Annual Report: Youth Internships

State Submission Annual Reporting Period: October 2017 - September 2018

Columbia University offers a variety of internship programs that help local youth gain valuable work experience:

**Brain Research Apprenticeships in New York at Columbia (BRAINYAC)** is a program that pairs high school students with scientists for intensive lab apprenticeships. This Zuckerman Institute program is an immersive science research experience in which Zuckerman Institute scientists open their doors to high school students, who in turn bring their talents and perspectives to the lab. Started in 2013, BRAINYAC pairs students with scientists who mentor them throughout seven weeks of intensive summer research. The program prepares students for laboratory research through training sessions, which run from January through May, followed by the seven-week period of intensive research during the summer. Upon completing the program, students come away with an increased understanding of how research in the lab leads to transformative discoveries. Eligible sophomores and juniors are drawn from select youth-serving programs: the Lang Youth Medical Program at New York-Presbyterian Hospital; the State Pre-college Enrichment Program run by Columbia University Medical Center; the Double Discovery Center; BioBus, Inc; and the Columbia Secondary School for Math, Science and Engineering (CSS). BRAINYAC receives generous support from the Pinkerton Foundation and the Stavros Niarchos Foundation.

**The Columbia University Facilities and Operations (CUFO) High School Summer Internship Program** is a structured, six-week initiative that provides students with practical work experience before graduation. The program was started in 2011 and is run by the Columbia University Department of Facilities and Operations for high schoolers that live in the 17 local zip code area. Local refers to those students whose primary residence is located within one of the following 17 zip codes: 10025, 10026, 10027, 10029, 10030, 10031, 10032, 10033, 10034, 10035, 10037, 10039, 10040, 10455, 10451, 10454, 10474.

**Engineering the Next Generation (ENG)** is a program for high school students interested in engineering. ENG is an opportunity for motivated high school students from local partner schools to participate in a six-week intensive research program that includes both lab work and supplemental programming to develop their academic and professional skills. Students gain practical research experience, exposure to lab culture, new skills and multi-level mentorship. Program components include working with Engineering faculty, hands-on research skills and experience, master class, poster symposium presentation, college letter of recommendation, and the possibilities of ongoing research and publication in the Columbia Undergraduate Science Journal.

<table>
<thead>
<tr>
<th>Internship Program</th>
<th># of Local Students</th>
<th># of CSS Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRAINYAC</td>
<td>7</td>
<td>2*</td>
<td>9</td>
</tr>
<tr>
<td>CUFO</td>
<td>11</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>ENG</td>
<td>4</td>
<td>4*</td>
<td>8</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>22</strong></td>
<td><strong>6</strong></td>
<td><strong>28</strong></td>
</tr>
</tbody>
</table>

* 2 BRAINYAC and 2 ENG interns from CSS are also local students for a total of 24 local interns.*

**Contents of Report**

- BRAINYAC Annual Report
- BRAINYAC Brochure
- BRAINYAC Partner Program Recruitment Letter
- BRAINYAC Information Session Invitation
- BRAINYAC 2018 Application Packet
- BRAINYAC 2018 Poster Presentation Program
- Columbia University Facilities and Operations (CUFO) Summer Internship Annual Report
- Columbia University Facilities and Operations (CUFO) Summer Internship Flyer
- Columbia University Facilities and Operations (CUFO) Summer Internship Application
- Columbia University Facilities and Operations (CUFO) Summer Internship Friday Schedule
- Engineering the Next Generation (ENG) Annual Report
- Engineering the Next Generation (ENG) Outreach and Application Process
- Engineering the Next Generation (ENG) 2018 Application Packet
Annual Report: Youth Internships - BRAINYAC

State Submission Annual Reporting Period: October 2017 - September 2018

- Information Session Date: October 14, 2017
- Application Deadline: November 14, 2017

Following the initial five year Summer Internship Program and in coordination with Columbia Secondary School’s leadership, CU modified the internship program to provide a more selective internship to focus on at least one aspect of Science, Technology, Engineering, Environment, Arts and/or Math (STEAM).

The BRAINYAC program (Brain Research Apprenticeships In New York At Columbia) admits students with a stated interest in biomedical and specifically neuroscience research and provides immersive science research experience with Zuckerman Institute scientists. The program prepares students for laboratory research through training sessions, which run from January through May, followed by a 7-week period of intensive research during the summer. Upon completing the program, students come away with an increased understanding of how research in the lab leads to transformative discoveries. The program admits from five partner programs; Lang Youth Medical Program, State Pre-College Enrichment Program (S-PREP), Columbia Secondary School, the Double Discovery Center and BioBus, Inc. Participants must be at least 16 years of age in order to participate and are granted a stipend for their time in the program.

