In 2014, we are offering 12 different academies with each providing 15 hours of interactive activities and study in a specific field of interest. **Space is limited** – each academy has set a maximum number of youth delegates they will accept. **Some have also placed a high school level restriction on their academy.** Spaces will be filled on a first-come, first-served basis. If an Academy is full when you try to register for it, you can email dstocker@illinois.edu and asked to be placed on a waiting list for that Academy OR you can register for another Academy of your choice.

Academies will be held at locations throughout the campus, including classrooms, labs, and the residence halls. Some academies may also provide off-campus visits in their curriculum. The Career Options that are listed below are only a sampling of the types of careers that college majors in this area can follow. Links for the University of Illinois programs in those areas are provided for your career exploration. They do not necessarily include information that will be included in the Academy.

**NOTE:** The Academy sponsors reserve the right to cancel any Academy that does not reach a minimum number of registered delegates.

**Aerospace Engineering**
How do aircraft fly and spacecraft orbit? That question and others will be addressed in this hands-on Aerospace Engineering session. Delegates will conduct experiments in rocket propulsion, flight mechanics, and fluid dynamics. You'll have the opportunity to design a spacecraft with a mission to Mars, and explore your creativity in our "What Would MacGyver Do?" challenge.

Visit Website: [http://aerospace.illinois.edu/](http://aerospace.illinois.edu/)

**Career Options:** Aerospace Design; Automobile Design; Flight Simulation; Satellite Development

Fee: Early-Bird $370 After April 14: $385
Minimum: 10 Maximum: 20
Restrictions: No repeat attendees.
**Art & Design**
See what it takes to be an artist/designer. This Academy will explore traditional and contemporary artistic processes, including observational drawing, site-specific installation and time arts.

Explore the foundations of drawing, including figure/ground, shape/form, linear/aerial perspective, scale/proportion, value/tonal range and pattern/texture.

Design and install a conceptual, site-specific artwork. Investigate time arts through basic exercises in editing and the construction of narrative with sound and video. All youth will work with faculty members in the University studios.

Visit Website: [http://www.art.illinois.edu/](http://www.art.illinois.edu/)

**Career Options:** Graphic Design; Industrial Design; New Media; Painting, Photography & Sculpture; Crafts - Ceramics & Metals; Art History

- Fee: Early-Bird $295, After April 14: $310
- Minimum: 10, Maximum: 30
- Restrictions: None

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**Creative Writing**
In this dynamic and creative program, delegates will write and discuss fiction, poetry and creative nonfiction, learning how and why to take the artistic process of writing to the next level. Sessions will include prompts, short readings, games and mini-workshops in which each delegate’s work is discussed in terms of themes, strengths and direction. The Academy will feature a guest reader/lecturer - delegates will read the work of a published poet or fiction writer, and prepare interview questions. This writer will provide an afternoon lecture/workshop session on the second day.

Visit Website: [http://www.english.illinois.edu/](http://www.english.illinois.edu/)

**Focus Options:** Poetry; Fiction; Non-Fiction; Publishing; Literature Review; Professional Writing

- Fee: Early-Bird $245, After April 14: $260
- Minimum: 8, Maximum: 20
- Restrictions: None
Crop Sciences
Crop Science is an exciting field with many career opportunities where knowledge about plants, insects, biology, agriculture, genetics, plant pathology, horticulture and other topics are used to improve plants and their products and enhance agricultural production.

Join this academy to Explore plant biotechnology, Discover how to identify insects, plant diseases and noxious weeds, Investigate climate change and the effects on crops, Learn about what makes peppers hot, Understand how a hydroponics systems works, go on field trips and more.

Visit Website: [http://cropsci.illinois.edu/](http://cropsci.illinois.edu/)

Career Options: Plant Biotechnology & Molecular Biology; Sustainable Food & Production; Agro ecology; Crop Agribusiness; Plant Protection
Fee: Early-Bird $215 After April 14: $230
Minimum: 10 Maximum: 30
Restrictions: No repeat attendees.

Electrical & Computer Engineering
Learn about Electrical and Computer Engineering. Visit one of the top Electrical and Computer Engineering Departments in the nation. Explore the instructional facilities, labs and get involved some of the research activities such as Robotics, design of cell phones and computer chip design. Discover what nanotechnology brings to our lives.

Visit Website: [http://www.ece.illinois.edu/](http://www.ece.illinois.edu/)

Career Options: Robotics; Cell Phone & Computer Chip Design; Biomedical Imaging; Nanotechnology; Power & Energy Systems
Fee: Early-Bird $370 After April 14: $385
Minimum: 10 Maximum: 20
Restrictions: no repeat attendees
Human Development & Family Studies
Do you ever wonder how Walter White, Nelson Mandala, Lindsay Lohan, and your mother became who they are? Do you wonder about changes in your thoughts, feelings, and relationships? Do you think about how you could help make a more just and tolerant society? This academy will introduce delegates to the scientific study of youth, families, and communities and efforts to promote individual and social change. The academy will include interactive activities with peers and instructors.

