

U.S. Department of Education
2023 National Blue Ribbon Schools Program

[X] Public or [] Non-public

For Public Schools only: (Check all that apply) [] Title I [] Charter [X] Magnet[X] Choice

Name of Principal Dr. Matthew Welker
(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official School Name MAST@FIU Biscayne Bay Campus
(As it should appear in the official records)

School Mailing Address 14301 Bay Vista Boulevard
(If address is P.O. Box, also include street address.)

City North Miami State FL Zip Code+4 (9 digits total) 33181-3606

County Miami-Dade

Telephone (305) 948-1200 Fax (305) 948-1201

Web site/URL https://www.mastfiu.org E-mail pr7031@dadeschools.net

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I-Eligibility Certification), and certify, to the best of my knowledge, that it is accurate.

Date _____

(Principal's Signature)

Name of Superintendent* Dr. Jose L. Dotres E-mail Superintendent'sOffice@dadeschools.net
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name Miami-Dade Tel. (305) 995-1430

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I-Eligibility Certification), and certify, to the best of my knowledge, that it is accurate.

Date _____

(Superintendent's Signature)

Name of School Board
President/Chairperson Ms. Mari Tere Rojas
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I-Eligibility Certification), and certify, to the best of my knowledge, that it is accurate.

Date _____

(School Board President's/Chairperson's Signature)

The original signed cover sheet only should be converted to a PDF file and uploaded via the online portal.

**Non-public Schools: If the information requested is not applicable, leave blank.*

PART I – ELIGIBILITY CERTIFICATION

The signatures on the first page of this application (cover page) certify that each of the statements below, concerning the school's eligibility and compliance with U.S. Department of Education and National Blue Ribbon Schools requirements, are true and correct.

1. All nominated public schools must meet the state's performance targets in reading (or English language arts) and mathematics and other academic indicators (i.e., attendance rate and graduation rate), for the all students group, including having participation rates of at least 95 percent using the most recent accountability results available for nomination.
2. To meet final eligibility, all nominated public schools must be certified by states prior to September 2023 in order to meet all eligibility requirements. Any status appeals must be resolved at least two weeks before the awards ceremony for the school to receive the award.
3. The school configuration must include one or more of grades K-12. Schools located on the same campus (physical location and mailing address) must apply as an entire school (i.e. K-8; 6-12; K-12 school). Two (or more) schools located on separate campuses, must apply individually even if they have the same principal. A single school located on multiple campuses with one principal must apply as an entire school.
4. The school has been in existence for five full years, that is, from at least September 2018 and each tested grade must have been part of the school for at least the three years prior to September 2022.
5. The nominated school has not received the National Blue Ribbon Schools award in the past five years: 2018, 2019, 2020, 2021 or 2022.
6. The nominated school has no history of testing irregularities, nor have charges of irregularities been brought against the school at the time of nomination. If irregularities are later discovered and proven by the state, the U.S. Department of Education reserves the right to disqualify a school's application and/or rescind a school's award.
7. The nominated school has not been identified by the state as "persistently dangerous" within the last two years.
8. The nominated school or district is not refusing Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district-wide compliance review.
9. The OCR has not issued a violation letter of findings to the school district concluding that the nominated school or the district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan from the district to remedy the violation.
10. The U.S. Department of Justice does not have a pending suit alleging that the nominated school or the school district, as a whole, has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
11. The nominated school has, or is subject to, a nondiscrimination policy (provide either a link to the policy or submit a text of the policy), is committed to equal opportunity for all students and all staff consistent with applicable law and does not have any outstanding findings of unlawful discrimination. The U.S. Department of Education reserves the right to disqualify a school's nomination and/or rescind a school's award if unlawful discrimination is later discovered.

12. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the school or school district in question; or if there are such findings, the state or district has corrected, or agreed to correct, the findings.

The U.S. Department of Education reserves the right to disqualify a school's nomination and/or rescind a school's award if one of these eligibility requirements is later discovered to have not been met or otherwise been violated.

PART II - DEMOGRAPHIC DATA

Data should be provided for the current school year (2022-2023) unless otherwise stated.

DISTRICT (Question 1 is not applicable to non-public schools. For charter schools: If a charter school is part of the public school system, information should be provided for the public school district. If a charter school is considered its own district or part of a charter district, the information provided should reflect that.)

1. Number of schools in the district (per district designation):
- 158 Elementary schools (includes K-8)
49 Middle/Junior high schools
64 High schools
0 K-12 schools
- 271 TOTAL

SCHOOL (To be completed by all schools. **Only include demographic data for the nominated school, not for the district.**)

2. Category that best describes the area where the school is located. If unsure, refer to NCES database for correct category: <https://nces.ed.gov/ccd/schoolsearch/> (Find your school and check “Locale”)

☐ Urban (city or town)
☒ Suburban
☐ Rural

3. Number of students in the school as of October 1, 2022 enrolled at each grade level or its equivalent at the school. Include all students enrolled, in-person, participating in a hybrid model, or online only. If online schooling or other COVID-19 school issues make this difficult to obtain, provide the most accurate and up-to-date information available:

Grade	# of Students
PreK	0
K	0
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	135
10	117
11	103
12 or higher	102
Total Students	457

*Schools that house PreK programs should count preschool students **only** if the school administration is responsible for the program.

4. Racial/ethnic composition of the school (if unknown, estimate):
- 0 % American Indian or Alaska Native
 - 6 % Asian
 - 15 % Black or African American
 - 48 % Hispanic or Latino
 - 0 % Native Hawaiian or Other Pacific Islander
 - 30 % White
 - 1 % Two or more races
 - 100 % Total**

(Only these seven standard categories should be used to report the racial/ethnic composition of your school. The Final Guidance on Maintaining, Collecting, and Reporting Racial and Ethnic Data to the U.S. Department of Education published in the October 19, 2007 *Federal Register* provides definitions for each of the seven categories.)