<table>
<thead>
<tr>
<th>Intern Name</th>
<th>Zip Code</th>
<th>High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>10455</td>
<td>The Young Women's Leadership School of East Harlem</td>
</tr>
<tr>
<td>2.</td>
<td>10031</td>
<td>Horace Mann School</td>
</tr>
<tr>
<td>3.</td>
<td>10037</td>
<td>Columbia Secondary School</td>
</tr>
<tr>
<td>4.</td>
<td>10040</td>
<td>NYC Museum School</td>
</tr>
<tr>
<td>5.</td>
<td>10033</td>
<td>Columbia Secondary School</td>
</tr>
<tr>
<td>6.</td>
<td>10033</td>
<td>NYC iSchool</td>
</tr>
<tr>
<td>7.</td>
<td>10040</td>
<td>City College Academy of the Arts</td>
</tr>
<tr>
<td>8.</td>
<td>10027</td>
<td>Harlem Village Academies High School</td>
</tr>
<tr>
<td>9.</td>
<td>10454</td>
<td>Manhattan Center for Science and Mathematics</td>
</tr>
</tbody>
</table>

Additional Supporting Documentation
- BRAINYAC Brochure
- BRAINYAC Partner Program Recruitment Letter
- BRAINYAC Information Session Invitation
- BRAINYAC 2018 Application Packet
- BRAINYAC 2018 Poster Presentation Program
The Zuckerman Institute's BRAINYAC program matches high school students with brain scientists for an immersive laboratory internship.
WHAT'S INVOLVED
The BRAINYAC program runs each year from January through August. The first portion, from January to May, is comprised of Saturday morning training sessions generally twice per month. During these sessions, students are prepared for their summer laboratory internship. Training sessions cover basic lab techniques, the essentials of neuroscience and how a lab works. During this time, each student is matched with a neuroscientist at Columbia University who will become the student's mentor for the summer portion of the program.

Starting in late June or early July, students commence the laboratory portion of the program. They work in their internship labs full-time, Monday through Friday, taking part in a research project and are guided by their mentor. Depending on the lab and project, a student might employ techniques such as microscopy, cell culture, functional imaging analysis and computer modeling.

Students join weekly BRAINYAC advisory sessions throughout their summer. The advisory sessions focus on supporting the students' progress in the labs and advancing their science communication skills.

Students who successfully complete the program receive a stipend that is paid in two installments.

STUDENT ELIGIBILITY
The BRAINYAC program admits students from select BRAINYAC partner programs and schools in Upper Manhattan. Students commit to the entirety of the program from January through August.

APPLICANTS MUST BE:
• sophomores or juniors in high school at the time of application;
• 16 years of age or older by the start of the summer session; and
• enrolled in one of our partner programs: Lang Youth Medical Program; State Pre-College Enrichment Program (S-PREP); Double Discovery Center at Columbia College; or the Columbia Secondary School for Math, Science, & Engineering. (See the Zuckerman Institute website for a complete and updated list.)

OUTCOMES
At the end of the program in mid-August students present their research to a diverse audience—friends, family, researchers, mentors and the broader Columbia community—during a poster presentation.

Students come away from the program with an enhanced understanding of how lab research can lead to transformative discoveries, exposure to a professional and academic environment and a heightened connection to science as a career.

The BRAINYAC program runs each year from January through August. The first portion, from January to May, is comprised of Saturday morning training sessions generally twice per month. During these sessions, students are prepared for their summer laboratory internship. Training sessions cover basic lab techniques, the essentials of neuroscience and how a lab works. During this time, each student is matched with a neuroscientist at Columbia University who will become the student’s mentor for the summer portion of the program.

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Students who successfully complete the program receive a stipend that is paid in two installments.
The Zuckerman Institute’s BRAINYAC (Brain Research Apprenticeships in New York at Columbia) program is an immersive science research experience in which high school students train and work in neuroscience laboratories at Columbia University. The program runs every year from January through August. This includes weekend training sessions in the winter and spring and a full-time internship during the summer.

APPLICANTS FOR BRAINYAC PROGRAM:
- are genuinely interested in the biomedical sciences;
- demonstrate the maturity needed to work in a sophisticated high-tech lab environment; and
- are willing to commit to the entire program.

Applications are distributed to partner programs and schools in the fall before the program starts in January.

BRAINYAC STUDENTS:
- are introduced to an academic scientific research environment;
- develop laboratory and technical skills;
- boost their understanding of science as it is practiced; and
- build their communication and presentation skills.

VISIT US ONLINE:
- zuckermaninstitute.columbia.edu
- @zuckermanbrain
- zuckermaninstitute

FUNDING PROVIDED BY:
- The Pinkerton Foundation
- Sigma Xi
- The Zuckerman Institute’s BRAINYAC program matches high school students with brain scientists for an immersive laboratory internship.
APPLICANTS FOR BRAINYAC PROGRAM:
• are genuinely interested in the biomedical sciences;
• demonstrate the maturity needed to work in a sophisticated high-tech lab environment; and
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Applications are distributed to partner programs and schools in the fall before the program starts in January.

