

# THE 2003 FIRST ROBOTICS COMPETITION MANUAL

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## **SCHOLARSHIP INFORMATION**

These scholarship offerings are accurate as of November 15, 2002. Visit the FIRST web site, [www.usfirst.org](http://www.usfirst.org), for up-to-date scholarship offerings, submission information, and deadlines.

The scholarships are listed alphabetically, and unless otherwise noted, all scholarship recipients will be announced at the Championship event.

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## ASME/FIRST SCHOLARSHIPS (7)

To recognize and reward students whose FIRST experience has inspired an interest in pursuing an engineering career, ASME International (The American Society of Mechanical Engineers) will award seven (7) \$5,000 scholarships to high school seniors active on FIRST teams, who are nominated by ASME members or student members who are also active with FIRST. These awards will be for the first year of study (non-renewable) in an accredited\* Mechanical Engineering or Mechanical Engineering Technology program. The recipients will be announced at the FIRST Championship.

## Nomination and Student Eligibility

Members of ASME, including student members, *may nominate no more than one student each*. Students must be:

- Graduating high school seniors active on FIRST teams, and
- Planning to enroll full-time in an ABET-accredited or substantially equivalent\* Mechanical Engineering or Mechanical Engineering Technology program, no later than the fall after their senior year in high school.

## Nomination Requirements

Applicants must complete the **ASME/FIRST Scholarship Nomination Form**, downloadable from the ASME Education web page <http://www.asme.org/education/precollege/first/firstapp.pdf>. Attached to the form should be the following:

- A **nomination letter** from an ASME member or student member attesting to the student's technical, creative and leadership contributions to the FIRST team;
- Evidence of the student's outstanding **academic performance** and other relevant activities (transcript, and/or resume or activity list with GPA information); and
- **Financial Data worksheet** (p.2 of downloadable Nomination form) as evidence of financial need.

## Submission Requirements/Deadline

- FOUR (4) COPIES of the nomination form and accompanying materials must be submitted.
- Materials must be POSTMARKED BY MARCH 3, 2003 and sent to:  
Theresa Oluwanifise  
Education Department  
ASME International  
Three Park Avenue, 23-S1  
New York, NY 10016-5990  
Tel: 1-800-THE-ASME (1-800-843-2763)  
Fax: 1-212-591-7143  
E-mail: OluwanifiseT@asme.org

## ASME and FIRST

ASME International has promoted FIRST widely since 1996, when the two organizations signed an agreement of affiliation. ASME International is a 125,000 member professional organization, active for more than a century in supporting the profession of engineering through establishing codes and standards, publishing technical journals, participating in educational accreditation, and hosting seminars and conferences. ASME is committed to promoting technological literacy, and supports FIRST as an outstanding means for engineers to be positively involved with young people and promote hands-on understanding of engineering.

The college a student is planning to attend must have a Mechanical Engineering (ME) or Mechanical Engineering Technology (MET) program accredited by the Accreditation Board on Engineering Technology (ABET) or substantially equivalent. Questions about whether a given program has received this accreditation may be answered by the college or university, or by checking listings on the ABET website ([www.abet.org](http://www.abet.org)). For degree programs outside the U.S., contact ASME for further information (see above).

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## CLARKSON UNIVERSITY FIRST SCHOLARSHIPS (12)

FIRST and Clarkson University have established a scholarship to benefit deserving students who have participated on a FIRST team during their high school years and who would like to attend Clarkson University. The students may enroll in any course of study at Clarkson University.

### Description

Clarkson University will award up to 12 merit scholarships to selected high school seniors who have been a member of a FIRST team at their high schools. Recipients of this scholarship will receive up to \$6,000 per year for four years upon enrollment at Clarkson University. The student must meet the academic requirements for admission to Clarkson University, as well as meeting requirements for scholarship retention. An eligible student will have a minimum overall high school average of 85. The recipient may be eligible for the Clarkson Leadership or Achievement Award but no additional merit scholarship awards from Clarkson University. The student should apply for need-based aid through the Free Application for Federal Student Aid.

### Submission Requirements/Deadline

To apply for the Clarkson University FIRST Scholarship, you will need the following:

- The regular application materials for admission to Clarkson University  
(Clarkson University will waive the \$30 application fee for FIRST scholarship applicants.)
- The Clarkson University FIRST Scholarship Application
- Three recommendations

(Two from high school teachers, and one from an adult leader on your FIRST team.)

- An essay relating to your FIRST experience.
- Submissions *must be received no later than March 3, 2003*. For more information or to request a Clarkson University FIRST scholarship and admission application package, please contact:

Office of Undergraduate Admission and New Student Financial Aid  
Clarkson University  
PO Box 5605  
Potsdam, NY 13699

[www.clarkson.edu](http://www.clarkson.edu)

Email: [admission@clarkson.edu](mailto:admission@clarkson.edu)

1-800-527-6577

### About Clarkson University:

Clarkson University is in Potsdam, NY, a community in Northern New York State, located between the Canadian cities of Montreal and Ottawa and the Adirondack Mountains. Clarkson is a private, 4-year university with an enrollment of approximately 3,000 students. Clarkson offers career-focused programs in Business, Engineering, Liberal Arts and Science, as well as distinctive interdisciplinary programs.

Clarkson University seeks to admit students who have the commitment it takes to excel in the classroom and extracurricular activities. Students admitted at Clarkson University rank in the top 10% of all college-bound students nationally.

Clarkson University provides an environment emphasizing a team-based learning curriculum that develops the skills in high demand by industry as illustrated by the University's 96% placement rate. Students are encouraged to participate in undergraduate research, project-based teams, cooperative education, internship programs and study abroad. Class sizes are small with a student to faculty ratio of 16:1.



**FIRST Scholarship Application**

**Personal Information**

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Telephone ( \_\_\_\_\_ ) \_\_\_\_\_ Social Security Number \_\_\_\_\_  
High School \_\_\_\_\_  
E-Mail Address \_\_\_\_\_

**Submission Requirements/Deadline**

To apply for the 2003-2004 Clarkson University FIRST Scholarship, along with this completed form, you must:

- \_\_\_\_\_ Submit 2 letters of recommendation from high school teachers.
- \_\_\_\_\_ Submit a letter of recommendation from an adult leader on your FIRST team.
- \_\_\_\_\_ Submit a 250-500-word essay on one of the following statements  
(Please attach a separate page):
  1. Describe how you have benefited from your FIRST Robotics participation.
  2. Describe a problem that your team encountered and how it was resolved.
- \_\_\_\_\_ Complete and submit a Clarkson University admission application. Clarkson University will waive the \$30 application fee for FIRST scholarship applicants.

Submissions must be received no later than March 3, 2003. Please send all submissions to:

FIRST Scholarship Committee  
Clarkson University  
Box 5605, Holcroft House  
Potsdam, NY 13699-5605

If you have questions, please contact us at:

[www.clarkson.edu](http://www.clarkson.edu) or  
Email: [admission@clarkson.edu](mailto:admission@clarkson.edu) or  
Phone: 1-800-527-6577

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## DANIEL WEBSTER COLLEGE SCHOLARSHIP

In partnership, FIRST and Daniel Webster College have established a scholarship to benefit a deserving student who has participated on a FIRST team during his or her high school years and who would like to attend Daniel Webster College. The student may enroll in any course of study at Daniel Webster College. Daniel Webster College will award a merit scholarship in the amount of \$7500 per year for four years to a student who has been a member of a FIRST team at any high school in the country. The student must meet the regular academic requirements for admission as written in the college catalogue, as well as meeting requirements for scholarship retention. This scholarship is a merit scholarship. The recipient will not be eligible for additional merit scholarship awards from Daniel Webster College, but the student may apply for need-based financial aid.

Daniel Webster College's project-oriented curriculums combine theory and application. Students who do well here have a can-do attitude, are willing to take the initiative to lead their teams in project work, and have a commitment to excel in the classroom.

To apply for the 2003 Daniel Webster College - FIRST Scholarship,

- Submit a detailed resume highlighting your leadership and technical skills and potential.
- Submit a recommendation from an adult leader on your FIRST team.
- Submit a 500-word essay on your reactions to one of the following three quotes:
  1. "Leaders lead by example. They know how to set aggressive but achievable goals. They know the difference between desirable pressure and undesirable stress. And they know how to create an environment where people work hard because they enjoy what they are doing" – Unknown
  2. "The most important thing is to keep the most important thing the most important thing." – Stephen Covey
  3. "Remember, the FIRST competition is not about building a robot, it's about building a team." - Vincent Wilczynski
- Complete a Daniel Webster College Admissions Application packet. The \$35.00 application fee has been waived.

### Submission Deadline

Submissions must be received no later than March 1, 2003. The recipient will be announced at the Championship in April 2003. Please send all submissions to:

Admissions Office  
2003 Daniel Webster College -FIRST Scholarship  
Daniel Webster College  
20 University Drive  
Nashua, NH 03063-1300

### About Daniel Webster College

Daniel Webster College awards the B.S. degree in several areas in aviation, business management, sport management, computer science, and information systems. The A.S. degree is awarded in engineering science and aeronautical engineering. The College has transfer agreements in engineering with UNH, UMASS-Lowell, Clarkson University, and Kettering University (formerly GMI).

Viewbook, course catalogue, and application materials may be obtained by contacting:

Director of Admissions, Daniel Webster College 20 University Drive, Nashua, NH 03063-1300.	College web site address: <a href="http://www.dwc.edu">www.dwc.edu</a> . Telephone: (603) 577-6600 or 800-325-6876. E-mail address: <a href="mailto:admissions@dwc.edu">admissions@dwc.edu</a> .
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## **DREXEL UNIVERSITY SCHOLARSHIPS (5)**

In partnership, Drexel University and FIRST have established five merit scholarships for high school juniors. These scholarships will benefit deserving junior students who are actively involved on a competing FIRST team during his or her junior year in high school and who would like to attend Drexel University. In order for the selected students to receive the scholarship award, they must enroll in a full time, day undergraduate program of study at Drexel University.

Drexel University will award a merit scholarship in the amount of \$8,000 per year of attendance to 5 junior students who are actively a member of a FIRST team at any high school in the country. The winners will be announced at the Championship in April 2003. Each junior student who applies for the scholarship must meet the regular academic requirements for admission as well as meeting requirements for scholarship retention. These scholarships are merit scholarships. The recipients will not be eligible for additional merit scholarships from Drexel University, but will be able to apply for need-based financial aid.

### **About Drexel**

Drexel University is a national leader in curricular innovation and co-operative education with a strong technological focus. Through the Drexel Co-op: “The Ultimate Internship,”<sup>®</sup> students alternate between periods of classroom study and paid professional employment, gaining the experience necessary to pursue graduate school or the career of their choice. At Drexel, students can earn a B.A., B.S., M.S., M.B.A., Ph.D., or M.D. in one of five colleges and three schools including Arts and Sciences; Business and Administration; Media Arts and Design; Engineering; Information Science and Technology; Biomedical Engineering, Science, and Health Systems; School of Education; and Hospitality Management. Most recently, MCP Hahnemann University has merged with Drexel University to form the Drexel University College of Medicine. In addition, Drexel now has programs in the School of Nursing and Health Professions, and School of Public Health. Thanks to Drexel’s Philadelphia location, the University offers its students all the benefits of a major metropolitan area and corporate center.

### **Requirements/Deadline**

To apply for one of the five Drexel University 2004 academic year scholarships:

- Complete a FIRST/Drexel application (including essay on FIRST involvement—500 words or less).
- Complete a Drexel University Application for Admission. The \$50.00 application fee will be waived for all eligible junior applicants.
- Submit an official or unofficial high school transcript, which should include first semester junior year grades.
- Submit SAT or ACT test scores. You may substitute PSAT scores for the SAT or ACT if you have not yet taken the SAT or ACT.

*These requirements pertain to scholarship eligibility only, not to University admission requirements.*

FIRST scholarship applications or any other Drexel University application materials may be obtained by e-mailing the Scholarship Coordinator in the Office of Undergraduate Admission ([rd22@drexel.edu](mailto:rd22@drexel.edu)). Completed applications (which includes FIRST application/essay, Drexel University Application for Admission, Transcript, and SAT/ACT/PSAT scores) must be received no later than March 1, 2003. We request that you return the ABOVE REQUIRED MATERIALS all together. If this is not possible, please address individual submissions to:

Drexel University  
Office of Undergraduate Admission  
Attn: Robert Forest  
3141 Chestnut Street, Philadelphia, PA 19104

Phone: 1.800.2.Drexel, 215.895.6722  
Fax: 215.895.5939  
E-mail: [rd22@drexel.edu](mailto:rd22@drexel.edu)  
Website: [www.drexel.edu](http://www.drexel.edu)



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## FIRST Robotics Scholarship Application

### Personal Information

Name \_\_\_\_\_ Team Number \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone ( \_\_\_\_ ) \_\_\_\_\_ Social Security Number \_\_\_\_\_

High School \_\_\_\_\_

E-Mail \_\_\_\_\_

Intended Major \_\_\_\_\_

***Please attach a resume and an essay, 500 words or less, highlighting your FIRST involvement, co-curricular activities, and any academic honors.***

In addition to this form, scholarship applicants must also submit a complete application for Undergraduate Admissions including official or unofficial high school transcripts, two letters of recommendation, and results of all SAT/ACT scores by March 1, 2003. Students may submit PSAT scores for the SAT/ACT if you have not taken them yet. Scholarship winners will be notified by April 1, 2003.

