Mainland Robotics Team

College of the Mainland / La-Marque High School / Texas City High School
www.mainlandrobotics.org

Revised 1/7/2005

Team FAQs

What are we doing and who do I contact?

o 2005 MATE ROV Competition (underwater robot)
o Houston Regional – Mid May 2005; NASA JSC Neutral Buoyancy Lab
o National Contest – Late June 2005; NASA JSC Neutral Buoyancy Lab
o Contact Robert Kershaw, 281.684.3786, teamcoordinator@mainlandrobotics.org

What are the team goals?

o Win the national contest.
o Take all eligible students to nationals or we don't go (all for one and one for all)!

How do we qualify for nationals?

o Finish 1st or 2nd in the Ranger Class at Houston Regional
o Or enter the Explorer Class

How do we win?

o Design and build a high performing ROV
o Document the process with technical/professional papers
o Explain the process in interviews with judges
o Play the game better than others.

What are the contest rules?

o Students must design and build the ROV
o Students must document the process
o Students must explain the process
o Teams accepting MATE funds must attend contest or refund money.
o Game packets are on website, www.mainlandrobotics.org

How do we develop the ROV?

o Start with a maximum of 6 students.
o Program begins January 2, 2005 and runs for 20 weeks (approximately 200-300 hours).
o Time frame will be 2-7 days per week including every Saturday and Sunday.
o Design an underwater robot.
o Record design and development with technical drawings and papers.
o Build ROV with sub-teams
    Documentation – 1 to 2 members; correlate and package information supplied by sub-teams. All work must be professional.
    Controls/tether – 1 to 2 members; develop programmable system.
    Manipulators – 1 to 2 members; develop unique game manipulators.
    Body/thrusters/cams – 1 to 2 members; develop ROV.
o All eligible students may compete for field positions (only 6 students allowed poolside).

How do we pay for everything?

Design and Construction

o Initial goal is $1000 for materials, nation trip expenses are additional
o MATE provides $100 material stipend for building an ROV
o BP CAST should provide $1000 for material expenses
o BP mentors can apply for time matching funds
o Seek material donations from appropriate vendors.

Fundraising

o Review fundraising document on the website: FILES > MATE Related Documents
o Concentrate on low cost, high revenue ideas

National Trip

o MATE provides two free rooms for local teams and some meals
o Fundraising must cover expenses for students and mentors
o All team members will share unfunded portion.

Donations are directed to College of the Mainland Foundation

What are the team membership requirements?

- o Membership is open to LaMarque and Texas City high school students
- o Students must attend all meetings
  - Contact Kershaw, 281.684.3786, if you will be late or absent
  - Excusable absences/tardiness - illnesses, school functions, jobs and family emergencies
  - Excessive and unexcused absences/tardiness will result in dismissal from team.
- o Attitude, discipline and participation
  - Working with others is critical to team success
  - Expect to work every session; if you are not contributing to the process you will be sent home and marked absent
  - Violating safety rules, horseplay or dangerous activity can result in immediate dismissal from team
- o Tasks include mechanical and graphic design, physics and math, mechanical and electrical construction, computer controls, document creation and more
- o Communication
  - Team website contains important documents and information.
  - Team information and updates will be issued by email.
  - Members are requested to obtain an email account.
  - Other members can help set up free email accounts.
  - Internet can be accessed from libraries, school or friends.

What safety rules apply?

- o Construction area will be marked and is a hazardous environment. Other areas will become hazardous whenever tools are used.
- o Approved safety glasses, properly worn, are required at all times.
- o Sturdy shoes covering the whole foot are required at all times. No high heels, sandals or slaps.
- o Tools can only be used with mentor approval.
- o Keep construction area clean at all times.

What is important?

- o Personal safety- no accidents!
- o Good sportsmanship is PARAMOUNT
- o The game is a scientific investigation where you compete against the game mock-up and the clock.
- o It is a friendly competition and you should make every effort to help other teams.