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• build their communication and presentation skills.

VISIT US ONLINE:
zuckermaninstitute.columbia.edu
@zuckermanbrain
zuckermaninstitute

FUNDING PROVIDED BY:
Dear Distinguished partners,

I hope you are enjoying what's left of the summer.

Following the completion of yet another successful BRAINYAC program session, we have commenced recruitment efforts for next year.

Attached is the tentative schedule for BRAINYAC 2018. We hope that the spring sessions will run select Saturdays, indicated in the attached schedule (from January through April) at 9:30am each day.

To that end, we would also like to meet with your students for a recruitment information session on October 14th 2017 from 9:15 am – 10:45 am. During this session, We will share with your students, details about the program, including the online application process and deadline.

Please feel free to contact me if you have any questions. Thank you for your time.
Columbia’s Zuckerman Institute presents

BRAINYAC PROGRAM

An immersive neuroscience research experience for high school students

Information session

Saturday, October 14, 2017
9:15 am - 10:45 am

Jerome L. Greene Science Center
Education Lab
605 129th Street, New York

Learn more about:
• Program structure
• Application process
and more

COLUMBIA | Zuckerman Institute
MORTIMER B. ZUCKERMAN MIND BRAIN BEHAVIOR INSTITUTE

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zuckermaninstitute
zuckermanbrain
zuckermaninstitute.columbia.edu

For details, contact [redacted]
Education Program Manager
Mortimer B. Zuckerman Mind Brain Behavior Institute
Columbia University
Studebaker Building
615 West 131st Street, New York NY 10027
Phone: [number]
Email: [email]
http://zuckermaninstitute.columbia.edu
http://zuckermaninstitute.columbia.edu/zuckerman-institute-public-programs
Facebook | Twitter | Website

2 attachments

- BRAINYAC Info Session Invite.pdf
  830K

- 2018 Program Schedule - Google Docs.pdf
  81K
Information session

Saturday, October 14, 2017
9:15 am - 10:45 am

Jerome L. Greene Science Center
Education Lab
605 129th Street, New York

Learn more about:
• Program structure
• Application process
and more

For details, contact
Welcome to the online application for Brain Research Apprenticeships in New York at Columbia (BRAINYAC). This application consists of multiple parts: personal information, parent/guardian information, education, short answer questions, essay questions, personal statement, and interview availability. We recommend that you compose your answers to the short answer and essay questions before beginning the application. You will be able to copy and paste your answers into the boxes provided.

By applying to the program, you commit that you will:

- attend all program sessions
- and be accompanied by a parent or guardian to the parent-student orientation on January 20, 2018 from 2:00 pm to 4:00 pm.

Short answer questions:

1. Describe one extracurricular activity (organizations, athletics, student government, etc.) you participated in and why it was meaningful to you. Include community service, if applicable.

2. What kind of laboratory experience do you have (in school or extracurricular) (No previous lab experience outside of the typical high school classes is necessary for this program.)

Essay questions:

1. Describe what makes you a good candidate for the BRAINYAC program. What interests you about the brain and neuroscience? (Max 300 words)

2. How would being in the BRAINYAC program help your education and career goals? (Max 200 words)

Personal statement:

Write an essay (650 words or fewer) that demonstrates your ability to develop and communicate your thoughts. Some ideas include: a person you admire; a life changing experience; your viewpoint on a particular current event or an insight to who you are.

Please direct any questions to:

Part I: Personal Information
Which of the BRAINYAC partner programs or school are you enrolled in? (If you are not currently enrolled in any of these programs, you are ineligible to apply for BRAINYAC)

- Lang Youth Program
- S-PREP
- Double Discovery Center
- Columbia Secondary School for Science Math & Engineering

Mailing Address Line 1 (Number, Street, Apt. #)

Mailing Address Line 2 (City, State)

Zip Code

Cell phone Number (If available)
Email Address

Re-type email address

Gender
  ○ Male
  ○ Female

Date of Birth (mm/dd/yyyy)

Will you be 16 years of age on or before June 30, 2018? 
(If you have not turned 16 years old by the start of the lab portion of BRAINYAC, you are ineligible to apply.)
  ○ Yes
  ○ No

Part II: Parent/ Guardian Information

Parent/ Guardian name (First and Last)

Parent/ Guardian Email Address

Home Telephone Number
Part III: Education

Name of high school

Current grade in school

- 10th grade
- 11th grade

List extracurricular activities you are currently involved in. (organizations, athletics, student government, etc.)

Part IV: Short Answer Questions

Describe one extracurricular activity (organizations, athletics, student government, etc.) participated in and why it was meaningful to you. Include community service, if applicable.)
What kind of laboratory experience do you have (in school or extracurricular) 
(No previous lab experience outside of the typical high school classes is necessary for this program.)

