

2015

Gardiner Iron Tigers Handbook



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MSAD 11

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TEAM OVERVIEW

Gardiner Iron Tigers FIRST team 4041 is fully endorsed by Gardiner Area High School and MSAD 11. The team is made up of students interested in math, science, engineering, software development, electronics, movie and animation creation and fabrication using wood and metal. With help from adult volunteers and mentors the students will design and build a robot to compete in the 2014 FIRST New England Districts. While the team has the full endorsement of the school district there is no financial support from the high school or MSAD 11, the team will raise all needed funds through corporate donations, grants and fund raising by the students.

FIRST stands for “For Inspiration and Recognition of Science and Technology.” The FIRST Robotics Competition is an international organization that brings together professionals and students to solve an engineering design problem in an intense and competitive way (www.usfirst.org). In 2014, it is anticipated that the competitions will include more than 55,000 high school students placed on 2,200 teams throughout the world. There are 9 New England Districts, one District Championship and one World Championship competition. The competitions are high-tech spectator sporting events, the result of brainstorming, teamwork, mentoring, and project deadlines. The FIRST mission is dedicated to changing the way high school students regard science and technology. FIRST inspires an appreciation for the real-life rewards and career opportunities in these fields.

The team begins in the summer by securing funds to pay for the costs of a robot starter kit, competition fees, robot parts, and travel expenses. They also familiarize themselves with FIRST and the tools and software they will be using. At a FIRST kick-off event in January, the team learns the competition game scenario and game rules when they pick up their robot kit.

The team has only 6 weeks to complete their robot before it is shipped to a regional competition site. Using a FIRST-provided kit of parts including motors, sensors, cameras and electronics, as well as more than \$3,000 of additional purchased materials, the team builds a full-scale robot. The team designs, builds, and programs their robot for the competitive game play.

The team will compete in two New England District Events between Feb. 27 and April 5. The team accumulates points and if the team’s ranking after two events is in the top 50 for the New England District, the team will attend the District Championship in Boston. There are 10 District events to choose from, the team will attend the Pine Tree District in Lewiston, Maine on April 4 – 5 and the WPI District on March 13 – 14. Each District has 35 to 40 teams competing over 2 days.

After the District events the team will host an open house to showcase the robot and to share their experiences with the team’s sponsors and the public.

TEAM MISSION STATEMENT

The main goal of the Iron Tigers is to offer students positions of leadership and responsibility, and to create an environment that encourages creative problem-solving while promoting this unique atmosphere to fledgling teams. The Team will also furnish opportunities for students to work and build relationships with adult mentors possessing professional expertise. Additionally, the Team will strive to develop and apply the students' knowledge of science, math, and business; and to spur interest in technological fields and environmentally supportive measures for the future.

TEAM HISTORY

In 2011 a group of parents and students got together to form the Gardiner Iron Tigers. In April of 2011 the MSAD 11 school board officially recognized the robotics team as an official MSAD 11 club. Starting with four students, 3 mentors and grant money from Fairchild Semiconductor and JCPenney the team embarked on their rookie season. This small team met in the high school cafeteria and classrooms through their first pre-season, learning the basics of electronics and programming. Their first build season was an experience like none of them had ever had. Spending 5 nights a week in a build space donated by a local businessman on Water Street using tools borrowed from mentors and parents they build their first robot. They attended the three day long WPI Regional in Worcester, Ma. from May 3 through May 5.

The team's first off season they performed a couple of demonstrations. The first was the River Festival on Water Street in Gardiner, the second was the Mini Maker Faire in Lewiston, Me. They also attended their first off season competition, Mainely Spirit, in Oakland, Me.

The 2012 season the team added new members and student participation grew to 16 students during the pre-season, with 12 students participating in the build season. The team participated in the inaugural Pine Tree Regional in Lewiston, Maine from April 4 to April 6. They encountered some problems with the design at the competition. They had to remove 10 pounds of material from the robot because the robot was overweight. They then had to make modifications because the robot wasn't maneuverable enough and it was too top heavy. There was a lot of learning during the 2013 competition. The most important was not to focus so much attention on one part of the robot, know when we've reached the point that a design isn't practical.

2014 started off great, we were voted the "BFFs" at the Mainely Spirit Competition, attended the LA Mini Maker Faire, and added team members, most notably a spirit team which greatly improved our pit area at the 2014 WPI and Pine Tree Districts. We ended the summer off by being awarded the most original entry at the Olde Hallowell Days Parade when we joined Delta Prime in the parade.

MEMBER REQUIREMENTS

Code of Conduct

“Gracious professionalism,” one of the founding precepts of FIRST, is essential to team participation. “It’s a way of doing things that encourages high-quality work, emphasizes the value encourages high-quality work, emphasizes the value of others, and respects individuals and the community” (www.usfirst.org). Disciplinary actions, to be determined by team mentors, may include suspension from team activities, ineligibility to travel with the team, or removal from the team.