Visit Website: [http://hcd.illinois.edu/](http://hcd.illinois.edu/)

Career Options: Child Care Services; Family Life Education; Human Services & Resources; Pediatric Services in Hospitals; Business Activities related to children or families.
Fee: Early-Bird $210 After April 14: $225
Minimum: 10 Maximum: 25
Restrictions: None

Leadership
This academy is full of rich content to help youth develop into self-aware and collaborative leaders. Learn how to maximize your leadership abilities and personality with a StrengthsQuest™ session, focus on how you learn and how that affects how you lead, and build new friendships in team-building sessions. You’ll even participate in the infamous ISA Amazing Race across campus. The Leadership Academy has something for everyone. Walk away feeling equipped for involvement in various activities.

Focus Options: Communication; Learning to Learn; Working with Groups; Team-Building; Leadership Styles
Fee: Early-Bird $255 After April 14: $270
Minimum: 15 Maximum: 50
Restrictions: None
**Molecular & Cellular Biology**

Do you sometimes wonder “how living things work, what is a cell and how does it function, or what are genes and what do they do?” By asking these questions, you are inquiring about the fundamental cellular processes that are at work in every one of us, and starting on the same path as researchers in Biological Sciences and Medicine.

Join the School of Molecular and Cellular Biology to fulfill your curiosity and start exploring the marvelous complexities and inner workings of the cell. Delegates will manipulate cells and their building blocks, using modern research laboratory techniques, while learning about the latest scientific discoveries that allow MCB researchers to discover answers to the above questions.

Participants will spend time working on:
- The effects of UV light on a bacterial population
- How to insert a gene of interest into a population of bacteria
- How to extract their own DNA
- Blood Typing
- PCR and DNA Typing
- The physiology of the circulatory system
- The eukaryotic cell
- Enzyme Biochemistry

Delegates will also have the opportunity to tour a research laboratory, learn about the research being done, and meet the scientists.

Visit Website: [http://mcb.illinois.edu/](http://mcb.illinois.edu/)

**Career Options:** Medical Fields; Biotechnology; Pharmaceuticals; Forensic Sciences; Veterinary Medicine; Disease Control

Fee: Early-Bird $285 After April 14: $270
Minimum: 10 Maximum: 24
Restrictions: No repeat attendees.
Natural Resources & Environmental Sciences
The natural world is amazing and important to our everyday. Join NRES as we explore the environment in a hands-on, active way to about learn the sciences that encompass our natural world. From the smallest microbes to the largest forests, you will learn how scientist study nature and how they work to conserve our natural systems for everyone’s benefit. We will take field trips to research plots and other green spaces to collect samples in the wild and study them further in our laboratory spaces. Get your hands dirty and let’s learn!

Visit Website: http://nres.illinois.edu/

Career Options: Conservation Biologist, Environmental Attorney, Environmental Consultant, Environmental Educator, Forester, Natural Areas Manager, Park Ranger, Soil Conservationist, Sustainability Coordinator, Wildlife Biologist

Fee: Early-Bird $250 After April 14: $265
Minimum: 6 Maximum: 14
Restrictions: No repeat attendees

Recreation, Sports & Tourism
Engage in a practical and experiential learning environment as you are introduced to the field of Recreation, Sport and Tourism. This Academy will provide personal, professional and academic insights to the career opportunities available in intercollegiate and professional athletics, community recreation, facility & special event management, and tourism industries.

Visit Website: http://rst.illinois.edu/

Career Options: Business Administration; Marketing; Management; Urban Planning; Sports Management; Tourism Management; Community Recreation Management

Fee: Early-Bird $320 After April 14: $335
Minimum: 15 Maximum: 25
Restrictions: None

Technical Systems Management
Are you always taking things apart and putting them back together? Do you want to know how fuel is made from algae, manure, and miscanthus? Do you wonder how the technical world and the business world interact? Technical Systems Management is the combination of agricultural, physical, and biological sciences with business and technical skills for application in the realms of food, fiber, feed, and fuel. Join this academy to learn hands-on skills such as soldering, discover how TSMs interact with the world of renewable energy, and explore the world of precision agriculture.

Visit Website: http://academics.aces.illinois.edu/majors/tsm

Career Options: Construction Management; Environmental Science Technician; Production Manager; Technical Marketing Representative; Technical Marketing Representative; Territorial Sales Representative.

Fee: Early-Bird $235 After April 14: $250
Minimum: 4 Maximum: 16
Restrictions: None
**Veterinary Medicine**

Are you interested in animals, medicine, and science? Do you like helping people? Do you like unraveling mysteries? Do you like real challenges?

If you answered *yes* to these questions, then the wide world of veterinary medicine just may be for you. Veterinarians have a strong interest and ability in science. They enjoy working with people as well as with animals. Take a step into the world of veterinary medicine and see what veterinary school is like, learn about the different aspects of veterinary medicine, and more.

Delegates in the veterinary medicine academy will learn about the science of veterinary medicine, anatomy, immunology, bacteriology, parasitology, wildlife medicine, large and small animal medicine, and more. Delegates will participate in clinical equine rounds, streak and read bacteriology slides, learn about veterinary specialty fields such as dentistry, ophthalmology, and forensic pathology, and so much more.

Visit Website: [http://vetmed.illinois.edu/](http://vetmed.illinois.edu/)

**Career Options:** Large and Small Animal Specialties; Equine Specialties; Wildlife Management; Veterinary Toxicology; Infectious Diseases

Fee: Early-Bird $285  After April 14: $300
Minimum: 15  Maximum: 25

Restrictions: Must have completed sophomore year in high school.
No repeat attendees.