Chemical and Molecular Engineering

Chairperson
Dilip Gersappe, Old Engineering Building 316 (631) 632-8499

Graduate Program Director
Taejin Kim, Engineering Building 210 (631) 632-1813

Department Administrator
Chandrani Roy, Assistant to the Chair (631) 632-4174

Graduate Program Coordinator
Jessica Armstrong, Engineering Building 314, (631) 632-8484

Department Office
Engineering Building 314, Zip 2275

Degrees Awarded
M.S. in Chemical and Molecular Engineering; Ph.D. in Chemical and Molecular Engineering

Website
https://www.stonybrook.edu/matscieng

Application
https://graduateschool.stonybrook.edu/apply/

Chemical Engineering

The Chemical and Molecular Engineering program, in the College of Engineering and Applied Sciences, offers graduate work leading to the Master of Science and Doctor of Philosophy degrees.

The main mission of the graduate program is to train the next generation of chemical engineers that will make important discoveries, develop new technologies, and apply innovative approaches to solve problems related to the production or use of drugs, food, chemicals, fuel and other products. Our programs in Chemical and Molecular Engineering offer students an extensive curriculum with the opportunity to pursue advanced studies and gain knowledge of chemical engineering theory and its relationship to related engineering processes, including catalysis, nanotechnology, computational modeling, environmental science, fluid mechanics, rheology, materials processing, polymers, thin films, biochemical, biomedical, biotechnology, separations, transport phenomena, and thermodynamics. The motivating philosophy of the graduate program is to provide the student with a broad knowledge in theoretical and experimental techniques to ensure that students graduate with the skills necessary for professional research and teaching in the chemical engineering field.

The faculty in the Chemical and Molecular Engineering program are actively involved in research in different areas and work with graduate students on projects that have both applied and fundamental aspects.

Research Areas

Research areas for the graduate program include Catalysis, Environmental Engineering, Nanotechnology, Nanotoxicology, Drug Delivery, Polymers, Energy Science and Computational Modelling.

Chemical and Molecular Engineering, MS and PhD

The MS degree in Chemical and Molecular Engineering is primarily a degree for students who wish to equip themselves with a more solid foundation in the principles of chemical and molecular engineering for further advanced study or pursuing a career as professional engineers. Master's degree candidates may elect a thesis or non-thesis option.

The PhD degree in Chemical and Molecular Engineering provides a thorough grounding in the fundamental principles of chemical engineering, as well as an intensive research experience. This degree is mainly designed to prepare students for a research career in academia, government or private laboratories, R&D in industry, or elsewhere.

Admissions

We are excited that you are considering our Graduate Program. Chemical and Molecular Engineering department offers admission to M.S. and Ph.D. programs. The Ph.D. program is intended for students who wish to pursue a research-oriented career, while M.S. program is intended for students who are looking for advanced positions in industry. Admission to the Ph.D. program is more competitive than the M.S. program.
To apply for Graduate Studies in MS and PhD in Chemical Engineering at Stony Brook you must complete your online application here. For information on application fee exceptions and the fee waiver request process, please visit this page. Also, when sending the required application documents please include a photocopy of your GRE (waived this year) and TOEFL scores besides having official scores sent.

Students are encouraged to apply to the five-year BE/MS accelerated degree program in the spring semester of their junior year. The application must include:

- A completed declaration form. Students complete the top section with their name, ID number, signature and date. Students will also need to complete the “Accelerated Program Declaration” section.
- Senior Year and MS Schedule Form to be completed in consultation with the student's proposed MS Advisor.
- A recent unofficial transcript.
- Three recommendation letters - At least two must be from current CME department faculty members; third may be completed by a non-CME professor or professional who can comment on the applicant’s academic background. Please note that recommendation forms should be sent directly from the faculty to ESMandCME_GradAdmissions@stonybrook.edu

Registration for MS Classes as an Accelerated Program Participant

If you are admitted to the Accelerated Program, SOLAR will not let you add your grad class; you must get permission from the Graduate School first. To get permission, you must complete the form “Permission for Undergraduate Students in an Accelerated or Combined Degree Program to Enroll in Graduate Course” and submit it to ESMandCME_GradAdmissions@stonybrook.edu at least 3 weeks before the semester starts. This form will be signed by the Graduate Program Director and then sent to the Graduate School for review and approval. Please note that the student may elect to take all 6 credits of the M.S. coursework in one semester, although it is not recommended.

