

TPCB PROGRAM OF STUDY

Dates apply to entering Class of 2021

<http://chembio.triiprograms.org/about-tpcb/program-of-study/>
<http://chembio.triiprograms.org/about-tpcb/timeline-and-requirements/>

Admissions Timeline

Feb–Apr 2021	TPCB admission offers sent to students; Additional discussions arranged with TPCB faculty based on interests
April 15, 2021	Deadline for students to accept or decline TPCB admission offers

Enrollment Timeline

May 1, 2021	Deadline for foreign students to submit completed I-20 visa applications to TPCB (processed by Weill Cornell Graduate School); First-Year Advisors contact students to discuss rotation selections
May 31, 2021	Deadline for students to arrange Laboratory Rotation #1 directly with faculty
June 21, 2021	Deadline for receipt of official final transcripts and GRE scores by TPCB (<i>deadline extended for students at institutions with later graduation dates</i>)
July 1, 2021	Students arrive on Tri-I campuses and formally enroll at Weill Cornell; Welcome Meeting & Orientation with TPCB Directors and 2nd-Year Students (<i>start date flexible for students with extended academic commitments</i>)
Summer 2021	Students attend Meet the Faculty lunches with TPCB faculty
Aug 31, 2021	Students establish Individual Development Plan and meet with First-Year Advisor to discuss and refine plan
Late Aug 2021	Graduate Student Orientation Week (hosted by Weill Cornell)
Sept 7, 2021	Classes begin on all campuses

Laboratory Rotations – Year 1

Students must complete at least 3 rotations on at least 2 campuses (Weill Cornell, Rockefeller, Sloan Kettering). A fourth rotation may be pursued and dates may be adjusted in consultation with First-Year Advisor and faculty, contingent upon satisfactory performance to date).

July 2021 – Sep 2021	Laboratory Rotation #1	(3 months)
Oct 2021 – Jan 2022	Laboratory Rotation #2	(4 months)
Feb 2022 – May 2022	Laboratory Rotation #3	(4 months)

Lecture Courses, Seminars, and Symposium

Students must complete 4 lecture courses and participate in interactive seminars

- Years 1–2
- 1) TPCB Principles of Chemical Biology (Rockefeller, Fall)
 - 2) TPCB Chemistry in Biology & Medicine (Weill Cornell, Spring)
 - 3) Core Course (*select one*)
 - Advanced Organic Chemistry (Columbia GU4147, Fall)
 - Biochemistry and Structural Biology Core (Weill Cornell, Fall)
 - Pharmacology I: Chemical Biology (Weill Cornell, Fall)
 - Statistical Thermodynamics (Columbia GU4230, Fall)
 - 4) Elective Course (*select one or a second course from Group 3*)
 - Other electives may be selected with prior approval by Program Director*
 - Highlighted courses pending confirmation from course director*
 - Biochemical & Biophysical Methods (Rockefeller, Fall, intermittent [expected 2021])
 - Cell Biology (Rockefeller, Spring, even years)
 - Cellular and Organismal Metabolism (Rockefeller, Winter)
 - Core Principles of Molecular Biophysics (Weill Cornell, Spring)
 - Cryoelectron Microscopy of Macromolecular Assemblies (NYSBC/NYU 4408, Spring)
 - Drug Development: From Molecule to Prescription (Weill Cornell, Spring)
 - NMR Spectroscopy of Macromolecules (NYSBC/Columbia G6270, Spring, even years)
 - Protein NMR Spectroscopy (NYSBC/CUNY 88900, Fall, intermittent [offered 2018])
 - Quantitative Understanding of Biology I (Weill Cornell, Fall)
 - Synthetic Methods in Organic Chemistry I (Columbia G4148, Fall)

- Years 1 & 2
- TPCB Chemical Biology Seminar Course (seminars and journal club)
- Years 1 & 5
- Tri-Institutional Responsible Conduct of Research Course (Fall) including required Rigor & Reproducibility workshop
- All Years
- TPCB Research-in-Progress Student Seminar Series (approx. biweekly)
- All Years
- Tri-Institutional Chemical Biology Symposium (annual)
- All Years
- TPCB Student Career Development Retreat (annual)
- All Years
- TPCB Open House Poster Session (annual)

Thesis Research

- June 1, 2021
- Deadline for selection of thesis laboratory (end of Year 1)
- July 1, 2021
- Students relocate to housing at thesis mentor's institution and formally transfer to corresponding graduate school if necessary (beginning of Year 2)
- June 30, 2022
- Deadline for successful completion of PhD candidacy exam (end of Year 2): Admission to Candidacy Exam (Weill Cornell and Sloan Kettering) or Thesis Research Proposal (Rockefeller)
- Fellowship
- Students must submit at least one external fellowship application during their training, generally based upon the thesis proposal
- Thesis Research
- Thesis Committee meetings at least annually (Years 3 and 4) then at least every 6 months (Year 5 and beyond); Thesis Committee report must be filed with TPCB and graduate school in which student is enrolled
- Thesis Defense
- Students complete written thesis, public oral presentation, and private defense with Thesis Committee and additional faculty examiner
- All Years
- Students must abide by all policies & procedures of TPCB and graduate school in which they are formally enrolled (Weill Cornell or Rockefeller)

