Summer Session
Detailed Schedule

Unless otherwise noted, each day runs 10am-5pm. Students can check in as early as 8:30am. We provide free lunch at 12pm.

Week 1

Monday, June 25 – Introduction
- 10-11am – Welcome!
  o Gerald P. Doyle, Vice Provost for Student Access, Success, & Diversity Initiatives, IIT
  o Marya Spont, Program Director, IIT Boeing Scholars Academy
  o Dr. Nancy Karuri, Assistant Professor, Department of Chemical and Biological Engineering, IIT; and Faculty Program Advisor, IIT Boeing Scholars Academy
  o Professor Stephen Sennott, Adjunct Associate Professor and Assistant Dean for Undergraduate Academic Affairs, College of Architecture, IIT; and Faculty Program Advisor, IIT Boeing Scholars Academy
  o Program Instruction team
- 11am-12pm – “Where is Chicago?” – Dr. Stuart Patterson, Associate Professor, Liberal Arts, Shimer College
- 12-1pm – Lunch
- 1-2pm – Assessment (pre-test)
- 2-5pm – Cluster teambuilding

Due Tuesday: In preparation for Tuesday’s design challenge, each of you is to conduct some ethnographic research. Whether at home, while commuting, or when “out and about,” take 30-60 minutes to observe an environment where people are present. Using the POEMS framework described below, observe this environment through a set of virtual lenses. Capture your observations. What workarounds do you notice? What things confuse you? What observations cause you to think, “Why do they do it that way?” or “Why are things designed that way?” Before you go to sleep for the night, identify 1-3 potential problems for which you would enjoy trying to design solutions over the next two days. The POEMS framework involves considering:
- People: Who is there? What are their values and pre-conceptions? When do they hesitate or encounter problems? What are their (unmet or underserved) needs?
- Objects: What physical things are in the environment, and how do they relate to activities taking place there?
- Environments: Where are people working or doing things? What else is going on in the background?
- Messages: What information is exchanged between people? What information is offered to people by objects or systems (present or not present)?
- Services: How are people being supported in their activities, either by systems or by employee actions?

Due Tuesday and Wednesday: During check-in or lunch on these dates, we will ask each student to report to us their updated weighted and unweighted GPAs and ACT/SAT scores (if taken). This information is necessary for us to advise students in their college search and to write letters of recommendation on their behalf. For students who elect to participate in the Chicago Scholars Onsite Admissions Forum (seniors only; very strongly recommended) and take advantage of the resources of College Greenlight (juniors and seniors; recommended), we can also use this information to help set up their profiles with these organizations in advance of or following the July 5 presentations. More information about Chicago Scholars and College Greenlight can be found at the end of this document.
Tuesday, June 26 – Design Thinking

- 10-11am – “Natural and Manmade Complex Systems” – Dr. Fouad Teymour, Johnson Polymer Professor and Director of the Center for Complex Systems and Dynamics, Department of Chemical and Biological Engineering, IIT
- 11am-12pm – “The Science of Service” – Frank Bergh, EIT, LEED-AP, Electrical Engineer, Nordex USA, Inc.; and President of Great Lakes Region, Engineers Without Borders-USA
- 12-1pm – Lunch
- 1-5pm – Design Thinking workshop (section 1 of 3) – Dr. David W. Gatchell, Director, MaDE Program; and Clinical Associate Professor, Segal Design Institute, Northwestern University

Wednesday, June 27 – Design Thinking (cont.)

Dress up! Slacks/skirt and a nice shirt is fine; no jeans or t-shirts.