Part V: Essay Questions and Personal Statement

Describe what makes you a good candidate for the BRAINYAC program. What interests you about the brain and neuroscience? (Max 300 words)

How would being in BRAINYAC program help your career goals? (Max 200 words)

Write an essay that demonstrates your ability to develop and communicate your thoughts. Some ideas include: a person you admire; a life changing experience; your viewpoint on a particular current event or an insight to who you are. (650 words or fewer)

Part VI: Program commitment and interview availability
We will be conducting interviews on the following days and times. Please indicate your availability on at least 3 separate dates, selecting as many time slots possible on each day. Interviews will be approximately 20 minutes and be conducted at Columbia University (Studebaker Building, 615 131st Street, New York). Further details will be provided to applicants invited to interview. Due to on-going constructions, please enter the building at 622 132nd Street.

Please hold dates you indicate below on your calendar until the week of November 21, 2017 when we will confirm your interview date.

<table>
<thead>
<tr>
<th>Date</th>
<th>3:00PM to 3:30PM</th>
<th>3:30PM to 4:00PM</th>
<th>4:00PM to 4:30PM</th>
<th>4:30PM to 5:00PM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday November 27</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
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<tr>
<td>Tuesday November 28</td>
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<tr>
<td>Wednesday November 29</td>
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<tr>
<td>Thursday November 30</td>
<td>☐</td>
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<tr>
<td>Friday December 1</td>
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<tr>
<td>Monday December 4</td>
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<tr>
<td>Tuesday December 5</td>
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<tr>
<td>Wednesday December 6</td>
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<td>☐</td>
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<tr>
<td>Thursday December 7</td>
<td>☐</td>
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<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Do you commit to attending the BRAINYAC training sessions from 9:00 to 11:00 am on the following Saturdays? January 27, February 3, February 10, March 3, March 17, March 24, April 14, April 21, May 5, May 12 and June 2, 2018?

☐ Yes  ☐ No

Do you commit to attending a campus tour from 10am to 2pm on (Chancellor's Day) Thursday June 7, 2018

☐ Yes  ☐ Maybe  ☐ No

Does your parent/ guardian commit to attend the parent-student orientation on January 20, 2018 from 2:00 pm to 4:00 pm?

☐ Yes  ☐ No
10/12/2017 Qualtrics Survey Software

Do you commit to participating in a scientific research laboratory internship and BRAINYAC advisory sessions from June 30 to August 17, 2018?

- Yes
- No

Part VII: Finalize submission

The information submitted above is true and correct to the best of my knowledge.

- I agree
- I disagree

I hereby submit my application to BRAINYAC program. (Name, date)

Thank you

Thank you for your interest in BRAINYAC program. A member of our team will contact you via email for next steps.

Please direct any questions to:

Zuckerman Institute
615 West 131st Street, 6th Floor
New York, NY 10027

Phone: [redacted]
Email: [redacted]

Powered by Qualtrics
Special thanks to the:

Principal Investigators and Mentors

Mentors

Program Staff

For more information
Email: programs@zi.columbia.edu   Phone: 212.851.9612
Website: zuckermaninstitute.columbia.edu/brainyac

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MORTIMER B. ZUCKERMAN MIND BRAIN BEHAVIOR INSTITUTE

BRAINYAC Research Poster Presentation & Reception

Celebrating the achievements of the 2018 BRAINYAC graduates
at
Greene Science Center
Education Lab and Building Lobby
3227 Broadway, New York

Thursday, August 16, 2018
2:00pm to 4:00pm

The Zuckerman Institute's BRAINYAC program matches high school students with brain scientists for an immersive laboratory internship.
The Zuckerman Institute extends a sincere thank you to everyone who joined us here today to celebrate the achievements of the BRAINYAC class of 2018.

We owe a huge thank you to the principal investigators and mentors for opening their labs and mentoring the next generation of scientists. This program wouldn’t be possible without their dedication and commitment.

We would also like to acknowledge our funders, the Pinkerton Foundation, the Stavros Niarchos Foundation and the VWR Foundation for their generous support.

We thank all the parents and guardians for their support throughout the program. We are also grateful to the BRAINYAC Alumni interns for returning to share their experiences and skills.

And finally, a very big congratulations to the BRAINYAC class of 2018 for successfully completing the program. We wish for your continued success through high school and in the next steps of your education and career trajectory.

Program Agenda

2:00 pm  Guest arrival
Opening remarks
Mentor appreciation
Presentation of certificates
3:00 - 4:00 pm  Refreshments and research poster presentations
4:00 pm  Departure

A Note of Thanks

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And finally, a very big congratulations to the BRAINYAC class of 2018 for successfully completing the program. We wish for your continued success through high school and in the next steps of your education and career trajectory.