Please direct all questions and scholarship materials to:

Undergraduate Admissions  
Drexel University  
3141 Chestnut Street  
Philadelphia, PA 19104  
ATTN: Robert Forest

Phone: 215.895.6722

800.2DREXEL

Fax: 215.895.5939

E-mail: [rdf22@drexel.edu](mailto:rdf22@drexel.edu)

Website: [www.drexel.edu](http://www.drexel.edu)

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## **DURHAM COLLEGE SCHOLARSHIP**

### **Description**

In partnership with FIRST, Durham College and the University of Ontario Institute of Technology is pleased to award one \$5000 (Canadian funds) non-renewable entrance scholarship for September 2003. The scholarship is to recognize and reward students whose experience with FIRST has inspired an interest in pursuing a career in the technological sector.

### **Eligibility**

The award is available to students in their final year of high school, who have been active on a FIRST team in that final year, and are applying to a technology program at Durham College and the University of Ontario Institute of Technology.

### **Application**

The candidate must meet the regular academic requirements for admission to Durham College and the University of Ontario Institute of Technology, and the successful candidate will be selected based on the merit of his/her application. Interested students must submit a letter detailing their involvement in the FIRST program along with a reference letter from an adult mentor or teacher involved in the student's FIRST team.

Send scholarship applications to the following address:

Ambrose Samulski  
Dean, Schools of Applied Sciences and Technology  
Durham College and the University of Ontario Institute of Technology  
PO Box 385  
2000 Simcoe St. N.  
Oshawa, Ontario  
L1H 7L7  
Canada

### **Deadline**

All Scholarship applications must be received by 1 March 2003.

### **About Durham College**

Durham College and the University of Ontario Institute of Technology is located in North Oshawa, 1 hour east of Toronto. Graduates have an 89.2 per cent employment rate and Durham College is the first Ontario college to guarantee their graduates' skills to employers. The University of Ontario Institute of Technology (UOIT) -- Canada's newest university -- is being built at the Oshawa campus. UOIT will open in September 2003, offering an exciting range of market-driven degree programs.

For most of the past decade, Durham College has also been the fastest-growing college in Ontario. This distinction is due to a number of factors, including our dedication to providing the top-drawer education that students and employers demand.

For more information please refer to: [www.durhamc.on.ca](http://www.durhamc.on.ca)

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## **FLORIDA INSTITUTE OF TECHNOLOGY SCHOLARSHIPS (15)**

In concordance with and in support of the FIRST mission, Florida Tech encourages students to pursue their education in the fields of engineering and science. The University is proud to offer up to fifteen Florida Tech FIRST Trustee Scholarships, each having a 4-year value of \$40,000(\$10,000 per year).

### **Requirements/Deadline**

High school seniors who are actively involved in a competing FIRST team during their senior year of high school and who have been admitted to Florida Institute of Technology on or before March 1, 2003 will be automatically considered for these awards. Recipients may enroll in any course of study at the university.

An experiential essay is required with the application for admission. It is strongly recommended that applicants for the Florida Tech FIRST Trustee Scholarship use this essay to describe their involvement in the FIRST competition, how that experience has enhanced their education, and the influence the competition has had on their life and career choice.

A minimum of one letter of recommendation, from an adult leader on the applicant's FIRST team, is required; additional letters are expected so the applicant will receive full scholarship consideration.

Contact the Office of Admission for application materials and information at 1-800-888-4348 or at [admissions@fit.edu](mailto:admissions@fit.edu). Apply on line and learn more about admission and financial aid at <http://www.fit.edu/ProsStud/undergrad/>. Learn more about Florida Tech at [www.fit.edu](http://www.fit.edu).

### **Why Florida Tech?**

Since 1958, Florida Institute of Technology was originally founded to provide continuing education to scientists, engineers, and technicians at what is now NASA's Kennedy Space Center. Today, the university maintains those close ties, and offers more than fifty degree programs in science, engineering, aviation, business, humanities, psychology, communication, and education. With world-class facilities, a 12:1 student to faculty ratio, and an average class size of 25, Florida Tech will provide you with an experience like no other.

### **University Quick Facts**

Florida Tech has an undergraduate student body of 2,000, a 20% international population from ninety countries, has a thirty percent women population and a five percent minority student population.

Florida Tech participates in the FIRST Robotics competition as part of the Brevard FIRST Team, Team Voltage. Florida Tech offers forty-four undergraduate majors in science and engineering fields. There are noted degree program offerings, such as one of the top ten Marine Biology and Ocean Engineering programs in the nation. Florida Tech has the third largest Aviation school in the U.S. We also offer specialized degree programs found in very few universities, such as Software Engineering, Astrophysics, Genetic Engineering, Aquaculture, Aerospace Engineering and more!

Ninety-eight percent of Florida Tech students are working in their major or are in graduate school within, six months of graduation. Sixty percent of working grads have a starting salary of more than \$40,000 per year.

The beautiful campus is located on Florida's Space Coast—the "high tech" capital of the state. The campus is minutes from wonderful, clean, and uncrowded beaches that offer every water sport available. The average annual temperature is seventy degrees and the campus is only an hour's drive from the Kennedy Space Center (NASA) and Disney attractions.

Florida Tech has an active student life with over ninety-five different clubs and organizations affording you the opportunity to build friendships that will last a lifetime.

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## GRAND VALLEY STATE UNIVERSITY ENGINEERING SCHOLARSHIP

### About the Padnos School of Engineering Scholarship

The Padnos School of Engineering at Grand Valley State University has established a merit based engineering scholarship to recognize the achievements of FIRST Robotics Competition participants. This renewable scholarship will provide a \$16,000 award, \$4000 per year, renewable for three additional years, for study in the Padnos School of Engineering at Grand Valley.

### About Grand Valley State University

Grand Valley State University is a comprehensive public university of approximately 21,000 students serving West Michigan. With three campuses in Allendale, Grand Rapids and Holland, Michigan, GVSU is located in an area with a strong manufacturing flavor. All students in the Padnos School of Engineering participate in an integrated cooperative education program. GVSU offers an ABET accredited Bachelor of Science in Engineering with mechanical, electrical, manufacturing, computer and interdisciplinary emphases.

### Scholarship Criteria

To be eligible, a student must:

- 1) Apply for admission to Grand Valley State University prior to February 1,
- 2) Have participated in the FIRST Robotics Competition,
- 3) Have a cumulative GPA of 3.3 or better in high school,
- 4) An ACT composite of at least 26 and
- 5) At least 6 units of high school math and science.

The Engineering Scholarship Committee will select a recipient from those students who meet the above qualifications and who have been admitted to the University. Awards will be announced by the end of March. The scholarship is renewable on an annual basis providing the recipient maintains the following level of scholarship:

- 1) Is enrolled in engineering and carry a minimum of 15 credits each semester,
- 2) Maintains a minimum 3.00 GPA, and
- 3) Successfully complete the engineering requirements for each academic year.

The Engineering Scholarship Committee monitors each recipient's progress and notifies the Financial Aid Office of award renewal.

### Application Deadline

March 31, 2003

### Contact Information

If you would like to apply for a FIRST Engineering Scholarship, please complete the application on the reverse side and return it to:

Grand Valley State University  
Seymour & Esther Padnos School of Engineering  
Engineering Scholarship Committee  
301 W. Fulton, Suite 718  
Grand Rapids, Michigan 49504

Phone (616) 331-6750

Fax (616) 331-7215

Web: <http://engineer.gvsu.edu/>

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## Application for GSVU FIRST Engineering Scholarship

### Instructions

Please complete the information below. The Engineering Scholarship Committee will use this along with other information in making its decision. Please return this form prior to February 1.

1. Name \_\_\_\_\_ Social Security # \_\_\_\_\_

2. Address \_\_\_\_\_  
Street Address

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

3. Email Address \_\_\_\_\_

4. Present High School \_\_\_\_\_

5. Date of expected high school graduation \_\_\_\_\_

6. List all mathematics and science classes taken in high school (grades 9 – 12).

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

7. List your extra-curricular activities and how you participated in them.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

8. Attach to your application, or have sent separately, a letter of recommendation from one of the sponsors of the FIRST Robotics team on which you worked. This letter should address your level of participation and your likelihood to succeed in an engineering career.

9. **ESSAY:** Please attach a typed essay written about yourself and your interest in engineering. Also, discuss your participation in the FIRST Robotics competition, including the name and location of your team and the name of your sponsoring organization. Help the Engineering Scholarship Committee understand your uniqueness and see you as a person, as a student, and as a future member of the engineering profession. To accomplish this, it would be best if you wrote in the first person. Remember that the Committee will read many essays, and you must make them understand why you should receive a scholarship. Your essay will weigh heavily in their decision. By signing this application, you have testified that the essay is your work alone.

Signature \_\_\_\_\_ Date \_\_\_\_\_



GRAND VALLEY  
STATE UNIVERSITY

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## HAMPSHIRE COLLEGE INNOVATOR'S SCHOLARSHIP

Hampshire College will award one \$5,000 per year renewable merit scholarship (valued at \$20,000) to a FIRST team member who enrolls at Hampshire College. The scholarship winner may also apply for need-based financial aid from Hampshire.

This scholarship is based on the notion that true innovation involves interdisciplinary thinking and collaborative teamwork. It also promotes the belief that creativity, discovery, and invention can and should be directed to improve human living conditions. It espouses the ideals of sustainable development and positive social values.

### Application Criteria

To compete for this scholarship, students must:

- Be an active junior or senior year FIRST team member at any secondary school;
- Submit a Hampshire College Innovator's Scholarship Application by March 1, 2003.

To receive the scholarship, the winner must:

- Apply for admission to Hampshire College before February 1<sup>st</sup> of the year in which he or she plans to enroll
- Be admitted to and attend Hampshire College
- Maintain satisfactory academic progress

### Application Deadline

March 1, 2003

### Contact Information:

Director of Admissions

Hampshire College

Amherst, MA 01002

413 559-4571 or 877 937-4267 (toll free)

[admissions@hampshire.edu](mailto:admissions@hampshire.edu)

[www.hampshire.edu](http://www.hampshire.edu)

### About Hampshire

Hampshire College, a four-year private liberal arts college located in Amherst, Massachusetts, attracts students who take substantial responsibility for directing their education. Working closely with faculty, students design individualized programs of study comprising courses, independent projects, and internships or field study, culminating in a significant creative, scientific, or academic project.

Hampshire's motto, *To Know is Not Enough* reflects its commitment to rigorous education that goes beyond the classroom and puts learning to good use in the world. Hampshire's national reputation for excellence rests in its distinctive, contract-based academic system, where each student's progress is measured through narrative evaluations by faculty instead of grades.

Hampshire supports student research and innovation through its Lemelson Assistive Technology Development Center, machine shop prototyping facility, courses in applied design and invention, extensive digital media design equipment and programs, aquaculture facility, environmental studies and sustainability program, and some of the very best chemistry instrumentation available at any liberal arts college in the United States.

Hampshire makes more than 10 million dollars in financial aid available annually to its student body of 1,200.

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## HAMPSHIRE COLLEGE INNOVATOR'S SCHOLARSHIP APPLICATION

Name \_\_\_\_\_  
Last First Middle

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip Code \_\_\_\_\_

Telephone \_\_\_\_\_  
Area code Number

Email address \_\_\_\_\_

School attended \_\_\_\_\_

Year you will graduate \_\_\_\_\_

Academic interests \_\_\_\_\_

Please submit the following:

- High School Transcript (Your school counselor must mail us an official copy.)
- One to two page essay that addresses *each* of the following three questions:
  - 1) Describe the role of collaboration in your FIRST team's robot design and development. What was the best part of working as a team? What was challenging about working as a team? How did your different team members contribute their unique knowledge?
  - 2) If you could rebuild your team's robot so that it helps someone with a disability, what would it look like? What would it do? How would it help someone? Feel free to attach sketches, drawings, or computer-aided renderings of your ideas.
  - 3) If you were developing a team to create the robot described above in question two, what various areas of knowledge would you want your team members to have, and why?

**Submit all materials to:**

Innovator's Scholarship Committee  
Admissions Office  
Hampshire College  
Amherst, MA 01002



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## **ILLINOIS INSTITUTE OF TECHNOLOGY/FIRST SCHOLARSHIPS**

In partnership, Illinois Institute of Technology and FIRST have established a merit-based scholarship program for current high school seniors who have actively been involved on a competing FIRST team and who would like to attend IIT. In order for the selected students to receive these scholarship awards, they must enroll as a full-time student in an undergraduate program of study at IIT. Illinois Institute of Technology currently offers undergraduate programs in engineering, architecture, sciences, humanities, political science, and psychology along with honors programs in medicine, research, and law.