- 10am-12pm – Design Thinking (section 2 of 3) – Dr. David W. Gatchell
- 12-1:30pm – “Global Connections” luncheon
  - Keynote by Amy L. Segami, inspirational speaker, independent consultant, engineer, and artist
  - Hosting guests from Angola, Brazil, Chad, China, Djibouti, Hong Kong, Kenya, Malawi, Nigeria, Pakistan, South Africa, South Korea, Spain, and more
  - Featuring Mexican, Moroccan, and Thai cuisine
- 1:30-5pm – Design Thinking (section 3 of 3) – Dr. David W. Gatchell

Due Thursday: In preparation for Thursday’s Project Challenge, please read the following documents (provided to Scholars electronically on June 20 and on paper on June 25):

- International Mercury Assessment (IMA):
  - Part 1 (http://blogs.iit.edu/boeing_scholars/files/2012/06/IMA-Assessment_Part-1.pdf)
  - Part 2 (http://blogs.iit.edu/boeing_scholars/files/2012/06/IMA-Assessment_Part-2.pdf)
- Readiness Questions (http://blogs.iit.edu/boeing_scholars/files/2012/06/IMAReadinessQuestions.pdf)
- General Instructions (http://blogs.iit.edu/boeing_scholars/files/2012/06/Hg-Game-General-Instructions.pdf)
- Glossary (http://blogs.iit.edu/boeing_scholars/files/2012/06/Hg-Game-Glossary.pdf)

Please do not spend more than two (2) hours reading these documents. That should be a more than sufficient amount of time for you to absorb as much as you need to know for Thursday’s activity. The “Readiness Questions” should guide your reading to the most important questions and issues at hand.

Thursday, June 28 – Environmental Stewardship, Global Cooperation, & Policy

- 10-10:30am – "Asking Researchable Questions" – Dr. Meghan Vincent, Education Outreach Director, Center for Robust Decision Making on Climate and Energy Policy, University of Chicago; with two of her summer research assistants, 2011-12 IIT Boeing Scholars Aidan Sadowski and Eritomiwa Sobayo.
- 10:30am-12pm – Issues Forum: Environmental Stewardship, Global Cooperation, & Policy
  - Introduction to the issues – Dr. Matthew Shapiro (moderator), Assistant Professor, Political Science, IIT
  - Speakers:
    - Melville (Mel) Nickerson, Staff Attorney and Government Relations Specialist, Environmental Law and Policy Center
    - Kim Wasserman, Director, Little Village Environmental Justice Organization (LVEJO)
    - Dr. David G. Ehrlich, Visiting Assistant Professor, Stuart School of Business, IIT
    - Dr. Bhoopesh Mishra, Assistant Research Professor, Department of Physics, IIT; and Visiting/Guest Scientist, Biosciences Division, Argonne National Laboratory
  - Q&A panel discussion (all speakers)
- 12-1pm – Lunch
- 1-5pm – Project Challenge: The Mercury Game
  - From 1:30-4:30pm, 12 Scholars will “live Tweet” the proceedings of our negotiation simulation. Follow them on our program blog: http://admission.iit.edu/boeingscholars!
Friday, June 29 – Sustainable Land Use & Food Access
Wear closed-toed shoes and long pants, and be prepared to spend some time outside (sunscreen, hat, etc.)
• 10am-1:30pm – Field trips (we have already randomly assigned which students will attend which trip)
  o 50 students travel to Argonne National Laboratory for a presentation by Dr. M. Cristina Negri, Agronomist and Environmental Engineer–Energy Systems, and a visit to a grove of poplar trees she uses for phytotechnologies research (the treatment of environmental problems through the use of plants).
  o 50 students travel to the outskirts of Plainfield, Illinois, to tour a century-old, 400-acre family-owned farm that grows corn and soybeans. Students will learn about the economics, science, and engineering of running a farm. Thanks to the Cook County Farm Bureau and farmer Mike Rauch.
• 1:30-2pm – Lunch
• 2-5pm – Project Challenge: Community Development

Week 2

Monday, July 2 – Understanding Infectious Disease
Wear closed-toed shoes and dark clothes or clothes you do not mind spilling on (unlikely, but possible).
• 10am-12pm – Leadership Grant Project (LGP) launch
• 12-1pm – Lunch
• 1-5pm – Project Challenge: Outbreak!

