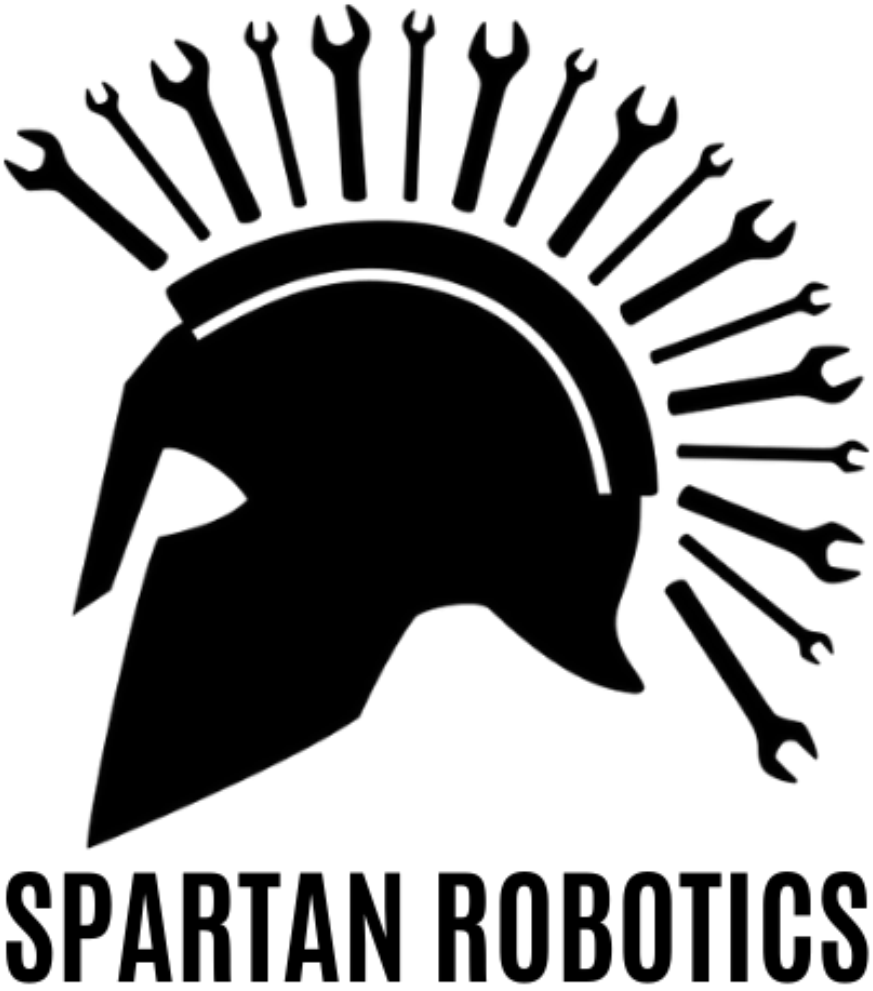
Team Handbook



Mountain View High School
FRC Teams 971 & 9584

Version 2026.02

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Part I: Introduction & Foundation

Welcome to Spartan Robotics

Spartan Robotics is the competitive robotics program at Mountain View High School, operating two FIRST Robotics Competition teams that serve over 100 students annually. This handbook provides the essential framework for understanding our program's structure, expectations, and operations. Detailed procedures and forms referenced throughout this document are maintained separately in appendices, allowing this core handbook to remain focused and accessible.

Our program creates an environment where technical skills, leadership development, and character building intersect through the exciting challenge of building competitive robots. Whether you are a student exploring engineering, a parent supporting your child's STEM journey, a mentor sharing expertise, or a community volunteer, this handbook will guide your participation in Spartan Robotics.

About FIRST

FIRST (For Inspiration and Recognition of Science and Technology) is an international organization founded in 1989 by inventor Dean Kamen. The FIRST Robotics Competition combines the excitement of sport with the rigors of science and technology. Teams of high school students work with professional mentors to design, build, and program industrial-size robots that compete in complex field games.

Central to FIRST are two core values that guide everything we do. **Gracious Professionalism®** encourages high-quality work while emphasizing the value of others and respecting individuals and the community. **Coopertition®** demonstrates that helping others and competing fiercely are not mutually exclusive.