### **Scholarship Description**

IIT will award annual merit-based scholarships, each with a value of up to \$12,000 per year for four years of study to current high school seniors from any high school in the country. Winners will be notified of the scholarships upon their admission to the university. Each student who applies for a scholarship must meet the regular academic requirements for admission as well as meet requirements for scholarship retention. As these scholarships are merit-based, recipients will not be eligible for additional merit scholarships from IIT, but will be able to apply for need-based financial aid.

### **Submission Requirements**

Complete and submit the following:

- Letter of Nomination from FIRST adult team leader
- IIT Application for Undergraduate Admission
- Essay (limit to 500 words)
- One teacher/counselor recommendation
- Official high school transcripts
- SAT and/or ACT test scores (the ACT code for IIT is 1040; the SAT code for IIT is 1318)

### **Submission Contact Information**

Application materials may be obtained from the Office of Admission by calling 312.567.3025 or 800.448.2329 (outside Chicago) or by emailing [admission@iit.edu](mailto:admission@iit.edu). You may also access the IIT Application for Undergraduate Admission online at <http://www.iit.edu/~apply>.

The Office of Admission must receive all application materials no later than March 1, 2003.

Office of Admission  
Illinois Institute of Technology  
10 W. 33rd Street  
Perlstein Hall, Room 101  
Chicago, IL 60616

### **About Illinois Institute of Technology**

IIT is a private, Ph.D.-granting technological university located in Chicago – one of the largest, most vibrant and culturally diverse cities in the world. IIT has structured its academic program to immerse you into the expanding world of technology, solving problems from the very beginning of your college career and providing you the advantages of an intensive, graduate-style education at the undergraduate level. To learn more about IIT, please visit our website at <http://www.iit.edu>

# **THE 2003 FIRST ROBOTICS COMPETITION MANUAL**

## **KETTERING UNIVERSITY SCHOLARSHIPS (6)**

In partnership with FIRST, Kettering University (formerly GMI) is awarding up to six, merit-based scholarships, each having a 4-year value of \$20,000.

### **Requirements/Deadline**

Scholarship applicants must be high school seniors who are actively involved on a competing FIRST team during their senior year of high school, and who would like to attend Kettering University.

Recipients may enroll in any course of study at the university.

Two letters of recommendations are required; at least one must be from an adult leader on the applicant's FIRST team. An essay must also be included which describes the applicant's involvement in the FIRST program and what the experience meant.

Students must meet the regular admission criteria for the university and must be admitted to the university by March 7, 2003 to be considered for the scholarship. Applications for admission are available through the Office of Admissions.

The FIRST scholarship application deadline is March 7, 2003. Interested students must submit a letter of scholarship application detailing their involvement in the FIRST program (this is a very important part of the selection process) with their two letters of recommendation to the Financial Aid Office, Kettering University, 1700 W. Third Ave., Flint, MI 48504 by this date.

The winners will be announced at the FIRST Championship at Orlando, Florida in April 2003.

### **Contact Information**

Contact Office of Admissions and/or the Financial Aid office at 1-800-955-4464 or by mail at: 1700 W. Third Avenue, Flint, MI 48504.

### **About Kettering University**

(Formerly GMI Engineering & Management Institute)

Founded: In 1919 by General Motors, independent since 1982. Became Kettering University in 1998.

Student Population: 2,400 Undergraduate students, 20% women, 12% minorities, 46 states and 15 countries represented.

Faculty: More than 130 full-time faculty members, 80% with terminal degrees and the majority with significant business/industrial experience.

Academic Programs:

Majors: Leading to Bachelor of Science degrees, offered in Computer, Electrical, Industrial, Manufacturing and Mechanical Engineering; Management; Applied Math; Applied Physics; Environmental Chemistry; and Computer Science.

Minors: Offered in Acoustics, Applied Chemistry, Applied and Computational Mathematics, Applied Optics, Applied Statistics, Computer Engineering, Computer Science, Electrical Engineering, Environmental Chemistry, International Studies, Liberal Arts Studies, Management, Material Science and Physics.

Academic/Co-op Calendar: Students alternate twelve-week terms of on-campus classroom study with on-the-job work at a co-op employer. Four twelve-week terms comprise one academic year.

### **Kettering: Learning and Job Experience**

FIRST and Kettering University constitute a great team! The very important hands-on engineering and technical experiences learned while competing in FIRST are skills that you can build on as an undergraduate student at Kettering University. Kettering students work side by side with engineers and technical experts developing work skills and earning substantial wages to cover a significant part of their educational expenses.

Kettering University is America's premiere cooperative education university. Many of the very companies sponsoring FIRST teams, such as Johnson & Johnson, Delphi Automotive and General

## THE 2003 FIRST ROBOTICS COMPETITION MANUAL

Motors, also employ our co-op students for the full five-year program. At graduation, Kettering University students have up to 2 ½ years of corporate experience and a significant start on their careers.

What do most employers demand from applicants? Related experience. Our students gain experience while earning their Bachelor of Science degree! As a student participant in FIRST, you will have an advantage over other Kettering University applicants because of your experiences in FIRST and the association with your sponsor. So....apply now to Kettering University and get your career off to a great start.

A quote from Rebecca Linhorst of Bridgewater, MA, 1998 FIRST participant with Johnson & Johnson and now a co-op student at Kettering University employed at Johnson & Johnson, Southington, CT.

*“FIRST is exactly the reason I decided to become an engineer and why I should be considered for this scholarship. I went to Johnson & Johnson many nights, working hand in hand with engineers to build a fully functional robot that would be ready to compete in six weeks. By doing this I developed an almost feverish desire to become an engineer!”*

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## LAWRENCE TECHNOLOGICAL UNIVERSITY / FIRST SCHOLARSHIP

Lawrence Technological University and FIRST (For Inspiration and Recognition of Science and Technology, now offer a scholarship intended to introduce students to the many rewards that science and technology offer. This scholarship is one tangible example of a benefit that can be gained through a student's participation and effort in the FIRST program. More importantly, it highlights a key role academic institutions can play in continuing the demand for excellence in science and technology created through the student, teacher, academic institution, and corporation partnership.

### Scholarship Description/Requirements

LTU will award a \$12,000, four-year undergraduate scholarship (valued at \$48,000) to a FIRST team student participant. This year, each team participating in the 2003 FIRST Robotics Competition may nominate **one** of its student members for the LTU FIRST Scholarship. The candidate must be in her/his junior or senior year of high school and be an active FIRST team member. An adult team leader will submit a letter of nomination to accompany the candidate's LTU Admissions Application form. Students nominated by their teams must be capable of meeting normal LTU admissions requirements, have demonstrated enthusiasm for engineering and science, and possess the ability and innovation necessary to excel as an engineer or scientist. The winning student must maintain satisfactory academic progress at LTU to maintain the award.

### Submission Information Criteria

Complete and submit the following materials to the Admissions office at LTU:

- Letter of Nomination from adult team leader
- Application materials for admission to LTU
- A presentation\* produced by the applicant that describes one or more of the **Design Innovations** in his/her team's robot as well as one or more of the following issues:
  1. The importance of teamwork in developing the team's robot
  2. How the team demonstrates sportsmanship
  3. How the team builds spirit

(\*Optional format, e.g., videotape, electronic presentation, paper, etc.--no greater than two pages or five minutes in length)

### Submission Deadline

All nominations with completed applications must be received by LTU admissions by March 3, 2003. They will be reviewed by the Scholarship Committee at LTU in time for the scholarship winner to be announced at the Championship Event in Orlando in early/mid April.

### Address/Contact Information

Nominated students interested in this scholarship should write to LTU for admissions material and an LTU scholarship application for the **LTU FIRST Scholarship**.

Lawrence Technological University  
Admissions Office  
21000 West Ten Mile Road  
Southfield, MI 48075-1058  
Attn: Scholarship Committee

Ph: 248-204-3160

e-mail: [admissions@ltu.edu](mailto:admissions@ltu.edu)

Web site: <http://www.ltu.edu>

# THE 2003 FIRST ROBOTICS COMPETITION MANUAL

## About LTU

With an enrollment of nearly 5,000 students, Lawrence Technological University is among Michigan's largest independent universities. The University offers more than 40 academic programs at the associate, baccalaureate, and graduate degree levels through Colleges of Architecture and Design, Arts and Sciences, Engineering, and Management. The University's full service 115-acre campus in Southfield offers a complete range of modern academic, residential, and recreational facilities along with plenty of free parking. Lawrence Tech was founded in 1932.

### **Fast Facts:**

- ◆ Qualified professionals lead classes at Lawrence Tech, not teaching assistants.
- ◆ Lawrence Tech is one of the nation's first universities to serve the special needs of adult learners.
- ◆ Within a year of graduation some 97 percent of Lawrence Tech students find positions that match their academic preparation.
- ◆ Lawrence Tech ranks in the top third of universities nationwide that graduate the leaders of America's most successful companies. - *Standard & Poor's*
- ◆ Lawrence Tech is number one in its class as a provider of the most sought after employees in Southeast Michigan.
- ◆ Lawrence Tech graduates on average earn more than those from other schools. - ACT

## MICHIGAN TECHNOLOGICAL UNIVERSITY SCHOLARSHIP

### Scholarship Description

Michigan Technological University, in partnership with FIRST, will award one \$5000 merit-based scholarship, renewable for up to four years, for an undergraduate degree in any engineering discipline. This scholarship is available to any eligible high school senior who is actively involved on a competing FIRST team during their senior year of high school and who plans to attend Michigan Technological University to pursue an undergraduate degree in engineering. The recipient must meet the regular academic requirements for admission to the College of Engineering and have a cumulative high school G.P.A. of at least 3.25. The scholarship will renew automatically each year of his or her undergraduate degree (for a maximum of four years) contingent upon maintaining a cumulative 3.00 GPA and continued availability of scholarship funds.

### Submission Contact Information

To request an MTU FIRST scholarship application form, please contact Mary Raber, Industry Project Coordinator at [mraber@mtu.edu](mailto:mraber@mtu.edu). Applications for admission are available through the Office of Admissions. Submit scholarship applications to the following:

Mary Raber  
Industry Project Coordinator  
College of Engineering  
Michigan Technological University  
1400 Townsend Drive  
Houghton, MI 49931  
Attn: MTU FIRST Scholarship

### Submission Requirements

Interested students must submit a scholarship application form, a written essay detailing their involvement in the FIRST program and two letters of recommendation, at least one of which must be from an adult leader on the applicant's FIRST team.

### Admission and Application Submission Deadlines

Students must meet the regular admission criteria for the university and must be admitted to the university by March 3, 2003 to be considered for the scholarship. The MTU FIRST scholarship application deadline is also March 3, 2003. The scholarship recipient will be announced at the 2003 Championship Event

### About Michigan Tech University

Michigan Tech was founded in 1885 in the aftermath of the first mining boom in the US – the clamor for Michigan's copper preceding the California Gold Rush by several years. At its outset, the college trained mining and metallurgical engineers. Today, the University offers associate, bachelor, master or doctoral degrees in the sciences, engineering, forestry, business, communication, and technology.

Michigan Tech offers undergraduates an education that emphasizes study across disciplines, team learning, and research: our graduate students receive intensive, advanced instruction and the opportunity to pursue research in a wide range of academic programs. Overall, our institution has gained worldwide attention for innovative education, our faculty strives to be mentors, our academic programs stress learning hand-in-hand with application, and our students learn to inquire and discover knowledge.

The College of Engineering at Michigan Tech has become a national leader in innovative programs. Among the new standards we strive for in the College of Engineering is education across disciplines, team learning and undergraduate research. One of our major efforts is to promote a learning atmosphere where faculty members serve as mentors and coaches; that is, they move from simply imparting knowledge to helping students discover knowledge. Envision engineering programs that include concepts such as sustainability, ethics, safety, business processes, innovation, creativity and communication - programs where inquiry and innovation are the norm, where learning and application go hand-in-hand, and where students and faculty work in a team environment on problems of significance to industry.

# **MichiganTech Engineering**

## **Michigan Technological University FIRST Scholarship Application**

2003-2004

**ELIGIBILITY:** High school senior level students who are planning to pursue an undergraduate degree in engineering at MTU and are currently actively participating on a FIRST team are eligible to apply. A minimum overall grade point average of 3.25 in high school classes for incoming freshmen is required. There are no restrictions as to engineering major. Recipients must be enrolled as regular, full-time undergraduate students at MTU in their first four years of college. Financial need will be taken into consideration, but is not a requirement.

**VALUE:** One scholarship, valued at \$5000.00, will be awarded for the 2003-2004 academic year. The scholarship is renewable for each year of undergraduate study (up to four years total) contingent upon maintaining a cumulative GPA of 3.00.