5. Student turnover, or mobility rate, during the 2021 - 2022 school year: ≤1%

If the mobility rate is above 15%, please explain:

This rate should be calculated using the grid below. The answer to (6) is the mobility rate.

Steps For Determining Mobility Rate	Answer
(1) Number of students who transferred <i>to</i> the school after October 1, 2021 until the end of the 2021-2022 school year	0
(2) Number of students who transferred <i>from</i> the school after October 1, 2021 until the end of the 2021-2022 school year	0
(3) Total of all transferred students [sum of rows (1) and (2)]	0
(4) Total number of students in the school as of October 1, 2021	0
(5) Total transferred students in row (3) divided by total students in row (4)	<.01
(6) Amount in row (5) multiplied by 100	<1

6. Specify each non-English language represented in the school (separate languages by commas):

English Language Learners (ELL) in the school: 32 %
147 Total number ELL

7. Students eligible for free/reduced-priced meals: 44 %

Total number students who qualify: 201

8. Students receiving special education services with an IEP: 2 %
Total number of students served 10

Indicate below the number of students with disabilities according to conditions designated in the Individuals with Disabilities Education Act. Do not add additional conditions. All students receiving special education services with an IEP should be reflected in the table below. It is possible that students may be classified in more than one condition.

<u>2</u> Autism	<u>0</u> Multiple Disabilities
<u>0</u> Deafness	<u>0</u> Orthopedic Impairment
<u>0</u> Deaf-Blindness	<u>3</u> Other Health Impaired
<u>0</u> Developmental Delay	<u>0</u> Specific Learning Disability
<u>0</u> Emotional Disturbance	<u>4</u> Speech or Language Impairment
<u>0</u> Hearing Impairment	<u>1</u> Traumatic Brain Injury
<u>0</u> Intellectual Disability	<u>0</u> Visual Impairment Including Blindness

9. Students receiving special education services with a 504: 4 %
Total number of students served: 19

10. Number of years the principal has been in the position at this school: 9

11. Use Full-Time Equivalents (FTEs), rounded to the nearest whole numeral, to indicate the number of school staff in each of the categories below. If your current staffing structure has shifted due to COVID-19 impacts and you are uncertain or unable to determine FTEs, provide an estimate.

	Number of Staff
Administrators	2
Classroom teachers, including those teaching high school specialty subjects, e.g., third grade teacher, history teacher, algebra teacher.	21
Resource teachers/specialists/coaches e.g., reading specialist, science coach, special education teacher, technology specialist, art teacher etc.	0
Paraprofessionals under the supervision of a professional supporting single, group, or classroom students.	0
Student support personnel e.g., school counselors, behavior interventionists, mental/physical health service providers, psychologists, family engagement liaisons, career/college attainment coaches, etc.	3

12. Average student-classroom teacher ratio, that is, the number of students in the school divided by the FTE of classroom teachers, e.g., 22:1 23:1

13. Show daily student attendance rates. Only high schools need to supply yearly graduation rates.

Required Information	2021-2022	2020-2021	2019-2020	2018-2019	2017-2018
Daily student attendance	95%	98%	97%	95%	96%
High school graduation rate	100%	100%	100%	100%	100%

14. **For high schools only, that is, schools ending in grade 12 or higher.**

Show percentages to indicate the post-secondary status of students who graduated in Spring 2022.

Post-Secondary Status	
Graduating class size	102
Enrolled in a 4-year college or university	97%
Enrolled in a community college	2%
Enrolled in career/technical training program	0%
Found employment	0%
Joined the military or other public service	1%
Other	0%

15. Indicate whether your school has previously received a National Blue Ribbon Schools award.

Yes ☐ No ☒

If yes, select the year in which your school received the award.

16. In a couple of sentences, provide the school's mission or vision statement.

The mission of MAST@FIU Biscayne Bay Campus is to provide students with first-rate advanced academics and early career experiences in a university-based, technology-rich environment. The vision of the school is to provide a unique high school experience in cooperation with FIU that includes college level courses, career experiences, and technology coursework to prepare students for Science, Technology, Engineering and Mathematics (STEM) related fields.

17. Provide a URL link to the school's nondiscrimination policy.

<https://www.hrdadeschools.net/civilrights/>

18. **For public schools only**, if the school is a magnet, charter, or choice school, explain how students are chosen to attend.

Magnet School applicants must meet the following criteria to apply for enrollment at MAST@FIU Biscayne Bay Campus: (1) Have a minimum of 2.5 Grade Point Average in each core academic subject area (e.g., language arts, mathematics, science, social studies) for the previous year and the first grading period of the current year combined. (2) A minimum of 2.0 Grade Point Average in conduct for the core academic subject areas (e.g., language arts, mathematics, science, social studies) for the previous year and the first grading period of the current year combined. (3) All effort grades in core academic classes must be a "2" or higher for the previous year and the first grading period of the current year combined. (4) No more than ten unexcused absences for the previous year and five unexcused absences for the first semester of the current year. (5) Physical Science Honors and Algebra I Honors must be completed and received credit before the school year begins. Proof of course enrollment or completion must be submitted by January 15th.

The Magnet Schools application process begins in October and ends in mid-January. Students interested in attending a Magnet program must complete and submit a Magnet application. When the number of eligible applications exceeds the seats available in a Magnet program, a computerized random selection (lottery) process is used for student admission. Eligible students who apply by the deadline qualify for participation

in the lottery. The Office of School Choice & Parental Options administers the Lottery. Students who submit a Magnet application by January 15th will be notified on or by March 15th regarding their application status.

