



# Middle School Robotics Teacher

**Job Title:** Middle School Robotics Teacher

**Position Type:** Full-Time

**Reports to:** Principal

**About:** Tallahassee Preparatory Academy is committed to fostering a nurturing and innovative learning environment that empowers students to excel academically and develop a passion for technology and engineering. We are seeking a dedicated Middle School Robotics Teacher to join our dynamic team and inspire the next generation of engineers and problem-solvers.

## **Position Overview:**

The Middle School Robotics Teacher will be responsible for teaching robotics, coding, and engineering concepts to students in grades 6-8. The role will involve developing and implementing a hands-on, project-based curriculum, leading extracurricular robotics activities, and fostering a school culture of innovation and inquiry. The ideal candidate will have a passion for technology, creativity, and the ability to inspire students to think critically and solve real-world problems.

## **Key Responsibilities:**

### **Curriculum Development & STEM Integration:**

- Design and implement a comprehensive robotics curriculum aligned with Florida State Standards, integrating STEM concepts across various disciplines such as life science, earth science, physical science, and mathematics.
- Emphasize the interconnectedness of robotics with technology, engineering, and scientific principles through cross-curricular activities and real-world applications.
- Regularly update and innovate the curriculum to incorporate emerging technologies, ensuring students stay at the forefront of robotics and engineering trends.

### **Hands-On, Project-Based Learning:**

- Lead hands-on projects that allow students to design, build, and program robots to solve real-world problems, fostering creativity, collaboration, and problem-solving skills.
- Encourage the use of robotics platforms such as VEX Robotics, LEGO Mindstorms, Arduino, and others, to engage students in building and programming robots.
- Integrate technology tools, coding platforms, and virtual simulations to enhance students' understanding of robotics and engineering concepts.

### **Extracurricular Activities & Mentorship:**

- Lead and mentor the middle school robotics team, preparing students for local and regional competitions such as VEX Robotics and FIRST LEGO League.



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- Organize and support additional STEM-related extracurricular activities like coding challenges and robotics workshops to deepen student engagement outside the classroom.
- Provide mentorship to students, guiding them through the design, testing, and refining of their robotics projects.

### **Collaboration & Active Learning:**

- Collaborate with science, technology, engineering, and mathematics (STEM) educators to design interdisciplinary projects that link robotics with other scientific principles and real-world applications.
- Implement active learning strategies, such as flipped classrooms and inquiry-based learning, to promote engagement and curiosity in robotics and STEM fields.
- Foster an environment that values exploration, experimentation, and interdisciplinary learning.

### **Classroom Environment & Student-Centered Approach:**

- Cultivate a safe, inclusive, and stimulating classroom environment where students feel encouraged to take risks, ask questions, and explore new ideas.
- Apply student-centered teaching methods, using interactive lessons, collaborative group work, and real-world applications to engage students actively.
- Promote a growth mindset by encouraging students to view challenges as opportunities for growth, especially in robotics design and problem-solving.

### **Classroom Management:**

- Establish and maintain an organized and respectful classroom environment that supports high levels of student engagement and mutual respect.
- Differentiate instruction to meet the diverse needs of all students, providing personalized support and ensuring that each student has access to the tools and resources necessary for success.

### **Technology Integration & Innovation:**

- Integrate innovative technologies, including coding platforms, virtual simulations, and interactive software, to enhance student understanding of robotics and engineering concepts.
- Encourage students to use technology to analyze and model complex phenomena, fostering their ability to solve problems using digital tools and robotics systems.

### **Assessment & Growth-Focused Feedback:**

- Develop and administer assessments such as quizzes, tests, projects, and presentations to evaluate student progress and understanding.



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- Provide timely, constructive feedback to guide student improvement and academic growth.
- Use assessment data to inform instructional decisions and provide targeted enrichment or intervention to support students' development.

### **Professional Development & STEM Leadership:**

- Actively engage in professional development to stay abreast of the latest trends in robotics and STEM education.
- Participate in professional STEM networks, conferences, and workshops to enhance expertise in robotics teaching and technology integration.
- Advocate for STEM education within the school community, helping to shape the vision for a future-focused, innovative learning environment.

### **Collaboration & School Culture:**

- Work closely with school leadership, colleagues, and parents to align instructional practices with the school's STEM-focused mission and goals.
- Foster a collaborative school culture that values creativity, teamwork, and a shared commitment to academic excellence and innovation.

### **Compliance & Educational Standards:**

- Ensure all robotics instruction complies with state and federal standards while meeting the needs of diverse learners.
- Maintain accurate records of student performance, attendance, and grades according to district policies.
- Prepare students for standardized assessments by aligning instruction with required competencies and test readiness.

### **Emergency Preparedness & Safety:**

- Adhere to school safety protocols, including emergency drills and maintaining a secure classroom environment at all times.
- Ensure students safely use robotics tools and equipment by enforcing proper safety protocols.

### **Physical Requirements:**

- Ability to stand, walk, and move around the classroom for extended periods.
- Ability to lift and carry classroom materials and robotics equipment up to 25 lbs.
- Dexterity to operate classroom technology, writing instruments, and robotics tools.