Transfer Students

Students who transfer to Stony Brook must complete at least one semester at Stony Brook before they will be considered for admission to the five-year BS/MS program and decisions will be made on a case-by-case basis to ensure they meet all other requirements to qualify for the combined degree program.

Admission to the M.S. and Ph.D. Programs are handled separately by the departmental Admissions Committee. The requirements for admission to graduate study in CME include:

1. Bachelor's Degree: A bachelor’s degree in CME (or a closely related field).
2. A grade point average of at least B (i.e., 3.0/4.0) in all mathematics, engineering, and science courses.
3. GRE Examination - At this time Graduate Record Examination (GRE) scores for the general aptitude tests is being waived for application purposes.
4. Submission of TOEFL Test scores for all students whose native language is not English. Please refer to minimum score requirements. Masters students that have completed a degree program from a U.S. institution may be eligible for a TOEFL waiver and need to request the waiver, please Graduate Admissions at gradadmissions@stonybrook.edu. All PhD applicants with a TA stipend whose native language is not English must demonstrate a sufficient level of English-speaking proficiency (TOEFL Speaking score) and may be required to take ESL courses based on these measures.

Application Deadlines

For Spring 2024
MS Domestic & International Application- October 15, 2023, 11:59pm (EST)

For Fall 2024:
MS Domestic-April 15, 2024, 11:59 pm (EST)
MS International-February 15, 2024 11:59 pm (EST)
PhD Domestic & International- January 15, 2024, 11:59pm (EST)

Application Instructions

All applications must be completed online here. All additional required documents, such as, diplomas, transcripts, recommendation letters, etc. must be sent using the application portal.

You may download our Completed Application Checklist

When applying to our program, please fill out the online application and send supporting documents, such as GRE (*GRE is waived for Fall 2023 admission cycle) and TOEFL scores, directly to the graduate school via ETS. All application materials should be uploaded to Slate by the student at the time of application. Letter of recommendation requests should be sent by the applicant to the recommender through an automated email from Slate. The recommender can then reply electronically.

All official and final transcripts, and other admission materials should be sent to:

Stony Brook University Graduate Bulletin: www.stonybrook.edu/gradbulletin
Stony Brook University
Office of Graduate and Health Sciences Admissions
Health Sciences Tower, Level 2 – Rm. 271
11794-8276

Official E-Transcripts should be sent to: gradadmissions@stonybrook.edu

For application status and submission questions, including using the Slate system, please email: gradadmissions@stonybrook.edu

For program or curriculum related questions, please email: ESMandCME_GradAdmissions@stonybrook.edu

For Graduate Application & Admission FAQs, click here

A WES evaluation is recommended for international transcripts, however, you may simply submit your transcript/degree certificate if the degree earned is equivalent to a US degree (e.g., 4-year Bachelor).

http://www.wes.org/

For undergraduate degrees, a WES evaluation is generally not required if all of the following are true:
Your degree title is or translates to “Bachelor”
Your degree was completed as part of a 4-year course
Your degree was earned from an institution accredited by the official regional accreditation board for your country or region

For graduate degrees, a WES evaluation is generally not required if all of the following are true:
Your degree title is or translates to a degree title recognized in the US (e.g., “Master”, “Doctor”, etc.)
Your degree was earned from an institution accredited by the official regional accreditation board for your country or region

Regardless of whether a WES evaluation is needed, all documents must be provided with an official English translation when the original document is in another language. Such translations are typically provided by the issuing institution; however, you may also obtain a translation using any of the following methods.