PART III – SCHOOL OVERVIEW

The Marine Academy of Science and Technology (MAST) is a public high school in Florida that enjoys a collaborative partnership with a public university. Located on the Biscayne Bay Campus (BBC) of Florida International University (FIU), MAST@FIU is the only STEM-based magnet school in Miami-Dade County Public Schools focusing on marine and environmental science. Because of our unique location, we serve an academically gifted, vibrant, and diverse student population from 43 different countries. Enrollment is capped at 500, and students must meet rigorous 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. Once selected, students must maintain a Grade Point Average (GPA) of 2.5 in all high school courses and a 3.0 GPA in all university courses.

The curriculum, which is rigorous, relevant, and mind-expanding, includes Honors, Advanced Placement, and Dual Enrollment courses. Courses are scheduled within a six-period structure where students attend three 120-minute instructional periods each day on an alternating odd-even period basis. Students may enroll in various Honors, Advanced Placement, and Dual Enrollment courses throughout high school. Additionally, students may take advantage of Dual Enrollment, internships, research opportunities offered by FIU, and the opportunity to enroll as full-time Dual Enrollment students in 12th grade.

The curricular focus of the school is marine and environmental science. However, inherent within that viewpoint is an instructional framework constructed around the interdisciplinary relationships among Science, Technology, Engineering, and Mathematics (STEM). The program is built around a unique matriculation design whereby students move seamlessly between high school and university life. The program design allows them to complete many requirements for a Bachelor of Science (BS) or a Bachelor of Arts (BA) degree.

All the courses affiliated with the program of study are interdisciplinary and require extensive reading and writing. A comprehensive and fluent understanding of language arts, mathematics, science, and social studies concepts is critical to student success. Courses designated as Honors follow the curriculum prescribed by the Florida Department of Education. Credit is awarded based on academic grades and an End-of-Course examination in specific disciplines. Courses designated as Advanced Placement (AP) and Dual Enrollment (DE) are eligible for college credit and are provided at no cost to students.

Advanced Placement courses are available to eligible students in all grades and subject areas and are taught by high school faculty. The College Board prescribes AP course content; final examinations are required in every course. AP examinations are graded on a scale of 1-5, with 5 being the highest score possible. College credit is awarded for scores of 4 or 5. Students must also earn a “C” or better grade to earn high school credit for an AP course. Dual Enrollment courses are available to eligible students in all grades and are taught by university faculty at FIU. Classes are offered on a semester basis, and credit is awarded based on student performance on a midterm and final examination.

The educational opportunities available to students at MAST@FIU BBC blur the traditional lines between high school and college. This enables our students to complete up to two years of university coursework at no cost to the student. Our partnership with FIU unites our students with socially and environmentally conscious faculty members and university professors who freely share their time, educational experience, and content expertise to benefit students. The school’s education stakeholders focus on providing students with a relevant academic foundation so they may enjoy a seamless transition between high school and college. Our motto is “College is not an opportunity—it’s our reality.”

Magnet Schools of America recognizes the school as a Magnet School of Excellence. The school is the 2022 District Silver STEM award winner. The school was recognized in 2015 at the Future of Education Technology Conference as a Top 10 STEM Program in the Nation. These recognitions and the school’s unique location and academic programming have significantly contributed to student and parent interest in enrolling.

PART IV – CURRICULUM AND INSTRUCTION

1. Core Curriculum, Instruction, and Assessment.

1a. Reading/English language arts curriculum content, instruction, and assessment:

From Honors-level coursework to Advanced Placement and Dual Enrollment courses, students at MAST@FIU BBC are engaged in a systematic and thoughtful progression throughout their high school experience. Ninth and tenth-grade students enroll in Honors English I and II. Once students matriculate to 11th grade, AP English Language and Composition and AP Literature and Composition are offered in 12th grade. Students, who qualify with entrance requirements, may take the dual enrollment equivalents to Advanced Placement offerings at Florida International University.

The language arts curriculum is scaffolded and forward-thinking to be interpersonal, relevant, and rigorous. Students not only experience instruction at their proximal reading and writing ability levels, but also see the benefits of their work in the larger context of personal goals and objectives. Courses are built to support reading comprehension, analysis, and academic and creative writing. Students are exposed to various texts, from classic literature to seminal texts to contemporary works, which prepares students for end-of-course examinations and dual enrollment. English teachers consistently infuse the curriculum with learning activities and stimuli that engage student interest, support student knowledge, and reinforce cultural, historical, and technical understanding and appreciation of different genres of literature and writing styles.

Beyond what students learn, MAST@FIU BBC engages in innovative approaches to improve how students learn. The school is designed as a digital school where personal devices have replaced paper. Teachers integrate technology throughout their lessons, so students move seamlessly from substitution to redefinition within the SAMR (Substitution, Augmentation, Modification, Redefinition) model. This digital environment allows students and teachers to collaborate in active learning exercises that challenge their knowledge and preconceptions about language and literature.

Assessments are a foundational part of the instructional process to determine the extent to which learning objectives have been achieved. However, at MAST@FIU, teachers utilize assessments to more than improve understanding. Students are consistently encouraged to engage in the self-reflective process of evaluating their assessment data to guide study and remediation. Through formative assessments like activities, projects, essays, examinations, and summative assessments, like state exams, proficiency in language arts is assessed continually throughout the year. Students participate in data chats with their teachers to help identify areas of success and weakness. This methodology ensures that students are connected to the cyclical process of learning, evaluation, remediation, and practice. In these conferences, teachers reflect on understanding of content rather than rote learning so that students see their growth as a continuous process rather than episodic. Teachers then provide targeted assistance and differentiated instruction to ensure students have multiple opportunities to demonstrate content knowledge.

In this way, students combine what and how they are learning to emerge from classes at MAST@FIU BBC prepared not just for college-level academics, as most have engaged at that level in high school, but are designed for living in an ever-increasing global society which requires critical thinking, cultural compassion, self-reflection, and thoughtful communication.