Our History and Evolution

Spartan Robotics began in 2002 when Team 971 was founded by a small group of students and mentors working from a garage. Over two decades, we've grown into one of the respected programs in FRC, with Team 971 attending over 10 consecutive world championships and consistently demonstrating technical innovation.

The 2020 pandemic challenged us to reimagine robotics education through virtual collaboration. Our community's resilience during this period strengthened our program's culture. In 2023, recognizing the need for more opportunities, we launched Team 9584 Spartan Squared, creating a developmental pathway that ensures every interested student can find their place in competitive robotics.

Mission and Values

Our mission is to inspire Mountain View High School students to pursue STEM careers through hands-on engineering experiences while developing leadership, teamwork, and problem-solving skills. We envision a sustainable, inclusive program where every student can discover their potential and become confident leaders. Each generation of team members commits to strengthening the program for future students, ensuring continuous growth in our capabilities, resources, and impact.

Our core values guide daily operations and long-term decisions:

- **Learn** through continuous improvement and embracing mistakes as opportunities
- **Compete** with excellence, integrity, and sportsmanship
- **Include** by valuing every individual's unique contributions
- **Lead** by developing student ownership at all levels
- **Inspire** by sharing our passion with the broader community
- **Sustain** by leaving the team stronger than we found it

Part II: Safety & Protection

Comprehensive Safety Culture

Safety forms the foundation of Spartan Robotics operations. We maintain equal focus on physical safety in our workshop and the social-emotional wellbeing of our members. This comprehensive approach requires active participation from every member of our community—students, mentors, and parents all share responsibility for maintaining safe environments.

Physical Safety Requirements

Working with power tools and industrial equipment demands strict safety protocols. All members must wear safety glasses at all times in the workshop, without exception. Closed-toe shoes, appropriate clothing without loose items, and tied-back hair when using machinery are mandatory. These requirements apply to everyone entering our workspace, regardless of their role or experience level.

Safety training follows a progressive certification system. Every member begins with general safety orientation covering workshop rules and emergency procedures. Only after demonstrating safe practices can students advance to power tools and eventually specialized machinery. This graduated approach ensures students develop both technical skills and the judgment necessary for working safely.

Detailed safety procedures, training requirements, and certification processes are documented in the Safety Manual (Appendix A).

Youth Protection Framework

The social and emotional safety of our members receives equal priority with physical safety. Spartan Robotics follows MVLA School District and FIRST's Youth Protection Program guidelines to ensure appropriate boundaries and safe environments for all students.

Key protection policies include:

- Requiring screened adults at all activities for supervision
- Observable settings for any necessary one-on-one interactions
- Electronic communications that include 3 or more participants
- Comprehensive background screening for all lead mentors

Reporting procedures ensure multiple pathways for raising concerns. Emergency situations require immediate contact with authorities (911). Non-emergency concerns should be reported

to lead mentors immediately, with additional reporting available to MVLA or through FIRST's portal at firstinspires.org/youth-protection.

Complete Youth Protection Policies and reporting procedures are detailed in Appendix B.

Code of Conduct

Our Code of Conduct establishes behavioral expectations that create a positive team culture. All members agree to demonstrate respect, maintain gracious professionalism, prioritize safety, and uphold academic integrity.

When standards aren't met, we employ progressive discipline: verbal warnings for minor first offenses, written warnings for repeated issues, activity suspension for serious violations, and team removal for severe or uncorrected problems. This approach emphasizes learning and growth while maintaining accountability.

The complete Code of Conduct with detailed behavioral expectations and disciplinary procedures is provided in Appendix C.

Part III: Team Organization

Program Structure

Spartan Robotics operates as an official Mountain View High School club under the Associated Student Body (ASB), with a faculty advisor providing the school connection. Within this structure, we maintain two distinct FIRST Robotics Competition teams serving different developmental needs.

Team 9584 Spartan Squared serves as our junior varsity program exclusively for first-year members who are freshmen or sophomores. Each October, we invite up to 25 students to join Team 9584 for one competition season. This focused experience provides a comprehensive introduction to FRC with appropriate support for beginning roboticists.