Due at check-in on Tuesday, July 3: Your ranked choices for Students’ Choice Enrichment Day (taking place on Friday, July 6). Due at check-in on Tuesday, July 3, or Thursday, July 5: Your ranked choices for Serving through STEM (SIS) project (each a “program-within-a-program” taking place during Weeks 3-4). See the end of this document for information about options.

Tuesday, July 3 – Innovative Design Solutions
• 10:10-10:15am – Student presentations on “innovative design solutions” in Argentina, Japan, Peru, and the United Kingdom – IIT Boeing Scholars Alexy Cruz, Edan Eingal, Alyssa Lawrence, Julia Mosqueda, Shanell Porter, and Akshara Sreedhar
• 10:15am-12pm – Issues Forum: Innovative Design Solutions
  o Introduction to the issues – Dr. David W. Gatchell (moderator)
  o Speakers:
    ▪ Joey Feinstein, Executive Director, Climate Cycle
    ▪ Karen K. Lee, Operations and Projects Manager, South Side Health and Vitality Studies, Urban Health Initiative, University of Chicago
    ▪ Mert Hilmi Iseri, Design for America Fellow, Northwestern University
    ▪ Representative (TBD), Working Bikes
  o Q&A panel discussion (all speakers)
• 12-1pm – Lunch
• 1-5pm – Project Challenge: Innovative Design Solutions

Wednesday, July 4
No program today – Happy July Fourth!

Thursday, July 5 – Ethics Bowl
Dress up! Slacks/skirt and a nice shirt is fine; no jeans or t-shirts.
• 10am-12pm – Introduction to college access resources
  o Onsite Admissions Forum – Carol J. Sharp, College Success Manager, Chicago Scholars Foundation
  o Using and leveraging College Greenlight – Various representatives
  o The college search process, including how to develop a College Greenlight profile
• 12-1pm – Lunch
• 1-5pm – Ethics Bowl
Friday, July 6 – Students’ Choice Enrichment Day
Depending on their choice, Scholars may have to dress up, prepare to spend time outside, or do something else.

- Full-day field trips (see the end of this document for more information about these options)
  - 9am-5pm – Fun with Financial Markets! (downtown)
  - 9am-6pm – Urban Agriculture and Community Development @ Sweet Water Foundation (Milwaukee, Wisconsin)
  - 10am-5pm – It's a Small World, After All! @ IIT
  - 10am-5pm – The Making and Meaning of Chicago's Lakefront (downtown)
  - 10am-5pm – Swing and Blues Dancing @ Big City Swing (Near West Side)

Week 3

Monday, July 9 – Serving through STEM (StS) Projects Launch

- 10-11am – "Dressing for Success" – Lisa Lockett, Human Resources and Administration Finance, The Boeing Company
- 11am-12pm – College admissions advice from graduating seniors
- 12-1pm – Lunch
- 1-5pm – Serving through STEM (StS) projects launch
  - By Tuesday, July 3, Scholars will have indicated their preference for one of six possible Serving through STEM (StS) Projects—multiday mini-programs focused on giving back through STEM areas like diabetes research, nature education, and data analysis. StS projects take place during regular program hours (28 hours total over seven afternoons), but each has its own unique schedule and field trips. Short summaries of options are available at the end of this document; during Week 1, the Program Director will present a more in-depth look at each option so that students can make informed decisions.

Tuesday, July 10 StS (day 2)

- 10am-12pm – LGP time
- 12-1pm – Lunch
- 1-5pm – StS (day 2 of 7)

Wednesday, July 11 – StS (day 3)

- 10am-12pm – “Explore a Major” event
- 12-1pm – Lunch
- 1-5pm – StS (day 3 of 7)

Thursday, July 12 – College & Careers

Dress up! Slacks/skirt and a nice shirt is fine; no jeans or t-shirts.
Parents/guardians and other family members are encouraged to attend from 3-9pm!