BRAINYAC Students and Research Projects

Changes in Amygdala Activity across Development in a Longitudinal Study
The Visual Perception Decoding Hierarchy: Further Deconstructed through the Exploration of Relative and Absolute Orientations
Assaying the Contribution of Low-Complexity Domains in Ultrabithorax Hub Formation in *Drosophila melanogaster*
Prophylactic Ketamine Modifies Aversive Memory Traces
A Learning Style Theory to Comprehend Autistic Conduct
The Role of Mettl3 in Motor Neuron Physiology
Developing Tools to Study the Stress Granules Dynamics in HeLa Cells
A Change in Perspective: Retrospective Decoding in Working Memory
Genome-editing the Sevenless gene in *Drosophila melanogaster*
Assessment of Neuronal Network Dynamics during Temporal Lobe Epileptogenesis through Calcium Imaging of Hippocampal Cell Types
Screening Beat Proteins And its Role in Leg Motor Neuron Development in Drosophila melanogaster
Examining Expression of 3 Neuromodulator Receptor Subtypes in the Fruit Fly Visual System
The Relationship between Diet Quality and Mental Disorders in Youths
Understanding the Romo Data Experience & the Spikes
Identifying Transcription Factors that Influence the Stable Expression of Olfactory Receptors in Neurons
Annual Report: Youth Internships - Columbia University Facilities and Operations

State Submission Annual Reporting Period: October 2017 - September 2018

- Application Deadline: Originally May 18, 2018, extended to May 29, 2018

The Columbia University Facilities and Operations Summer Internship Program is a 6-week long paid internship for high school students living in the local* community who are looking to gain real work experience before graduation. Previous work experience is a plus, but is not required. Interns must be at least 16 years old at the time of the internship and are paid New York State minimum wage.

This summer, the program began on July 9, 2018 and ended on August 17, 2018. Interns were placed in one of the following Facilities and Operations departments: Manhattanville Development Group, Finance and Administration, Planning and Capital Project Management, Strategic Communications, Student Center Operations, Environmental Stewardship, or Operations. Interns worked in their respective departments from Monday - Thursday and met as a group every Friday for special tours, workshops, and skills training.

* Local refers to those students whose primary resident is located within one of the following 17 zip codes: 10025, 10026, 10027, 10029, 10030, 10031, 10032, 10033, 10034, 10035, 10037, 10039, 10040, 10455, 10451, 10454, 10474.

<table>
<thead>
<tr>
<th>Intern Name</th>
<th>Zip Code</th>
<th>High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>10027</td>
<td>Business of Sports School</td>
</tr>
<tr>
<td>2.</td>
<td>10025</td>
<td>Manhattan Bridges High School</td>
</tr>
<tr>
<td>3.</td>
<td>10025</td>
<td>High School of Art and Design</td>
</tr>
<tr>
<td>4.</td>
<td>10455</td>
<td>Cambia Heights Academy for New Literacies</td>
</tr>
<tr>
<td>5.</td>
<td>10029</td>
<td>High School of Economics and Finance</td>
</tr>
<tr>
<td>6.</td>
<td>10032</td>
<td>High School of Economics and Finance</td>
</tr>
<tr>
<td>7.</td>
<td>10026</td>
<td>The Urban Assembly School for Green Careers</td>
</tr>
<tr>
<td>8.</td>
<td>10455</td>
<td>Brooklyn Technical High School</td>
</tr>
<tr>
<td>9.</td>
<td>10454</td>
<td>Brooklyn Technical High School</td>
</tr>
<tr>
<td>10.</td>
<td>10033</td>
<td>Inwood Early College</td>
</tr>
<tr>
<td>11.</td>
<td>10029</td>
<td>Business of Sports School</td>
</tr>
</tbody>
</table>

Additional Supporting Documentation

- Columbia University Facilities and Operations Summer Internship Flyer
- Columbia University Facilities and Operations Summer Internship Application
- Columbia University Facilities and Operations Summer Internship Friday Schedule
Columbia University Facilities and Operations provides a wide range of services to the University community, including planning, design, construction management and operations.

This summer, we are offering paid internships for high school students living in the local* community looking to gain real work experience before graduation. Previous work experience is a plus, but not required.

The paid internships begin on July 9, 2018 and end on August 17, 2018. Applicants must be at least 16 years old at the time of the start of the internship.

Apply for a high school internship by May 18: cufo.columbia.edu/intern2018

* "Local" refers to those students whose primary residence is within one of the following 17 zip codes: 10025, 10026, 10027, 10029, 10030, 10031, 10032, 10033, 10034, 10035, 10037, 10039, 10040, 10455, 10451, 10454 and 10474

Columbia University is an Equal Opportunity/Affirmative Action employer—Race/Gender/Disability/Veteran
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Columbia University is an Equal Opportunity/Affirmative Action employer—Race/Gender/Disability/Veteran
COLUMBIA UNIVERSITY
Facilities and Operations

High School Internship Application Form

Columbia University Facilities and Operations is offering paid internships for high school students living in the local community looking to gain real work experience before graduation. Previous work experience is a plus, but is not required.

