CENTER FOR GIFTED YOUTH
SUMMER 2021 PROGRAM
JULY 5 – JULY 29, 2021

Long Island University

Center for Gifted Youth

Celebrating 41 Years
The Long Island University (LIU) program for gifted children was established in 1980 in response to the increasing recognition of society’s special responsibilities for children with demonstrably superior intellectual ability.

The LIU Center for Gifted Youth brings together two important elements of education for the gifted: extraordinary teachers recruited from leading high schools, middle schools, and elementary schools in the metropolitan area; and university-level facilities. These two factors, combined with an administrative and psychological team schooled in the needs of gifted children, give the program at LIU Post unique strengths in producing positive benefits for young people admitted to the program.

The Center for Gifted Youth’s underlying philosophy is the development of the intellectual potential of each child. Its purpose is to provide learning experiences for children with superior intellectual ability that will deepen and extend their intellectual interests, as well as develop the skills of independent learning.
**WHO?**

Students accepted to Long Island University Center for Gifted Youth entering grades 2 through 8 in September 2021 are eligible. Enrollment is limited.

**WHAT?**

The Center for Gifted Youth is a four-week, campus-based, non-residential summer program emphasizing hands-on academic activities. Opportunities are provided for individual and group work and productive learning experiences with special emphasis on higher order thinking skills, creativity, problem-solving and leadership development. A supervised recreational program is offered at the end of each day. Students may participate in outdoor athletic activities, such as soccer and kickball, or take part in club-type activities, such as chess and group discussions. Students enrolled in the program come from the New York area, across the country and overseas.

**COURSE OFFERINGS**

See offered courses on pages 16 through 22.

**TRANSPORTATION**

Transportation is available upon request. Please call to inquire.

**ENTRANCE REQUIREMENTS**

The Center admits children who have shown evidence of academic and intellectual promise. While guidelines are not fixed, gifted children are usually identified by high scores on standardized I.Q. tests, strong personal interests and superior school performance. Students accepted into the program in past semesters have usually shared most or all of the following characteristics: scores of 130 or higher on I.Q. tests, high scores on achievement tests, and exceptional school performance (pupils in grade 4 through 8 are generally working a minimum of two years above grade level). In addition to the above criteria, recommendations indicating the degree of the child's social and emotional maturity are required for all applicants.

**APPLICATION PROCEDURES**

New students are accepted into the Center throughout the year for entry the following semester. Applications on behalf of students may be made directly by parents, as well as by elementary and middle schools. Appropriate forms are provided within this brochure.

Due to the limited number of openings for new students, as well as the time it takes to review applications, parents are urged to apply as soon as possible before the start of a new term.
WHEN?
July 5 - July 29, 2021
Monday through Friday
9:15 A.M. - 3:30 P.M.

WHERE?
Drop off is at the top of Hillwood Commons.

CENTER FOR GIFTED YOUTH
LIU Post
School of Professional Studies
720 Northern Boulevard, Brookville,
New York 11548-1300

TUITION
The tuition is $3,875 for the four-week program. There will be a $35 lab fee per science class for children enrolled in science courses and a $30 application fee for new students.

LUNCH PROGRAM
Students will be provided a healthy lunch at the Hillwood Commons Cafeteria. The cost is $260 for the lunch in accordance with NYS CDC and Nassau County Department of Health Guidelines.

WELCOME TO THE LIU POST CAMPUS

LIU is home to the North Shore Equestrian Center. The Winnick House is the former estate of Post Cereal Heiress Marjorie Merriweather Post.

Constructed in 1927, this Georgian mansion, Lorber Hall, is home to the Hutton House Lectures and the Theodore Roosevelt Library. This is the future site of the LIU College of Veterinary Medicine’s learning laboratory.
APPLICATION PROCESS
Applications will be reviewed by the admission committee when all of the following materials have been received:

FORM 1: ENTRANCE APPLICATION
A completed application form (to be filled out by the child’s parent or legal guardian).

FORM 2: SCHOOL RECOMMENDATION
A recommendation by the principal or guidance counselor of the applicant’s school including the results of standardized intelligence and achievement tests. Parents must notify schools of their permission to release these scores.

FORM 3: TEACHER RECOMMENDATION
A recommendation by the applicant’s teacher or appropriate school guidance counselor. We require a brief narrative focusing on the child’s social and emotional maturity, as well as the child’s classroom performance.