Any of the accredited agencies listed at http://www.atanet.org/
Any of the accredited agencies listed at http://naces.org/
Translations from SBU faculty members

Please note, the Graduate School reserves the right to request a WES evaluation later in the admissions process if we are not satisfied with the information in the submitted documents upon their review. A subsequent request for a WES evaluation will delay the processing of your matriculation, as your application package will not be finalized until it is received & reviewed.

For application status and submission questions, please email: gradadmissions@stonybrook.edu

For program or curriculum related questions, please email: ESMandCME_GradAdmissions@stonybrook.edu

It is recommended if you have confirmation that your transcripts and other documents are received by Graduate School, please inform us (the department) via email at ESMandCME_GradAdmissions@stonybrook.edu so we can follow up to expedite your matriculation process.

The Graduate School application fee is $100* and is non-refundable. It is required for applicants from all countries.

Checking on the Status of your Application

Fall applications are reviewed in February. If your application file is missing anything, you will receive an e-mail from the department. Due to the high volume of applications we receive, we can’t respond to e-mails checking on status until AFTER April 10th.

Offer letters will begin to be mailed out from the end of February. We ask that you do not send us numerous e-mails checking on the status of your application or telephone us regarding application status.

If you do NOT receive a letter of offer from us by April 10th, you should then contact us if you have any questions.

Financial Support

Admitted Ph.D. students are typically offered financial support in the form of teaching or research assistantships, which include full tuition and broad-based fees. Admission into this program is very competitive.
M.S. students are typically admitted with no financial support; however, full time MS students in the thesis track may be appointed as Research Project Assistants with an opportunity to enter the PhD program at the discretion of a faculty member upon availability of funds. Information regarding tuition and other costs can be found here.

**Transfer of credits into M.S. or Ph.D. programs**

Students may transfer up to 9 credits of graduate courses obtained from another US accredited university. The following conditions and procedure are required to transfer any credits.

In order to be counted towards graduation, the credits must be evaluated by Chemical Engineering Program committee and faculty. The evaluation must establish equivalence between a course being transferred from another institution and a CME course in Stony Brook, which is accepted as part of the graduation requirements. The GPD typically evaluates the course materials/contents, student transcripts, etc. The approval is not automatic and we generally take a very careful look at such transfer requests.

Graduate courses that do not meet the previous requirement can be transferred without being counted towards graduation. This can sometimes be useful because students who have earned 24 graduate credits of any kind need to be registered for only 9 credits in order to have full time status. Therefore, gaining this status early might reduce tuition liability.

**M.S. to Ph.D**

A student in the M.S. program from CME or any related field at Stony Brook can subsequently apply for admission into the Ph.D. program, only if the student can be supported by an advisor to complete the PhD program in CME at Stony Brook. The students will require to complete a change of level/program form to enter the PhD program as a G-4 student.

The CME Ph.D. program also recognizes M.S. degree from other accredited US institutions, student who have M.S. degree in CME will still require to complete courses totaling 24 credits. The student will be accepted as G4 level student and expected to complete all requirements towards the Ph.D. degree.

**University Labs and Centers:**

- SensorCat New York State Center for Advanced Technologies Geospatial Center
- Trace Element Laboratory
- Trace Organic Chemical Mass Spectrometry Laboratory
- Flax Pond Marine Laboratory
- Southampton Marine Station
- Advanced Energy Research and Technology Center
- Center of Excellence in Wireless and Information Technology

**External Labs and Facilities:**

- National Synchrotron Light Source (NSLS) II, Brookhaven National Lab.
- Center for Functional Nanomaterials (CFN), Brookhaven National Lab.

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**External Labs and Facilities:**

- National Synchrotron Light Source (NSLS) II, Brookhaven National Lab.
- Center for Functional Nanomaterials (CFN), Brookhaven National Lab.
Requirements for the MS in Chemical and Molecular Engineering

Course requirements: Successful completion of a total of 30 course credits, which include four core courses (CME 501, CME 502, CME 503, CME 504) for a total of 12 credits, a choice of two out of five advanced elective chemical engineering courses (CME 511, CME 512, CME 513, CME 514, CME 515) for a total of six credits, two out of five specialization elective courses, all requiring capstone projects; (CME 522, CME 523, CME 524, CME 525, CME 526) for a total of six credits. If any of the above courses are not offered, students can replace/substitute a course with any other course offered in the program and/or in the department with GPD approval.