The paid internships begin on July 9, 2018 and end on August 17, 2018.

Please note that in accordance with New York State Law, all applicants must be able to provide an employment certificate (also called "working papers") before they begin work if selected for an intern position. Interns will be paid New York State minimum wage.

Other requirements:

- Must be at least 16 years old by start of internship (July 9, 2018)
- Must live in one of the following local zipcodes: 10025, 10026, 10027, 10029, 10030, 10031, 10032, 10033, 10034, 10035, 10037, 10039, 10040, 10451, 10454, 10455 and 10474

In order to be considered for an internship, you must submit this completed application form along with a copy of your resume and a cover letter. You will be able to upload your cover letter and resume at the end of this application form.

Application deadline: May 29, 2018

Please select your zip code from the drop down list below:

...
Name: 
Street Address: 
City 
State 
Telephone Number: 
E-mail Address: 

Are you legally eligible to work in the United States?

☐ Yes
☐ No

If you are not a U.S. Citizen, are there any restrictions on your eligibility for employment? Please explain:

Education:

School Name: 
School Address: 
Anticipated Graduation Date: 
Grade Point Average: 
Major: 
Career Interests: 
Please list any scholastic honors/achievements/activities:

Work History (please include paid, volunteer, and intern positions):

Most Recent Employer:
References (may include teachers, supervisors, family members or volunteer work leaders.) Written references may be submitted with an application. The letter of reference should site specific examples of the candidate's ability to successfully complete the internship if chosen.

Reference #1 Name: 
Telephone Number: 
Company/School: 
Relationship: 
Known How Long: 

Reference #2 Name: 
Telephone Number: 
Company/School: 
Relationship: 
Known How Long:
Accomplishments (Community/professional organizations, honors and awards):

Accomplishments (Activities relevant to the internship for which you are applying):
Why would you like to work as an intern at Columbia University?

Please see below for descriptions of each internship position:

**Department: Manhattanville Development Group**

**Project Management Intern:**

- Perform architecture/design related tasks, including compiling data and preparing drawings for distribution; assisting in compiling architectural plans; assist in conducting preliminary studies to obtain information as to space and design requirements; research and information gathering for use in various projects.
- Work closely with Project Management team on various task lists, construction updates and construction reports Learn how to conduct effective meetings with clients and contractors and document the meeting with formal minutes.
- Assist with filing, organizing and cataloging project documents

**Department: Finance and Administration**

**IT Helpdesk Support Intern:**

- Learn how to identify, research, and resolve technical problems
- Respond to telephone calls, email and personnel requests for technical support
- Learn how to document, track and monitor all problems to ensure a timely resolution
- Assist in the installation and configuration of workstations based on needs and requirements
**Human Resources Intern:**

- Gather information/data on employee engagement
- Organize large database of files
- Attend all team training, meetings, and presentations

**Capital Finance Intern:**

- Review capital construction capital project documents and high level financial information in order to compile an Excel database of key information from each document
- Learn to use key financial Excel tools to prepare financial summaries geared toward upper management, clients and project management groups
- Prepare a summary of historical capital project contingency usage by category
- Compile historical project expenses by trade into a benchmarking database

**Code Compliance Intern:**

- Organize and review City certificates, permits, and plans to ensure they are up to date
- Create Excel database of key information for each city permit
- Assist with noting the progress of renovations

**Department: Planning and Capital Project Management**

**Design and Compliance/Capital Project Management Intern:**

- Create directory of plan room files
- Scan and file operations drawings
- Organize compliance binders and progress photos
- Attend meetings with a Project Manager, take notes, record attendance

**Department: Strategic Communications and Construction Business Initiatives**

**Communication and Outreach Support Intern:**

- Help design, develop and distribute effective communication materials for meetings with clients and contractors
- Review and recommend social media strategies to reach targeted audiences
• Track and record commitment outreach efforts to local community
• Conduct research and assist with preparation of presentations and support client relation activities
• Conduct daily review of vendor requests and provide administrative support for document management, expense reports and contact records

**Department: Student Center Operations**

**Student Center Operations Intern:**

• The Intern will report to the Welcome Desk Assistant Managers and work side by side with them to support the delivery of services to students, tenants and visitors.
• Participate in the implementation of procedures related to the communication and guest services at the Welcome Desk
• Perform daily inspections of the buildings common areas, office areas, reporting any equipment in need of repair and spaces that are unclean
• Help organize and manage existing data sheets and files for building analytics
• Support special projects during building summer refresh

**Department: Environmental Stewardship**

**Environmental Stewardship Intern:**

• Summarize 2018 Transportation Survey data - Make a series of tables using Excel to summarize results from 2018 Transportation Survey
• Audit bike cage for abandoned bikes – write done registration codes for bikes that look abandoned in the bike enclosure
• Weekly Zagster bike checks- record and report bikes that need maintenance
• Develop list of energy efficient fleet alternatives
• Price check video conferencing technologies and develop Excel list for consideration
• Assist with any audits of the organics program throughout the residential portfolio

**Department: Operations**

**Compliance/Work Safety Intern:**

• Create a "Safety in the Workplace" guide
- Assist with developing, designing, and distributing communication materials for meetings and trainings
- Attend meetings with members of the Compliance Team, take notes and record attendance
- Organize and review files and records

Please select your first preference for internship position:

Please select your second preference for internship position:

How did you find out about the Columbia University Facilities and Operations High School Internship Program?

