Congratulations on your admission to the 2012-13 IIT Boeing Scholars Academy! As you consider this opportunity, we encourage you to review the following FAQs and corresponding responses, as well as the program website: http://admission.iit.edu/boeingscholars. Please do not hesitate to contact Marya Spont, Program Director for the IIT Boeing Scholars Academy, at spont@iit.edu or 312.567.5193, with any additional questions.

En español: Tanya Cabrera, tcabrera@iit.edu, 312.567.6943, o Leticia Moreno, Imoreno2@iit.edu, 312.567.3422.

W języku polskim: Emilia Radkiewicz, radkiewicz@iit.edu, 312.567.7984.

中文: Connie Ma, yma24@iit.edu, 617.905.6545.

What is the IIT Boeing Scholars Academy?
Now in its second year of operation, the Illinois Institute of Technology (IIT) Boeing Scholars Academy is a free, year-round academic enrichment program that enables access and exposure to STEM fields (science, technology, engineering, mathematics)—as well as architecture, business, and psychology—for up to 100 high-achieving rising juniors and seniors per year from Chicago-area high schools. The Academy, which is non-residential, takes place on IIT’s Main Campus, and provides four weeks of intensive, project-based summer programming; periodic workshops, seminars, and field trips during the school year; college and career advising; and leadership skills training and student grant competitions. Through this work, we intend to encourage exploration of a broad range of STEM areas, as well as to engage students’ existing knowledge, critical inquiry, and motivation for interdisciplinary innovation.

This year’s Summer Session will run weekdays from June 25 to July 20, excluding the July 4th holiday, from 10am-5pm each day. The Academic-Year Session will run from August 2012 to May 2013.

Is the IIT Boeing Scholars Academy really FREE?
Yes! Thanks to a generous grant from the Boeing Company, the IIT Boeing Scholars Academy is an entirely free program for participants. All lunches, field trip costs, and project materials are included. However, transportation to and from campus at the beginning and end of each day is not included, except in extenuating financial circumstances. Please also note that students are not compensated financially (e.g., through stipends or scholarships) for their participation.

Who are the other IIT Boeing Scholars?
Each year’s class of IIT Boeing Scholars includes approximately 100 high school students (rising juniors and seniors) hailing from dozens of Chicago-area schools, chosen for their commitment to academics, promise as future leaders, and vision for positively impacting their communities and the world through STEM fields. Like you, each IIT Boeing Scholar brings to the program their enthusiasm for engaging with peers in a collaborative and project-based learning environment, motivation to pursue a high-quality educational experience at the university level and beyond, and desire to innovate in order to solve real-world problems. Beyond these commonalities, Scholars reflect the broad diversity of Chicago-area youth, and each possesses a unique and rich set of experiences, perspectives, skills, and interests.

While you will get to know all 100 Scholars in some capacity over the course of the program, your most in-depth, daily interactions will be with other students in your “cluster.” Each cluster is comprised of 15-20 Scholars who work together as a group during the summer program to complete various hands-on projects under the direction of their Program Instructor. Scholars are assigned to their Program Instructor and cluster based on a number of factors, including—insofar as we can tell from each student’s application, recommendations, and interview—their personality and areas of interest and what kind of role we think they might fulfill on a team of their peers. We want every cluster to be as diverse as possible.
What will I learn and do in the 2012 Summer Session?

Shortly before the start of the summer program we will provide a detailed schedule so that students and parents/guardians know what to plan for each day. In general, the Summer Session provides participants with an interdisciplinary, thematic program of activities focused on increasing access and exposure to STEM fields, solving real-world problems, and addressing “big ideas” of relevance to local high school students. Students spend approximately 75% of their time engaging with STEM-related academic content and 25% developing a toolkit of general skills for success in college, careers, and other endeavors. To get a general sense of what we did last summer, you may wish to review http://blogs.iit.edu/boeing_scholars/cities-of-the-future.

Through our Summer 2012 theme, “Local Action, Broader Impact,” we will explore how STEM-related work can positively impact lives and improve conditions locally, regionally, nationally, and internationally. We will investigate various interconnected world problems (related to energy, poverty, hunger, health, resources, the environment, education, economics, and more), learn about existing approaches to addressing them through STEM, and propose (and gauge the scalability of) local actions that could effect broader change. In addition to collaborating with one another on projects modeled on real-world situations, students will have the opportunity to contribute to real projects taking place in the real world—specifically, in the city of Chicago.