FORM 4: APPLICATION PAYMENT FORM
A non-refundable $30 application fee must be submitted with the application. Checks should be made out to “LONG ISLAND UNIVERSITY” and include the applicant’s name at the bottom.

FORMS 1, 2, 3 and 4 should be mailed directly to the Center’s office:

Long Island University
School of Professional Studies
Center for Gifted Youth
720 Northern Boulevard
Brookville, New York 11548-1300

Parents will be notified by mail or email as to whether their child has been accepted into the program. If accepted, registration materials will follow. Parents of accepted students need not re-apply for admission to the Center for subsequent semesters.

EMERGENCY CLOSING PROCEDURES
The Center for Gifted Youth operates under the auspices of LIU Post. Therefore, the Center is not responsible for program closing due to inclement weather or other university emergencies. Emergency information will be posted at www.liu.edu/post.

TUITION, DEPOSIT, AND FEES
Academic tuition is $3,875 in the summer program. The lunch is $260. Therefore, tuition and lunch are a total of $4,135. A laboratory fee of $35 per course will be charged for students enrolled in science classes. The tuition, lunch, and fees are due upon registration.
REGISTRATION PROCEDURES FOR ACCEPTED STUDENTS

Once a child is accepted into the Center for Gifted Youth, parents will receive additional registration materials, as well as other information concerning tuition payment and schedules. Registration is separate for each semester and is based on a first-come, first-served basis. Enrollment in our classes is limited in order to maximize learning opportunities for each student. As soon as a course is filled, it will be closed. We cannot guarantee placement. In order to avoid disappointment, it is advisable to register early. We ask you to consider simultaneous enrollment for both fall, spring, and summer semesters. We believe that this will improve the benefits of the program by providing continuity in friendships among students. It will also enable us to plan in advance for the needs of individual students.

Students are the guests of LIU Post while participating in the gifted youth program and are expected to act appropriately. Misconduct may result in removal from the program.

REFUND POLICY

• The only circumstance in which the tuition will be refunded is if the student becomes seriously ill before the start of the semester and a doctor’s note is provided.
• Assignment to any course chosen by your child on the registration form commits her/him to attend. Therefore, choose only courses that will be suitable for your child.
• All withdrawal requests must be made in writing.
• Under no circumstances will tuition payments be applied to another student.
• Once the semester has started, there will be no refunds.

LUNCH PROGRAM
As part of the tuition, students will be served a nutritious lunch from the Hillwood Commons Cafeteria. Following lunch, a brief recess is provided. During the lunch and recess times, students are given opportunities to socialize with friends and meet new people. The lunch is $260.

RECREATION AND ARTS PROGRAM
In an effort to achieve a healthy balance between the academic and social aspects of the summer program, recreation and arts have been woven into the daily student activities. A recreation program including indoor and outdoor activities is provided daily. A creative arts program is also offered. The Carnival and Team Olympics highlight the program.
INSTRUCTIONS TO THE PARENT:
This questionnaire should be filled out promptly and returned to the Center with the required $30 non-refundable application fee. Checks should be made out to “Long Island University.”

Two recommendation forms are enclosed; one is for the school principal and one for a recent teacher or guidance counselor. Once completed, these forms are to be forwarded directly to the Center for Gifted Youth office. Candidates should provide the school with a stamped envelope addressed to the above.

PLEASE NOTE: THIS IS NOT A REGISTRATION FORM. This application form is for entrance into the program. If your child is accepted, a separate registration form will be mailed or emailed to you along with an acceptance letter. Students who have already been accepted need not reapply.

APPLICATION FORM
(PLEASE PRINT CLEARLY)

NAME __________________________________________________________________________

(LAST)                                                         (FIRST)                                           (MIDDLE)

SEX __________ DATE OF BIRTH __________________ PRESENT GRADE __________

ADDRESS OF CANDIDATE

STREET __________________________________________________________________________

CITY ___________________________ STATE __________ ZIP __________

HOME PHONE NUMBER (including area code) ________________________________

FATHER’S CELL PHONE (including area code) ________________________________

MOTHER’S CELL PHONE (including area code) ________________________________

FATHER’S BUSINESS PHONE (including area code) ____________________________

MOTHER’S BUSINESS PHONE (including area code) ____________________________

EMAIL ADDRESS ________________________________

PLEASE CHECK
____ Summer Program 2021
____ Fall Program 2021
____ Siblings in Program