Team 971 Spartan Robotics operates as our varsity program with 45 competition spots. Students compete for these positions based on demonstrated skills, commitment, and contribution. The competitive selection reflects resource limitations while motivating students to develop their abilities.

Students not selected for competition teams remain valued club members, contributing to robot development, outreach activities, and team operations throughout the year. This structure ensures meaningful participation opportunities for all interested students while maintaining competitive excellence.

Leadership Framework

Effective leadership balances student ownership with adult oversight. Two lead mentors carry ultimate responsibility for both teams' safety, culture, and operations. Currently, these mentors serve both teams, providing unified vision across our program. They interface with school administration, FIRST headquarters, and parents while maintaining final authority on safety and disciplinary matters.

Supporting mentors provide expertise across technical and operational areas without taking ownership from students. The assignment of mentors to specific areas is done on personal interest, knowledge and skill sets.

Student leadership empowers young people to drive team success. A team captain coordinates overall student activities, supported by area leads for software, hardware, business, and other domains. These positions serve a one-year term (June to June) with a mid-season evaluation checkpoint, with selection occurring in June as seniors graduate. Competition-specific role assignment is detailed in Appendix E.

Each leader is responsible for actively developing their team members' skills through coaching, training, and delegation of meaningful responsibilities. Leaders must identify and prepare potential successors early in their term, ensuring knowledge transfer and continuity. At the conclusion of their service, leaders document lessons learned, update process guides, and formally transition responsibilities to strengthen the team's capabilities for future seasons.

As an official Mountain View High School club, Spartan Robotics also fills ASB's three required student leadership roles: the Team Captain serves as Club President, with a Secretary and a Purchase Officer (doubling as Treasurer) completing the set. Mentor selection, onboarding, exit procedures, and the club's formal governance structure — including the Principal's oversight authority — are detailed in Appendix I.

The parent committee coordinates volunteer support including supervision, meals, travel logistics, and team celebrations. Operating separately, Mountain View Robotics provides 501(c)(3) financial infrastructure enabling tax-deductible donations and fiscal management.

Leadership selection processes and detailed role descriptions are provided in Appendix D.

Roles and Responsibilities

Students drive day-to-day operations, taking ownership of robot design, construction, and competition preparation. They manage project timelines, coordinate between technical groups, and lead outreach activities. This comprehensive responsibility prepares students for complex real-world challenges.

Work organization typically follows subteams divided by robot systems—drivetrain for mobility, various mechanisms for game-specific functions. Assignments are made by student leadership based on interest, experience, and team needs, with specific structures varying by season based on game requirements.
Experienced members are expected to actively teach their skills to (new) members, creating a culture where knowledge compounds year over year rather than resetting with each graduating class.

Mentors advise and guide without doing the work for students. They share professional expertise, demonstrate technical and leadership skills while encouraging independent problem-solving. Key mentors maintain authority to override decisions affecting long-term program viability or safety.

Parents provide essential logistical support through supervision, transportation coordination, and financial contributions, enabling students and mentors to focus on the team’s work.

Part IV: Membership & Participation

Joining Spartan Robotics

Membership is open to all Mountain View High School students who complete registration requirements. The application window runs from June through August, aligning with school registration periods. Both new and returning members must register annually through spartanrobotics.org/join, ensuring current information and renewed commitment. Incoming freshmen may join during summer before their first year.

Required documentation includes:

- Student information and emergency contacts
- Safety waiver acknowledgment
- Code of Conduct agreement
- Completed safety test
- Transportation permissions

Each document serves specific purposes for safety, communication, and legal compliance.

Competition Team Selection

While club membership is open to all qualified students, competition team selection recognizes practical constraints of limited competition slots and resources.

Team 9584 selection occurs in October after new members complete basic training. Selection criteria include:

- Completion of tool training levels 1 and 2
- Regular attendance during off-season
- Active participation in activities
- Commitment to full season including 1 off season competition

Team 971 selection happens per event, allowing flexibility throughout the season. The 45 competition spots are filled based on attendance, technical contributions, teamwork, and availability. This structure allows different students to participate across various competitions while maintaining a consistent core team.