### **Qualifications:**



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- Bachelor's degree in Education, Engineering, Computer Science, or a related field.
- Valid Florida teaching certification, or eligibility for certification in Technology Education or a related area for grades 6-8.
- Minimum of two years of teaching experience, preferably in middle school STEM or robotics education.
- Proficiency with robotics platforms (e.g., VEX Robotics, LEGO Mindstorms, Arduino) and programming languages (e.g., Python, Scratch).
- Experience leading and mentoring students in extracurricular robotics teams or STEM clubs.
- Strong understanding of robotics, coding, and engineering principles.
- Ability to design and deliver engaging, hands-on lessons that cater to diverse learning styles.
- Excellent communication and interpersonal skills, with the ability to collaborate with students, parents, and staff.
- Demonstrated leadership and organizational skills, particularly in managing extracurricular activities.

### **Knowledge, Skills, and Abilities (KSAs):**

#### **Knowledge:**

- Strong understanding of robotics, coding, and engineering principles, including but not limited to VEX Robotics, LEGO Mindstorms, Arduino, and programming languages such as Python and Scratch.
- Knowledge of project-based learning methods and how to incorporate robotics into cross-curricular STEM education.
- Familiarity with Florida State Standards for technology education and robotics.
- Knowledge of student-centered instructional strategies and differentiation techniques to accommodate diverse learning needs.
- Understanding of current trends and developments in robotics, engineering, and educational technologies.

#### **Skills:**

- Ability to design and implement a comprehensive, engaging curriculum for middle school students in robotics and coding.
- Proficient in using and teaching various robotics platforms, tools, and simulation software.
- Excellent communication skills, both verbal and written, to clearly explain complex concepts and foster student engagement.
- Strong classroom management skills to create a safe, respectful, and organized learning environment.
- Ability to lead and motivate students in extracurricular robotics activities and competitions, fostering teamwork and problem-solving.



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- Proficient in using technology to enhance learning experiences, including coding platforms, virtual simulations, and educational software.
- Skilled in assessing student progress and providing timely, constructive feedback.

### **Abilities:**

- Ability to inspire and engage students in hands-on, project-based learning experiences that connect robotics to real-world problems.
- Ability to differentiate instruction to meet the diverse needs and skill levels of students.
- Ability to work collaboratively with colleagues across disciplines to integrate robotics and STEM concepts throughout the school curriculum.
- Ability to effectively manage and maintain robotics tools, equipment, and classroom materials.
- Ability to adapt to new technologies and continuously improve instructional methods.
- Ability to mentor and guide students in extracurricular robotics competitions, offering encouragement and constructive guidance.
- Ability to maintain records, communicate effectively with parents/guardians, and meet school and district compliance standards.

### **Physical Conditions:**

- Ability to stand and move around the classroom for extended periods.
- Ability to lift and carry classroom materials and robotics equipment up to 25 pounds.
- Dexterity to operate classroom technology, robotics tools, and writing instruments.
- Ability to assist students with building and troubleshooting robotics kits, requiring manual dexterity and attention to detail.
- Ability to set up and maintain robotics equipment and technology systems.
- Capacity to work in various classroom environments, including those that may require bending, kneeling, or sitting on the floor to assist students with robotics projects.
- Ability to handle occasional exposure to potentially hazardous materials or tools (e.g., soldering irons, small machinery) used during robotics activities, following proper safety protocols.

### **Equal Employment Opportunity**

TPA is an Equal Opportunity Employer. We are committed to providing equal employment opportunities to all qualified individuals, regardless of race, color, religion, sex, sexual orientation, gender identity, national origin, disability, or protected veteran status. We ensure that all employment decisions are made without discrimination. For additional information regarding your rights as an applicant, please refer to the U.S. Equal Employment Opportunity Commission poster.

### **Conviction History Background Check**

This position requires fingerprinting and a background check due to the nature of the



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responsibilities. TPA is an equal opportunity employer and considers applicants with conviction histories. We review all background information within the context of the job requirements. Employment may be contingent upon the successful completion of the background check.

### **Misconduct Disclosure Requirement**

As part of the employment process, the final candidate who accepts a conditional offer of employment will be required to disclose any final administrative or judicial decisions within the past seven years that found them responsible for misconduct. Additionally, candidates must disclose if they have received notice of allegations or are currently under investigation in any administrative or disciplinary proceedings involving misconduct, or if they left a previous position while under investigation or after receiving notice of such allegations.

"Misconduct" is defined as any violation of workplace policies or laws, including but not limited to sexual harassment, sexual assault, other forms of harassment, discrimination, dishonesty, or unethical conduct, as defined by the applicant's previous employer. For reference, our institution adheres to policies that address these behaviors.

### **Job Description Disclaimer:**

This job description is intended to provide a general overview of the responsibilities and qualifications for the Middle School Robotics Teacher role. It is not an exhaustive list of all duties and may change at any time, with or without notice. It is not intended to be an exhaustive list of qualifications, skills, duties, responsibilities, or working conditions associated with the role.