In addition to these courses the different programs have the following requirements:
Masters (MS) Degree requires another six credits for a total of 30 credits. Each track has different requirements for these six credits as follows;

Track:
Non-Thesis:
The election of this option must be made by the student by the end of the first semester in the program and it will be considered a terminal degree. Six credit of special topics (CME 696), additional electives or research (CME 599), and satisfactory completion of a capstone project as part of the specialization elective course selection

Thesis:
The election of this option must be made by the student by the end of the first semester in the program. Students may not transfer to the Non-Thesis Option once registered for a Thesis Master’s track. Students are required to complete six credits of research course (CME 599), which culminate in an original Master’s thesis. Students on this track may change into the PhD program at the completion of this track.

Requirements for the Ph.D. Degree in Chemical and Molecular Engineering

A. Plan of Work
Before completion of one year of full-time residency, the student must have selected a research advisor who agrees to serve in that capacity. The student will then prepare a plan of further coursework. This must receive the approval of the student’s advisor and of the Graduate Program Committee.

B. Coursework

• An average grade of B or higher is required for all courses.
• A minimum of 24 graduate course credits is required to graduate (excluding CME 555, 599, 697, 698, and 699).
• The 24 course credits must include the following four core courses: CME 501, 502, 503 and 504. If the student does not receive a minimum of a B in a core course, he or she may repeat that course one other time.
• All students must complete CME 555 Teaching and Mentoring Techniques. This course does not count towards the 24 graduate course credits
• The student must pass at least three credits of CME 698 Practicum in Teaching and six credits of CME 699 Dissertation Research on Campus.
• All courses taken outside the Department require permission from the Graduate Program Director.
• All PhD students must act as teaching assistants for five semesters (regardless of support), and they must register for CME 698 Practicum in Teaching- in all five semesters for a total of 3 credits and 0 credits for the rest.

C. Preliminary Examination
The preliminary examination must be taken before the beginning of the student’s fifth semester. This is an oral examination designed to test the student’s ability to utilize his or her chemical engineering background to carry out research in a chosen field of study, and to make clear written and oral presentations of research. At least ten days prior to the examination, the candidate should submit a research proposal (10-15 pages) to the examiners that places the research in context of other work in the area, demonstrates original thought, clearly outlines its broader impact, and provides a sustainable timeline for its completion.

The examination committee will consist of three Chemical and Molecular Engineering faculty members, and one member from another department or institution. If a second examination is required, it must be completed by the tenth week of the fifth semester.

Once the student has advanced to candidacy, the student must report to the committee at least once a year before the end of the spring semester on progress towards his/her dissertation.

D. Advancement to Candidacy
After the prelims, the department processes the Advancement to Candidacy once the student’s preliminary examination committee has signed to confirm that the student has passed the prelims. It is important to note, that a student must have no “I” or “U” grades for courses that count towards the degree to advance to candidacy. He/she must have completed all coursework requirements to advance to candidacy.

E. Dissertation
The most important requirement of the Ph.D. degree is the completion of a dissertation, which must be an original scholarly investigation. The dissertation shall represent a significant contribution to the scientific literature, and its quality shall be compatible with the publication standards of appropriate and reputable scholarly journals. At least two semesters should elapse between the preliminary exam and submission of the dissertation.

Stony Brook University Graduate Bulletin: www.stonybrook.edu/gradbulletin
F. Defense
The candidate shall defend the dissertation before an examining committee consisting of four members, including the research advisor, two members of the Materials Science and Chemical Engineering Department, and one member from outside the Department.

G. Time Limit
All requirements for the Ph.D. degree must be completed within seven years after completing 24 credit hours of graduate courses in the program.