A new program feature this summer will be multi-day “Serving through STEM (StS)” Projects—immersive “programs within a program” offered in partnership with IIT professors, research centers, and external companies/organizations. Through participation in one of our six StS Projects, students will learn about a given area (e.g., solar energy, diabetes research, product testing and development) and then contribute to a portion/stage of a related real project in the real world. StS Projects are intended to give students exposure to professionals and a given professional area, experience on a real-world project, and a sense of how they can have a positive impact on the lives of others through STEM.

Outside of the StS projects, most days’ activities are oriented around a sub-theme or an issue, beginning with a 2-hour “Issues Forum,” an interdisciplinary panel discussion featuring faculty, professionals, and community members addressing a given topic. During the afternoon, Scholars engage in a 3-4-hour “Project Challenge,” a hands-on “problem-centered” project in which they collaborate, experiment, and innovate before presenting and defending their work to their peers. Last summer, students completed seven “Project Challenge” activities, including:

- **The Net Zero Project:** Springing forward in time to 2050, to a significantly and climatically changed Chicago, Scholars were challenged with accommodating a group of researchers in a new “living city.” Teams had to plan for multiple dwellings, food supply, and sustainable building systems in order to run the city without the help of certain current commodities, like oil.
- **Creating an Electrical Generator:** Armed with basic background information about how electricity works and with almost no instructions, Scholars had to make electricity in less than three hours...using K'nex, copper wire, neodymium magnets, metal bolts...and not much else!
- **Stormwater Management:** Groups were assigned different sites and tasked with completing area measurements for impervious and pervious surfaces, calculating stormwater runoff for that site during a 24-hour precipitation event, and planning Low Impact Development (LID) strategies.

Through participation in these projects and in dedicated sessions, we also devote time to helping students develop practical STEM skills (e.g., data collection and analysis, how to write a college-level lab report), professional skills (e.g., presentation skills, project management), and college and career literacy. Besides offering college-oriented workshops and career exposure events, we host a Q&A admissions forum and a college fair—this year, in partnership with the University of Chicago Collegiate Scholars Program, which also serves high-achieving Chicago high school students. Additionally, our Scholars participate in a mock “business luncheon” with IIT administrators and area professionals, an Ethics Bowl organized by IIT’s Center for the Study of Ethics in the Professions, lab tours, and field trips.

One of Scholars’ favorite aspects of our program is the Leadership Grant Projects. For these, students collaborate in teams to develop and propose their own projects to be implemented in their communities/schools over the course of the academic year. Through the awarding and stewardship of these Leadership Grants, we provide Scholars with the opportunity, resources, and guidance to empower them to promote positive change, give back to their community, and continue to develop as leaders.
While each day of the Summer Session is structured slightly differently, a typical day might look something like this:

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30-10:00am</td>
<td>Check-in</td>
</tr>
<tr>
<td>10:00am-12:00pm</td>
<td>All students together—for instance, in an Issues Forum or workshop</td>
</tr>
<tr>
<td>12:00-1:00pm</td>
<td>Lunch in The Commons (IIT’s Dining Hall)</td>
</tr>
<tr>
<td>1:00-5:00pm</td>
<td>Project time (by cluster, StS, or Leadership Grant Project group), plus a break</td>
</tr>
<tr>
<td>5:00pm</td>
<td>Check-out</td>
</tr>
</tbody>
</table>

Overall, through our theme and the collaborative structure of the program, we intend to give students a framework through which to situate and integrate their existing experiences and observations of Chicago and the world, what they have already learned in school, and knowledge gleaned through participation in our program. In developing academic programming, we draw extensively on student input acquired through both brainstorming sessions and focus groups with current Scholars and careful review of applicants’ “critical response” essays. We pride ourselves on our engagement of students’ interests and concerns as an entry-point to studying issues of global relevance and to inspire their STEM study.

Who are the instructors and staff?
As an IIT Boeing Scholar, your most consistent daily contact is with a team of six Program Instructors (IIT graduate students and upper-level undergraduates from a variety of STEM disciplines), all of whom are leaders and role models in our campus community. They have stellar academic records, strong experience and interest in teaching, and enthusiasm for and commitment to the program. In addition to co-developing and leading the various projects that Scholars engage in during the program, Program Instructors participate in lectures and workshops alongside students, serve as Teacher Assistants to supervising faculty, and assist with college, career, and leadership programming. Throughout these activities, Program Instructors facilitate and critically mediate learning, helping students figure out how to approach the problems at the core of each curricular project and drawing attention to any unseen complexities and interconnected issues. While Program Instructors do “instruct” Scholars, their relationship to their cluster is more “coach-team” than “teacher-student.”