**APPLICATION PROCEDURE:** Please complete the information below and return this form to the following address no later than March 3, 2003:

Industry Project Coordinator  
College of Engineering  
Michigan Technological University  
1400 Townsend Drive  
Houghton, MI 49931

**Name:** \_\_\_\_\_ **MTU ID or SS#:** \_\_\_\_\_

**Home address:** \_\_\_\_\_

**Campus Address (if different):** \_\_\_\_\_

**Cumulative Grade Point Average:** \_\_\_\_\_ **in your high school courses**

**Major:** \_\_\_\_\_

**Expected date of graduation from MTU:** \_\_\_\_\_

**Extracurricular, service and leadership activities (e.g., teams, clubs, including offices held):**

\_\_\_\_\_  
\_\_\_\_\_

**Honors/Awards received:** \_\_\_\_\_

\_\_\_\_\_

Please attach two letters of recommendation, one of which must be from an adult leader on the applicant's FIRST team. Also attach an essay describing the applicant's involvement in the FIRST program and what the experience meant.

The Scholarship recipient will be announced at the 2003 FIRST Championship Event.

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## **WILLIAM P. MURPHY – VISION SCHOLARSHIP**

In partnership with FIRST, Small Parts, Inc. is privileged to establish a four-year scholarship benefiting a deserving high school senior wishing to pursue a career in science and/or technology. This scholarship will be presented annually to the graduating student most clearly possessing a vision of how he or she, as an individual, hopes to impact society through the pursuit of science and/or technology. Our hope is to challenge students to consider the personal responsibility that accompanies the privilege of education.

Small Parts, Inc. will award a \$6000.00 merit scholarship. The scholarship will be \$1500.00 each year, and will be renewable for three consecutive years while enrolled in an accredited educational institution pursuing a degree in science and/or technology. Application and renewal requires a minimum 3.5 GPA.

### **Submission Requirements**

1. Letter of recommendation from one or more high school teacher/administrator.
2. Letter of recommendation from one or more engineer/advisor of your FIRST Team.
3. Your resume with GPA and high school transcript.
4. A completed scholarship application.
5. An essay explaining how you as an individual hope to impact our world through your studies in the field of science and/or technology. What dreams and aspirations do you have about making a positive difference in the society in which you are a part? How do you hope to impact our world by the career you pursue?

### **Contact / Application Information**

Scholarship applications may be requested on-line at [www.smallparts.com](http://www.smallparts.com) or from:

Mr. James Edgar  
At  
Small Parts, Inc.  
William P. Murphy- Vision Scholarship  
13980 N.W. 58<sup>th</sup> Court  
Miami Lakes, FL 33014-0650  
Ph: (305) 558-1038

### **Scholarship Application Deadline**

Completed scholarship applications must be received by Small Parts, Inc. via U.S. Mail at the above address, by March 1, 2003. The recipient will be announced at the FIRST Championship in April 2003.

## **NORTHEASTERN UNIVERSITY SCHOLARSHIP**

The mission of FIRST is to expose and attract new students to the fields of engineering and science--a necessity of critical, national importance. This mission is significantly aligned with that of Northeastern University (NU) in Boston. The NU College of Engineering is proud to be a participant in FIRST and to offer a full-tuition, fully renewable scholarship to a high school senior who has participated in a FIRST team.

### **Scholarship Description**

Northeastern University's College of Engineering will award a full-tuition, merit-based scholarship for an undergraduate degree in any engineering discipline. This scholarship is available to any eligible high school senior who has participated in the FIRST program on any team. The recipient must meet the regular academic requirements for admission to the College of Engineering and scholarship retention as described in the university catalogue.

The scholarship recipient will be announced at the Championship and will renew automatically each year of her or his undergraduate degree (for a maximum of five years), contingent upon maintaining good academic standing. Postcards to request a scholarship application package will be available at the regional and Championship competitions or can be obtained by contacting the College of Engineering at Northeastern University directly (see below).

### **Submission Requirements**

To apply for the Northeastern University FIRST Scholarship, request the application package (see below). It will include:

- The regular application materials for admission to Northeastern University's College of Engineering. The application fee will be waived.
- The NU FIRST Scholarship Application

### **Scholarship Application Deadline:**

Completed NUFIRST scholarship and admission applications must be received at the address below by February 14, 2003. However, to be eligible for the many other merit-based scholarships that Northeastern University offers, your complete admission application package must be received by January 1, 2003. To request a NUFIRST scholarship and admission application package, please contact:

David S. Navick, attn: NUFIRST Scholarship    E-mail: [dnavick@coe.neu.edu](mailto:dnavick@coe.neu.edu)  
Assistant Dean for Engineering Enrollment  
230 Snell Engineering Center  
Northeastern University  
360 Huntington Avenue  
Boston MA 02115-5000

### **About Northeastern University**

Located in the center of Boston's thriving educational and cultural community, students study with nationally recognized faculty in state-of-the-art facilities and have easy access to many recreational activities in the city and surrounding New England countryside. The College of Engineering is well known for the teaching and research of its faculty in the following departments and academic programs:

- Mechanical, Industrial, & Manufacturing
- Electrical & Computer Engineering
- Civil & Environmental Engineering
- Chemical Engineering
- School of Engineering Technology.

Outside the classroom, students benefit from a nationally recognized cooperative education program, a strong academic honors program, and numerous professional societies and student groups. As one of the oldest and largest co-op-based universities, students consistently report that they relate their course-work better to real-world applications, return to their studies with greater commitment, and often receive permanent job offers from former co-op employers. All engineering students also have the option to obtain a minor in business, mathematics, computer information systems, music, etc.

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## **OLIN COLLEGE OF ENGINEERING**

### **Description**

Olin College offers full tuition scholarships to all admitted students, and will do so in perpetuity. Members of the incoming class of 2003 also receive room scholarships, bringing the total value of Olin's scholarship to over \$140,000. In their admission process, Olin College recognizes and values the commitment of candidates who have participated in FIRST.

### **Submission Requirements**

Applicants to Olin College must apply online (<https://apply.olin.edu/>) by **January 10, 2003**. See our web site ([www.olin.edu](http://www.olin.edu)) for details of the admission process.

### **Criteria for Admission**

Typically, strong candidates for admission have

- Pursued honors and Advanced Placement classes throughout high school
- At least a 3.5 GPA or higher
- Earned standardized test scores in the top 5%
- Have developed a non-academic passion, such as dance, athletics, community service, restoring old cars, theatre, singing, musical talents of all kinds, as examples
- Have an entrepreneurial spirit
- Solving problems, working with other people skills
- Demonstrated leadership skills

### **About Olin College of Engineering**

Funded by the F.W. Olin Foundation in New York City, Olin College officially opened in fall 2002 with a mission to prepare technological leaders. The campus is state-of-the-art facilities located in Needham, Massachusetts, twelve miles west of Boston. Olin College's curriculum integrates rigorous math, science and engineering, broad liberal arts with business and entrepreneurship. Our campus is located next to Babson College, one of the top business schools. Each graduate will receive a Bachelor of Science in Mechanical Engineering, Electrical and Computer Engineering, or General Engineering.

## **POLYTECHNIC UNIVERSITY FIRST SCHOLARSHIPS (5)**

Polytechnic University embraces the mission of FIRST, which exposes and attracts new students to the technology-focused fields of engineering and science--a necessity of critical national importance. Polytechnic University is also committed to this goal and applauds FIRST for their actions. Polytechnic University, therefore, is proud to be a participant in FIRST and to offer 5 partial-tuition, fully renewable scholarships in the amount of \$10,000 per year to 5 high school juniors/seniors who have participated on a FIRST team.

### **Scholarship Program Description**

Polytechnic University Office of Admissions will award five (5) partial-tuition, merit-based scholarships, each in the amount of \$10,000 toward an undergraduate degree in any of our undergraduate disciplines. This scholarship is available to any eligible high school junior/senior who has participated in the FIRST program on any team. The recipient must meet the regular academic requirements for undergraduate admission and scholarship to the University as described in the university catalogue.

The scholarship recipient will be announced at the Championship and will renew automatically each year of her or his undergraduate degree (for a maximum of four years), contingent upon maintaining good academic standing.

### **Application Package / Contact Information**

To request a scholarship application package, please contact the Polytechnic University's Office of Admissions at 1-800-POLYTECH, inquiry@poly.edu, or by writing to the scholarship submission address below.

Stacey Walters  
Director of Undergraduate Admissions  
Polytechnic University  
6 MetroTech Center  
Brooklyn, NY 11201

### **Scholarship Program Requirements**

To apply for the Polytechnic University FIRST Scholarship, request the application package and submit the following materials to the Office of Admissions at Polytechnic University:

- The regular application materials for admission to Polytechnic University.
- The Polytechnic FIRST Scholarship Application; and
- A letter of recommendation, completed by an adult leader on your FIRST team.

### **Scholarship Application Deadline:**

Completed Polytechnic/FIRST scholarship and admission applications must be received at the address below by March 3, 2003.

# Polytechnic

## University

Brooklyn Long Island Westchester

**FALL 2003**

### *FIRST Scholarship*

*(For Inspiration and Recognition of Science and Technology)*

**Note:** In order to qualify scholarship, applicants must also submit a completed application for admission to Polytechnic University **by 3/03/03**. Please call 1-800-POLYTECH today, to request your application for admissions.

Ms./ Mr. \_\_\_\_\_  
Last First Middle

Home Address: \_\_\_\_\_  
Number Street Apt.

\_\_\_\_\_ City State Zip

Phone ( ) \_\_\_\_\_ e-mail: \_\_\_\_\_  
Area Code Number

Social Security Number: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

FIRST Team # : \_\_\_\_\_

Prospective Major: \_\_\_\_\_

High School: \_\_\_\_\_ Expected date of graduation: \_\_\_\_\_

Name of Guidance Counselor or College Counselor: \_\_\_\_\_

(Please Print)

Phone ( ) \_\_\_\_\_ e-mail: \_\_\_\_\_

*I certify that the information supplied on this scholarship application is complete and accurate to the best of my knowledge.*

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

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# **THE 2003 FIRST ROBOTICS COMPETITION MANUAL**

## **PURDUE UNIVERSITY / DELPHI CORPORATION SCHOLARSHIP**

### **About the Scholarship**

The Purdue University Schools of Engineering, with the generous assistance of Delphi Corporation, are pleased to announce a \$30,000 scholarship payable over 4 years to offset the costs of obtaining a Purdue baccalaureate degree in engineering. This scholarship will be awarded to a senior in high school who has participated at least one full season in high school with a FIRST robotics team. Consideration for the scholarship will be initiated by interested students completing the scholarship application form available from Purdue's Department of Freshman Engineering. Only students who are admitted to Purdue Schools of Engineering will be considered. Selection will be determined by a committee of faculty and staff appointed by the Dean of Engineering or designee.

Criteria that will weigh heavily in the selection of the Purdue University FIRST Scholar are as follows:

- Proven high school academic ability overall and in math and science in particular.
- Continuity and breadth of math and science preparation, AP courses are desirable.
- Quality performance on standardized college entrance exams (SAT and ACT).
- Active participation in extracurricular activities, in particular exemplary leadership is valued.
- Statement of interest in the field of engineering and value of the FIRST experience.
- Two references from adult leaders (one from FIRST team adviser or practicing engineer and one from a teacher).

In addition to the scholarship, the student receiving this award may be offered a summer internship or Co-Op experience with Delphi Corporation in an engineering area of interest.

Payment of the award is contingent upon the selected student's successful matriculation into the engineering program at Purdue University, which must be initiated by application to the University (available online or from Purdue's Office of Admissions) and acceptance into the engineering program, which will be indicated by a letter from the University. Continuation of the award is contingent on the student remaining in good academic standing with a GPA of at least 3.0 on a 4.0 scale and continuing undergraduate study in an engineering discipline within Purdue's Schools of Engineering.

### **Application Process / Deadlines / Contact Information**

Deadline for applications, including all letters of reference and personal statement, is February 1, 2003. The award decision will be made by March 1, 2003. Although the prospective recipient will be notified in March, the selected student will be recognized at the FIRST Championship in April.

*Be sure to mention FIRST* when requesting a Purdue University FIRST Scholarship application packet.

Contact:

Dr. John Gaunt  
Associate Head, Freshman Engineering  
Schools of Engineering  
Purdue University  
Engineering Administration Building, Room 212  
400 Centennial Mall Drive  
West Lafayette, IN 47907-2016

E-mail: [gaunt@ecn.purdue.edu](mailto:gaunt@ecn.purdue.edu)

Phone: (765) 494-3898

## **About Purdue Engineering**

Purdue University is recognized worldwide for its excellence in engineering academic programs as well as research. Purdue is consistently ranked among the top ten nationally for both undergraduate and graduate education in the *U.S. News & World Report* Best Engineering program rankings. Purdue students are highly sought after by Fortune 500 companies as well as entrepreneurial start-ups. As alumni and professionals, they are also extremely successful — Purdue produces more CEOs than any other land grant or publicly assisted university in the country. You will recognize the names of some of the companies led by and/or started by a Purdue engineer: Amgen, On-command Video, Tellabs, Bechtel, Texas Instruments, and Ariba.

Purdue's program is diverse with more than 13 disciplines from which to choose an undergraduate engineering major including; Agricultural and Biological Engineering, Aeronautics and Astronautics Engineering, Chemical Engineering, Civil Engineering, Construction Engineering and Management, Electrical and Computer Engineering, Food Process Engineering, Industrial Engineering, Interdisciplinary Engineering, Materials Engineering, Mechanical Engineering, and Nuclear Engineering. All students begin their program of study in Freshman Engineering enabling them to explore the various degree options and relevant careers before selecting the desired discipline.