Requirements for the Bachelor of Science Degree/Master of Science Degree Accelerated Program
The Accelerated BE/MS program is designed to allow Chemical and Molecular Engineering (CME) students in good academic standing to graduate with both a Bachelor's degree and a Master's degree in five years. This is made possible by allowing the students to take up to 6 credits of graduate courses to substitute for 6 credits of undergraduate specialization courses as an undergraduate student that can be counted towards the MS degree, consistent with the Graduate School policy. However, the undergraduates can only take graduate technical electives (not core courses), totaling 6 credits and completing the remaining 24 credits to fulfill the 30-credit requirement for completion of the M.S. degree in their fifth year.

The program will be highly selective, and it is anticipated that only a few students will be admitted each year. The admissions requirements for students entering the accelerated degree program are as follows:

1. Applicant must be a senior in the CME major with a cumulative undergraduate GPA of at least 3.3 at the time of application and must graduate from the undergraduate program that year;
2. GPA in courses required in the CME undergraduate major of at least 3.3;
3. Three letters of recommendation from Stony Brook faculty members.
4. Please contact the department at ESMandCME_GradAdmissions@stonybrook.edu to apply to the program.

Applications are reviewed by the CME Graduate Admissions Committee and students will be notified if they have been admitted to the Accelerated Program. The BE/MS is a sequential degree program; Students typically matriculate to the graduate career at the beginning of their third semester in the accelerated program. Students must have a cumulative GPA of 3.3 or higher to be admitted to the Graduate School. The Master's in Chemical Engineering is a 30 credit program and 24 of those credits must be earned as a matriculated graduate student.

Students who transfer to Stony Brook must complete at least one semester at Stony Brook before they will be considered for admission to the five-year BS/MS program and decisions will be made on a case-by-case basis to ensure they meet all other requirements to qualify for the combined degree program.

Faculty

Faculty of Materials Science and Chemical Engineering Department

Chemical Engineering Program

Professors
Mahajan, Devinder, CME Graduate Program Director, Ph.D., 1979, University of British Columbia: catalysis and process engineering; large-scale energy storage for decarbonization of power and transportation sectors via Hydrogen economy and Renewable methane.

Tannenbaum, Irena, PhD 1982, ETH Zurich: Polymers, Biomaterials, nanotechnology and nanomedicine.

Associate Professors
Koga, Tadanori, Ph.D., 1998, Kyushu University, Japan, Physics: green nanofabrication of polymer thin films; chemical recycling of waste plastics and methane hydrate as a future energy resource

Kim, Taejin, PhD, 2007, Lehigh University, Catalysis and Reaction Engineering, Operando methods of characterizing catalytic reactions, biomass conversion to fuels and chemicals

Assistant Professors
Rajput, Nav Nidhi, Assistant Professor, Ph.D., Louisiana State University (2013). Research: Molecular dynamics studies of ionic liquids, Nanoporuous materials; Electrochemistry

Lecturers
Meng, Yizhi, PhD, 2003, Cornell University, Food Engineering

Nitodas, Steve PhD, 2001, University of Rochester, Materials Science & Chemical Engineering, Kinetic Investigation and Modeling of the Chemical Vapor Deposition of Aluminum Oxide, Silicon Oxide and Aluminosilicates from Mixtures of Metal Chlorides, Carbon Dioxide, and Hydrogen

Stony Brook University Graduate Bulletin: www.stonybrook.edu/gradbulletin
Crossover with Materials Science

Distinguished Professors

Rafailovich, Miriam, Ph.D., 1980, Stony Brook University: Polymeric liquids; phase transitions; thin film wetting phenomena; atomic force microscopy; ion, X-ray, and neutron scattering.

Samath, Sanjay, Ph.D., 1989, Stony Brook University: Thermal spraying; protective coatings; functioning graded materials; thick film electronics and sensors.


Professors

Clayton, Clive R., Ph.D., 1976, Surrey University, England: Environmental degradation of materials; XPS; AES; dynamic and static SIMS; electrochemical analysis synthesis by ultra-fast laser ablation; RHEED; protective coatings.

Dudley, Michael, Ph.D., 1982, University of Warwick, England: Synchrotron topography; crystal defects; mechanical properties.