If "Other" please write in how you found out about internship program:

Please upload your cover letter.

Drop files or click here to upload
Please upload your resume.

Drop files or click here to upload

If you have a reference letter, you may upload it here.

Drop files or click here to upload

I certify that all of the statements in this application are true and complete to the best of my knowledge. Please sign below with mouse cursor.

× SIGN HERE

clear

Columbia University is an Equal Opportunity/Affirmative Action employer -- Race/Gender/Disability/Veteran.
### Columbia University Facilities and Operations Summer Intern Friday Schedule 2018

**Friday, July 13** – Ice Breaker, Presentation Skills Workshop, and Team Building Exercise with [Name]

**Friday, July 20** – Overview of Campus Services

- Welcome with [Name], Vice President
- Behind the scenes tour of Roone Aldridge Auditorium with [Name], Executive Director, University Event Management; [Name], Manager, Technical Services; [Name], Supervisor, Technical Services
- Tour of Alfred Lerner Hall with [Name], Assistant Manager, Lerner Hall Welcome Desk
- Tour and Lunch at Ferris Booth Commons with [Name], Assistant Director, Lerner Hall Dining Operations
- Tour of Faculty House with [Name], General Manager
- Overview of the Office of Environmental Stewardship and Recycling Demonstration/Activity with [Name], Manager Operations and [Name], Assistant Director, Outreach & Planning

**Friday, July 27** – Tour of the Manhattanville Campus

- Tour of the Manhattanville Power House with [Name], Manager, District Energy Systems and [Name], Project Coordinator
- Visit to the Sheffield Farms Exhibit with [Name], Program Coordinator
- Tour of the Jerome L. Greene Science Center with [Name], Program Coordinator
- Tour of the Wallach Art Gallery and Art Activity with [Name], Associate Director, Education & Public Programs
- Tour of the Lenfest Center for the Arts with [Name], Audience Services Manager
- Overview of Alice! Health Promotion and Health & Wellness discussion with [Name], Chief of Administration (former Executive Director of Alice! Health Promotion)
- Q&A on how to create short videos with [Name], Director, IT

**Friday, August 3** – Tour of the Lamont-Doherty Earth Observatory

- Walking tour of the campus with [Name], Manager, Safety, Security & Communications
- Tour of research lab and research activity with [Name], Educator
- Meeting with Lamont-Doherty High School Interns and lecture from [Name], Associate Research Professor

**Friday, August 10** – Finalize and Practice Presentation

- Met with [Name], General Manager to discuss room set up and specifications
- Met with [Name], Audio Visual Manager to discuss all A/V needs

**Friday, August 17** – Final Presentation
Annual Report: Youth Internships - Engineering the Next Generation

State Submission Annual Reporting Period: October 2017 - September 2018

- Information Session Date: January 10, 2018
- Application Deadline: April 29, 2018

Following the initial five year Summer Internship Program and in coordination with Columbia Secondary School’s leadership, CU modified the internship program to provide a more selective internship to focus on at least one aspect of Science, Technology, Engineering, Environment, Arts and/or Math (STEAM).

The Engineering the Next Generation (ENG) Program is a 6-week long intensive summer program at Columbia Engineering for academically competitive high school students. Rising high school seniors are placed in engineering labs, matched with research mentors, and supervised by faculty members. Program components include research, mentoring, college preparation, presentation skills, as well as academic and professional workshops. Students are challenged with high-level academic expectations of both the researchers and undergraduate mentors. The program admits from five partner schools; Columbia Secondary School, The High School for Math, Science and Engineering (HSMSE) at the City College of New York, Marble Hill HS for International Studies, and ELLIS Preparatory Academy, and Bronx Center for Science and Math. Participants must be at least 16 years of age in order to participate and are granted a stipend for their time in the program.

