

The Marine Academy of Science and Technology at Florida International University (MAST@FIU)

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Community Profile

North Miami is a suburban city located in northeast Miami-Dade County, Florida, United States, about 10 miles (16 km) north of Miami. The city lies on Biscayne Bay and hosts the Biscayne Bay Campus of [Florida International University \(FIU\)](#), and the North Miami campus of [Johnson & Wales University](#). Originally the town of "Arch Creek", the area was incorporated as the "Town of Miami Shores", which was renamed the "Town of North Miami" in 1931. It was reincorporated as a city in 1953. The city is also home to the [Oleta River State Park](#), which is the state's largest urban park. As of 2010, the population recorded by the U.S. Census Bureau is 58,786 with almost 60,000 residents; North Miami is the sixth largest city in [Miami-Dade County](#).

School Profile

The Marine Academy of Science and Technology (MAST) began its existence in 2013. The school is one of 500 magnet choice options available to parents and students in Miami-Dade. It is the only public high school in Florida that enjoys a collaborative partnership with a public university. Located on the Biscayne Bay Campus of FIU, the MAST@FIU is the only STEM-based magnet school in M-DCPS that focuses on Marine and Environmental Sciences. Because of its unique location, it serves an academically gifted, vibrant and diverse student population from 43 different countries. Enrollment is capped at 500 and students must meet a rigorous set of academic and behavioral requirements to apply to the school. Student admission is based on eligibility and students are selected randomly through the district magnet admissions process. One selected, students must maintain a Grade Point Average (GPA) of 3.0 in all high school and university courses. Enrollment at the MAST @ FIU gives students an opportunity to complete up to two years of college credit during their four years of high school.

Enrollment

The total enrollment at the MAST@FIU for the 2017-2018 school year is 318 students with a staff of 15 teachers and 4 support personnel. Enrollment for the class of 2018 is 65 students.

Curriculum

The school's curriculum and instruction demonstrate an interdisciplinary approach to science, technology, engineering, and mathematics instruction. For example, language arts teachers incorporate the processes of research and technical writing and include science topics and concepts in the creation of creative literary pieces. Math teachers include statistical analysis and interpretation of data and teachers in social studies incorporate current issues in ethics, political, social and geographical issues as they relate to science and technology. A strong theme of this school entails developing students' ability to communicate orally and in writing about mathematics, science, technology, and environmental stewardship. Emphasis on the arts and new technologies ensure that students are able to share their research findings with all stakeholders in an effective and environmentally responsible manner.

Educational Options

In order to provide educational programs that fulfill the unique needs of our program of study, students who meet certain criteria are eligible to participate in [Advanced Placement](#) and [Dual Enrollment](#) courses in grades 9-12. Students must maintain an unweighted GPA of 3.0 in order to participate in Dual Enrollment courses. Students may enroll in as many as 5 DE courses as juniors and eligible seniors may pursue full-time DE as part of our partnership with FIU.

Advanced Placement

Advanced Placement (AP) courses prepare students for AP tests, which many qualify them for college credit and/or exempt them from freshman-level college courses. Last year, MAST@FIU administered over 300 AP examinations to our students. The following AP courses are available at the MAST@FIU: English Language and Composition, English Literature and Composition, Calculus (AB), Calculus (BC), U.S. History, World History, Human Geography, Psychology, Biology, Chemistry, Environmental Science, Physics 1, U.S. Government and Macroeconomics.

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Minimum Requirements

Students at the MAST@FIU are required a minimum of 32 credits prior to graduation in the following areas: 4 in Language Arts/ESOL, 4 in Mathematics, 8 in Science, 4 in Social Studies, 1 in Fine or Practical Arts, 1 in Health Education and 10 electives that are program specific. Student must maintain a minimum GPA of 3.0 to remain in the program after ninth grade.

Grades, Point Affiliation and Weighting Factors

All courses are included in computing GPA and class rank. Grades are weighted in Honors, Dual Enrollment and AP courses. Grades: A=90-100, B=80-89, C=70-79, D=60-69, F=0-59; Point Affiliation: A=4.0, B=3.0, C=2.0, D=1.0, F=0; Honors Courses: A=5.0, B=4.0, C=3.0, D=1, F=0; AP/DE Courses: A=6, B=5, C=4, D=1, F=0

Minimum Requirements

The district administers the following assessments to aid teachers and counselors in diagnosing individual strengths and weaknesses in order to provide more effective instruction. Our school also uses this information for identifying potential National Merit Scholars.

- [PSAT \(Preliminary Scholastic Aptitude Test\)](#) – administered to 10th graders and made available 9th and 11th graders.
- [FSA \(Florida Standards Assessment\)](#) – in order to graduate, students must show proficiency in reading comprehension.
- [EOC \(End of Course Assessment\)](#) – in order to graduate, students must show proficiency in Algebra 1. Students are also required to take EOCs in US History, Biology, Geometry, and Algebra II as part of their final grade in these specified courses.
- [PERT \(Post-Secondary Education Readiness\)](#) – administered to all students beginning in 9th grade (unless student has concordant SAT/ACT scores) in order to identify college readiness capabilities and whether or not students need remedial courses in English and/or math in 12th grade.

National Merit Recognition

<u>Year</u>	<u>Number</u>
2017	1
2018	NA
2019	NA
2020	NA

Future Enrollment Statistics

4-year University/College	90 %	Armed Forces	N/A
2-year College/Technical School	10%	Employment/Other	N/A

Awards and Recognitions

- National Spotlight for Eyes on the Rise Collaboration with School of Journalism and Communication at FIU
- FETC 2015 STEM Excellence High School Award Recipient
- Formula E Racing School Series Participant
- Magnet Schools of America, 2014 Magnet School of Distinction
- Miami-Dade County Public Schools, 2016 STEM Designated School
- Florida Department of Education, A–Rated School

Student and Counseling Services

For further information, please contact Ms. Cristina Madrigal at cmadrigal@dadeschools.net