In addition to Purdue's strong academic programs, Purdue offers students cooperative education work experience in their chosen fields, study abroad programs, dozens of opportunities to gain leadership and organizational experience through engineering related student groups, and strong support programs for various constituencies including the Honors program, the Minority Engineering program and the Women in Engineering program.

## **About Purdue University**

Purdue University is a state assisted, land grant university that was established in 1869 through a generous gift by John Purdue. The main campus of this statewide system is located in West Lafayette, Indiana, which is the location of the engineering program noted above. Close to 38,000 students are enrolled in programs on the West Lafayette campus and approximately 20% of those students are in engineering. Purdue has an extensive residence system, as well as close to 100 fraternities, sororities, and cooperative housing opportunities for students. Purdue is home to a diverse student body with people from 132 different countries at the undergraduate level and engineering students from all 50 states.

### ***Purdue Web sites of interest***

Purdue University: [www.purdue.edu](http://www.purdue.edu)

Purdue Schools of Engineering: [www.purdue.edu/engr](http://www.purdue.edu/engr)

Purdue Admissions Office: [www.purdue.edu/admissions](http://www.purdue.edu/admissions)

## **About Delphi Corporation**

Delphi Corporation is a global company that offers products in mobile electronics, transportation components, and systems technology. With almost 216,000 employees in 40 countries, its world headquarters in Troy Michigan direct the efforts of its three primary business sectors: Dynamics and Propulsion; Safety, Thermal, and Electrical Architecture; and Electronics and Mobile Communications. Delphi's integrated systems and modules simplify vehicle manufacturing processes, helping to meet the demands of modern high-tech vehicle design. For more information refer to the Delphi Web site at [www.delphiauto.com](http://www.delphiauto.com).



# THE 2003 FIRST ROBOTICS COMPETITION MANUAL

## Purdue University / Delphi Corporation Application Instructions

Students should apply who:

- Are admitted as a beginning student in the Purdue University Schools of Engineering.
- Have participated for at least one full season with a FIRST Robotics team; and
- Have a strong academic background, particularly in science and mathematics.

*Please read and follow these instructions carefully:*

1. **Section A, (personal information).** Complete legibly, for positive identification.
2. **Sections B through F must be complete:** These sections are pertinent to the scoring of your application. If your high school does not rank, we suggest that you estimate as closely as possible.
3. **Section H** is important to the scoring of your application. Please give these questions careful consideration.
4. **Include a transcript** with this application. If your high school GPA is figured on a system other than A=4.0, attach an explanation.
5. **Include two recommendations** with this application. Please furnish letters of recommendation, on official letterhead, from your FIRST team advisor and either your mathematics or science teacher.
6. **Include only the third and fourth pages** when mailing. Attach your recommendation letter, transcript, and if needed, an explanation of grading system, to the back of the application.
7. **Complete and return your application as soon as possible.** They must be received by February 1, 2003.

## Submission Contact Information

### **Application Submission Address:**

FIRST Scholarship Selection Committee  
Department of Freshman Engineering  
Purdue University  
Engineering Administration Building, Room 212  
400 Centennial Mall Drive  
West Lafayette, IN 47907-2016  
(800) 440-9885

Please e-mail any questions to Dr. Gaunt at [gaunt@purdue.edu](mailto:gaunt@purdue.edu).

## Selection Considerations

All applicants will be considered on the basis of academic merit, character, and evidence of leadership ability. *Final notification to the recipient will not be mailed until mid-March.*

This form does *not* replace the FAFSA required for consideration for need-based aid administered through the Division of Financial Aid.

# THE 2003 FIRST ROBOTICS COMPETITION MANUAL

## Purdue University FIRST Scholarship Application

### A. Personal Information

\_\_\_\_\_  
Last Name                                      First Name                                      MI                                      (Area code) Phone Number

\_\_\_\_\_  
Street Address                                      City                                      State                                      Zip

\_\_\_\_\_  
Social Security Number                                      Date of Birth                                      Please circle:    Male    Female

\_\_\_\_\_  
High School Name                                      (Area code) Phone Number                                      Intended Engineering Major

### B. Please indicate your best test scores below.

SAT I SCORES		SAT II SCORES		ACT SCORES	
Total	_____	Math I	_____	Math II	_____
Math	_____	Physics	_____	English	_____
Verbal	_____	Chem	_____	Other	_____
Tests Taken:		Tests Taken:		Tests Taken:	
Jr. Year	Sr. Year	Jr. Year	Sr. Year	Jr. Year	Sr. Year

C. Rank in high school class: \_\_\_\_\_ in a graduating class of \_\_\_\_\_ students.

D. Grade Point Average: \_\_\_\_\_ based on a \_\_\_\_\_ scale.  
What number of your courses were honors, accelerated, or AP? \_\_\_\_\_

E. List your state-level and national-level recognition for personal achievement and/or leadership

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

F. List extracurricular activities that you have been involved with for at least one full year during high school. Indicate any leadership positions you have held in these activities.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

G. Please attach a copy of your high school transcript and letters of recommendation before mailing.

*Please proceed to the next page of the application and respond to the questions.*

**Purdue University**  
**FIRST Scholarship Application**  
(continued)

**H. Short essay questions - respond in the space provided or attach a separate sheet.**

Describe your interest in the field of engineering.

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Describe your role performing as part of a FIRST team. Give specific examples.

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# **THE 2003 FIRST ROBOTICS COMPETITION MANUAL**

# **THE 2003 FIRST ROBOTICS COMPETITION MANUAL**

## **ROCKY MOUNTAIN– FIRST SCHOLARSHIP**

In partnership with FIRST, the Pernicka Corporation is pleased to provide a one-year scholarship to benefit a deserving senior high school student, who has participated on a FIRST team located in New Mexico, Colorado, Wyoming, or Montana. He or she must have been admitted to an accredited college or university to pursue a career in engineering, science or math.

The Pernicka Corporation will award this non-renewable merit scholarship in the amount of \$5,000.00 to the candidate who best exemplifies the spirit and goals of FIRST.

### **Submission Requirements**

1. Letter of recommendation from high school teacher.
2. Letter of recommendation from engineer/advisor of FIRST Team.
3. A 50 words-or-less essay stating the impact FIRST has had on your life.
4. Completed scholarship application.

### **Application Information**

Scholarship applications are available from:

Frona Wilson  
Rocky Mountain – FIRST Scholarship  
Pernicka Corporation  
112 Racquette Drive  
Fort Collins, CO 80524  
frona@pernicka.com  
Ph: 970-224-0220  
Fax 970-224-3617

### **Scholarship Application Deadline**

All scholarship application materials must be received at the Pernicka Corporation by March 14, 2003. The scholarship recipient will be announced at the FIRST Championship event in April.

Mail completed scholarship application materials to:

Rocky Mountain–FIRST Scholarship  
Pernicka Corporation  
112 Racquette Drive  
Fort Collins, CO 80524

## SAN JOSE STATE UNIVERSITY SCHOLARSHIP

### Scholarship Description

In partnership with FIRST, San Jose State University's College of Engineering- Department of Technology is pleased to award one merit-based, full tuition scholarship in the amount of \$2,000 per year for four years for an undergraduate degree in a program of the Department of Technology.

The scholarship is available to high school seniors who are actively involved on a competing FIRST team during their senior year of high school and who would like to attend San Jose State University. The recipient must meet the regular academic requirements for admission to the University and the department of Technology.

### Submission Requirements

To apply for the San Jose State University FIRST Scholarship, the application package must include:

- Application to The California State University system for the academic year 2003-2004 in the Department of Technology SJSU.
- Two letters of Recommendation, one of which must be from an adult leader on the applicant's FIRST team.
- An essay describing the applicants FIRST experience and what the experience has meant.

### Scholarship Information and Submission

For answers regarding the scholarship, to receive a scholarship application, and submission, please contact:

Professor James Beck  
Director Lifelong Learning  
College of Engineering  
San Jose State University  
One Washington Square  
San Jose, CA 95192-0080

jbeck@sjsu.edu  
Phone: # (408) 924-3598

### Submission Deadline

Deadline for submission is March 3, 2003.

### About San Jose State University

San José State University's location in the Silicon Valley makes it an exceptionally rewarding learning environment for students to explore their talents and hone their professional skills. Silicon Valley firms and agencies seek SJSU students for internships, summer work programs and for assistance with research and development projects. Silicon Valley firms employ more graduates from SJSU than from any other university in the nation.

Located on 154 acres in center city San José, the university offers the excitement of studying at a large, metropolitan campus where many cultures meet. Yet students find personal attention from faculty members in the smaller setting of the university's eight colleges. San José is a newly revitalized city which hosts major sports, the arts, museums and restaurants serving a wide variety of cuisines. A new attraction is The Tech Museum of Innovation, which features an IMAX® theatre. From its focal point at the center of the South Bay, San José is an hour from the Santa Cruz coastline; San Francisco is one hour north.

### About the SJSU Department of Technology

The Department of Technology, located in the College of Engineering at San Jose State University, is at the forefront of technological change and innovation in the Silicon Valley. As product markets become global, our hands-on approach to learning prepares our students to enter these jobs as experienced professionals. The Department offers both undergraduate and graduate degrees in a variety of areas, including a BSIT in Manufacturing systems and a BSIT in electronics and Computer Technology.

### General Information, Department of Technology

The Department of Technology's email address for general information is

San Jose State University      Phone: (408) 924-  
1 Washington Square      3190  
San Jose, CA 95192-0061      [tech@sjsu.edu](mailto:tech@sjsu.edu)

# **THE 2003 FIRST ROBOTICS COMPETITION MANUAL**

## **ST. CLAIR COLLEGE SCHOLARSHIP**

### **Description**

In partnership with FIRST, St. Clair College and St. Clair College Foundation is pleased to award one \$1000 (Canadian funds) non-renewable entrance scholarship for September 2003. The scholarship is to recognize and reward students whose experience with FIRST has inspired an interest in pursuing a career in the manufacturing sector.

### **Eligibility**

The award is available to students in their final year of high school, who have been active on a FIRST team in that final year, and are applying to a manufacturing program housed in the Ford Centre for Excellence in Manufacturing at St. Clair College. Applicants do not need to be Canadian citizens.

### **Application Requirements**

The candidate must meet the regular academic requirements for admission to St. Clair College, and the successful candidate will be selected based on the merit of their application. Interested students must submit a letter detailing their involvement in the FIRST program along with a reference letter from an adult mentor or teacher involved in the student's FIRST team.

### **Contact Information**

Scholarship applications should be sent to the following address:

FIRST Robotics Competition Canadian Regional  
Mark Breadner, Board of Directors  
140 Borough Drive – level 2  
Toronto, Ontario  
M1P 4N6

### **Application Deadline**

*All Scholarship applications must be received by 1 March 2003.*

### **About St. Clair College**

St. Clair College has the distinction of being located in Windsor, ON, Canada's southernmost city. With Detroit, Michigan as its "next door neighbor," Windsor is Canada's automotive capital and home to world-renowned manufacturers, tier one suppliers, tool and die and mould making companies. St. Clair College offers two and three-year diploma programs in technology, trades, business, hospitality/tourism, health sciences, international business, human services, media communications and general arts & science. Many programs offer co-op and apprenticeship opportunities that provide students with hands-on experience. St. Clair College is proud of its many partnerships in the community that have helped to strengthen the overall quality of program delivery. One such partnership program is the Automotive Manufacturing Skills Initiative (AMSI), which is a unique partnership with DaimlerChrysler and the CAW. AMSI delivers an innovative mix of workplace apprenticeship and classroom instruction that combines to give students a high degree of on-the-job experience, preparing them to be multi tasked, and well versed for careers in the manufacturing environment. St. Clair also partners with the Ministry of Training, Colleges and Universities in their SuperBuild program, which will see the College with a new The Ford Centre for Excellence in Manufacturing, ready to accept new students in 2003.

For more information please refer to: [www.stclairc.on.ca](http://www.stclairc.on.ca)

## TEMPLE UNIVERSITY SCHOLARSHIPS (4)

### Scholarship Description

In partnership with FIRST, Temple University will award up to four \$2500 per year merit scholarships, renewable annually for a total of four years and contingent upon maintaining a 3.0 or better cumulative GPA, to students enrolled in full-time study in a College of Engineering major. The award winners must be active FIRST team members and meet the Temple University regular academic standards for academic merit scholarships (generally at least a 3.5 high school GPA and SAT score of 1150). The winners will be announced at the Championship in April 2003. Each junior/senior student who applies for the scholarship must meet the regular academic requirements for admission as well as meeting requirements for scholarship retention.

### Scholarship Application Requirements

\*To apply for one of the four Temple University 2003 scholarships:

- Complete a Temple University Application for Admission and submit two letters of recommendation with this application, one from a teacher and one from a participating engineer involved with your FIRST team.
- Submit an official high school transcript.
- Submit SAT or ACT test scores. You may substitute PSAT scores for the SAT or ACT if you have not yet taken the SAT or ACT.