RETURN TO:
Long Island University
School of Professional Studies
Center for Gifted Youth
720 Northern Boulevard
Brookville, New York 11548-1300
NAMES AND OCCUPATIONS OF PARENTS
(please include last name if different from candidate)

FATHER ___________________ OCCUPATION ___________________

MOTHER ___________________ OCCUPATION ___________________

How did you learn about this program? (If website, please specify name.)
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Does your child have any unique interests or abilities? (If yes, please explain)
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Have you applied for this child before? ______________

NAME OF PRESENT SCHOOL ______________________________________________

ADDRESS (STREET) _____________________________________________________

CITY ___________________ STATE ___________ ZIP ____________

SCHOOL TELEPHONE NUMBER (including area code) ________________________

SIBLINGS IN THE PROGRAM (if any) _______________________________________
______________________________________________________________________________
______________________________________________________________________________

DATE ___________________ SIGNATURE OF PARENT OR GUARDIAN ____________
This form should be filled out by the principal of the child’s present school, and the completed form should be mailed by him or her directly to the Center in a stamped, addressed envelope provided by the parent. Please attach a copy of the candidate’s latest report card to this form.

(PLEASE PRINT)

CANDIDATE’S NAME ____________________________

(LAST) (FIRST) (MIDDLE)

CANDIDATE’S ADDRESS ________________________________________________

CANDIDATE’S PHONE NUMBER ________________________________________

This candidate has been a student of the __________________________ School,
located at __________________________

(STREET ADDRESS) (CITY) (STATE) (ZIP)

from __________________________ to __________________________.

Grade level as of Sept. 2021 __________

School Telephone Number __________________________

This is a program for gifted children. As the name implies, it is for children with noticeable academic and intellectual promise. While guidelines are not fixed, gifted children are usually identified by high scores on standardized I.Q. tests, strong personal interests, and superior school performance. Students accepted into the program in past semesters have usually shared most or all of the following characteristics: scores of 130 or more on I.Q. tests, high scores on achievement tests, and exceptional school performance (e.g., pupils in grades 4 and higher are generally working a minimum of two years above grade level). As we do not wish to place a child in a group in which he/she cannot cope, we welcome your comments.
## TEST RESULTS

### INTELLIGENCE:

<table>
<thead>
<tr>
<th>INDIVIDUAL TESTS</th>
<th>Test Date</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>WISC-V</td>
<td></td>
<td>VCI  VSI  FRI  WMI  PSI  FSIQ</td>
</tr>
<tr>
<td>WPPSI-IV</td>
<td></td>
<td>VCI  VSI  FRI  WMI  PSI  FSIQ</td>
</tr>
<tr>
<td>Stanford-Binet V</td>
<td></td>
<td>FR  KN  QR  VS  WM  FS</td>
</tr>
<tr>
<td>Stanford-Binet IV</td>
<td></td>
<td>VR  AVR  QR  STM  COMP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GROUP TESTS</th>
<th>Test Date</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Abilities Test (COGAT)</td>
<td></td>
<td>V  Q  NV  Total</td>
</tr>
<tr>
<td>Otis-Lennon</td>
<td></td>
<td>V  NV  Total</td>
</tr>
<tr>
<td>Other (Name)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: We do not accept brief or abbreviated assessment measures, e.g., VKT, Slosson, WASI, etc.

### ACHIEVEMENT - MATHEMATICS:

<table>
<thead>
<tr>
<th>NATIONAL</th>
<th>LOCAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Date</td>
<td>%</td>
</tr>
<tr>
<td>Iowa Test of Basic Skills</td>
<td>N/A</td>
</tr>
<tr>
<td>NYS Math (Grade 4)</td>
<td>N/A</td>
</tr>
<tr>
<td>Terra Nova</td>
<td>N/A</td>
</tr>
<tr>
<td>TONYSS</td>
<td>N/A</td>
</tr>
<tr>
<td>Other (Name)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### ACHIEVEMENT - READING:

<table>
<thead>
<tr>
<th>NATIONAL</th>
<th>LOCAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Date</td>
<td>%</td>
</tr>
<tr>
<td>Iowa Test of Basic Skills</td>
<td>N/A</td>
</tr>
<tr>
<td>ELA (Grade 4)</td>
<td>N/A</td>
</tr>
<tr>
<td>Terra Nova</td>
<td>N/A</td>
</tr>
<tr>
<td>TONYSS</td>
<td>N/A</td>
</tr>
<tr>
<td>Other (Name)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Personal Evaluation

1. Student is _______________ is not _______________ mature and well adjusted.
2. As a student (circle one) Outstanding Above Average Average

Additional Comments: ________________________________________________________________

Date__________________________ Signature__________________________

Print Name______________________ Title____________________________
Both sides of this form are to be completed by a recent teacher or guidance counselor who knows the candidate well. Please return directly to the Center in a stamped envelope provided by the parent.

(PLEASE PRINT)

CANDIDATE’S NAME ________________________________________________

(LAST) (FIRST) (MIDDLE)

CANDIDATE’S ADDRESS _____________________________________________

CANDIDATE’S PHONE NUMBER _______________________________________

Please rate the candidate in the categories listed below. Categories that are rated “deficient” by the teacher should be accompanied by a brief explanation on the reverse side of this page.

<table>
<thead>
<tr>
<th>Category</th>
<th>Outstanding</th>
<th>High</th>
<th>Average</th>
<th>Below Average</th>
<th>Deficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prefers complex ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Asks penetrating questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Vocabulary</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Originality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Curiosity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Motivation to learn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Initiative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Commitment to excellence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Enthusiasm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Sense of humor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Attention span</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Perseverance &amp; industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Emotional stability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Social maturity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Frustration tolerance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
This is a program for gifted children with noticeable academic and intellectual promise. While guidelines are not fixed, gifted children are usually identified by high scores on standardized I.Q. tests, strong personal interests and superior school performance. Students accepted into the program in past semesters have usually shared most or all of the following characteristics: scores of 130 or more on I.Q. tests, high scores on achievement tests, and exceptional school performance (e.g., pupils in grades 4 and higher are generally working a minimum of two years above grade level).

For all applicants, we require a brief narrative emphasizing the child’s social and emotional maturity, as well as an indication of the child’s math and reading levels.

As we do not wish to place a child in a group in which she/he cannot cope, we welcome your comments.

Reading Level:
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Math Level:
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Social and Emotional Maturity:
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Additional Comments:
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Candidate was in my class in _____________________ grade.

During the 20___ - 20___ School Year

Signature ___________________________________________ Date ____________

Title ______________________________________________

School Address ______________________________________

School Telephone Number ______________________________
APPLICATION PAYMENT FORM

Method of Payment

___ Check or money order payable to LONG ISLAND UNIVERSITY
___ Discover Card
___ MasterCard
___ Visa
___ American Express

CARD HOLDER’S NAME (as it appears on the credit card)
_________________________________________________________________________________

CREDIT CARD NUMBER

CVV (Last 3 Digits on the back of the card)  EXPIRATION DATE  AMOUNT TO BE CHARGED

Please make checks payable to the Long Island University. Include child’s full name at the bottom of check. If you are paying by credit card, please mail this form to the address below. If you have any questions please call 516-299-2580.

MAIL PAYMENT TO:
Long Island University
School of Professional Studies
Center for Gifted Youth
720 Northern Boulevard
Brookville, New York 11548-1300

___ I have enclosed a non-refundable application fee of $30.

My signature below denotes that I have read and I am aware of the LIUCGY registration and refund policies.

Parent Signature ___________________________  Date ___________________
LABORATORY FEES
A laboratory fee of $35 per science course will be charged to all students registered for science courses. These fees should be paid separately only after registration is confirmed and will be due at the same time as the tuition balance for that semester. Send no lab fees at this time.