<table>
<thead>
<tr>
<th>Intern Name</th>
<th>Zip Code</th>
<th>High School</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>10467</td>
<td>Bronx Center for Science &amp; Math</td>
</tr>
<tr>
<td>2.</td>
<td>10027</td>
<td>Columbia Secondary School</td>
</tr>
<tr>
<td>3.</td>
<td>10457</td>
<td>ELLIS Preparatory Academy</td>
</tr>
<tr>
<td>4.</td>
<td>10451</td>
<td>ELLIS Preparatory Academy</td>
</tr>
<tr>
<td>5.</td>
<td>11417</td>
<td>Columbia Secondary School</td>
</tr>
<tr>
<td>6.</td>
<td>11364</td>
<td>High School for Math Science and Engineering (HSMSE) at the City College of New York</td>
</tr>
<tr>
<td>7.</td>
<td>10463</td>
<td>ELLIS Preparatory Academy</td>
</tr>
<tr>
<td>8.</td>
<td>10462</td>
<td>High School for Math Science and Engineering (HSMSE) at the City College of New York</td>
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<tr>
<td>9.</td>
<td>10033</td>
<td>Columbia Secondary School</td>
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<tr>
<td>10.</td>
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<td>Columbia Secondary School</td>
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<tr>
<td>11.</td>
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<td>ELLIS Preparatory Academy</td>
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<tr>
<td>13.</td>
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<td>ELLIS Preparatory Academy</td>
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<tr>
<td>14.</td>
<td>11375</td>
<td>High School for Math Science and Engineering (HSMSE) at the City College of New York</td>
</tr>
</tbody>
</table>

Additional Supporting Documentation

- ENG Outreach and Application Process
- ENG 2018 Application Packet
**ENG Program: Summer Research for High School Students at Columbia University Fu Foundation School of Engineering & Applied Science**

**Program Description**
The ENG Program is a 6-week academic summer program at Columbia Engineering for academically competitive high school students. Rising high school seniors will be placed in engineering labs, matched with research mentors, and supervised by faculty members. This program has rigorous demands and will prepare students for the caliber of work expected of college students.

Program components include research, mentoring, college preparation, presentation skills, as well as technical, academic, and professional development workshops. Students will also learn time management, communication, and teamwork skills, which are all increasingly important for success in STEM fields and in higher education. Possible extensions of the program include continuing research throughout the academic year, publication in the Columbia Undergraduate Science Journal, and a letter of recommendation from the research lab’s supervising professor and Principal Investigator.

**Eligibility**
Students should be current high school juniors to apply. While there is no minimum GPA, students should excel academically overall. Ideally, applicants will have demonstrated interest in STEM subjects, for example by seeking out advanced classes and extra-curricular activities.

Students must be free for the entire duration of the program. Students are required to present their project at the research master class, write a summary of the research project, and prepare a poster to present at the undergraduate symposium in August 2018. The program also requires students to attend a lab safety training as well as relevant workshops. Students will be awarded a stipend upon successful completion of the program.

**Dates and Duration**
The program runs from Tuesday July 5th through Friday August 12, 2016. Students will work about 35 hours a week, Monday – Friday from 9am – 5pm.

**Application Deadline:**
Please print out all materials and submit them to your teacher by **April 29th 2018** by 5:00pm EST.
Application Checklist

Please use the following checklist to verify that your application is complete prior to submitting your application. All materials, including the letter of recommendation, are due on April 29th.

- **Personal Information Form**
  - Student and parent signatures are required.

- **Two (2) Essay Responses**
  - Essay responses should be written/typed on a separate document attached to the completed application. Please label each page with the question you are answering.

- **Extracurricular Responses**
  - Please describe up to three (3) of your most important extracurricular activities on the form included.

- **Recommendation Letter**
  - Please ask either your current science or math teacher to submit a recommendation on your behalf. **Important:** Please notify your teacher well in advance of the April 29th deadline to give your teacher ample time to prepare a letter of recommendation.
  - Teachers: Please email your letters of recommendation directly to [Director of Outreach Programs at Columbia Engineering](mailto:outreach@columbia.edu).

- **High School Transcript**
Essays

Please limit your responses to 300 words or less. There are no “right” answers to any of these questions; essays will be judged for creativity, innovation, and your ability to convey your ideas clearly and concisely. Submit your responses in a separate document along with the rest of your application, and clearly label each page with the question that you are answering.

1) What do you think has been the greatest scientific or technological discovery in the past 50 years? Why?

2) Describe a social, personal, or academic challenge that you have faced and how you overcame it.

3) Imagine that you are a product engineer for a rehabilitation clinic. Many of the clinic’s patients suffer from arthritis and have difficulty doing daily tasks with their hands, such as turning a doorknob, typing on a keyboard, or opening containers. The clinic has asked you to design a product that will allow arthritis patients to do some of these tasks more easily.

Describe your plan on how you will design your solution from start to finish. To help you get started, here are a couple questions to help you begin your design plan:

- Arthritis makes numerous daily activities difficult. Which specific activity will your product make easier for arthritis patients, and why did you choose this activity?
- How will you brainstorm possible solutions?
- How will you make your product economically feasible?
- How will you test your product?

Please note that we are NOT looking for a specific solution, and you do not need to design or sketch a possible solution unless you wish. We are more interested in your approach to problem solving and design planning rather than a “correct” solution.