Detailed selection criteria and processes are documented in Appendix E.

Commitment Expectations

While no specific hours are mandated for club membership, meaningful participation typically requires 12-16 hours weekly during build season, with top contributors exceeding 25 hours. Attendance tracking through sign-in/out and work summaries helps monitor engagement and inform selection decisions.

Off-season expects approximately 50% attendance as students balance other commitments while focusing on skill development. Build season requires maximum attendance for meaningful contribution. All members must complete 10 hours of annual community outreach, sharing our STEM passion through demonstrations, mentoring, and events.

Students must maintain a 2.0 GPA minimum, with temporary suspension possible for academic struggles. This protects students from overcommitment while ensuring capacity for complex problem-solving.

Financial Considerations

Spartan Robotics charges no membership fees, with operational costs covered by sponsors, grants, and donations. Students are responsible for competition travel expenses, which vary by event location and type. Financial assistance is available confidentially through lead mentors, ensuring economic circumstances don't limit participation.

Financial assistance application procedures are detailed in Appendix G.

Recognition Programs

Students demonstrating exceptional commitment over three or more years receive recognition at a senior ceremony celebrating their evolution from beginners to team leaders. Alumni status is automatic upon senior year completion, providing network access for internships, advice, and mentorship opportunities. Letters of recommendation are available from mentors at their discretion and based on their direct experience with students.

Part V: Season Operations

Annual Calendar Structure

The Spartan Robotics year follows the FIRST competition calendar, creating a unique rhythm that differs from traditional academic scheduling. The competition season launches with Kickoff on the first or second Saturday in January, when FIRST reveals the game challenge worldwide. Build season extends through March, overlapping with early competitions as designs continue evolving. Competition season peaks in March-April with qualifying events, potentially extending through district championships into May for the world championship. The off-season from May through December focuses on skill development, team building, and preparation.

This calendar means new students typically join during the calmer off-season, developing foundational skills before January's intensity arrives.

Off-Season Development

Off-season serves as the foundation for competitive success. Training programs address multiple skill levels—"101" courses for new members covering safety and basics, advanced training for veterans in specialized areas. This period enables deeper exploration of concepts without competition pressure.

Community engagement flourishes through sponsor visits and public demonstrations, promoting STEM within our community while developing student communication skills. Off-season competitions like Chezy Champs (September) and MadTown (November) provide practice opportunities and testing grounds for new concepts and team members.

Build Season Operations

January's kickoff transforms our workshop into focused activity. For 971 the target is a competition ready robot prototype within 4 - 5 weeks, driving rapid design and fabrication. The strategy of building two robot versions—one for early competitions, another incorporating lessons learned—demands exceptional organization but enables continuous improvement necessary for championship performance.

Meeting schedules intensify from standard Wednesday/Saturday sessions to include Friday evenings, full Saturdays, Sunday afternoons, and extended hours during school breaks. This totals 20+ hours weekly. Friday and Saturday potlucks bring families together, while Fun Friday activities provide mental breaks. The parent meeting after kickoff allows students to explain the game and strategy to families.

Competition Framework

Event selection occurs in the fall before knowing the game, requiring strategic thinking about venue quality, competitive fields, and logistics. Both teams will compete at two district events and can participate in the District Championship event based on performance in their first two events. From there, the best teams in the District qualify to the World Championships based on performance in all three events.

Competition preparation extends beyond robot construction. Drive team selection through tryouts identifies students for high-pressure match play. Pit crews learn and train rapid repair techniques. Scouting teams develop data systems. Strategy teams prepare for alliance selections.

Team 9584 brings approximately 25 members to competitions, ensuring all committed members build experience during events. Team 971's 45-person contingent includes specialized roles like their service team helping other teams. Students lead operations with mentor oversight and parent transport and chaperoning.

Detailed competition procedures including roles, schedules, and logistics are provided in Appendix E.

Travel Management

Travel decisions depend on practical commute times rather than raw distance. Local events may use parent carpools, while distant events require buses or flights. All arrangements follow Mountain View-Los Altos School District policies for supervision, lodging, and conduct.