PAYMENTS
Please make all checks payable to: LONG ISLAND UNIVERSITY.
Be sure to include the full name of the student at the bottom of your check so that you will be credited correctly.
You may also pay by credit card (MasterCard, Visa, Amex or Discover). Please email us at giftedyouth@liu.edu or call the office at 516-299-2580 for this form.
Please note: Should LIU need to shift from onsite programming to an online format, we will notify parents and may issue a partial credit applicable for a future semester; Fall 2021 or Spring 2022 at the discretion of the administrative staff.
We require a signature, name of credit card, credit card number, expiration date, and CVV (3 numbers on the back of the card above your signature).
Mail all checks or credit card information with the completed payment form to:

Center for Gifted Youth
School of Professional Studies
Long Island University
720 Northern Boulevard
Brookville, NY 11548-1300

GUIDELINES
IMPORTANT: Please mail forms directly to the Long Island University Center for Gifted Youth.
We encourage all grade 2-8 students to select courses from a variety of disciplines each semester. This is an opportunity to take subjects that are not typically offered during the regular school week. As students are not individually evaluated or tested in their classes, courses that are not in the child’s area of strength should also be considered.
In order to ensure individual attention for each student, enrollment in our classes is limited. As soon as a course is filled, it will be closed. In order to avoid disappointment, it is advisable to register early.

REGISTRATION POLICY
Students should select, in priority order, four course choices for each hour. All choices listed on the registration form will be considered commitments. Email giftedyouth@liu.edu for this form or call 516-299-2580.

***Should your child wish to be enrolled in a course with another child, a note signed by both parents must be attached to their registration forms.
# SUMMER 2021 CLASS SCHEDULE

## Grades 2–3

| Period 1 | 9:15 – 10:10 a.m. | · Introduction to the Plant and Animal Kingdom*  
· Journalism: Kids on Campus |
|---|---|---|
| Period 2 | 10:20 – 11:15 a.m. | · Introduction to the Plant and Animal Kingdom*  
· Mathematical Problem Solving |
| Period 3 | 12:20 – 1:15 p.m. | · Awesome Archaeology  
· Journalism: Kids on Campus |
| Period 4 | 1:25 – 2:20 p.m. | · Building Skills in Coding*  
· Awesome Archaeology |

## Grades 4–6

| Period 1 | 9:15 – 10:10 a.m. | · Design for Competition*  
· Explore Your Inner Genius in Physics - Greco-Roman, Renaissance and Modern Age*  
· Show Me the Money! |
|---|---|---|
| Period 2 | 10:20 – 11:15 a.m. | · Physical Computing Using Raspberry Pi and Micro:Bit*  
· Rocketry and Space Science*  
· 3D Modeling and Tinkercad* |
| Period 3 | 12:20 – 1:15 p.m. | · Chemistry: Selected Topics*  
· 3D Modeling and Tinkercad*  
· Geo-Art (Intermediate) |
| Period 4 | 1:25 – 2:20 p.m. | · Design for Competition*  
· Writer’s Workshop: Creating Short Stories  
· Astronomy* |

## Grades 6–8

| Period 1 | 9:15 – 10:10 a.m. | · Match Wits with Mensa  
· Artificial Intelligence* |
|---|---|---|
| Period 2 | 10:20 – 11:15 a.m. | · New Frontiers in Chemistry*  
· Show Me the Money! |
| Period 3 | 12:20 – 1:15 p.m. | · Artificial Intelligence*  
· Advanced Rocketry* |
| Period 4 | 1:25 – 2:20 p.m. | · Geo-Art (Advanced)  
· New Frontiers in Chemistry* |

*Indicates Science Fee ($35)
CALENDAR SUMMER SEMESTER 2021

July 5 – July 29, 2021
9:00 A.M. – 3:30 P.M.
Monday- Friday

GRADES 2-3 SUMMER
- Awesome Archaeology
- Building Skills in Coding*
- Introduction to the Plant and Animal Kingdom*
- Journalism: Kids on Campus
- Mathematical Problem Solving

GRADES 4-6 SUMMER
- Astronomy*
- Chemistry: Selected Topics*
- Design for Competition*
- Explore Your Inner Genius in Physics - Greco-Roman, Renaissance and Modern Age*
- Show Me The Money!
- Rocketry and Space Science*
- Physical Computing Using Raspberry Pi and Micro: Bit*
- Writer’s Workshop: Creating Short Stories
- 3D Modeling and Tinkercad*
- Geo-Art (Intermediate)

GRADES 6-8 SUMMER
- Artificial Intelligence*
- New Frontiers in Chemistry*
- Advanced Rocketry*
- Math: Match Wits With Mensa
- Show Me The Money!
- Geo-Art (Advanced)

*Lab fee of $35 per science class will be charged for any student taking science classes.*
Students in grades 2-3 will choose four of the following courses during the day. See Program Schedule for the time of each course.

