program will appear on both their official high school transcript and an official college transcript. Students also have the opportunity to earn college credits through agreements with Monmouth University and Montclair State University.

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## SCHOOL PROFILE 2023-2024 SY CONTINUED

### CLASS OF 2023

- Class size: 70
- 97% Attending four-year college
- Scholarship Offers: \$17 million
- Scholarships Accepted: \$5.4 million
- Highest GPA – 98.922
- Lowest GPA – 80.766

### CLASS OF 2023 SAT RESULTS

- 99% of the Class of 2023 took the SAT
- Math: 711  
State % – 532  
National % – 521
- Evidence Based Reading and Writing: 669  
State % - 538  
National % – 529

### CLUBS AND ACTIVITIES

- |                                  |                               |
|----------------------------------|-------------------------------|
| Project Terrapin                 | Independent Research          |
| Envirothon                       | Robotics                      |
| Extra-Curricular Athletics       | Chemistry Olympics            |
| Genders and Sexualities Alliance | Mock Trial                    |
| Literary Magazine                | Drama Club                    |
| Math League                      | SkillsUSA                     |
| National Honor Society           | Spanish Club                  |
| Fishing Club                     | Student Government            |
| Environmental/Birding Club       | Yearbook                      |
| Science Bowl                     | Focus on the Drive            |
| Games Club                       | Model United Nations/Interact |



**MATES was recognized by the United States Department of Education as a 2012 Blue Ribbon School. This award is based on overall academic excellence.**

**MATES is an Institutional Member of the National Consortium of Secondary STEM Schools (NCSSSS). NCSSSS high schools are ranked as the best in the country and share the goals of transforming mathematics, science, and technology education.**



### MATES COURSE OF STUDY

All courses are instructed utilizing a block scheduling format ~ Classes are 80 minutes. All students are accepted via a competitive application process and follow the same rigorous course of study. Students must successfully complete 161.250 high school credits or their college equivalent to graduate. All high school courses are taught at an honors level or college level.

FRESHMAN YEAR .....	CREDIT(S)
English I .....	5
Algebra I/Data Analysis .....	5
Geometry .....	5
Chemistry I* .....	5
Biology I* .....	5
PE/ Health I .....	5
World History .....	5
Spanish II .....	5
Independent Research Study* <i>part of science course requirement</i>	5
<b>TOTAL:.....</b>	<b>40</b>

SOPHOMORE YEAR .....	CREDIT(S)
English II .....	5
Introduction to Computer Science .....	5
Algebra II/Trigonometry .....	5
Chemistry II .....	5
Aquatic Ecology or Research Methods/Field Ecology.....	5
Spanish III.....	5
Spanish IV (SU LANG 2142) or Introduction to Art .....	5
Health II/Driver's Education .....	1.25
PE II .....	3.75
<b>TOTAL:.....</b>	<b>40</b>

JUNIOR YEAR .....	CREDIT(S)
English III .....	5
Pre-Calculus .....	5
Biotechnology (SU BIOL 1200/1205) .....	5
Physics (SU PHYS 2110/2120) .....	5
US History I .....	5
Fall Elective - Geographic Information Systems (SU GNM 1242), Geo/Astrophysics (SU GEOL 2120), Statistics (SU CIST 1206), Art History (SU GAH 2243)/Basic Drawing (SU GAH 1261), Public Speaking (SU GEN 2105), or Introduction to Engineering Design .....	5
Spring Elective - Introduction to Art*, Spanish IV (SU LANG 2142), Spanish V (SU LANG 2143), Data Visualization with Python, or Anatomy & Physiology (SU BIOL 1260).....	5
PE III/Health III .....	3.75
Financial Literacy.....	2.5
<b>TOTAL:.....</b>	<b>41.25</b>

*\*Option II V/PA available as a P/F course in fulfillment of NJDOE requirements*

SENIOR YEAR.....	CREDIT(S)
English IV (SU LITT 1100/1110).....	5
Calculus (SU MATH 2215) .....	5
US History II .....	5
Oceanography (SU MARS 2202) .....	5
Advanced Oceanographic Research (SU MARS 2202).....	5
Environmental Science (SU ENVL 1100) or Computer Science Senior Capstone .....	5
Data Visualization with Python or Data Science .....	5
Elective - Geographic Information Systems (SU GNM 1242), Geo/Astrophysics (SU GEOL 2120), Statistics (SU CIST 1206), Art History (SU GAH 2243)/Basic Drawing (SU GAH 1261), Public Speaking (SU GEN 2105), or Introduction to Engineering Design .....	5
PE/ Health IV .....	5
Senior Experience: Research/SLE .....	P/F
<b>Total:.....</b>	<b>40</b>