Each day of the summer program, IIT Boeing Scholars also interact with a wide range of IIT faculty members. Faculty Program Advisors have a daily or near-daily presence, facilitating and leading academic lectures and workshops, as well as co-supervising Program Instructors. Faculty Program Advisors are also essential to developing the overall theme and integrating all academic activities. Each “Serving through STEM” project has a lead IIT faculty member, and other university faculty serve as guest speakers, share their research and professional guidance with the students, and show their labs and research facilities. IIT administrators and professionals from external groups also contribute their time and expertise.

The Program Director and Program Coordinator (IIT staff) and Program Interns (IIT students) are on site full-time throughout the summer, serving to administrate and supervise.

Will there be homework? Will I have to take tests?
We do not generally assign students homework, and when we do it is usually something like “for tomorrow, bring an idea about….” When students start developing their Leadership Grant Project proposals, they do tend, mostly of their own accord, to work on them together outside of program hours.

While students are not given grades or traditional tests, to ensure that we are providing a high-quality educational experience that is valuable to all IIT Boeing Scholars, we expect that every program participant complete brief assessment measures. In the 2011-12 year, assessment involved a computer-based “pre-” and “post-test” administered during the Summer Session and an end-of-academic-year survey. These assessments were designed by faculty in IIT’s College of Psychology and Center for Research and Service. There will be similar assessment measures in 2012-13. All personal information and results remain confidential, and only aggregated data is reported to the grantor, the Boeing Company. By a separate procedure, we also assess our teaching staff to ensure a superior quality of instruction.
What if I have to miss a few days this summer?
We understand that the kind of students we admit to the program are highly involved individuals with many talents and interests. While we of course encourage your participation in a variety of arenas, we expect that students will attend every day of the Summer Session. If they must miss a couple of days, they must discuss this in advance, and in writing, with the Program Director to get the absences formally approved as “excused.”

Additionally, we ask that, in advance of any known absence, tardiness, or early dismissal, you notify your Program Instructor and all members of your team with the levels of respect and responsibility that would be expected of you in any future professional environment.

How should I dress for the Summer Session?
Unless noted otherwise, daily attire is casual (shorts, jeans, t-shirts) and comfortable (we will be moving around a lot). We encourage you to also bring a long-sleeved shirt or sweater each day, as different campus buildings and field trip sites may be of varying temperatures. We will notify you in advance regarding for which days alternate dress is recommended or required. For instance, on days that we will be making special visits or hosting representatives of the Boeing Company, we require “business casual” attire. On other days, we may strongly encourage you to wear walking shoes as well as a hat and/or sunscreen.

Please remember that, at all times, you represent your sending high school and home community, and thus should be conscious about the message that your clothing and behavior sends. While we understand that summer temperatures may soar at times, we expect students to maintain modesty in dress as well as in demeanor.

Can I receive college credit for my participation in the Summer Session?
The IIT Boeing Scholars Academy Summer Session is not an IIT “course,” and we do not grant college credit for its completion. We are aware that there are other academic summer programs that are essentially college courses for high school students, and we recognize that the possibility of college credit can be attractive to participants. Please note that, even with such programs, receiving credit for the courses is contingent on the postsecondary institution you ultimately attend and its policy regarding giving credit for work completed at other institutions. We strongly believe in the structure, purpose, and methods of our program and while you will not get a credit for your work with us this summer we are confident that you will benefit in numerous ways.

What happens during the Academic-Year Session?
Throughout the months of August 2012 to May 2013, following completion of the Summer Session, you are expected to stay involved with the IIT Boeing Scholars Academy through participation in the Academic-Year Session. During this time, you will be invited to a number of designated program events—such as workshops, seminars, and field trips—of which you are expected to attend at least three per semester. We provide a calendar of options at the beginning of each semester and occasionally add events as we go; a sampling of what we have done so far this year can be found on our blog: http://admission.iit.edu/boeingscholars.

Our academic-year events range in focus, depth, purpose, and time of offering to accommodate students’ varying schedules. Some events provide opportunities for enrichment or for the development of particular STEM skills. Others are designed to help Scholars explore their college and career options, and still others support students’ continued development and implementation of ongoing Leadership Grant Projects. For many of our academic-year events, we invite Scholars to bring a “plus-one,” such as a family member or friend, to share in their learning.