Frenkel, Anatoly., PhD 1995, Tel Aviv University, Application of synchrotron measurements in materials, Structure-property-function relationships in applied nanomaterials, catalysis

Gersappe, Dilip., Chairperson, Ph.D., 1992, Northwestern University: Polymer theory and simulation, Modeling of complex fluids and electrochemical processes

Sokolov, Jonathan C., ESM Graduate Program Director, Ph.D., 1983, Stony Brook University: Surface and interface properties of polymers and blends; phase transitions; neutron and X-ray scattering; EXAFS; SIMS.

Associate Professors

Halada, Gary, Ph.D., 1993, Stony Brook University: Electron spectroscopy; electrochemistry; surface engineering; optical spectroscopy; environmental remediation.

Orlov, Alexander, Ph.D., 2005, University of Cambridge, UK, Physical Chemistry: M.Phil. Chemistry University of Cambridge, UK; M.S.E. Engineering, University of Michigan, USA; M.E./B.E. Engineering, National Technical University, Ukraine. Materials for environmental applications; physical chemistry, environmental nanotechnology and photocatalysis

Trelewicz, Jason, Ph.D., 2008, M.I.T.; thermodynamic and mechanical properties of binary nanocrystalline alloys by implementing a combination of analytical theory and experimental mechanics

Venkatesh, T.A., Ph.D., 1998, Massachusetts Institute of Technology: Nanomaterials, Smart Materials, Materials for MEMS and biomedical applications

Assistant Professors

Chen-Wiegart, Karen, PhD, 2011, Northwestern University, x-ray imaging and spectroscopic techniques to study novel functional materials. Energy storage and conversion, nano-/meso-porous materials, thin film & surface treatment

Research Professor

Koga, Maya Ph.D. 2005, Kyoto University, Japan, Polymer Physics.

Marshilok, Amy, University of Buffalo, Energy storage and electrochemical transport. New material and electrode concepts for high power, high energy density, extended life primary and secondary batteries

Snead, Lance, Ph.D., 1992, Rensselaer Polytechnic Institute, Nuclear Engineering

Sprooster, David, Ph.D., 2010, Physics, Australian National University (Canberra), Research School of Physics and Engineering: “Ion Beam Formation and Modification of Cobalt Nanoparticles”

Samuilov, Vladimir, Ph.D., 1986, Belarus State University: Physics.

Muller, Erik, Ph.D., 2005, Cornell University, Physics: “A Study of Charge Trapping in Pentacene Thin Film Transistors Using Electric Force Microscopy”

Raghothamachar, Balaji, Ph.D., 2001, Stony Brook University, Materials Science and Engineering

Veerasamy, Vijayen S., PhD., 1994, University of Cambridge, England, Engineering & Material Science

Adjunct Faculty

Abboud, Marcus, Ph.D., 2003, University of Bonn, Dental Medicine; “Correlation between gingival recession and tooth deflections in patients with mandibular crowding”

Arbab, Hassan, M., Dual Ph.D., 2011, Electrical Engineering and Nanotechnology

Berndt, Christopher, Ph.D., 1981, Monash University, Materials Science Engineering

Bhatt, Vatsal, Ph.D., 2014, CEPT University Ahmedabad, India, Urban Energy, Water and Climate Change

Boscoboinik, Jorge Anibal, Ph.D., University of Wisconsin Milwaukee, Chemistry; Small Organic Molecules in Transition Metal Surfaces and Monte Carlo Simulations of Bimetallic Surface Alloys.

Butcher, Thomas, Ph.D. 1987, Stony Brook University, Mechanical Engineering

Cen, Jiajie, Ph.D., 2019, Stony Brook University, Materials Science Engineering


Concepcion, Javier, Ph.D 2002, Pontifical Catholic University of Chile (Chile) and Georgia Institute of Technology (USA): Inorganic Chemistry

Cotlet, Mircea, Ph.D., 2002, Katholieke Universiteit Leuven, Belgium: Physical Chemistry

DiMarzio, Donald, Ph.D. 1987, Physics, Rutgers University New Brunswick, NJ.