- 9am-12pm – Optional: Open computer lab time
- 12-1pm – Lunch
- 1-3pm – Career exploration
  - 1-1:30pm – College student and young professionals panel
  - 1:30-3pm – Career exploration fair
    - Professionals interested in volunteering to talk about their career path can sign up online at http://tinyurl.com/iitcareerexp.
- 3-9pm – College night
  - 3-4pm – College 101 – Illinois Student Assistance Commission (ISAC)
  - 4-5pm – Financial Aid 101 – Illinois Student Assistance Commission (ISAC)
  - 5-6pm – Dinner
  - 6-6:45pm – Q&A panel discussion with college admissions professionals
  - 6:45-9pm – College fair
Friday, July 13 – StS (day 4)
- 10am-12pm – LGP time
- 12-1pm – Lunch
- 1-5pm – StS (day 4 of 7)

Saturday, July 14 – Boeing Company’s Global Day of Service
Dress up! Slacks/skirt and a nice shirt is fine; no jeans or t-shirts.
- 8:30am-12pm – On this day, 75 Boeing Company employees will travel to IIT’s campus to spend their annual Global Day of Service helping IIT Boeing Scholars develop their Leadership Grant Projects!

Week 4

Monday, July 16 – StS (day 5)
- 10am-12pm – “Understanding Debt” – Larissa J. Miller, Program Instructor, IIT Boeing Scholars Academy; and PhD student in Finance, Stuart School of Business, IIT
- 12-1pm – Lunch
- 1-5pm – StS (day 5 of 7)

Tuesday, July 17 – StS (day 6)
- 10am-12pm – LGP time
- 12-1pm – Lunch
- 1-5pm – StS (day 6 of 7)

Wednesday, July 18 – StS (day 7)
Dress up! Slacks/skirt and a nice shirt is fine; no jeans or t-shirts.
- 10am-12pm – “Life Mapping” activity
- 12-1pm – Lunch
- 1-5pm – StS (day 7 of 7) – Scholars present their deliverables!

Thursday, July 19 – Network-Building
- 10am-12pm – Guest speaker (TBC)
- 12-1pm – Lunch
- 1-4:30pm – Scholar skill-share (like a talent show, only more about teaching each other!)
- 4:30-6:30pm – LGP mentor-matching

Friday, July 20 – Visitors’ Day
Dress up! Slacks/skirt and a nice shirt is fine; no jeans or t-shirts.
Invite family and friends to attend from 2-5pm!
- 10-11am – “Where is Chicago?” – Dr. Stuart Patterson
- 11am-12pm – Assessment (post-test)
- 12-1pm – Lunch
- 1-2pm – Prepare for Visitors’ Day
- 2-5pm – Visitors’ Day
  - Summer in review
  - StS presentations
  - Closing reception

Thanks for an amazing summer!
More Information

Chicago Scholars & College Greenlight (College Access Organizations) – Thursday, July 5

The Chicago Scholars Foundation is an innovative not-for-profit organization that helps marginalized Chicago-area high school students overcome barriers to collegiate access and success. Since we are a partner organization of Chicago Scholars, our seniors are invited to participate in their annual Onsite Admissions Forum. The Onsite is a live college admissions event that is designed to ensure that students are matched with a set of “good-fit” college options as they jump-start the admissions process—putting Scholars ahead of traditional admission cycles, relieving anxiety (particularly for first-generation college students), and freeing them up to concentrate on academics during their senior year. By mid-September, participating students submit completed applications to five “good-fit” attending colleges, and colleges come to the Onsite event in late October prepared to meet with students to discuss their applications and often to admit them “onsite.” More than 500 students (including 24 IIT Boeing Scholars) interviewed for admission to 70 colleges as part of the 2011 Onsite Forum. We found it to be extraordinarily beneficial for our students and very strongly encourage all seniors in this year’s program to participate.

College Greenlight is a free online resource associated with college search company Cappex.com that helps students—especially underresourced students—connect with and organize applications for schools and scholarships. College Greenlight works primarily and directly with community-based organizations like ours to help students find opportunities that may be good fits, taking into consideration our specializations and groups served.