\*These requirements pertain to scholarship eligibility only, not to University admission requirements.

### Application Information

Obtain FIRST scholarship applications or any other Temple University application materials by e-mailing the Scholarship Coordinator in the Office of Undergraduate Admission attention Dr. John J. Helferty, Chair of Electrical and Computer Engineering ([jhelfert@nimbus.temple.edu](mailto:jhelfert@nimbus.temple.edu)).

### Scholarship Application Deadline

Completed applications (which includes two letters of recommendation and Temple University Application for Admission, Transcript, and SAT/ACT/PSAT scores) must be received no later than **March 1, 2003**.

### Application Submission

Return the above-mentioned required materials in the addressed, postage-paid envelope provided. Please return them all together in one envelope. If this is not possible, please address individual submissions to:

Attn: Dr. John J. Helferty, FIRST Scholarship  
Coordinator

141-09

Office of Undergraduate Admission

Temple University

1801 North Broad St.

Philadelphia, PA 19122-6096

Phone: 215-204-8089

E-mail: [jhelfert@nimbus.temple.edu](mailto:jhelfert@nimbus.temple.edu)

Website: [www.temple.edu](http://www.temple.edu)

### About Temple University

Temple University, of the Commonwealth System of Higher Education, is a comprehensive public research university with more than 29,000 students. It has a distinguished faculty in 16 schools and colleges, including schools of Engineering, Law, Medicine, Podiatry, and Dentistry, and a renowned Health Sciences Center. Temple is one of Pennsylvania's three public research universities, along with the University of Pittsburgh and Penn State University. Temple University is the 39th largest university in the United States, and it is the largest provider of professional education (law, dentistry, medicine, pharmacy, and podiatric medicine) in the country.



## **THE 2003 FIRST ROBOTICS COMPETITION MANUAL**

Based in Philadelphia, Pennsylvania, USA, Temple has five regional campuses, including the flagship Main Campus, Health Sciences Campus, and Center City Campus in Philadelphia; a major suburban campus -- Temple University at Ambler; and a suburban art campus -- Tyler School of Art -- in Elkins Park. The University has an education center in Harrisburg, and international campuses in Tokyo, Japan, and Rome, Italy. Temple also offers programs in the People's Republic of China, Israel, Greece, Great Britain, France and other countries throughout the world.

Through its various schools and colleges, Temple University offers degree programs in 9 associate degree areas, 127 bachelor's degree areas, 132 master's degree areas, 61 doctoral degree areas, and 6 first professional degree areas.

Dr. Russell H. Conwell founded the institution in 1884, chartered as Temple College in 1888 and incorporated as Temple University in 1907. In 1965, by the Act of the Legislature of the Commonwealth of Pennsylvania, Temple University became a state-related institution in the Commonwealth System of Higher Education.

# THE 2003 FIRST ROBOTICS COMPETITION MANUAL

## UNIVERSITY OF ARKANSAS AT LITTLE ROCK CYBER SCHOLARSHIP

The Donaghey College of Information Science and Systems Engineering (CyberCollege) is offering a fully renewable full-tuition scholarship to a high school junior or senior who has participated in a FIRST team.

### Scholarship Description

The College will award a full-tuition, merit-based scholarship for an undergraduate degree in any discipline in the CyberCollege. This scholarship is available to any eligible high school junior or senior who has participated in the FIRST program on any team. The recipient must meet the regular academic requirements for admission to the College and major in a program from the CyberCollege.

The scholarship recipient will be announced at The FIRST Championship and will renew automatically each year of his or her undergraduate degree (for a maximum of five years), contingent upon maintaining good academic standing.

### Submission Requirements

To apply for the University of Arkansas at Little Rock FIRST Scholarship, complete the application package (see below) to include:

- The regular application materials for admission to the University of Arkansas at Little Rock
- The UALR FIRST Scholarship Application (available at [www.ualr.edu](http://www.ualr.edu) or by e-mailing an application request to [cybercollege@ualr.edu](mailto:cybercollege@ualr.edu))
- A letter of recommendation from an adult leader on your FIRST team
- A letter of recommendation from a math or science teacher

### Scholarship Application Deadline / Contact Information

Completed UALR FIRST scholarship and admission applications must be post marked by March 1, 2003.

Please send to:

Katie Young  
Director of Academic Services  
UALR CyberCollege  
2801 South University  
Little Rock, AR 72210  
Attn: UALR FIRST Scholarship  
E-mail: [kcyoung@ualr.edu](mailto:kcyoung@ualr.edu)

### About the UALR CyberCollege

The CyberCollege is UALR's technology college. The College is prepared to educate and train the technical workforce of the future. The comprehensive programs in the CyberCollege provide students with a well-rounded education, as well as with the specific technical skills needed to obtain entry-level positions and to rise quickly to management and leadership positions. Baccalaureate programs in the following disciplines are offered:

- Computer Science
- Construction Management
- Electronics and Computer Engineering Technology;
- Mechanical Engineering Technology;
- Information Science
- Systems Engineering

### UALR's Participation in FIRST

UALR has co-sponsored Team 356 since 2000. CyberCollege scholarship recipients can continue their FIRST experience as engineers-in-training and as mentors on Team 356. Students can receive elective credit in design courses and through a unique course, FIRST in Engineering, which was first offered in 2002.

# **THE 2003 FIRST ROBOTICS COMPETITION MANUAL**

## **UNIVERSITY OF DAYTON DELPHI CORPORATION SCHOLARSHIP**

In partnership with Delphi Corporation, the School of Engineering at the University of Dayton is pleased to offer a \$15,000 merit-based scholarship payable over four years for a high school senior who has participated on a FIRST team.

### **Scholarship Description**

University of Dayton's School of Engineering will award one four-year merit-based scholarship to be applied toward the tuition for an undergraduate degree in the School of Engineering. Preference will be given to students in electrical, computer and mechanical engineering, and engineering technology. This scholarship is available to any incoming freshman that has participated on a FIRST team. Payment of the award is contingent upon the selected student's successful matriculation into the School of Engineering at the University of Dayton, which must be initiated by on-line application to the University

<http://www.udayton.edu/> and acceptance, which will be indicated by a letter from the University

Continuation of the award is contingent on the student remaining in good academic standing with a GPA of at least 3.0/4.0 and continuing undergraduate study in an engineering or engineering technology discipline within the University of Dayton School of Engineering

In addition to the scholarship, the student receiving this award may be offered a summer internship or coop experience with Delphi Corporation in an engineering area of interest.

### **Submission Deadline and Requirements**

The deadline for applications, including all letters of reference and a personal statement, is March 1, 2003. To apply for the FIRST Scholarship at the University of Dayton, after receiving a letter of admission, please contact the Associate Dean for Undergraduate Programs at the address below for an application form:

### **Contact Information**

Dr. Malcolm Daniels,  
Associate Dean for Undergraduate Programs  
School of Engineering  
University of Dayton  
300 College Park  
Dayton, OH 45469-0228

Phone: 937-229-2736

FAX 937-229-2756

E-mail [Malcolm.Daniels@notes.udayton.edu](mailto:Malcolm.Daniels@notes.udayton.edu)

### **About the University of Dayton**

The University of Dayton is a highly residential living – learning community of 6,500 undergraduates and 3,000 graduate students. With an enrollment of 1,600, the School of Engineering provides students with solid technological training and a high level of personal attention from faculty so that graduates become well-rounded professionals in chemical engineering, civil engineering, electrical engineering, computer engineering, mechanical engineering, and engineering technology.

To prepare graduates for the 21<sup>st</sup> century workplace, our 'New Engineer' approach emphasizes a broad, holistic approach to engineering combining strong professional preparation with breadth of understanding of social and human concerns, well developed moral discernment, structured leadership and teaming experiences, and opportunities for applied, practical learning through enriched co-op and internship experiences. The School of Engineering produces engineering and technology professionals who can communicate persuasively, solve complex problems, show moral compassion, and provide solutions to the issues confronting businesses and society.

## **THE 2003 FIRST ROBOTICS COMPETITION MANUAL**

The School of Engineering also offers programs, minors, and options in manufacturing, design, materials, industrial, environmental, quality, and electronics engineering. It also offers graduate programs in ten areas of study, with additional support available from the University of Dayton Research Institute.

### **About Delphi Corporation**

Multi-national Delphi Corporation (NYSE: DPH) is a world leader in mobile electronics and transportation components and systems technology. Headquartered in Troy, Michigan, USA, Delphi's three business sectors -- Dynamics & Propulsion; Safety, Thermal & Electrical Architecture; and Electronics & Mobile Communication -- provide comprehensive product solutions to complex customer needs. Delphi has approximately 216,000 employees and operates 184 wholly-owned manufacturing sites, 44 joint ventures, 53 customer centers and sales offices, and 31 technical centers in 40 countries. Regional headquarters are located in Paris, Tokyo, and São Paulo.

By leveraging our rich heritage and extensive technical knowledge, we offer a broad range of innovative solutions from components to systems and modules.

Delphi's integrated systems and modules are designed to help simplify vehicle manufacturers' processes and meet the demands of today's high-tech vehicles. Our main focus is on customer satisfaction through technology leadership, quality, world class cost levels and responsiveness.

Our global network, combined with our extensive vehicle systems knowledge, allows us to be there when you need us. For single point solutions, partner with Delphi Corporation to meet your automotive challenges in today's ever-changing global market. For more information, please see

<http://www.delphiauto.com/>

# **THE 2003 FIRST ROBOTICS COMPETITION MANUAL**

## **UNIVERSITY OF DELAWARE FIRST SCHOLARSHIP**

### **Scholarship Description**

The University of Delaware ([www.udel.edu](http://www.udel.edu)) will award one \$10,000 merit-based scholarship, renewable annually for up to four years. This scholarship is available to any incoming freshman who has participated on a FIRST team (application should be made as a high school senior and awarded during the recipient's freshman year at the University of Delaware). Therefore, the recipient must meet the regular admission requirements for the University of Delaware and matriculate at UD prior to receiving the award. Additionally, the recipient must be admitted and enrolled in one of the following Colleges at the University of Delaware: Engineering; Agriculture and Natural Resources; or Health and Nursing Sciences. For renewal, the recipient must attain and maintain a 3.0 GPA.

### **Submission Requirements**

To apply for the University of Delaware FIRST Scholarship, please send a letter of interest to the Office of Scholarships and Financial Aid at the address below. This letter should be accompanied by a letter of recommendation to be completed by an adult leader on your FIRST team. The Office of Scholarships and Financial Aid may require other applications as necessary.

### **Application Deadline**

Deadline for scholarship application is March 1, 2003.

### **Contact Information**

To request more information on the University of Delaware FIRST scholarship, please contact:

Office of Scholarships and Financial Aid

University of Delaware

Newark, DE 19716

(302) 831-8081

### **About the University of Delaware**

Located on one of the most beautiful campuses on the East Coast, the University of Delaware is a distinguished teaching-oriented university with a breadth of academic and professional options. A faculty committed to research, undergraduate teaching (undergraduates compose 80% of our population), and advising prepares students for successful careers and for entry into leading professional and graduate schools. Its location links the beautiful Delaware campus to New York, Philadelphia, Baltimore, and Washington D.C. and a host of opportunities for employment, internships, independent research, and study. With over 124 majors in six undergraduate colleges, the University offers multiple opportunities for students to pursue studies in the sciences and more. A strong Undergraduate Research Program, competitive Honors Program, nationally recognized faculty, and academic programs (including top ten status for chemical engineering), are just some of the many reasons why top students choose UD. These many elements, combined with a vibrant campus life including the Fightin' Blue Hens athletic teams, a 300+-member marching band, and over 200 student organizations ensure a world-class collegiate experience for all students.

# THE 2003 FIRST ROBOTICS COMPETITION MANUAL

## UNIVERSITY OF HARTFORD / FIRST SCHOLARSHIPS (2)

The mission of FIRST is to expose and attract new students to the fields of engineering and science – a necessity of critical, national importance. This mission is significantly aligned with that of The University of Hartford.

### Scholarship Description

In partnership with FIRST, the University of Hartford will annually award the University of Hartford's FIRST Robotics Scholarships in the amount of \$11,000 each to two high school seniors who are members of a FIRST team. Eligible students must apply for admission in any program at the University, meet the academic requirements for the University President's Scholarship as outlined by the University Bulletin, and reside in the continental United States. The scholarships are renewable annually for a maximum of four years according to the academic scholarship policies described in the University Undergraduate Bulletin. FIRST scholarships will not be combined with any other University non-need based aid.

### Application

To apply for this scholarship, interested students must complete an application for admission to the University, as well as submit a resume and letter of recommendation. The \$35.00 admission application fee will be waived for any student applying for this scholarship. Please send all documentation to the contact person below.

### Application Deadline

March 3, 2003

### Contact Information

Beth Skoglund  
Associate Director of Admissions and Financial Assistance  
FIRST/UTC University of Hartford Scholarship  
University of Hartford  
200 Bloomfield Avenue  
West Hartford, CT 06117  
skoglund@mail.hartford.edu  
1.800.947.4303  
1.860.768.4296

### A Brief Profile of the University of Hartford

Do you want a suburban college campus or an urban one?