Dwivedi, Gopal, Ph.D., 2011, Stony Brook University, Materials Science & Engineering

Endoh, Maya Koga, Ph.D., 2005, Kyoto University, Japan, Polymer Physics


Gangwal, Santosh, Ph.D., 1977, University of Waterloo, CA, Chemical Engineering

Ge, Mingyuan, Ph.D., 2015, Materials Science, University of Southern California (USC), CA

Gu, Genda, Ph.D., 1989, Harbin Institute of Technology, Harbin, China; Materials Science & Engineering; Single crystal characterization and physical properties measurement; single crystal growth and solidification of oxide materials and metallic materials

Hainfeld, James, Ph.D., 1974, University of Texas, Chemistry and Biochemistry

Harrison, Robert, Ph.D., 1984, University of Cambridge, Theoretical Chemistry

Htun, Nay, Ph.D, Chemical Engineering, Imperial College, U.K.

Hu, Enyuan, Ph.D., 2015, Stony Brook University, Mechanical Engineering, Solid-State Chemistry

Huang, Xiaoqing, Ph.D., 2009, Stony Brook University, NY: Physics; Cryo Soft X-ray Diffraction Microscopy with Biological Samples

Huang, Xianrong, Ph.D., 1995, Nanjing University, China: X-ray typography

Johnson, Curtis, Ph.D., Pennsylvania State University, Metallurgy

Keister, Jeffrey, Ph.D. 1997: University of North Carolina at Chapel Hill, Physical Chemistry.

Krstic, Predrag Ph.D., 1982, City College of CUNY, NY; Theoretical Physics; Atomic Physics

Kwon, Gihan, Ph.D., 2009, University of Alabama, Chemical & Biological Engineering

Lee, Wilson, Ph.D., 2007, Stony Brook University, Materials Science, Cosmetics Research and Development

Li, Qiang, Ph. D., 1991, Iowa State University at Ames: Energy and electronic materials; synthesis and characterization.

Lindberg, Jake C., Ph. D., 2021, Stony Brook University, Chemical & Molecular Engineering

Liu, Bingzhao, Ph.D., 2007, The University of Chicago, Chemistry; Solar water splitting; Pulsed Laser Deposition (PLD), Atomic Layer Deposition (ALD); Colloidal nanoparticle synthesis; Numerical simulation for nanophotonic/plasmonic structures

Liu, Qun, Ph.D., 2006, Cornell University, Ithaca, NY: Biophysics, Biochemistry

Lombardi, Jack, Ph.D., 2015, Stony Brook University, Materials Science and Engineering
Lu, Deyu, Ph.D., Physics, University of Illinois at Urbana-Champaign: Empirical nanotube model: Applications to water channel and nano-oscillators
Lu, Mingzha, Ph.D., 2007, The University of Chicago, Chemistry; Solar water splitting; Pulsed Laser Deposition (PLD), Atomic Layer Deposition (ALD); Colloidal nanoparticle synthesis; Numerical simulation for nanophotonic/plasmonic structures.

Lu, Fang, Ph.D., 2007, Chinese Academy of Sciences: Condensed Matter Physics

May, Katherine Flynn, Ph.D, 2014, Stony Brook University, Materials Science and Engineering, Research field: Thermal Spray Formed Ceramic

Marschilok, Amy, Associate Professor, Stony Brook University; Co-Director, Institute for Energy Sustainability and Equity, Stony Brook University; Scientist and Division Manager, Brookhaven National Laboratory; Ph.D., University at Buffalo, Chemistry; Areas of Interest: Electrochemistry, Electrochemical Materials Science

Petrash, Stansislas, Ph.D., 1998, Polymer Science, University of Akron: "Neutron Reflectivity Studies of Human Serum Albumin Adsorption onto Well-Defined Surfaces"

Meng, Qingpeng, Ph.D, 2002, Shanghai Jiao Tong University, Materials Science and Engineering, Research field: Phase Transformation & Nanostructured Materials