1b. Mathematics curriculum content, instruction, and assessment:

Math literacy is a critical element of the instructional program at MAST@FIU BBC. The mathematics curriculum provides a systematic progression of Honors, Advanced Placement, and Dual Enrollment courses. Instruction within each class is interactive, relevant, and rigorous. Students typically take Honors Geometry in ninth grade, Algebra II in tenth grade, Honors Pre-calculus in eleventh grade, and AP Calculus AB or AP Statistics in twelfth grade. Starting in 2023-2024, students may also take AP Pre-calculus in eleventh grade and AP Calculus BC in twelfth grade, depending on their math proficiency. Eligible students may also take the university dual enrollment equivalent of AP Calculus at Florida International University.

Mathematics teachers at MAST@FIU BBC purposefully articulate the following five elements of mathematical proficiency in their instructional planning and delivery: conceptual understanding, procedural fluency, strategic competence, adaptive reasoning, and productive disposition. Hands-on, exploratory lessons develop conceptual understanding, helping students transfer knowledge to new circumstances. Emphasis on procedural fluency allows students to apply mathematical procedures in a manner that reflects accuracy, efficiency, and flexibility. It also will enable students to transfer functions to different, novel contexts, build or modify procedures from previously mastered material, and recognize when a particular strategy is most appropriate.

Teachers present lessons that advance student understanding of heuristic problem-solving, so they develop strategic competence. This allows them to formulate a mathematical model to represent a problem and then determine the process necessary to formulate a viable solution. The focus on problem-solving is particularly evident in the mathematics department's commitment to a real-world solution development project in each course. In one approach, for example, students were directed to create packaging that maintained the volume but reduced the surface area by at least 10%. Adaptive reasoning is emphasized within mathematics instruction because it requires students to think logically and communicate effectively about the solutions they propose to others. Throughout the real-world solution development project, students are challenged to present mathematically sound reasoning in an approachable and understandable manner. Student awareness of the importance and utility of mathematics, also called productive disposition, is fostered through the intentional use of manipulatives, involvement in active learning exercises, and participation in collaborative problem-solving.

Mathematics teachers articulate the belief that assessment should be used to inform the educational process. Assessment provides information that teachers use to determine how learning objectives have been achieved. Student proficiency in mathematics is assessed through a series of formative and summative assessments throughout the year. Proficiency exams are administered in the spring of each year, and students must demonstrate proficiency according to a predetermined rubric corresponding to state-identified standards. Teacher-made assessments and district-prepared mid-year assessments (MYAs) are used to guide instruction and identify weaknesses in student understanding. Teachers concentrate on content understanding rather than rote memorization so students can apply mathematical skills to novel challenges. Teachers and dedicated math interventionists provide differentiated instruction and specialized tutorial assistance to students based on assessment data and classroom observations.

1c. Science curriculum content, instruction, and assessment:

The Science curriculum at MAST@FIU BBC offers Honors, Advanced Placement, and Dual Enrollment courses in a methodical and thoughtful sequence. Instruction within each course is collaborative, relevant, and thorough. Students typically take Honors Biology in ninth grade, Honors Chemistry in tenth grade, Honors Physics in eleventh grade, and an AP science course in twelfth grade as part of the core science curriculum. In addition, the magnet elective curriculum focuses on marine and environmental science as part of the school's thematic approach to science education. As such, students must take an additional second science or technology course each year. The magnet science electives include Marine Science I, Marine Science II, and Environmental Science. Flexibility in course selection is afforded to eleventh and twelfth-grade students based on course history and career interests. Students who pass the Post-secondary Education Readiness Test (PERT) may take the university dual enrollment equivalents to AP Environmental Science and AP Biology at Florida International University.

Science teachers at MAST@FIU believe that instruction should center on pertinent everyday events and problems. This approach fosters interest and curiosity, encouraging students to take a more active role in considering how natural events occur and connect to the global environment. The intended purpose of instruction is to help students develop exploratory questions and hypotheses. Students then evaluate, assess, and refine their theories based on scientific evidence using engineering design, research styles, or various methods of inquiry. Science teachers purposefully plan lessons that nurture student curiosity, encourage scientific thinking, and extend scientific literacy. Science teachers work collaboratively with other disciplines to demonstrate the interconnectedness of science instruction. Further, students at MAST@FIU

have the unique opportunity to infuse science in all fields during STEM Week. All academic courses explore a scientific theme and propose real-world solutions to current challenges in that area.

As in mathematics, science teachers develop experiences that advance heuristic problem-solving. Adaptive reasoning is also emphasized within science instruction because it requires that students think logically and communicate effectively about the solutions they propose to others. Through hands-on laboratory work and real-world data collection at the nearby wetlands and Biscayne Bay, students learn to evaluate results, justify their hypotheses, and communicate their findings through oral and written presentations. The scientific skills students gain empower them to advocate, not just participate, in the problem-solving process necessary to improve the world around them.

Teachers and students constantly evaluate their work through the lens of the specific process; for example, lab reports and science fair projects all have elements of self-reflection and ideas for continuous improvement, which all students take ownership of. Student proficiency in science is assessed through formative and summative assessments throughout the year. Teacher-made and district-prepared evaluations are used to guide instruction and identify weaknesses in student understanding. Teachers concentrate on the understanding of content rather than memorization.

1d. Social studies/history/civic learning curriculum content, instruction, and assessment:

MAST@FIU BBC is a magnet high school that focuses on providing students with advancement opportunities, including Social Studies coursework. First-year students are required to take the World History course for high school graduation. Unique to MAST@FIU BBC is that 9th-grade students can complete this coursework at the Honors, Advanced Placement, or Dual Enrollment level. This holds for the graduating requirements: U.S. History, U.S. Government, and Economics students take in their 11th and 12th grade years. MAST@FIU BBC also provides 10th graders with the unique opportunity to deepen their humanities knowledge and cultural understanding by offering courses in Psychology at the Honors, Advanced Placement, and Dual Enrollment level; Advanced Placement Human Geography, which curriculum works symbiotically with Advanced Placement Environmental Sciences; and, Debate. All college-level credits students earn in their Advanced Placement or Dual Enrollment classes can be applied to their college credits needed for an associate's or bachelor's degree.