Students bear travel costs with financial assistance available. Only rostered team members participate in organized team travel; others attending must arrange independent supervision. Meals are coordinated where practical to reduce costs and ensure nutrition.

Complete travel procedures and policies are documented in Appendix F.

Part VI: Administration

Communication Systems

Effective communication enables coordination across our large, diverse community. Our public presence at spartanrobotics.org provides official information for prospective members, sponsors, and community. Slack serves as our primary internal platform with daily check-in expected. Email groups handle formal announcements requiring documentation or parent attention.

Authority to communicate varies by role and content. Lead mentors handle all official communications, while students may represent the team to peers and at outreach events within appropriate boundaries. External communications, especially social media, require mentor and leadership review before publication.

Information flows through established channels—operational decisions via Slack and meetings, policy changes through formal emails from lead mentors. Concerns can be raised through mentors, lead mentors, or the school club advisor, with parents asked to contact lead mentors directly.

We balance transparency with privacy. Robot designs remain team confidential during competition season. Performance evaluations stay within leadership until decisions are final. Personal information follows strict need-to-know protocols.

Financial Management

Our annual operating budget of approximately $85,000 (excluding travel) supports both teams' robot builds, workshop operations, competitions, and outreach activities. Student leadership develops budget proposals, which the MV Robotics board (the two Lead Mentors and Treasurer) formally approves before funds are released. Teams maintain separate robot budgets while sharing operational expenses.

MV Robotics, our 501(c)(3) affiliate, manages bank accounts and provides financial infrastructure enabling tax-deductible donations. Student leadership can authorize purchases under $1,000 within budget categories, with larger expenditures requiring leadership discussion and mentor approval.

Funding comes from diverse sources—corporate sponsorships, grants, donations, and targeted fundraising for specific goals. This diversification provides resilience while teaching real-world financial management. The treasurer provides regular reports tracking spending against budgets.

Detailed financial procedures including purchasing, reimbursement, and reporting are provided in Appendix H.

Resources and Infrastructure

Our primary workspace in the MVHS Robotics Lab and Workshop provides professional-grade facilities through school district investment. Access requires adult supervision—teacher, approved volunteer, or mentor—ensuring safety compliance. Lead mentors maintain keys with controlled access for other supervisors.

Equipment ownership involves multiple stakeholders. School-owned equipment in buildings follows district policies. Team-maintained competition tools travel to events. Personal use requires explicit mentor approval. Major equipment purchases require collaboration between team and school administration.

All designs and code become open source after each season per FIRST requirements. During competition, we balance helping struggling teams with protecting competitive advantages. Digital infrastructure includes OnShape for CAD, GitHub for code, and Google Drive for documentation. Access follows membership status with prompt revocation upon departure.

Documentation preservation ensures knowledge accumulates across generations. Each year's work is archived with clear labeling, creating institutional memory that enables continuous improvement.

Appendices Reference

Detailed procedures and forms are maintained separately to keep this handbook focused:

Safety & Protection Documents

- Appendix A: Safety Manual & Training Procedures
- Appendix B: Youth Protection Policies
- Appendix C: Code of Conduct & Disciplinary Procedures

Organization & Selection

- Appendix D: Leadership Selection Processes
- Appendix E: Competition Team Selection & Procedures
- Appendix I: Club Governance & Mentor Selection

Operations

- Appendix F: Travel Policies & Logistics
- Appendix G: Financial Assistance Procedures
- Appendix H: Financial Management Procedures

Additional Resources

- Student Registration Package
- Mentor Application & Requirements
- Parent Volunteer Guide
- Drive Team Selection Process
- Awards Submission Guidelines
- Communication Protocols
- Sponsorship Information
- Contact Directory
- Glossary of Terms

Current versions available at spartanrobotics.org/resources or through team leadership.

For updates or questions: info@spartanrobotics.org

Change Log

Date	Summary	Author
02/2025	Update Appendix references	Stephan Massalt
08/2026	Fixed Appendix A/C/E cross-reference names, corrected leadership term description to match Appendix D, fixed malformed date, added Appendix G/H placeholders	Stephan Massalt
08/2036	Corrected leadership term & budget approval wording; added Appendix I cross-references; pointed competition roles to Appendix E	Stephan Massalt