- Students will display “Gracious Professionalism” – the motto of FIRST – at all times and promote the ideals of FIRST.
- Students will sign an agreement and follow the same rules as dictated by Gardiner Area High School including those in regards to alcohol and chemical substances.
- Students will not violate the racial / religious / harassment / violence / and hazing bylaws of Gardiner Area High School and MSAD 11.
- Students are expected to be respectful of others and behave in a way that protects the health and safety of themselves and others.
- Students shall not use profane, obscene or vulgar language in written, gestured, or verbal form. Iron Tigers Robotics abides by MSAD 11 Public School’s Acceptable Use Policy for all communications, including all social media and Internet usage. Students’ Internet/social media/online communications are team communications, and will be regarded as such.
- Students are expected to keep current with team activities and requirements by checking the Facebook page and their email frequently.

Student Eligibility

- Students must be a high school or home school student in the Gardiner School District.
- Students must maintain a minimum of a C- average.
- Students are expected to make a significant time commitment to the team, actively participating in meetings, workshops, and events. Commitment to the team increases significantly during the months of January – April.
 - During pre-season (Sept – Dec) students are required to attend the weekly meetings.
 - During build season (Jan – April) students are required to attend 2 of three week night meetings and the Saturday meeting.
- Students are expected to be reliable (on-time, prepared to work, clean up, positive attitude, assist newer members, responsive to mentors and other adult volunteers) and assist with team administrative tasks.
- Students and parents must complete the necessary paperwork and participate in fund raising activities.
- Students must register for the team via STIMS (<https://my.usfirst.org/stims/site.lasso>). If a parent doesn’t have an email address then the student is responsible for getting their FIRST Press Releases signed and delivered to the Lead Mentor as well as ensuring their name and information is on the team roster.

Team Organization

Lead Mentor

- Responsible for basic team organization.

- Has final say on budgeting issues and student disciplinary actions.
- Responsible for communications with MSAD 11 faculty and staff.
- Responsible for getting students registered in STIMS.
- Responsible for ensuring the team has all resources needed to complete tasks.

Mentor

- Will be responsible for their sub teams, a mentor may have more than one sub team.
- Provide professional knowledge in technical areas.
- Work with students to get them engaged in areas that are new to them.

Fundraising Chair

- Adult volunteer or student.
- Responsible for organizing fundraisers.

All Parents

Are expected to provide additional support of the team, including chaperoning, making travel arrangements, providing meals, transportation (people and robot), general supervision (non-mentorship), donation of general supplies/snacks/water and assisting team mentors as requested.

Sub Team Leaders

- Sub Team Leaders will be selected prior to the build season. Team members input will be critical but final selections are made by the sub team Mentor.
- A student who is responsible for the sub team they are asked to lead.
- Responsible for ensuring that deadlines are met, or informing their Mentor when issues arise.
- Responsible for instructing new students on the sub team.
- Sets the example to be followed. Gracious Professionalism is a full time job for Sub Team Leaders.
- Responsible for ensuring that a minimum number of students (set by sub team mentor) are at each meeting. This is especially important during the build season to keep progress moving forward.
- Sub Teams will include:
 - Robot programmers
 - Web developers
 - Build team
 - Spirit team
 - Writers
 - Media (includes animators and movie production)
 - Other sub teams maybe created as the need arises.

Safety Officer

- Responsible for team safety in the build space and the pit area during competitions.

FUNDING AND TEAM FINANCIALS

The Gardiner Iron Tigers receive no direct financial support from MSAD 11. This means the team must seek out sponsorships, grants and fundraise to meet the financial requirements for District registration, robot parts and building supplies, travel (hotels mostly) and all other miscellaneous expenses it incurs.

These items are the known expenses that the team must raise funds for annually:

District registration	\$5000
Robot parts budget	\$4000
Travel to out of state District	\$3000 (may vary depends on student numbers)
Misc (T-shirts, fundraising materials, etc.)	\$2000
TOTAL	\$14000

These items are known expenses that the team may need to raise funds for:

District Championships in Boston	\$4000
Travel to District Championship	\$3000
World Championship in St. Louis	\$5000
Travel to District Championship	\$5000
TOTAL	\$17000

SAFETY

- Team members will act in a safe manner AT ALL TIMES. This includes during any team related activity while traveling to team events, and during competitions.
- Team members will be respectful of the Safety Captain(s) and adhere to any reasonable requests made by the Safety Officer(s).
- Team members will be expected to attend a safety seminar and pass a Safety Quiz.
- Power tools or equipment may only be used under the supervision of an adult mentor.
- Team members will be expected to wear safety glasses at work sites and in the pit area at all competitions. In addition, team members may be asked to wear gloves, face masks, and ear protection during certain tasks.
- Horseplay will not be tolerated at any time.
- All work areas will be cleaned up at the end of every day including sweeping the floors and work surfaces, putting away tools and materials, and throwing away trash.
- Students will not socialize or linger in the workshop once the designated task(s) are completed.
- Team members will not directly or indirectly give out personal information about themselves or other team members while using any form of online/Internet communications or media. This includes all social media (Twitter, Facebook, et al), Team 4041, other FIRST teams or other FIRST-sponsored Forums, wikis or any Internet/Web/mobile device (smartphones, cellphones). As Team 4041 members, students' communications through any media are representative of the team and should not negatively reflect on the team and should at all times reflect the tenets of FIRST and "Gracious Professionalism."