Social Studies teachers at MAST@FIU BBC demonstrate five pedagogical approaches within their instructional planning and delivery: the constructivist, collaborative, reflective, integrative, and inquiry-based approach. Teachers individually and collectively provide context for the learning within the curriculum. These approaches enhance the heuristic thinking that is fostered in other disciplines. At its core, Social Studies instruction helps students become better readers and learners; fosters responsible citizenship and civic literacy; promotes cultural understanding and respect for history; promotes critical thinking and a real-world experience of the socio-political and economic factors that impact them personally and society at large.

Teachers design meaningful, integrative, challenging, and active lessons so students observe and develop the skills necessary to become thoughtful, well-informed participants in our democracy. A variety of activities, such as simulations, history laboratories, investigations, projects, discussions, and dramatizations, are used by teachers to bring Social Studies alive. By fostering a connection between students and the curriculum, teachers share their passion for learning. They engage students with thoughtful inquiry and critical thinking, ensuring they become positive, forward-thinking global citizens.

Assessment is used to inform the instructional process and determine the extent to which learning objectives have been achieved. Student proficiency in Social Studies is assessed through a series of formative and summative assessments throughout the year. Assessment data is consistently shared to ensure that students have ownership of their knowledge and understanding of course material, can build off their performance, and reinforce their areas of weakness. Teachers utilize assessment data to differentiate instruction to assist all classroom students. Proficiency exams are administered in the spring of each year, and students must demonstrate ability according to a predetermined rubric corresponding to state-identified standards. Teacher-made assessments and district-prepared mid-year assessments (MYAs) guide instruction and

identify weaknesses in student understanding of course content. Student aptitude in Advanced Placement courses is determined by exam, and individual results are ranked on a scale of 1-5, five being the highest score possible.

1e. For schools that serve grades 7-12:

Students may enroll in various Honors, Advanced Placement, and Dual Enrollment courses throughout high school. Additionally, students may take advantage of Dual Enrollment, internships, research opportunities offered by FIU, and the opportunity to enroll as full-time Dual Enrollment students in 12th grade. The program design allows students to complete many requirements for a Bachelor of Science (BS) or a Bachelor of Arts (BA) degree. The Career and Technical Education (CTE) curriculum at MAST@FIU BBC expands on students' career interests and goals. Students may take Digital Information Technology in ninth grade, Honors Multimedia 3 in tenth grade, AP Computer Science Principles in eleventh grade, and AP Computer Science A in twelfth grade.

1f. For schools that offer preschool for three- and/or four-year old students:

2. Other Curriculum Areas:

2a. Arts (visual and/or performing)

Students must obtain one course credit in fine and performing arts, speech and debate or a practical art as part of the Florida Department of Education requirements for a high school diploma. Students may take Journalism 1, Introduction to Information Technology, Honors Multimedia 3, or Honors Art History & Criticism to fulfill this requirement.

2b. Physical education/health/nutrition

Students must obtain one course credit in physical education as part of the Florida Department of Education requirements for a high school diploma. Students satisfy this requirement in ninth grade by taking one semester of Personal Fitness and one semester of Fitness Lifestyle Design.

2c. Foreign language(s), if offered (if not offered, leave blank)

Students in Florida are not required to take a foreign language to graduate from high school. However, admission into a public university in Florida and elsewhere is competitive and our students are counseled to complete the requirements for the scholar diploma designation which includes two credits in the same foreign language. Because of our unique geographic location, many students take Spanish I and II or French I and II in ninth and tenth grade respectively to satisfy this requirement. This, along with other rigorous academic requirements, helps students qualify for various scholarships and grants within Florida and throughout the country.

2d. Technology/library/media

The Career and Technical Education (CTE) curriculum at MAST@FIU BBC expands on students' career interests and goals. Students may take Digital Information Technology in ninth grade, Honors Multimedia 3 in tenth grade, AP Computer Science Principles in eleventh grade, and AP Computer Science A in twelfth grade. CTE courses are designed to give students a unique perspective on what is needed to succeed in today's employment marketplace. Courses are delivered in a logical and detailed structure, so students grow their understanding of the content and ability to apply what they have learned. Instruction within each course is cooperative, applicable, and demanding. It is common for students to take two or three courses in CTE during their tenure as high school students. Many of the courses available to students allow students to become industry certified, which provides additional scholarship opportunities for these students.

Career and Technical Education is essential to the STEM (Science, Technology, Engineering, and Math) focus of the educational program design at MAST@FIU BBC. The concepts and skills associated with STEM-based education are evident throughout the curriculum in all disciplines. During the annual event, STEM week, teachers and students in all courses collaborate and participate in activities that include but are not limited to the engineering, construction, and testing of bridges and water bottle rockets. Students collected and analyzed data about their designs, brainstormed, and authored essays on improving the results they compiled. In addition to these skills, students learn about the importance of work ethics, time management, and teamwork which are valued in today's workplace.

2e. Any other interesting or innovative curriculum programs you would like to share

The faculty and students at MAST@FIU BBC have established a 0.5-acre coastal wetland research center behind the school to conduct research, develop new scientific methodologies, and disseminate much needed scientific information that will assist in the management, conservation, and restoration of coastal wetlands. This coastal wetland area provides students with a viable ecosystem to conduct research. Students spend time with their teachers and FIU researchers engaging in scientific research, journalism, and strategic communication. The research conducted in the wetland fosters student awareness about their importance to South Florida and beyond. The wetland's proximity gives students frequent opportunities to observe native birds and other wildlife that frequent the area. The Student Environmental Advocacy (SEA) Corps was created as part of this endeavor to give students a voice in advocating solutions to protect wetlands. This component teaches students about the power of communication and how they may use broadcast and social media to promote greater ecological awareness, understanding, and advocacy.

