

## STEM Academy

### *National Defense Cadet Corps (NDCC)/Junior Reserve Officers' Training Corps (JROTC) Pathway - Arthur R. Sypek Center*

The U.S. Army Junior Reserve Officers' Training Corps (JROTC) is one of the largest and most impactful character development and citizenship programs for youth worldwide. Established by the National Defense Act of 1916, the program originally functioned in public and private educational institutions. In 1964, Congress expanded JROTC to encompass all branches of the military, transitioning its operational model from active-duty involvement to a collaborative support system between the services and schools. Today, under Title 10, United States Code, Section 2031, JROTC operates with a clear mandate: to "instill in students in United States secondary educational institutions the values of citizenship, service to the United States, personal responsibility, and a sense of accomplishment." This mission drives the program's success, embodied in the guiding principle: "To Motivate Young People to be Better Citizens."

The JROTC curriculum is designed to deliver equitable and rigorous academic content, providing authentic, hands-on learning experiences that prepare cadets for future leadership roles in both military and civilian life. Lessons are built around a four-part instructional model that seeks to motivate, educate, and equip cadets with skills they can apply in real-life situations. The curriculum promotes collaboration, reflection, and the development of critical thinking skills, integrating content across multiple disciplines. Core areas of study include leadership, health and wellness, physical fitness, first-aid, geography, American history and government, communications, and emotional intelligence. Additionally, cadets can explore STEM electives supported by Project Lead The Way, enhancing their technical skills and preparing them for emerging career fields.

JROTC places a strong emphasis on co-curricular Career Technical Student Organization (CTSO) activities, which reinforce the lessons learned in the classroom and provide real-world leadership experiences. The CTSO most closely aligned with the JROTC Career Cluster is Family, Career and Community Leaders of America (FCCLA). Participation in these activities helps cadets develop leadership abilities, enhance their sense of civic duty, and build stronger connections within their communities. Through these varied and holistic experiences, JROTC prepares students not just for military careers, but for leadership and success in any path they choose. The program cultivates critical skills like responsibility, discipline, and service, empowering young people to become engaged and responsible citizens of tomorrow.

#### **Industry Valued Credentials & Certifications**

- JROTC Leadership & Employability Skills Credential

#### **Dual Enrollment & Articulation Agreements**

- Mercer County Community College
- The College of New Jersey (TCNJ)
- Rochester Institute of Technology

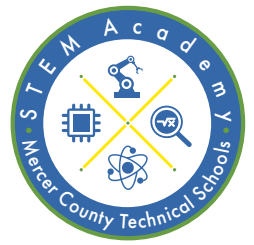
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Core	Grade 9	Grade 10	Grade 11	Grade 12
<b>English Language Arts</b>	English I	AP Seminar: English II	<b>English III</b>	<b>English IV</b>
<b>Mathematics (*)</b>	Algebra I or Geometry	Geometry or <b>Algebra II</b>	<b>Algebra II or AP Pre-Calculus</b>	MAT151 Calculus I
				MAT201 Probability & Statistics for Science & Engineering
<b>Science</b>	<b>Biology</b>	<b>Chemistry</b>	<b>Physics</b>	PHY115 University Physics I
				CHE101 General Chemistry
<b>Social Studies</b>	<b>World History</b>	<b>US History I</b>	<b>US History II</b>	
<b>Financial, Economic Business, and Entrepreneurial Business Literacy</b>			Foundations in Personal Finance	ECO112 Microeconomics
<b>Health, Safety, and Physical Education</b>	JROTC	JROTC	JROTC	JROTC
<b>Visual and Performing Arts</b>		Visual & Performing Arts Seminar		
<b>World Languages</b>	Spanish I/ <b>Spanish II</b>	<b>Spanish II</b>		
<b>21st Century Life &amp; Careers, OR Career Technical Education</b>	<b>Leadership Education and Training (LET) I</b>	<b>Leadership Education and Training (LET) II</b>	<b>Leadership Education and Training (LET) III</b>	<b>Leadership Education and Training (LET) IV</b>
	<b>Interdisciplinary Studies, STEM Internship</b>	<b>AP Computer Science Principles (Project Lead The Way)</b>	<b>Principles of Engineering (Project Lead The Way)</b>	<b>Aerospace Engineering (Project Lead the Way) Or Computer Science A (Project Lead the Way)</b>
				<b>Civil Engineering &amp; Architecture (Project Lead the Way) or COS101</b>
<b>Technology</b>	Integrated throughout all courses			

- Students have the opportunity to earn up to sixty (60) credits at Mercer County Community College, per the requirements in the articulation agreement.
- **Bolded courses** provide opportunity for students to earn dual enrollment credit on MCTS campus. See specific course descriptions details by visiting, [www.mcts.edu/admissions](http://www.mcts.edu/admissions)
- All post-secondary agreements are reviewed annually.
- All courses **may be subject to change\***
- Board Approved 03/19/2025
- Created 09/12/2025

**Admissions**  
[mcts.edu/admissions](http://mcts.edu/admissions)