**HUMANITIES**

**Awesome Archaeology: Uncovering The Past**
What do you have in common with kids from long ago? What can old coins, tools and even garbage help us understand about how people lived? This course is designed to place students in the roles of archaeologist and historians who use artifacts to understand our past. Students will use inquiry-based learning as they participate in activities such as analyzing pottery and art and mapping archaeological sites. They will carry out investigations to understand the techniques real archaeologists use to learn how people behaved in the past. Throughout the course, archaeology will also be used as a springboard for teaching scientific method, critical thinking and writing. This new and exciting course will explore the science that has taught us so much by "digging" into the fascinating artifacts that have provided us with a window to our past.

**Journalism: Kids On Campus**
This course is designed to introduce students to become reporters and editors. They will write news, features, sports stories, and conduct interviews and surveys for the program newspaper, "Kids on Campus."

**SCIENCE AND TECHNOLOGY**

**Building Skills in Coding**
Computer coding is important in our informational age, and students are encouraged to get involved, and have fun developing logical thinking and problem-solving skills. The curriculum is flexible, allowing for different levels, as students creatively engage with turtle graphics and Karel, the robot dog. Students produce and present projects.

**Introduction To The Plant and Animal Kingdom**
In this course, students will study the biology of various plants and animals. Hands-on activities and role-playing games will be used to learn about these organisms. Students will begin with the study of simple organisms and progress to the more advanced, while learning how they interrelate with each other.
**MATHEMATICS**

**Mathematical Problem Solving**

Students will participate in activities that will help them develop and enhance their problem-solving abilities. They will learn to analyze and solve non-routine mathematical problems, identify key words, and use diagrams and tables. They will also identify patterns and develop estimation and deductive reasoning skills. Daily activities include short presentations on key techniques followed by small group and individual practice sets designed to challenge students and improve their critical thinking skills. Computer generated questions are utilized in this course. New problems are selected for the summer semester. Special attention will be provided to meet the needs, interests, experience and ability of each student.

*Science fees apply*

**GRADES 4-6**

*Students in grades 4-6 will choose four of the following courses during the day. See Program Schedule for the time of each course.*

**SCIENCE AND TECHNOLOGY**

**Astronomy**

This visually rich course is designed to provide a nontechnical description of modern astronomy, including the structure and evolution of planets, stars, galaxies, and the universe as a whole. It includes a substantial number of new images, diagrams, and animations. Spectacular discoveries reported up to 2020 are integrated throughout these lectures, and more recent findings included as well.

**Chemistry: Selected Topics**

This course is designed to engage the youngster who has had minimal experience in the study of chemistry. Activities and discussions will be drawn from topics such as matter and its classifications, phases and phase changes, physical and chemical properties, chemical changes and reactions, and the interactions of energy and matter. In each instance, the objectives are to enable students to “discover” some basic chemical concepts and principles, become familiar with standard laboratory techniques, and experience the excitement and enjoyment of scientific inquiry. Laboratory activities will be carefully supervised, and safety procedures emphasized.
Design for Competition*
Are you ready to create? Design for Competition is a new course designed to engage students in open-ended activities. Students will design transportation devices and systems that meet specific design criteria. The experiences will allow students to design gliders, a working roller coaster, and even a functional Rube Goldberg machine. Students will gain valuable design experiences while having fun competing in multiple in-class competitions. New projects are offered each semester.

Physical Computing Using Raspberry Pi and Micro: Bit*
This project-based course introduces students to Physical Computing using Raspberry Pi and Micro: Bit. Students will have the opportunity to apply knowledge of basic coding concepts (control structures, variables, functions, etc.) to a physical device. They will learn how to perform basic physical tasks using LEDs, buttons, and basic sensors by building circuits. No coding experience is needed, and all skill levels are encouraged.

Physics: Explore Your Inner Genius*
This course will study three great times in the development of physics: the Greco-Roman period and the contributions of Pythagoras, Aristotle, and Archimedes, as well as the development of the Roman arch; the Renaissance and the ideas developed by Tycho Brahe, Kepler and Galileo; and the 1930s and the coming-of-age quantum mechanics. This course is designed to show how great minds developed new ideas in science.