3. Academic Supports

3a. Students performing below grade level:

The Student Services Program at MAST@FIU BBC is structured around a four-component comprehensive, multi-tiered student support system. The components, which include psychology, nursing, social work, and counseling, are designed to promote a safe and healthy school environment that supports all students. This integrated approach provides opportunities for counselors and practitioners to develop close professional associations with students. These associations help students demonstrate personal and academic growth, make appropriate educational and career decisions, and interact positively with others.

The blended university high school experience at MAST@FIU BBC necessitates that students perform above grade prior to entry to the school. Nonetheless, students who enroll in the Magnet program are provided with a personalized program of study that begins in the ninth grade. A school counselor conferences with the parent and student to review the student's academic and behavioral histories. The counselor also reviews and discusses any specialized services and/or accommodations the student may have received during their education. The counselor also reviews each student's proficiency in mathematics and English language arts to ensure that services, such as individualized tutoring are provided to students who demonstrate performance gaps as measured by state assessments.

Student performance and attendance is monitored throughout the year. Students, whose school attendance exceeds three unexcused absences and/or whose academic performance drops below a "C" average in a course, are placed on academic probation and asked to complete an Academic Success Plan (ASP) in collaboration with their teacher, counselor, and parent. The plan identifies educational impediments, goals for success, and tutoring services available to the student after-school. The implementation timeline for the ASP is nine weeks. The goals outlined in the ASP are reviewed at the end of the grading period. If, at that time, a student has not met the goals outlined in the ASP, the student is issued an academic warning, and the ASP is revisited and updated.

3b. Students performing above grade level:

The blended university high school experience provided at MAST@FIU BBC necessitates that students perform above grade prior to entry to the school. Students who enroll in the Magnet program are provided with a personalized program of study that begins in the ninth grade. A school counselor conferences with the parent and student to review the student's academic and behavioral histories. The counselor also reviews and discusses any specialized services and/or accommodations the student may have received during their education.

Incoming ninth graders who are performing one or two grade levels above their peers in mathematics and or science are encouraged to take the Post Education Readiness Test (PERT) to determine if they qualify for dual enrollment (DE). Ninth grade students who pass the PERT may take as many as four dual enrollment courses during school year. These students may also take Advanced Placement (AP) courses or a combination of AP and DE courses throughout their high school experience including summer.

Each semester, counselors meet personally with students to review their program of study, select courses, schedule PERT/SAT/ACT administrations, apply for college scholarships, and revisit career plans. Students who consistently demonstrate exceptional performance are encouraged to take the SAT or ACT to determine their eligibility for full-time dual enrollment in grade twelve. High achieving students may qualify for an Associates of Arts designation on their university transcript upon graduation.

MAST@FIU has an open-door policy for parents and students.. In-person and virtual informational and student services meetings are held each month, so parents and students are apprised of the programs and services offered at the school. The electronic grade book program, email, website, social media, and telephonic services facilitate communication with parents and students.

3c. Students with disabilities:

Students who enroll in the school are provided with a personalized program of study that begins in the ninth grade. A school counselor conferences with the parent and student to review the student's academic and behavioral histories. The counselor also reviews and discusses any specialized services and/or accommodations the student may have received in the past as part of an Individualized Education Program (IEP), Educational Plan (EP), or 504 Accommodation Plan.

The counselor, parent, and student collaborate on selecting courses that comprise the student's program of study in ninth grade and subsequent years. This individualized program of study identifies a carefully planned sequence of high-level classes that will satisfy the requirements for a high school diploma and accelerate the student toward completing a bachelor's degree. Student attendance and academic performance is monitored throughout the year. Additional meetings are scheduled to update the student's educational plan so that services are delivered efficiently and effectively. Individual meetings are held with teachers, so they are aware of the accommodations and services afforded each student with a plan.

Students whose school attendance exceeds three unexcused absences and/or whose academic performance drops below a "C" average in a course are placed on academic probation and asked to complete an Academic Success Plan (ASP) in collaboration with their teacher, counselor, and parent. The plan identifies educational impediments, goals for success, and tutoring services available to the student after-school. The implementation timeline for the ASP is nine weeks. The goals outlined in the ASP are reviewed at the end of the grading period. If, at that time, a student has not met the goals outlined in the ASP, the student is issued an academic warning, and the ASP is revisited and updated. Each year, counselors meet personally with students to review their program of study, select courses, schedule PERT/SAT/ACT administrations, apply for college scholarships, and revisit career plans.

3d. English Language Learners:

Students who enroll in the school are provided with a personalized program of study that begins in the ninth grade. A school counselor conferences with the parent and student to review the student's academic and behavioral histories. The counselor also reviews and discusses any specialized services and/or accommodations the student may have received in previous years. Counselors also discuss any language

assistance English Language Learners (ELL) may require as part of their affiliation with the ESOL (English for Speakers of Other Languages) program. The counselor will arrange and facilitate any testing that may be necessary to determine language proficiency or course placement. Specialized courses are identified to assist students with limited English proficiency within the curriculum. ESOL student performance is monitored on a quarterly basis to determine individual English language proficiency and the efficacy of services provided in content areas. In some cases, students receive additional support through individual tutoring and peer assistance.

Students whose school attendance exceeds three unexcused absences and/or whose academic performance drops below a “C” average in a course are placed on academic probation and asked to complete an Academic Success Plan (ASP) in collaboration with their teacher, counselor, and parent. The plan identifies educational impediments, goals for success, and tutoring services available to the student after-school. The implementation timeline for the ASP is nine weeks. The goals outlined in the ASP are reviewed at the end of the grading period. If, at that time, a student has not met the goals outlined in the ASP, the student is issued an academic warning, and the ASP is revisited and updated. Additional meetings that may be necessary to update the student’s educational plan or services provided are scheduled by the counselor on an as needed basis.