Students’ Choice Enrichment Day – Friday, July 6

Please review the options described below. When you sign in on the morning of Tuesday, July 3, we will record your preferences (ranked 1-5) and then tell you on Thursday in which activity you will be participating on Friday. Each option gives you the opportunity to immerse yourself in an area we have already touched upon or to discover an entirely new one! Chaperoned by Program Instructors, 15-30 students will be able to pursue each full-day activity. Please note alternate times for some activities.

- Fun with Financial Markets! (downtown) – The financial markets play an integral part in how money is transferred among households, businesses, and governments. This option provides students with an opportunity to tour the Chicago Board of Trade and the Chicago Board of Exchange, learn about currency markets and how they work, and participate in a trading simulation game (OANDA)—all thanks to Larissa J. Miller (IIT Boeing Scholars Academy Program Instructor and PhD student in Finance at IIT’s Stuart School of Business)! The group will also experience life as a trader by eating in one of the oldest trading gathering posts, the Ceres Café, with Ms. Miller and several finance professionals. Maximum: 30 students. Must be 16 or older. No jeans, and young men must wear a tie (let us know if you don’t have one, because we do!). Scholars selecting this option should plan to depart from IIT at 9am (an hour early) and return at 5pm (normal time).

- It’s a Small World, After All! @ IIT – As more and more research is conducted on complex systems and networks, scientists continue to discover universal features and structures that recur in diverse fields of applications. Among these are a class of networks known as scale-free networks and often referred to as small-worlds. These networks uniquely combine a high degree of clustering and a short average path between any two nodes chosen at random. This leads to the often experienced phenomenon of running into someone, usually at the strangest possible place, who knows a friend of a friend of yours. Small world!!! Small-world properties are found in many real-world phenomena, including road maps, food chains, electric power grids, metabolite processing networks, networks of brain neurons, voter networks, telephone call graphs, and social influence networks (learn more at http://en.wikipedia.org/wiki/Small-world_network or email us for scholarly articles). In this activity, Dr. Fouad Teymour of IIT’s Department of Chemical and Biological Engineering will lead you in an effort to interactively mine the Internet Movie Database (IMDB) to construct a network of collaborations starting from randomly selected movies, and to inquire whether small-world properties emerge in this network. Maximum: 15 students.
• The Making and Meaning of Chicago’s Lakefront (downtown) – This daylong excursion into the heart of Chicago’s Lakefront cultural showpieces will explore the history, politics, design, and engineering that put them there and made them what they are today. Join Shimer College’s Dr. Stuart Patterson for a special tour of the Art Institute of Chicago—looking mostly at the museum itself (rather than what’s in it) and how the institution’s building and operations reflect its role as a local cultural center designed to engage global visitors. After lunch at the museum, students will take a closer look at the life and history of what is now Millennium Park (a local and tourist cultural destination) and was once part of Lake Michigan. This is a great opportunity to learn more about the liberal arts. Maximum: 15 students.

• Swing and Blues Dancing @ Big City Swing (Near West Side) – Instructors Sara Cherny (Big City Blues) and Bob Bednarz (Big City Swing) will teach students the basics of swing dance and blues dance, two forms of social partner dance. They will learn dance frame and connection, which are important to many different partner dances. Students will also explore the history, evolution, and musical tradition behind swing dance and blues dance, which have roots in blues music, jazz, big band, and other genres. Maximum: 15 students.

• Urban Agriculture and Community Development @ Sweet Water Foundation (Milwaukee, Wisconsin) – Travel to Milwaukee (!) to visit the Sweet Water Foundation, a non-profit organization focused on the potential of urban agriculture as a vehicle for community development. After touring the Sweet Water Organics farm, Scholars will learn about five main components of an aquaponics system: fish, plants, bacteria, lights, and air/aeration. Assisted by SWF educators, Scholars will work in small groups on a series of “design charrettes” (proposing solutions to garden and aquaponics design problems) and hands-on design-build projects. Maximum: 30 students. Scholars selecting this option should plan to depart from IIT at 9am and return at 6pm; prepare to spend time outside (sunscreen, hat, etc.) and to get muddy.