If you know that you will be unable to make a full-year commitment to the IIT Boeing Scholars Academy, we encourage you to visit http://summer.iit.edu to learn about summer-only programs offered on the IIT campus. You may also wish to visit other universities’ websites, as well as online databases such as the Institute for Broadening Participation’s STEM Program Search (www.pathwaysstoscience.org/Programs.asp) and Project Exploration’s Discover Your Summer database (www.projectexploration.org/dys/search).
Why should I participate in the IIT Boeing Scholars Academy?

Through innovative, interdisciplinary programming, the IIT Boeing Scholars Academy provides you and other talented students from Chicago-area high schools with the opportunity and resources to:

- Expand your intellectual and professional options by advancing your knowledge of STEM fields, gaining a wide range of experiences in different settings, and interacting with professionals.
- Initiate and build positive relationships with renowned IIT faculty members and students from multiple disciplines, as well as with other outstanding high school students, as you collaborate to find solutions to real-world problems.
- Develop and demonstrate your academic excellence, sense of innovation, leadership and teamwork skills, and motivation for success in a college-level learning environment—all of which can strengthen your applications to selective colleges like Illinois Institute of Technology.
- Navigate the college selection, admission, and financial aid processes with the help of program advisors.
- Become a community leader, creating lasting educational links between your sending classrooms, schools, and communities and the IIT Boeing Scholars Academy.

Indeed, many—like IIT alumna Andrea Berry, quoted below—credit their participation in summer programs as a significant factor in their college and long-term career success:

“As a Chicago Public Schools student, I attended a summer program very similar to the IIT Boeing Scholars Academy. During that summer, I met amazing students who inspired me and who have remained lifelong friends. The educational experiences at IIT that summer changed my life forever. New doors were opened and new possibilities were created—ones that I could barely have imagined as a high school student.

“Today, I want to encourage you to strongly consider the IIT Boeing Scholars Academy, and I want you to know, on behalf of the entire alumni community, that you will have our support today, tomorrow—forever.”

—Andrea Berry, IIT Trustee and Alumna, Senior Vice President of Broadcast Operations, Fox Network Engineering and Operations, Los Angeles, California

While IIT Boeing Scholars will not receive grades, they do receive an official “letter of participation” recognizing their successful completion of the program. Students may also receive, at their request and with suitable advance notice, letters of recommendation from Program Staff, regarding their individual progress and performance in the program.

Additionally, through their affiliation with the IIT Boeing Scholars Academy, rising seniors are eligible to participate in the Onsite Admissions Forum. Organized by one of our partner non-profit organizations, Chicago Scholars, the Onsite provides a unique opportunity for students to receive special early admissions consideration (in September and October of their senior year) by approximately 70 selective institutions.

A note to parents/guardians

Please note that students will be required to turn off their cell phones and other communication devices during the summer program day so as not to disturb program activities or distract fellow participants. Students will only be allowed to check their messages during structured breaks, and even then will be discouraged from communicating about non-urgent matters as this can disrupt their team-building and social development with other students. If, in the event of an emergency, you must reach your child immediately, you may call Marya Spont on her summer work cell at 312.520.6733 and she will excuse your child from program activities to speak with you.

Acknowledgements

In addition to the generous support provided to this program by the Boeing Company and by IIT, we are also grateful for partner organizations—such as Chicago Scholars and the University of Chicago Collegiate Scholars Program—with whom we collaborate to enhance or expand our own programming. While IIT has a long history of hosting academic summer programs, we would like to acknowledge the leadership, guidance, and/or inspiration in these areas that other universities—particularly MIT, the University of Chicago, Rutgers, and Johns Hopkins University—have provided. We celebrate our shared work with youth.
About Illinois Institute of Technology (IIT)
Founded in 1890, Illinois Institute of Technology is a private, Ph.D.-granting research university that awards degrees in engineering, the sciences, architecture, law, design, psychology, humanities, and business. IIT brings a focused, interdisciplinary approach to education, including to the Interprofessional Projects (IPRO) Program. With alumni around the world, IIT pairs the educational and cultural experiences of America’s Second City with the feel of a small community, with an undergraduate population of approximately 2,300 students and total population of more than 7,400 students. Learn more at www.iit.edu.

IIT’s Commitment to Diversity
Illinois Institute of Technology is a community that values and respects its members. We appreciate that our faculty, staff, students, alumni/ae and trustees come from many backgrounds and many parts of the world. We embrace the contributions that differences offer. We are committed to providing a working and learning environment in which all students and all members of the faculty and staff are able to realize their full potential.