Do you want a small school or a large one?

Do you want a traditional liberal arts curriculum or a cutting-edge professional program? You may be asking yourself, why do I have to choose? Why do I have to compromise? You don't!

You can have the best of each of these worlds at the University of Hartford. You can enjoy both the comfort and the fun of a 320-acre campus and still take advantage of the city of Hartford only 10 minutes away. With just 4100 full time undergraduates, you will benefit from small classes and personalized attention while at the same time being offered over 75 majors, extensive facilities and a broad spectrum of activities usually reserved for a large university. You will have the opportunity to develop essential reasoning and communication skills in our nationally recognized liberal arts curriculum as you master the professional, technical, and computer skills of the 21st century.

For more information please visit us on-line at <http://www.hartford.edu>

# **THE 2003 FIRST ROBOTICS COMPETITION MANUAL**

## **UNIVERSITY OF MASSACHUSETTS AMHERST SCHOLARSHIP**

The College of Engineering at the University of Massachusetts Amherst is proud to be a participant in FIRST and to offer a \$20,000 scholarship to a high school senior who has participated in a FIRST team.

### **Scholarship Description**

The College of Engineering at the University of Massachusetts Amherst will award a \$20,000, merit-based scholarship to a student attending UMass Amherst and pursuing an undergraduate degree in any engineering discipline. This scholarship is available to an eligible high school senior who has participated in the FIRST program on any team. The recipient must be admitted to the University of Massachusetts Amherst and the College of Engineering.

The scholarship will be awarded over four years at \$5,000 per year. The scholarship will be automatically renewed each year of her or his undergraduate degree if the awardee remains in an engineering major and maintains good academic standing.

### **Submission Requirements**

To apply for the College of Engineering FIRST Scholarship, students should obtain an application, which will include requests for:

- An essay
- A high school transcript
- Recommendations

Obtain applications from the College of Engineering web site at <http://www.ecs.umass.edu/scholarship.html> or by contacting the College directly.

### **Scholarship Application Deadline**

Completed scholarship applications must be received at the address below by March 1, 2003. Please note that applications for admission to the University of Massachusetts Amherst must be received by JANUARY 15, 2003. To request a scholarship application, please contact:

Kathleen G. Rubin  
Assistant Dean for Engineering Outreach  
131 Marston Hall  
College of Engineering  
Amherst, MA 01003

## **About the University of Massachusetts Amherst & the College of Engineering**

The University of Massachusetts Amherst is a coeducational, nationally ranked research institution located in a beautiful, culturally rich New England town surrounded by hills, forests, lakes, and meadows, just a few hours from Boston and New York City. Edward B. Fiske, of The New York Times, called Amherst one of the nation's "Ten Best College Towns."

A public university, UMass offers an excellent education at an affordable price. Its size, diversity, and the richness of its academic and extracurricular offerings provide almost unlimited possibilities for personal growth and professional development. UMass participates in what is known as the Five College Consortium. These five schools within a 12-mile radius include the University of Massachusetts, Amherst College, Hampshire College, Mount Holyoke College, and Smith College. Students at any one of the five colleges are eligible to take courses for credit at the other four without paying additional tuition or fees.

The College of Engineering at UMass Amherst offers a world-class education to students who come to study and do research with top-ranked faculty. A distinctive feature of UMass is the opportunity for undergraduates to become directly involved in research, and get hands-on experience in numerous areas through the cooperative-education program. Engineering students also take advantage of programs such as the Commonwealth Honors College and the Study Abroad Program to enhance their engineering education.

## **THE 2003 FIRST ROBOTICS COMPETITION MANUAL**

The College of Engineering offers Bachelor of Science degrees in these fully ABET accredited programs:

- Chemical Engineering
- Civil and Environmental Engineering
- Computer Systems Engineering
- Electrical Engineering
- Industrial Engineering
- Mechanical Engineering

To learn more about the College of Engineering at UMASS, see our website at <http://www.ecs.umass.edu/>



# THE 2003 FIRST ROBOTICS COMPETITION MANUAL

## UNIVERSITY OF MICHIGAN COLLEGE OF ENGINEERING / DELPHI CORPORATION SCHOLARSHIP

### About the Scholarship:

The University of Michigan College of Engineering, with the generous assistance of Delphi Corporation, is pleased to announce a \$15,000 scholarship payable over 4 years to offset the costs of obtaining a University of Michigan baccalaureate degree in engineering. This scholarship will be awarded to a senior in high school, who has participated at least one full season with a FIRST robotics team and who will enroll in Michigan Engineering. Interested students completing the scholarship application form available from the Michigan Engineering Scholarship Office will initiate consideration for the scholarship. A committee of faculty and staff will determine selection. Finalists for the award may be brought to campus for interviews with the committee and a representative of Delphi before the final award decision is made.

### Scholarship Criteria

Criteria that will weigh heavily in the selection of the College of Engineering FIRST Scholar are as follows:

- Proven high school academic ability overall, math and science in particular.
- Continuity and breadth of math and science preparation, AP courses are desirable.
- Quality performance on standardized college entrance exams (SAT and ACT).
- Active participation in extracurricular activities, exemplary leadership is particularly valued.
- Statement of interest in the field of engineering and value of the FIRST experience.
- Two references from adult leaders (one from FIRST team adviser and one from a teacher).

In addition to the scholarship, the student receiving this award may be offered a summer internship or coop experience with Delphi Corporation in an engineering area of interest.

Payment of the award is contingent upon the selected student's successful matriculation into the engineering program at the University of Michigan, which must be initiated by application to the University (available on-line or from the University of Michigan Office of Admissions) and acceptance into the engineering program, which will be indicated by a letter from the University. Continuation of the award is contingent on the student remaining in good academic standing with a GPA of at least 3.0/4.0 and continuing full-time undergraduate study in an engineering discipline.

### How to Apply/Contact Information:

Deadline for applications, including all letters of reference and personal statement, is March 3, 2003. The prospective recipient will be recognized at the FIRST Championship in April 2003.

Be sure to mention FIRST when you contact the following individual to request a University of Michigan College of Engineering FIRST Scholarship application packet.

Sharon Burch

Director, Office of Recruitment, Transfer, Admissions and Scholarships

College of Engineering

University of Michigan

1112 Robert H. Lurie Engineering Center

Ann Arbor, MI 48109

Email: [enginrta@umich.edu](mailto:enginrta@umich.edu)

Phone: 734-647-7101 or 647-7113



Michigan**Engineering**

**DELPHI**  
Automotive Systems  
Driving Tomorrow's Technology

## University of Michigan & Delphi Corporation



In a partnership with FIRST and Delphi Corporation, The University of Michigan College of Engineering is awarding a \$15,000 scholarship payable over 4 years. Top students admitted to the University of Michigan College of Engineering for Fall 2003 will be considered.

# \$15,000

## FIRST Robotics Scholarship

### Requirements for Consideration:

1. Be accepted to the University of Michigan College of Engineering
2. Submit an essay describing demonstrated leadership on a FIRST team
3. Provide 2 letters of recommendation  
(One from a teacher and one from a FIRST advisor)
4. Deadline to submit all materials: (extended to March 7, 2003)

### Mail essay and letters of recommendation to:

Sharon Burch, Director  
Office of Recruitment & Scholarships  
University of Michigan College of Engineering  
1108 LEC / 1221 Beal Ave.  
Ann Arbor, MI 48109-2102  
E-mail: [enginrta@umich.edu](mailto:enginrta@umich.edu)  
Phone: 734-647-7101 or 734-647-7113  
Fax: 734-647-7119

# THE 2003 FIRST ROBOTICS COMPETITION MANUAL

## UNIVERSITY OF SOUTHERN CALIFORNIA SCHOLARSHIPS (2)

As a host for the Southern California regional competition, and a sponsor for four local high school teams, the University of Southern California's School of Engineering has first hand knowledge of just how exciting and motivating FIRST is for students who are considering careers in engineering or computer science.

In partnership with FIRST, the USC School of Engineering has established a \$5,000 renewable, merit-based scholarship for two students who have participated on a FIRST team. In order for the selected students to receive the scholarship award, the student must be admitted and enroll full time in any undergraduate engineering or computer science degree program at USC. The scholarship is renewable, contingent upon satisfactory academic progress in the engineering major and maintaining a 3.0 GPA overall, for a total of \$20,000 over four years. The winners will be selected based on overall academic achievement and the content of their essay and will be announced at the Championship in April.

### Scholarship Criteria:

1. Students must apply and meet all the application requirements and deadlines for admission to the University of Southern California School of Engineering.  
(For Fall 2003, the final freshman application deadline is January 10, 2003.)
2. Students must submit an essay (500 words or less) on your FIRST involvement to the Director of Admission for the USC School of Engineering by February 15, 2003.

### Submission Information:

To request an application for admission, contact:

Mr. Matthew O'Pray Director, Admissions University of Southern California School of Engineering Olin Hall, Rm. 106 Los Angeles, CA 90089-1455	(213) 740-4530 or (800) 526-3347 E-mail: <a href="mailto:opr@usc.edu">opr@usc.edu</a> Website: <a href="http://www.usc.edu">www.usc.edu</a>
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### About the USC School of Engineering

The University of Southern California is a private, research university located three miles from downtown Los Angeles. Established in 1880 and covering 155 acres, USC offers bachelors degrees in 77 undergraduate majors as well as masters, doctoral, and professional degrees in 139 areas of study. Students may select from a variety of degree combinations in the College of Letters, Arts & Science, or in one of the 17 professional schools.

The School of Engineering is the second largest professional school in the university with eight major departments and over 30 different degree options available. Some unique degree programs include bachelor's degrees in Biomedical Engineering, Computer Engineering and a combined program in Civil Engineering and Architecture called Building Science. Engineering students at USC come from all over the United States and the world, with approximately 50% of our students coming from outside California and 13% coming from around the world.

Our faculty members are world-class researchers, who annually conduct more than \$100 million dollars in sponsored research. They also teach and involve undergraduates in their laboratories. Students begin their engineering coursework in the freshmen year and have an opportunity to combine theoretical knowledge gained in the classroom with hands-on design work incorporated throughout their curriculum.

We offer a number of special programs including our own Career Services Program, Cooperative Education, Center for Engineering Diversity, a summer Overseas Program, Peer Mentoring, Learning Support Services and an Undergraduate Merit Research Program.

For more detailed information about our program, please contact the Engineering Student Affairs office at [engrstaf@usc.edu](mailto:engrstaf@usc.edu) or (800) 526-3347 or visit our website at [www.usc.edu/dept/engineering/esa](http://www.usc.edu/dept/engineering/esa)

## UNIVERSITY OF WATERLOO / FIRST MECHATRONICS ENGINEERING SCHOLARSHIP

### Scholarship Description

In partnership with FIRST and the Departments of Mechanical and Electrical & Computer Engineering, the University of Waterloo is pleased to award one \$5000 (Canadian funds) non-renewable entrance scholarship. The scholarship is to recognize and reward students whose experience with FIRST has inspired an interest in pursuing an engineering education.

### Eligibility

The award is available to students in their final year of high school, who have been active on a FIRST team in that final year, and are applying to the Mechatronics Engineering program at the University of Waterloo. Applicants do not need to be Canadian citizens.

### Application and Criteria

The scholarship will be awarded through the regular admissions process to the Faculty of Engineering at the University of Waterloo. The candidate must meet the admissions requirements for the Mechatronics Engineering program, and the successful candidate will be selected based on the merit of their application.

As a part of the regular application procedure, it is expected that

- Eligible students will emphasize their participation on a FIRST team in the Admission Information Form (AIF), which will be mailed to them after they apply through the [Ontario Universities Application Centre](#) (OUAC). As well,
- A reference letter from an adult mentor or teacher involved in the student's FIRST team must be included with the AIF.

In addition to the regular application procedure,

- Students must also indicate their desire to be considered for the FIRST scholarship, by sending an e-mail to [first.scholarship@mechatronics.uwaterloo.ca](mailto:first.scholarship@mechatronics.uwaterloo.ca), prior to March 31st of their graduating year. In the e-mail, students must include their name and OUAC application reference number.

### Application Deadline

The registration e-mail (see above) must be sent prior to March 31st of the students graduating year. The AIF submission deadline is typically in mid-March, and is written on the AIF form.

### About Mechatronics Engineering at the University of Waterloo

Mechatronics Engineering concerns the design of computer-controlled electromechanical systems. It includes robotics and automation systems, neural prosthetics, micro electro-mechanical systems (MEMS), and many other leading-edge technologies.

At the University of Waterloo, Mechatronics Engineering is a multi-disciplinary program in the Department of Mechanical Engineering, in cooperation with both the Systems Design and Electrical & Computer Engineering departments. Graduates of the program will receive the degree of Bachelor of Applied Science in Mechatronics Engineering. For more information on the program, please see [www.mechatronics.uwaterloo.ca](http://www.mechatronics.uwaterloo.ca).