Serving through STEM projects – Weeks 3 & 4

New in 2012! Each IIT Boeing Scholar will have the opportunity to immerse themselves in one of six possible multi-day “Serving through STEM (StS)” projects, which are intended to provide Scholars with further exposure to STEM issues and professionals, experience contributing to a project in the real world, and a sense of how they can have a positive impact on the lives of others through participation in STEM. These “programs within a program” are offered in partnership with faculty members, research centers, and organizations; Program Instructors serve as TAs to lead faculty. StS projects take place during the regular summer program day (four hours per day over the course of seven afternoons during Weeks 3 and 4), but each has its own unique schedule and field trips. Though diverse in topics addressed, for each StS project Scholars will have to develop assigned deliverables to be presented to related stakeholders on July 18 and to fellow Scholars and guests during our July 20 “Visitors’ Day.”

Please review the options described below. When you sign in on the morning of Tuesday, July 3, or Thursday, July 5, we will record your preferences (ranked 1-6). By the end of the day Thursday, we will tell you in which of the following StS projects you will be participating:

• Analyzing Data in the Public Interest: Computing Approaches to Investigating Community Health Indicators in the United States. Led by Alana Platt, Department of Computer Science (Doctoral Candidate), IIT. Program TAs: Anna Kladzyk and Luis Larco. In modern society, the sheer amount of information available can be overwhelming. How do we figure out what data are reliable and relevant, and how can we use them to better understand our world? Scholars will learn basic computational methods for data collection and analysis (e.g., databases, data mining, search engines) and apply these to research local and national health and wellness indicators. Scholars will explore information in two datasets—Community Health Status Indicators (CHSI) to Combat Obesity, Heart Disease and Cancer from Data.gov, and a dataset of health-and obesity-related Tweets (gathered in part by the students in this STS). Working in small groups, Scholars will develop and answer their own research questions, create a website to showcase their findings, and identify actions to potentially effect a positive change in their communities’ health.
- **Engineering Research and Mentorship: An Introduction to Understanding Diabetes, Its Complications, and Treatments.** Overseen by Dr. Eric Brey, Department of Biomedical Engineering, IIT, and led by 14 STEM undergraduates from various universities, Research Experience for Undergraduates (REU) program funded by the National Science Foundation and IIT’s Pritzker Institute of Biomedical Science and Engineering. Program TA: Courtney Regis. Through shadowing undergraduates and visiting research facilities in the city, Scholars will learn about the nature of research, diabetes and its impact on society, and the many ways engineers contribute to new treatments of the disease and its complications. Scholars will learn tips for reading and synthesizing information from scientific journal articles as well as how to develop a research question. For their deliverable, Scholars participating in this StS will be challenged with creating a 3D physical model to teach middle schoolers how a healthy body uses insulin to control the level of glucose in the blood, and what happens when it doesn’t work. Finally, Scholars will actually teach this lesson to some middle schoolers!

- **Enhancing Design Engineering Education: Iterating “DESIGN. BUILD. TEST.” with the James Dyson Foundation.** Led by James Dyson Foundation educators and engineers. Program TA: Saurabh Mathur. Help ignite a passion for engineering in young people—including yourself—by influencing the re-design of the James Dyson Foundation’s “DESIGN.BUILD.TEST.” (DBT) after school program! Guided by Dyson engineers and educators, Scholars will participate in the current version of DBT (designed for use in the UK), going through the process of identifying something that frustrates them and designing a solution by brainstorming, sketching, prototyping with cardboard, and testing their designs to iterate again. After this hands-on engineering experience, Scholars will meet with industry professionals to learn exactly what tools engineers use (from group brainstorming to selective laser sintering) and how products get developed. Scholars will conduct user-centered design by interviewing teachers who have used the DBT curriculum before and delve into the curriculum themselves to analyze how best to communicate the design process to other students. On the last day, the Scholars will present—to James Dyson Foundation Directors and Dyson engineers—their recommendations for adjustments to DBT to better reach and inspire other young people.

