

Exploration in Biotechnology IUP/RUIA Summer Program 2019

Summer program designed by the IUP College of Natural Sciences and Mathematics and the Office of International Education exclusively for students from RUIA College in Mumbai, India.

- Experience four weeks of full-time research in American college science laboratories.
- Complete field experiences at cutting-edge research facilities.
- Present laboratory findings in a professional setting using models, charts, and graphs.
- Participate in guest lectures by accomplished scientists.
- Live on an American college campus.
- Augment academic experience with travel and cultural explorations.

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Did you know?

IUP is ranked among the top 100 public institutions in the United States by *U.S. News & World Report*.

IUP RUIA Summer 2019 Program Highlights

- Study Biotechnology-related topics such as: forensics, genomics to proteomics, stem cell biology, tissue regeneration, nano-biotechnology, biomaterial science, functional genomics, biosensors, and drug discovery.
- Perform laboratory activities supervised by IUP professors.
- Fully integrate guest lectures with accomplished scientists and research groups.
- Visits to premier research centers (field experiences).

Experimental Laboratories

- Biological Safety and Broadening Occupational Awareness
- Quality Control and Assurance
- Confocal Imaging, and Digital Documentation Digital Documentation
- Bacterial Genome Editing using CRISPR/Cas9
- Forensics DNA Fingerprinting
- DNA Bar Coding, DNA, RNA, and Proteins on Chip
- Nano particles Applications; Biosensors in Medicine, Toxicology and Environmental Monitoring
- Tissue Engineering and Stem Cell
- RNA/DNA Manipulations... cDNA Cloning
- GMO/Genetically modified Foods and Detection
- REAL-TIME PCR and Conventional PCR Validation for Cancer Detection
- Bioinformatics and Primer-Probe Design
- Protein Characterization and Analysis (Proteomics)

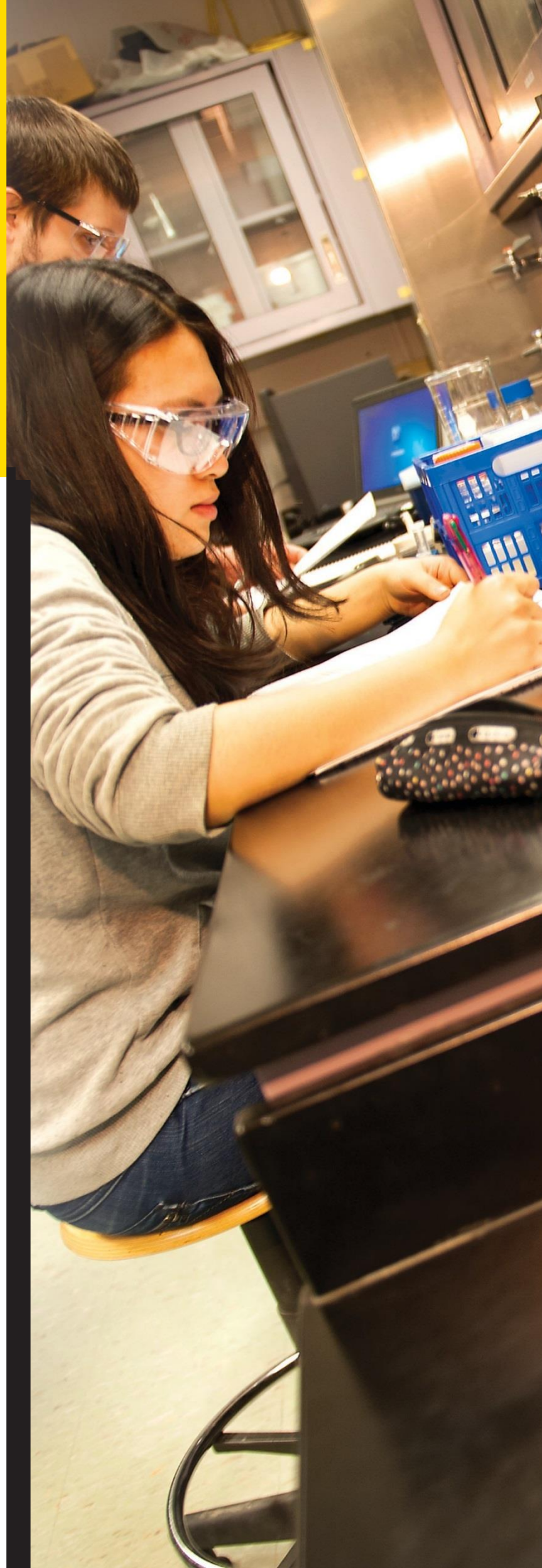
Required Field Experiences

Chan Soon-Shong Institute of Molecular Medicine, Windber, PA

Center for Nanotechnology Education & Utilization, Penn state for more information visit: <http://www.cneu.psu.edu>

ITSI-Biosciences, Johnstown, Pennsylvania, is a drug discovery Biotechnology facility dedicated to providing proteomics, mass spectrometry and targeted genomics services to pharmaceutical companies and academia. Students will learn about drug discovery and product development. For more information visit: www.itsibio.com.

For more information and to register, visit:
iup.edu/natsciandmath



Schedule and cost information

Summer 2019 Program Schedule (May 13, 2019-June 8, 2019)

Sunday, May 12	Arrive in Indiana, Pennsylvania, USA
Monday, May 13	IUP-RUIA Summer Program classes begin
Friday, May 17	Laboratory Experience Confocal Imaging-Olympus Microscopes
Saturday, May 18	Optional trip to Niagara Falls, New York
Friday, May 24	Field Experience ITSI Drug Discovery Proteomics Facility, Johnstown, Pennsylvania
Saturday, May 25	Optional trip to Washington, D.C.
Monday, May 27	Social Event at IUP celebrating Memorial Day
Saturday, June 1	Optional Shopping to Outlet Mall
Friday, June 7	Exploration in Biotechnology Program Closing Events <ul style="list-style-type: none"> • Research Poster Presentations • Awarding of Certificates • Banquet
Saturday, June 8	Departure from Indiana, Pennsylvania, to Mumbai, India

All laboratory and academic activities will follow the same Monday through Friday schedule (May 13-June 8) except on field experience days.

8:00 a.m. to 11:45 a.m.	Academic and laboratory activities
12:00 to 1:00 p.m.	Lunch
1:15 to 5:00 p.m.	Academic and laboratory activities

Cost for IUP/RUIA Summer Program 2019

(USD)

Program cost (includes all course materials, laboratory supplies and mandatory field experience cost)	\$1,140.00
Campus Accommodation / \$25 per night for shared room	\$700.00
Campus Meals (vegetarian option available) \$115 per week for 19 meals (on weekends, brunch replaces breakfast and lunch)	\$460.00
Total cost	\$2,300.00

Optional excursion trip travel costs

Niagara Falls	\$150.00
Washington, D.C.	
Grove City Shopping Trip	