3e. Other populations, if a special program or intervention is offered:

PART V – SCHOOL CLIMATE AND CULTURE

1. Engaging Students:

The school follows a 3-R approach to student engagement: relationships, relevance, and rigor. Great teachers know that before their students can learn, they need to build positive relationships and shared understandings about their instruction's purpose. Teachers work with students to set realistic personal goals that help students develop and internalize their purpose for being in a particular course. Our teachers spend time getting to know their students. By conducting an in-depth analysis of each student's academic, behavioral, and social histories, teachers design instruction to address each child's specific needs and interests.

Engagement requires relationships between the student and teacher and between the course content and the student. These relationships are further strengthened by relevance. Students learn best and engage more when course content makes sense and is relevant to their needs, experience, and goals. Teachers also acknowledge that learning is more than just grades—it is about understanding and application. Learning tasks and activities are designed to scaffold student learning, connect to the real world and students' experiences, and challenge students to use what they know to solve a problem or apply their knowledge to a new task.

Our teachers also acknowledge that learning is primarily a social activity. Teachers establish classroom structures that allow students to collaborate verbally or through virtual learning communities on relevant instructional content. In this manner, students are liberated from traditional brick-and-mortar structures to explore ideas beyond the campus boundaries and communicate with people in distant lands.

Rigorous course content and instruction are also part of teachers' engagement protocol. Students are challenged to learn innovative ideas and skills, so they are prepared to meet the challenges of today and those yet to be known in the future. Teachers across the curriculum use instructional techniques that move students beyond their proximal ability levels to higher levels of performance through a series of stages that engage, motivate, and support students throughout the academic year. Students whose performance falter or stagnate are provided differentiated instructional support and individualized tutoring to help them regain their intellectual competence and confidence.

Engagement is also fostered using digital message boards, email, and social media so students are aware of activities and events planned throughout the year. Positive messages about students and teachers are communicated frequently using these media and honor celebrations, events, and luncheons are conducted each month to highlight students and teacher success, as well.

2. Engaging Families and Community:

Respect, responsiveness, and reassurance are vital considerations in engaging with our families and the community. Showing families respect is more than being polite; it recognizes the importance of family relationships in child growth and development. We strive to demonstrate to parents that we respect their family values, culture, and home experiences. In this regard, families are viewed as contributors, creators, and participants within the educational environment. At a time when parents have choices, we are thankful that parents think highly enough of us to share their most precious gift—their child. We take that responsibility personally and reassure parents that their child is safe and well cared for by professionals who genuinely meet their needs. Our open-door invitation to parents and 48-hour communication policy help parents feel we are open and responsive in addressing their concerns and questions.

Our robust partnership with Florida International University affords students and teachers extensive access to various resources on the Biscayne Bay Campus. Resources include the Glenn Hubert library and media services, gymnasium pool and diving well, tennis courts, basketball courts, and soccer field: Wolfe University Center, theater, study rooms, and computer technology. Access to print and electronic resources is available to both students and teachers alike. Through a joint instructional partnership, FIU professors and

credentialed MAST@FIU BBC teachers teach dual enrollment courses. Project Aspire brings scientists who work at the FIU's marine science center together with students and teachers at MAST@FIU BBC each month to investigate topics such as the impact of microplastics on marine animals and the environmental effects of climate change on deep-sea corals. Teachers at MAST@FIU BBC are collaborating with volunteers within the tech industry as part of Microsoft's TEALS (Technology Education and Learning Support) Program to build teacher capacity and student interest in computer science.

We want our parents, students, and community partners to see us as a resource to rely on in their children's education and other valuable areas. Community service is at the heart of what we do every day. Our students routinely accumulate thousands of community service hours pursuing worthwhile endeavors, such as the Million Orchid Project, which supports planting orchids throughout south Florida. SEA (Student Environmental Advocacy) Corps empowers student volunteers to advocate for environmentally conscientious solutions that deter climate change and sea level rise. Rho Kappa, our social studies honor society, is working with a migrant assistance organization to collect much-needed food and supplies for farm workers in Homestead, Florida.

3. Creating Professional Culture:

We are immensely proud of the culture that has emerged within the school. Our purpose, mission, and values authentically represent how we operate and what we hope to achieve. Our mission and vision statements clearly articulate our goal to provide students with a relevant and relationship-driven rigorous education. We make no apologies about the fact that we want to be the number one school in America, and it is our culture that propels us forward toward that goal. The culture we have established and continue to evolve is built on elements that frame and form professional interactions within the school. The set begins with a clear purpose and values reflected in our mission and vision statements. Leadership is distributed throughout the organization, so that every employee feels empowered and supported. Instructional leaders collaborate with their colleagues within the Continuous Improvement Model (Plan, Do, Check, and Act) to refine our educational practices.

Employees are supported through an active professional development program with financial support and time. Teachers are afforded at least two one-hour monthly sessions to collaborate on topics germane to educational practice and student performance. New and tenured teachers are supported by a "buddy" or mentor who provides personal assistance throughout the year. District and school site professional development sessions are available throughout the year, and teacher coverage is provided when necessary. Emphasis is also given to our employees' physical, emotional, and mental health. Meditation (mindfulness), yoga, stretching, and exercise breaks are recommended activities that students and employees are encouraged to take throughout the day to support their holistic needs. The impact of these programs and support structures has resulted in improved attendance rates for students and staff. Student performance continues to improve because of the professional development and collaboration that exist within the school.