- **Nature Education in the City: Developing a Community-Based Youth Volunteer Program for the Chicago Zoological Society and Eden Place Nature Center.** Led by Dr. Jo-Elle Mogerman, Chicago Zoological Society. Program TA: Julia Gonzalez. As we wander through cities filled with glass, steel, asphalt, and brick, it can be easy to forget that we are part of nature. Yet our actions—and our lack of action—impact nature and thus our lives. Today, there is an increasing need to develop young leaders concerned with conservation to guide, teach, and motivate others to protect the threatened wildlife and ecosystems of our world and our city. For this StS, Scholars will contribute to the Chicago Zoological Society’s mission of inspiring conservation leadership by connecting people with wildlife and nature. Guided by Society staff, Scholars will use Eden Place Nature Center, the Brookfield Zoo, and their knowledge of Chicago to become teen consultants on the newest Community Track of the Society’s Youth Volunteer Corp (YVC). After exploring these sites, interviewing professionals, shadowing current YVC teen interpreters at the zoo, and learning about existing efforts to connect Chicago’s residents to nature through agriculture, ecology, and “citizen science,” Scholars will develop sample urban science projects as well as other proposals for youth engagement. On the last day of this project, Scholars will meet with Chicago Zoological Society staff to propose new ways to educate and inspire conservation leadership among our city’s young people.

- **Urban Recycling in Chicago and Beyond: Promises and Problems.** Led by Dr. Matthew Shapiro, Department of Social Sciences, IIT. Program TA: Larissa Miller. We (Americans) produce around 250 million tons of garbage a year. Remember the Titanic? That’s almost 5,000 Titanic’s! Besides the storage problem represented by such huge amounts of waste, we must remember that it took energy and resources to produce this waste in the first place—which means we’re throwing away money every day. How much of this consumed by-product do we really need to bury in the ground? How much money can be saved by recycling? Keeping garbage out of the landfill and in a non-polluting state means money saved—but how
much, by what methods, and is recycling worth the cost? For this StS, Dr. Shapiro will assist Scholars as they engage in a rigorous analysis of recycling in Chicago, conduct formal cost-benefit analyses of different types of recycling (e.g., electronic, food waste, paper, plastic, metals), and offer recommendations for change. In addition to learning about the present and projected landscape of recycling in Chicago and other cities around the world, Scholars will be challenged to consider critical relationships among recycling, energy, economics, the environment, and sustainability. Scholars will present their analyses—and their proposals for “next steps” in promoting cost-effective ways of recycling in Chicago—to a state or local official or an influential non-governmental organization.

- Urban Solar: Developing Chicago’s Capacity for Solar Energy. Led by Andrew Barbour, Grant Klinzman, and Dr. Mohammad Shahidehpour, Robert W. Galvin Center for Electricity Innovation, IIT. Program TA: Ross Ludwig. Scholars will be challenged with helping to find a solution to the following problem: With Chicago’s Fisk and Crawford coal plants shutting down by the end of the year, how and where can enough solar power be acquired in Chicago to replace that coal power with new renewable energy? Guided by IIT faculty and Galvin Center staff, Scholars will use Google Earth and their knowledge of Chicago to develop proposals for the specific and optimal placement of solar panels on rooftops or in lots throughout the city. In addition to learning about the present and projected landscape of solar and other renewable energy sources (locally, regionally, nationally, internationally)—in this, the United Nations’ “International Year of Sustainable Energy for All”—Scholars will be challenged to consider critical relationships among energy, economics, the environment, and education. Scholars will present their proposals for “next steps” in developing Chicago’s capacity for renewable energy to a state or local official.

[updated 06.30.12]