TEAM TRAVEL

Travel – The team will attempt to raise the necessary funds for travel. If the team fails to have the funds needed for transportation and lodging it will be the responsibility of the student to make up the difference in travel funding. In the event that the travel budget falls short, the cost for one child to travel will be calculated. Then number of students traveling will be divided into the available travel funds. The student will then be responsible for the difference between per student travel cost and their share of the travel budget.

Expectations of students when traveling:

- Be a member in good standing (see Member Requirements).
- Arrange ahead of time with their teachers to make-up any work missed (students will miss Thursday and Friday of school for competitions)
- Exhibit team spirit and “Gracious Professionalism” at all times while traveling.
- Attend all travel information meetings.
- The team will sit as a group at all competitions when not in the pit area.
- Complete all necessary paperwork for travel (permission slips, FIRST consent form (preferred method is STIMS, excusal form/contract).

To qualify for travel to competitions:

- Meet all other Eligibility Requirements.
- Student must attend at least one meeting a week during the pre-season (Sep to Dec) or make arrangements with the Lead Mentor for alternative participation.
- Student must attend at least half the meeting hours per week during the build season (Jan – Feb) or make arrangements with Lead Mentor for alternative participation.

COMMUNICATION AND RESOURCES

Communications Expectations

All team members and mentors are required to have an email address (Google's Gmail is the preferred email server) and check it daily. In addition, the team website, including the forums, blog, and calendar, should be checked frequently. *Any distributed roster of the team members, parents, and mentors is designated as for team use only. All team communications will utilize bcc to protect student and parent privacy.*

General Team Contact:

- Team email: first.team4041@gmail.com
- Lead Mentor email: aaron.basford@gmail.com
- Lead Mentor phone: 207-485-7679

Resources:

1. www.facebook.com/FIRST.Team.4041 - Team 4041 Facebook page
2. firstteam4041.com/IronTigers.html - Official team website.
3. www.usfirst.org - official website of the FIRST Robotics Competition (FRC), includes:
 - a. information about FIRST,
 - b. information about FIRST Robotics Competition,
 - c. video of last year's championship games,
 - d. competition manual.
4. www.chiefdelphi.org - a website of a veteran team with helpful information and forums on many topics.
5. www.thebluealliance.net - a website that archives videos of previous years' competitions and source of much helpful information.
6. www.firstnemo.org - a website with information for non-engineering

SEASON CALENDAR

Sept 11, 2014

Sept 18 through Dec 18, 2014

Sept 14 through Dec 20, 2014

Sep 6, 2014 (all day)

Sep 20, 2014 (all day)

Jan 3, 2015

Jan 5 through Feb 17, 2015

March 12, 13 and 14, 2015

April 3, 4, and 5, 2015

Parent and student information night

Sub team meetings every Thursday night from 6PM to 8PM.

FUNDRAISERS!!!!!!!!!!!! Details of fundraisers will be discussed in full team meetings.

Mini Maker Faire in Lewiston, Maine

Mainly Spirit, FIRST Competition in Oakland, Maine.

FIRST Kick off meetings, one group goes to Portland and one group goes to Manchester NH.

Meetings for all sub teams every week night 6PM to 8PM and every Saturday 10AM to 4PM.

WPI District Event on the campus of Worcester Polytech.

Pine Tree District at the Colisee in Lewiston, Maine.

GAHS IRON TIGERS STUDENT/PARENT CONTACT SHEET

Last Name _____ First Name _____ MI _____

Age _____ Birthday _____

Mailing Address _____

Legal Address _____

Parents/Guardians _____

Emergency contact information for Parents/Guardians

Phone Numbers: Home _____ Cell _____

Parents/Guardian Email _____

NOTE: Emails are used only by the team mentors for team communications. All emails are BCC'd to maintain the privacy of parents and students.

Health Concerns/Allergies _____

If my child becomes ill or injured during program activities, mentors and volunteers have my permission to seek medical treatment for my child. I understand that I will be contacted if medical treatment is necessary.

X _____ Parent Signature

My child and I understand the requirements for team membership and event attendance as laid out in the Iron Tigers Team Handbook. We understand that there are time and fundraising commitments for both of us, and agree to the terms in the Handbook.

X _____ Parent Signature

X _____ Student Signature