Rocketry and Space Science*
From hot air balloons to the outer edge of space, we will investigate the pathway that led us from our dream of flight to our first lunar steps. Students will design, build, and launch lighter-than-air vessels. The principles of aerodynamics and rocketry will be explored, as they design, build, and launch their own rockets. Safety procedures will be stressed throughout the program.

3D Modeling and Tinkercad*
Welcome to 3D modeling and printing! In this class, students will learn how to use Tinkercad, a free 3D modeling software, to create basic 3D printed objects. Students will have the opportunity to design multiple creations and 3D print objects.

HUMANITIES

Geo-Art (Intermediate)
Interest in the nature of space, the unusual, perspective and multiple points of view mark 20th Century artists like Picasso and Escher. The artists utilized geometry and the imagination to create magnificent works of art. Students will have the opportunity to discover forms and patterns as they create their own examples of Geo-Art.
Show Me The Money!
Students will be introduced to the language of finance. They will become immersed in financial literacy through the practice of activities that are engaging and entertaining. They will enter the Shark Tank as both inventors and investors. In addition, they will engage in activities to make a profit from buying low and selling high.

*Science fees apply*

**GRADES 6-8**

*Students in grades 6-8 will choose four of the following courses during the day. See Program Schedule for the time of each course.*

**SCIENCE AND TECHNOLOGY**

**Advanced Rocketry***

This course will be a study of the exploration of space, including aerodynamic principles and rocket propulsion. Students will build and launch multistage rockets and use triangulation techniques to ascertain altitudes. Experienced rocketeers will be given more advanced projects and will discuss and develop selected aspects of projectile motion. Safety procedures and rules will be stressed throughout the program.

**Artifical Intelligence***

Artificial Intelligence (AI) is the wave of the future. This course will help students develop important 21st century skills such as critical thinking, problem-solving skills and creativity which will help open doors to successful careers. Students will be introduced to key concepts such as algorithms and machine learning. Topics covered through real world computer-based projects are optical character recognition, computer vision, face detection, and self-driving cars. No coding experience is necessary.

**New Frontiers in Chemistry***

This course is designed to give students an opportunity to participate in exploratory activities in the areas in stoichiometry, kinetics, equilibrium, acid-based equilibrium, chemical bonding, chemical thermodynamics, and electrochemistry. Students will investigate problems of interest to them, using the procedures and concepts learned through earlier activities. Proper chemistry laboratory skills and techniques will be stressed.
Geo-Art (Advanced)

Geo-Art is a course in the skill of visual perception where artists depicted three dimensions on a flat canvas, breaking up the subject into different shapes and repainting them from different angles. Students will learn about Escher, Picasso, and other 20th Century masters. They will create their own examples of “Neo-Geometric Art.”

Math: Match Wits With Mensa

When we think critically, we are engaging in strategies to probe the nature of the puzzle or game. This is accomplished by observation, generalization, deductive reasoning, establishing relationships, and developing sequences and patterns. Students will be challenged by mathematical puzzles and games from the Mensa Society. This will encourage children to be inventive, creative and artistic. Students will be inspired to embrace the unknown, while solving challenging puzzles at their level.

Show Me The Money!

Students will be introduced to personal financial literacy and investments. Topics will include how the stock market works, how to upscale for a profit, understanding key financial decisions in today’s economic climate, and how to manage your own finances.

*Science fees apply*
ABOUT THE LONG ISLAND UNIVERSITY (LIU)

LIU, founded in 1926, continues to redefine higher education, providing high quality academic instruction by a world-class faculty. Recognized by Forbes for its emphasis on experiential learning and by the Brookings Institution for its “value added” approach to student outcomes, LIU offers nearly 400 accredited programs, with a network of 265,000 alumni that includes industry leaders and entrepreneurs across the globe. Visit liu.edu for more information.

ABOUT THE LIU SCHOOL OF PROFESSIONAL STUDIES

Long Island University has a rich legacy of achievement in delivering accessible learning to a diverse and multi-generational community. In the LIU School of Professional Studies, our learning population consists of students of all ages with a wide range of interests and passions. Courses, lectures and special events engage the young and the young-at-heart with lifelong learning opportunities spread across a wide range of disciplines and social and cultural areas. The Center for Gifted Youth, Hutton House Lectures, Theodore Roosevelt Institute, and Fundraising Academy are among the School’s innovative and interactive programs.
SUMMER PROGRAM
JULY 5 - JULY 29, 2021