The University of Waterloo is proud to be on the leading edge of this new discipline, offering the first undergraduate degree in Mechatronics Engineering in Canada. We invite you, FIRST alumni, to be a part of the future; we hope you will join us!

# THE 2003 FIRST ROBOTICS COMPETITION MANUAL

## VIRGINIA COMMONWEALTH UNIVERSITY SCHOOL OF ENGINEERING SCHOLARSHIP

VCU School of Engineering is proud to be the host site of the VCU School of Engineering Regional. We are pleased to partner with FIRST to provide a merit-based scholarship of \$4,000 per year to a high school senior who is a FIRST team participant.

The scholarship recipient will be announced at the Championship.

### Scholarship Criteria

Scholarship applicants must fulfill the following criteria:

1. Be high school seniors who are actively participating on a FIRST team during their senior year in high school,
2. Be interested in attending the VCU School of Engineering,
3. File two letters of recommendation concerning the student's involvement in FIRST, one of which must be from an adult leader on the student's FIRST team,
4. Submit a **complete** application for admission to VCU by February 15, 2003 (application for admission, standardized exam results, high school transcript, essay, recommendations) as required by the University
5. Submit an essay describing his/her involvement on their FIRST team, and what that experience has meant in his/her own personal development, to be submitted with the application for admission to the University

The recipient must meet the regular academic requirements for admission to the School of Engineering, and later maintain a cumulative GPA of 3.0 in a major within the School of Engineering, to be considered for and retain the scholarship.

### Contact Information

Information about the FIRST Scholarship, the University, and an application for admission to VCU can be obtained by contacting:

Nancy Neville, Assistant Dean  
VCU School of Engineering  
Dept. F  
Box 843068  
Richmond, VA 23284

phone: 804-827-7028  
e-mail: [nanevill@vcu.edu](mailto:nanevill@vcu.edu)  
web: <http://www.vcu.edu/ugrad>  
<http://www.egr.vcu.edu>

### About Virginia Commonwealth University:

Virginia Commonwealth University (VCU) is ranked by the Carnegie Foundation as one of the nation's top research universities. Its teaching, research, public service, and patient care missions support full-time and part-time students and faculty of diverse backgrounds.

Located in Richmond, the capital of Virginia, VCU is composed of two campuses: the 75-acre Academic Campus in the historic Fan District of Richmond, and the 51-acre Medical College of Virginia (MCV) Campus two miles east in the financial, commercial, and governmental district of the city. The Virginia Biotechnology Research Park and the Virginia Microelectronics Center are also part of the University, and are outstanding examples of the collaborative initiatives and partnerships that mark VCU's role in the economic growth of the greater Richmond community.

VCU offers 153 baccalaureate, master's, professional, doctoral, and post-graduate certificate and degree programs through the College of Humanities and Sciences (which includes the School of Mass Communications), and the Schools of Engineering, Allied Health Professions, Arts, Business, Dentistry, Education, Medicine, Nursing, Pharmacy, and Social Work. Forty of the University's programs are unique in Virginia, including the only undergraduate program in Biomedical Engineering. The University enrolls more than 23,000 students, of which 13,000 are undergraduates.

## **THE 2003 FIRST ROBOTICS COMPETITION MANUAL**

The School of Engineering was established in 1996 and has brought innovative, real-world engineering education to central Virginia. The School enrolls about 1000 students, and offers undergraduate degrees in Biomedical, Chemical, Electrical, and Mechanical Engineering, and Computer Science, as well as specializations in such areas as computer engineering, microelectronics, and robotics, among others. Students benefit from close, personal interactions with faculty. The program emphasizes creativity, entrepreneurship, business skills, communication, teamwork, and undergraduate research. The required industrial internship prepares graduates with a clear understanding of the application of engineering skills to real-world environments.

There are many opportunities for students to work with FIRST teams and gain academic credit. VCU Engineering is the host of the VCU School of Engineering FIRST Robotics Regional Competition, and warmly welcomes FIRST team members to its ranks. In 2001, VCU Engineering enrolled 17 FIRST team members. The class that entered in 2002 had 26 FIRST members. The School's student body is very involved with FIRST activities and teams.

## WASHINGTON STATE UNIVERSITY AND THE DEAN'S MERIT SCHOLARSHIP

### Scholarship Description

In partnership with FIRST, the College of Engineering and Architecture at Washington State University, will award a merit-based scholarship of up to \$2,000 per year (renewable for an additional three years) to be applied to tuition costs toward an undergraduate degree in either computer science or one of the eight engineering programs offered at the Pullman campus. These majors include Bioengineering, Biological Systems Engineering; Chemical Engineering; Civil Engineering; Computer Engineering; Computer Science; Electrical Engineering; Materials Science and Engineering; and Mechanical Engineering.

### Submission Criteria/Requirements

This scholarship is available to any eligible high school senior who is actively involved on a competing FIRST team during his/her senior year of high school and who meets the scholarship requirements. The recipient must meet the regular academic requirements for admission to Washington State University and have taken the ACT or SAT to determine eligibility. Scholarship criteria require that the student be taking engineering/computer science track classes, complete a minimum of 12 credits each semester, and be advised by an engineering/computer science advisor. Renewal will be automatic each year contingent upon maintaining a grade point average calculated at the end of each year for the following renewals: 3.2-3.39 = \$500; 3.4-3.59 = \$1000; 3.6-3.79 = \$1500; and 3.8 up = \$2000.

To request a scholarship application form, please contact the Scholarship Services Department at Washington State University (509-335-1059), or apply online. This one scholarship application will be used to evaluate the student for eligibility for other scholarships in addition to the Dean's Merit Scholarship for engineering and computer science students. Apply early, since the University awards several scholarships on a first-come, first-served basis. You can complete the scholarship application online at [www.finaid.wsu.edu/scholar](http://www.finaid.wsu.edu/scholar) and choose "Applications" from the menu. The priority deadline is February 1. Students must meet the regular admission criteria and be admitted to Washington State University to be considered for the scholarship. The application for admission is available online at [www.wsu.edu](http://www.wsu.edu) or you can send a paper application if you prefer.

The scholarship recipients will be announced at the Championship in April.

### About Washington State University.

Washington State University invites you to be a part of a major research university with over a 100-year history of strong undergraduate programs. You will interact with accomplished faculty members and talented students involved in a variety of academic pursuits; and you will be part of a supportive academic community that values a diversified population and is committed to providing a rich learning environment for all students. Washington State University enrolls over 21,700 students of which 16,000 attend classes in Pullman. Its nine degree-granting colleges collectively offer 150 major fields of study with more than 300 optional areas of emphasis. The University Honors College offers students of high ability and initiative an enriched, four-year core curriculum that is combined with curriculum requirements for the various degree programs across the university.

One of the largest residential universities west of the Mississippi, Washington State University houses the majority of its student population on its 600-acre campus in Pullman. Branch campuses in Spokane, Richland, and Vancouver, Washington offer a variety of undergraduate and graduate programs. The faculty of 1,255 is dedicated to helping student stay abreast of the most recent knowledge and discoveries, conducting high quality research, and performing exemplary public service.

Our undergraduate enrollment in engineering and computer science is small enough to provide you with personal attention, yet large enough to offer a wide range of academic options. If you wish to work in industry over the summer or through a semester, there is an office on the campus to help you arrange it. If you are interested in special projects that give you a taste of industrial practice or state-of-the-art research, we can also help you find these opportunities.

For more information go to [www.wsu.edu](http://www.wsu.edu) or [www.cea.wsu.edu](http://www.cea.wsu.edu).



## **WILLIAM TYNDALE COLLEGE SCHOLARSHIPS (2)**

In partnership with FIRST, William Tyndale College has established up to two merit-based scholarships to students who have participated on a FIRST team. Each recipient will receive a \$2,000 per academic year award, renewable for up to four total years. Tuition is applicable only to fall and winter semesters.

### **Scholarship Criteria:**

All applicants must meet general admission requirements, must be incoming freshmen and participate in the college and community service program required of all scholarship students.

To apply for a scholarship for the 2004 academic year:

- Complete a FIRST Scholarship Application
- Contact the Admissions Office at William Tyndale College and complete an Application for Admission, indicating that you are a FIRST applicant. The application fee will be waived for FIRST applicants.
- Submit all required materials including SAT or ACT scores, and high school transcripts.

### **Application Contact Information**

William Tyndale College/FIRST Scholarship winner(s) will be announced via the FIRST website by July 30, 2003.

Admission applications, as well as WTC/FIRST Scholarship Applications, are available by contacting Admissions at 1-800-483-0707 or by e-mail at [admissions@williamtyndale.edu](mailto:admissions@williamtyndale.edu).

Completed applications should be sent to William Tyndale College at the address below.

William Tyndale College  
Scholarship and Financial Aid Office  
35700 West Twelve Mile Road  
Farmington Hills, Michigan 48331  
Phone: 800-483-0707  
Fax: 248-553-5963

### **Application Deadline**

Completed applications must be received by June 30, 2003.

### **About William Tyndale College**

William Tyndale College is a four-year Christian liberal arts college located in Farmington Hills, Michigan offering Bachelor degrees in five divisions: Christian Studies, Natural Sciences, Mathematics and Education, Social Sciences, Language Literature and Fine Arts, and Professional Studies. To learn more about WTC, please visit our website at <http://www.williamtyndale.edu>



## WPI DESIGN INNOVATION SCHOLARSHIP

FIRST would like to congratulate WPI for blazing the trail for other academic institutions to follow. FIRST and WPI remain committed to introducing today's students to the many rewards that science and technology offer. This scholarship is one tangible example of a benefit that can be gained through a student's participation and effort in the FIRST program. More importantly, it highlights a key role academic institutions can play in continuing the demand for excellence in science and technology created through the student, teacher, academic institution, and corporation partnership.

### Scholarship Description/Requirements

For the eighth consecutive year, WPI will award a full-tuition, four-year undergraduate scholarship (valued at more than \$100K) to a FIRST team student participant. This year, each team participating in the 2003 FIRST Robotics Competition may nominate *one* of its student members for the WPI Design Innovation Scholarship. The candidate must be in her/his senior year of high school and be an active FIRST team member. An adult team leader will submit a letter of nomination to accompany their candidate's WPI application forms. Students nominated by their teams must be capable of meeting normal WPI admissions requirements, have demonstrated enthusiasm for engineering and science, and possess the ability and innovation necessary to excel as an engineer or scientist. The winning student must maintain satisfactory academic progress at WPI to maintain the award.

### Submission Criteria

Complete and submit the following materials to the Admissions office at WPI:

- Letter of Nomination from adult team leader
- Nomination Form. Please use the nomination form at the end of this WPI section, or download it from FIRST Scholarship site.
- Application materials for admission to WPI (by February 1)
- A presentation\* produced by the applicant that describes one or more of the **Design Innovations** in the team's robot as well as one or more of the following issues:
  1. The importance of teamwork in developing their robot
  2. How his/her team demonstrates sportsmanship
  3. How his/her team builds spirit(\*Optional format, e.g., videotape, electronic presentation, paper, etc.--no greater than two pages or five minutes in length)

### Application and Nomination Deadlines

All nominations and presentations must be *received by WPI admissions by March 1, 2003*. The *WPI application must arrive by the February 1* application deadline. A WPI committee will review applications in time for the scholarship winner to be announced at the FIRST Robotics Competition Championship Event in April 2003.

### Address/Contact Information

In addition to the completed WPI application, nominated students interested in this scholarship should submit the letter of nomination and presentation to the following address:

WPI  
Admissions Office  
100 Institute Road  
Worcester MA 01609  
Attn: WPI Design Innovation Scholarship  
Ph: 508-831-5286

e-mail: [admissions@wpi.edu](mailto:admissions@wpi.edu)

Web site: <http://www.wpi.edu>

## **About WPI**

WPI, founded by New England industrialists John Boynton and Ichabod Washburn and their associates in 1865, is the third oldest technologically oriented college in the country. An independent university, WPI awards bachelor, master, and doctoral degrees. WPI students come from 45 states and 68 countries and include 2,700 undergraduates (625 women, 2,075 men) and 1,050 graduate students. WPI leads students to develop an excellent grasp of fundamental concepts in their principal area of study, to lay a foundation for lifelong renewal of knowledge, to gain a mature understanding of themselves, and to form a deep appreciation of the interrelationships among basic knowledge, technological advance and human need. The distinctive, project-based curriculum is well suited to students with demonstrated ability to take responsibility, to thrive in the team environment, to solve problems, and to assume leadership--in short, WPI postulates the same characteristics for success as FIRST.

WPI...The University of Science and Technology. And Life.



**FIRST Design Innovation Scholarship Nomination Form**

**Student Information**

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

Social Security Number \_\_\_\_\_

**Nominated by**

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

Length of acquaintance \_\_\_\_\_

Please attach your letter of nomination to this form. Please include examples of how this student has demonstrated enthusiasm for engineering and science and possesses the ability and innovation necessary to excel as an engineer or scientist. Send this form and the attached letter to:

WPI  
Admissions Office  
100 Institute Road  
Worcester, MA 01609  
Attn: WPI Design Innovation Scholarship