Communication is the last element significantly contributing to our culture and success. Communication is how we engage our employees; it helps us keep a pulse on the student and staff experience. It also helps us identify problems and activate innovative programs and solutions that influence the culture. Formal and informal structures support frequent and effective communication among stakeholders. Communication is not top-down; it is multidirectional and multimedia in nature. Communication is affected through print and electronic media via email distributions, telephone calls, face-to-face interactions, conventional print mailings, and website postings. The communication we have established also helps build trust so that stakeholders are informed, confident, and engaged.

4. School Leadership:

The principal and other key school personnel believe that leadership is most efficient and effective when appropriately distributed so those closest to the problem or point of service are supported and empowered to make crucial decisions. It is about sharing power and leadership to empower others to be their best. The administrative team recognizes the strengths of the people around them and creates opportunities for those strengths to flourish. This belief is articulated well in the school's organizational design, which includes the

following leadership roles: principal, assistant principal, magnet lead teacher, instructional leader, laboratory manager, grade book manager, dual enrollment liaison, professional development liaison, SECME/STEM (Southeastern Consortium for Minorities in Engineering) coordinator, social media manager, sustainability manager, activities director, test coordinator, water safety manager, school advisory chair, substitute locator, instructional technology leader, uniform enforcement, special programs compliance manager, website manager, cafeteria manager, head custodian, and lead custodian. These roles encompass the leadership team that functions to support the mission of the school and the objectives articulated within the School Improvement Plan. A subset of this team, referred to as the curriculum council, comprises roles that directly impact student instruction and teacher support.

This distributive approach is also evident within the student population and school advisory council. A robust Student Government Association (SGA) exists to give students within each grade level a voice and a seat at the table as decisions are made about the school. Student representation is evident in all school advisory council meetings. The SGA president meets regularly with the activities director and magnet lead teacher. Student input is frequently solicited through email distributions and survey forms so that every student is empowered to contribute in ways meaningful to them. Parents and community members also play an essential leadership role in school governance. They are active members of the school advisory council, which identifies goals and objectives within the annual School Improvement Plan.

Leadership, like learning, is all about relationships. Leadership can only thrive in an environment where people work in collaboration. Our leaders intentionally make themselves accessible to teachers, students, parents, and community members. This all-access philosophy has contributed significantly to the caring, trusting environment within the school. This emphasis on connections and community promotes effective school leadership and facilitates relationships that support learning while empowering everyone to be their best.

5. Culturally Responsive Teaching and Learning:

Culturally responsive teaching and learning rely on the power of relationships, as with school culture and climate. As a school, we are fortunate to have teachers who actively get to know their students and families; create positive environments where equity and access are evident; provide opportunities for students to see themselves as active participants in the learning environment; set lofty expectations for student success; and, scaffold instruction and support so all students may learn. Within this framework, teachers encourage students to talk to each other, whether in pairs or whole groups, so that experiences and ideas are shared frequently. Teachers seek to create educational experiences that promote intellectual growth and problem-solving skills so students may apply what they learn to real-world applications.

Classroom environments are designed to promote equity, access, and engagement. Classroom furniture layouts within the school depart significantly from the industrial model of instruction, where students are seated in forward-facing rows of desks. In the spirit of reducing our carbon footprint at MAST@FIU BBC, the school is built around a paperless environment where furniture, technology, and people are mobile. This allows students to see their learning environments as active and engaging rather than static and unappealing. The design of hallways, instructional spaces, and public areas reflect the marine and environmental themes of the school. Color and fabric choices on each floor convey distinct parts of the ocean environment and express a sense of serenity and meaning. Unique soundscapes have been created for each floor to further the marine-like experience for students.

Instructional resources are curated in a culturally responsive manner so students may experience the music, art, and language within their family background and those from other parts of the world. Additionally, teachers have replaced the practice of student hand-raising, where only a few students respond, with random Socratic questioning techniques that stimulate student engagement and discourse among all students.

PART VI - STRATEGY FOR EXCELLENCE

Statistically, only a few public high schools reside on the campus of a public university, and even fewer focus on marine science and technology. One could argue that these characteristics and the application requirements contribute significantly to the school's continued success. However, no school's location or instructional focus fosters success — people do. Schools are most successful when leadership is shared equally among stakeholders. We use distributive leadership like other companies use profit sharing as the engine that powers engagement, innovation, and productivity. When employees see themselves as leaders, they believe and work differently because they know that their contributions impact the work of their colleagues, student performance, and the school's reputation. This shift from the traditional command-and-control leadership mentality to distributive leadership allows employees to adopt a strategic mindset to respond to evolving technology and external variables that affect education and schools.

When power is evenly distributed, as in our school, people demonstrate greater agility and flexibility in thinking. This improves task efficacy, and as a result, tasks are completed much faster. Giving employees full independence over their work nurtures trust and leads to more ownership. This, in turn, encourages commitment, engagement, progress, and a general improvement in quality. Autonomy also grants more space for creativity and collaboration among stakeholders. School employees are more likely to interact with their colleagues, share experience and knowledge, and benefit from a stronger connection. In an era when schools struggle to fill positions in all areas, shared leadership contributes to employee retention because it provides opportunities for everyone to lead and assume greater responsibility. Employment candidates also see shared leadership as a reason to join an organization because they see opportunities for advancement.

Distributive leadership also extends to students, parents, and the business community, as they are integral to the school's success. Students have opportunities to contribute to the goals and objectives of the school through the Student Government Association and the school advisory council. Clubs and extracurriculars implement this strategy. For example, students propose, lead, and support all National Honor Society projects, such as the Million Orchid Project and the SAT Tutoring Program. Likewise, parents and business representatives must participate in the school advisory council. As part of our partnership with Florida International University, representatives from various academic and operational departments also participate in the school advisory council.

Outstanding leadership is at the heart of MAST@FIU BBC because employees believe that leadership is most effective when distributed among a team of individuals with different skill sets and experiences, along with a shared mission to spark and sustain a school-wide culture of learning and improve outcomes for students.