Muller, Erik, Ph.D., 2005, Cornell University, Physics; Investigating the material properties of high quality synthetic diamond for use as both electron emitters and x-ray detectors

Mironava, Tatsiana, Ph.D., 2011, Stony Brook University, Materials Science, and Engineering

Nam, Chang-Yong, Ph.D., 2007, University of Pennsylvania, Materials Science and Engineering; Infiltration synthesis, with a focus on material hybridization & nanopatterning; Atomic layer deposition for oxidation catalysts; Organic & hybrid photovoltaics; Nanowire electronics; Semiconductor device physics & characterization

Neiser, Richard A, Ph.D. 1989, Stony Brook University, Materials Science, and Engineering

Nam, Chang-Yong, Ph.D., 2007, University of Pennsylvania, Materials Science and Engineering; Infiltration synthesis, with a focus on material hybridization & nanopatterning; Atomic layer deposition for oxidation catalysts; Organic & hybrid photovoltaics; Nanowire electronics; Semiconductor device physics & characterization

Okoli, Celest, Ph.D., 2018, Stony brook University, Materials Science & Chemical Engineering

Petrovic, Cedomir, Ph.D. 2000, Florida State University, Physics.

Petrash, Stansislas, Ph.D., 1998, Polymer Science, University of Akron: "Neutron Reflectivity Studies of Human Serum Albumin Adsorption onto Well-Defined Surfaces"

Rodriguez, Jose, Ph.D., 1988, Indiana University, Chemistry, Catalysis and Surface Science

Shah, Raj, Ph.D, 1995, Pennsylvania State University, Chemical Engineering.

Sharma, Priyanka, Ph.D., 2014, CSIR-National Chemical Laboratory, India, Material Chemistry and Nanomaterials

Sharma, Sunil, Ph.D., 2016, IIT Bombay, Mumbai, India, Material Chemistry and Nanomaterials

Singh, Gurtej, Ph.D., 2012, Rensselaer Polytechnic Institute (RPI), Troy, NY; Chemical and Biological Engineering


Stacchiola, Dario, Ph.D., 2002, University of Wisconsin-Milwaukee, Physical Chemistry, Surface Science

Tan Kun, Ph.D., 2022 Stony Brook University, Chemical and Molecular Engineering

Tawfik, Hazem, P.E. and a Certified Manufacturing Engineer; Director of the Institute of Research and Technology Transfer (IRTT) at Farmingdale State College - State University of New York

Uchimiya, Sophie Minori, Ph.D, 2005, Environmental Chemistry Department of Geography and Environmental Engineering: Research Chemist, USDA-ARS Southern Regional Research Center, New Orleans, LA

Veerasamy, Victor, Ph.D., 1994 University of Cambridge, England

Veerasamy, Yovana, Ph.D., 2020 University of Toledo, Administration and Policy, Internationalization Policy


Wang, Jia, Ph.D., 1987, Physical Chemistry, City University of New York: Surface Electrochemistry and Electrocatalysis

Wang, Mu, Ph.D., 1991, Physics, Nanjing University, Jiangsu, China

Weil, Edward, Ph.D., 1953, University of Illinois, Organic Chemistry
Wiegart, Lutz, Ph.D., 2007, Physics, Université Joseph Fourier (Grenoble, France), Commissariat à l’énergie atomique (CEA, Grenoble, France), European Synchrotron Radiation Facility (ESRF, Grenoble, France) and University of Dortmund (Germany)

Wu, Qin, Ph.D., 2004, Duke University, Chemistry

Xin, Huolin, Ph.D., 2011 Cornell University, Physics

Xiao, Xianghui, PhD., 2002, Institute of High Energy Physics, Chinese Academy of Science, China, Physics

Zhang, Zhiwei, Ph.D. 2003, Colorado School of Mines, Chemical Engineering, Reaction Kinetics and Reactor Engineering

Affiliate Faculty

Bhatia, Surita, Ph.D., 2000, Princeton University

Takeuchi, Kenneth, Ph.D. Ohio State University

NOTE: The course descriptions for this program can be found in the corresponding program PDF or at COURSE SEARCH.