Additional Course Information

Course Lists

Weill Cornell (quarters): <http://gradschool.weill.cornell.edu/academics/course-offerings>
Rockefeller (trimesters): <http://www.rockefeller.edu/graduate/curriculum/>
Columbia (semesters): <http://www.columbia.edu/cu/bulletin/uwb/sel/subj-C.html>
CUNY (semesters): www.gc.cuny.edu/Page-Elements/Academics-Research-Centers-Initiatives/Doctoral-Programs/Chemistry/Path-to-Degree/Courses
NYSBC (semesters): <http://nysbc.org/education-events/>

TPCB Required Courses

Principles of Chemical Biology (Rockefeller, Fall T1)
Course Director: Tarun Kapoor (RU)
Website: n/a - syllabus on file

Chemistry in Biology & Medicine (Weill Cornell, Spring Q3Q4)
Course Director: Anant Menon (WCM)
Website: n/a - syllabus on file

TPCB Core Courses

Advanced Organic Chemistry (Columbia GU4147, Fall, every year, MW 8:40a-9:55a)
Course Directors: Jack Norton (2021, CU)
Website: <http://www.columbia.edu/cu/bulletin/uwb/#/cu/bulletin/uwb/subj/CHEM/G4147-20213-001/>

Biochemistry and Structural Biology (Weill Cornell, Fall Q1, every year, MWF 10:30-12:00)
Course Director: Baran Ersoy (WCM)
Website: <http://gradschool.weill.cornell.edu/academics/course-offerings/biochemistry-and-structural-biology>

Pharmacology I: Chemical Biology (Weill Cornell, Fall Q1Q2, every year, MFW 1:30-3:00)
Course Directors: Anthony Sauve (WCM) & Minkui Luo (MSK)
Website: <http://gradschool.weill.cornell.edu/academics/course-offerings/principles-pharmacology-i-chemical-biology>
Includes Sauve lectures in Essential Principles of Pharmacology in preceding week

Statistical Thermodynamics (Columbia GU4230, Fall, every year, TR 11:40a-12:55p)
Course Directors: Angelo Cacciuto & David Reichman (2021, CU)
Website: <http://www.columbia.edu/cu/bulletin/uwb/#/cu/bulletin/uwb/subj/CHEM/G4230-20203-001/>

TPCB Elective Courses

Other electives may be selected with prior approval by Program Director

Biochemical & Biophysical Methods I (Rockefeller, Fall T1, odd years, TR 3:00-5:00)
Directors: Seth Darst (RU) & Michael Rout (RU) – Fall 2021 (*last offered 2019*)
Website: n/a - 2019 syllabus available on file

- Biochemical & Biophysical Methods II (Rockefeller, Winter T2, even years, TR 3:00-5:00)
Directors: Gregory Alushin (RU) & Shixin Liu (RU) – Winter 2022 (*last offered 2020*)
Website: n/a - 2020 syllabus available on file
- Cell Biology (Rockefeller, Spring T2T3, even years, W 2:00-5:00 / T 9:00-11:00)
Directors: S. Simon (RU) & S. Shaham (RU) – Spring 2022 (*last offered Spring 2020*)
Website: n/a - 2020 syllabus available on file
- Cellular and Organismal Metabolism (Rockefeller, Winter T2, every year, M 1:30-3:30)
Directors: K. Birsoy (RU) & P. Cohen (RU)
Website: n/a - 2020 syllabus available on file
- Core Principles of Molecular Biophysics (Weill Cornell, Spring Q3Q4, every year, TR 4:00-6:00)
Directors: A. Accardi, J. Dittman, J. Levitz, M. Meyerson (WCM)
Website: n/a - 2020 syllabus available on file
- Cryo-EM Microscopy of Macromol. Assemblies (NYSBC/NYU 4408, Spring, MW 3:30-5:00)
Director: Edward Eng (NYSBC)
Website: <https://semc.nysbc.org/the-winter-spring-2022-em-course/>
- Drug Development: From Molecule to Rx (Weill Cornell, Spring Q3Q4, every year, R 3:00-5:00)
Course Directors: D. Heller (MSK) & L. Gudas (WCM) - Spr 2022 (*last offered Spr 2021*)
Website: n/a - 2021 syllabus available on file
- NMR Spectroscopy of Macromol. (NYSBC/Columbia G6270, Spring, even years, WR 1:00-2:30)
Director: Arthur Palmer (CU) & Ann McDermott] (CU) - Spr 2022 (*last offered Spr 2020*)
Website: <http://www.nysbc.net/twiki/bin/view/Main/NmrCourse>
Website: *see Columbia course website when Spring calendar is posted*
- Protein NMR Spectroscopy (NYSBC/CUNY 88900, Fall, intermittent, R 2:00-5:00)
Director: Rhanajeet Ghose (CUNY) - not offered in 2021 (*last offered Fall 2018*)
Website: <http://www.nysbc.net/twiki/bin/view/Main/ProteinNmrCourse> (2018)
- Quantitative Understanding of Biology I (Weill Cornell, Fall Q1Q2, every year, TR 5:30-7:00)
Director: Jason Banfelder (RU) & Luce Skrabanek (Cornell)
Website: https://physiology.med.cornell.edu/people/banfelder/qbio/schedule_2020/
- Synthetic Methods in Organic Chem. I (Columbia GU4148, Fall, every year, TR 10:10a-11:25a)
Directors: Dalibor Sames & Tomislav Rovis (2021, CU)
Website: <http://www.columbia.edu/cu/bulletin/uwb/#/cu/bulletin/uwb/subj/CHEM/G4148-20213-001/>