Tri-Institutional PhD Program
Chemical Biology

TPCB PROGRAM OF STUDY

Entering Class of 2017

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

Admissions Timeline

Feb–Apr 2017	TPCB admission offers sent to students; Additional discussions arranged with TPCB faculty based on interests
April 15, 2017	Deadline for students to accept or decline TPCB admission offers

Enrollment Timeline

May 1, 2017	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 15, 2017	Deadline for students to arrange Laboratory Rotation #1 directly with faculty
June 20, 2017	Deadline for receipt of final official undergraduate transcript by TPCB *(deadline extended for students at institutions with later graduation dates)*
July 3, 2017	Students arrive on Tri-I campuses and formally enroll at Weill Cornell; Welcome Lunch & Orientation with TPCB Directors and 2nd-Year Students *(start date flexible for students with extended academic commitments)*
Summer 2017	Students attend Meet the Faculty lunches with TPCB faculty
Aug 27–31	Graduate Student Orientation Week (hosted by Weill Cornell)
Sept 4, 2017	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). Additional rotations may be pursued and dates may be adjusted in consultation with First-Year Advisor and faculty.

July 2017 – Sep 2017	Laboratory Rotation #1	(3 months)
Oct 2017 – Jan 2018	Laboratory Rotation #2	(4 months)
Feb 2018 – May 2018	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, odd years)

2) TPCB Chemistry in Biology & Medicine (Weill Cornell, Fall, even years)

3) Core Course (*select one*)

Advanced Organic Chemistry (Columbia G4147, Fall)
Biochemistry and Structural Biology Core (Weill Cornell, Fall)
Pharmacology I: Chemical Biology (Weill Cornell, Fall)
Statistical Thermodynamics (Columbia G4230, 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

Biophysical Methods (Weill Cornell, Fall, odd years)
Biochemical & Biophysical Methods (Rockefeller, Spring, intermittent [expected 2017])
Biomolecular NMR Spectroscopy (NY Structural Biology Center/CUNY, odd years)
Cell Biology (Rockefeller, Spring, even years)
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)
Quantitative Understanding of Biology I (Weill Cornell, Fall)
Synthetic Methods in Organic Chemistry I (Columbia G4148, Fall)
Synthetic Methods in Organic Chemistry II (Columbia G8149, Spring)

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

Thesis Research

June 1, 2018	Deadline for selection of thesis laboratory (end of Year 1)
July 1, 2018	Students relocate to housing at thesis mentor's institution and formally transfer to corresponding graduate school if necessary (beginning of Year 2)
June 30, 2019	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 required to 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, odd years)
Course Director: Tarun Kapoor (RU)
Website: n/a - syllabus on file

Chemistry in Biology & Medicine (Weill Cornell, Fall Q1Q2, even years)
Course Director: Scott Blanchard (WCM)
Website: n/a - syllabus on file

TPCB Core Courses

Advanced Organic Chemistry (Columbia GU4147, Fall)
Course Directors: Jack Norton & Dalibor Sames (2017, CU)
Website: http://www.columbia.edu/cu/bulletin/uwb/subj/CHEM/G4147-20163-001/

Biochemistry and Structural Biology Core (Weill Cornell BCMB.5002.01, Fall Q1)
Course Directors: Paul Tempst (MSK) & Andrew Koff (MSK)
Website: http://gradschool.weill.cornell.edu/academics/course-offerings/biochemistry-and-structural-biology

Pharmacology I: Chemical Biology (Weill Cornell PHAR.5006.02, Fall Q1Q2)
Course Directors: Anthony Sauve (WCM) & Minkui Luo (MSK)
Website: http://gradschool.weill.cornell.edu/academics/course-offerings/principles-pharmacology-i-chemical-biology

Statistical Thermodynamics (Columbia GU4230, Fall)
Course Director: Bruce Berne (2017, CU)
Website: http://www.columbia.edu/cu/bulletin/uwb/subj/CHEM/GU4230-20173-001/

TPCB Elective Courses

Other electives may be selected with prior approval by Program Director

Biophysical Methods (Weill Cornell, Fall Q1Q2, odd years, not offered in 2017)
Course Director: Frederick Maxfield (WCM)
Website: http://gradschool.weill.cornell.edu/academics/course-offerings/biophysical-methods

Biochemical & Biophysical Methods (Rockefeller, Spring T2, intermittent years)
Directors: Seth Darst & Michael Rout - 2017 (*last offered in 2014 and 2008*)
Website: n/a - 2017 syllabus available on file

Biomolecular NMR Spectroscopy (NYSBC/CUNY 86900, intermittent years)
Director: Ranajeet Ghose (CCNY)
Website: http://www.nysbc.net/twiki/bin/view/Main/ProteinNmrCourse
Website: http://ghoselab.org/Teaching/CHEM86900/

Cell Biology (Rockefeller, Spring T2T3, even years)
Director: Sanford Simon (RU)
Website: n/a - 2016 syllabus available on file

Cryoelectron Microscopy of Macromolecular Assemblies (NYSBC, Spring 2018)
Director: Clint Potter (NYSBC)
Website: http://semc.nysbc.org/course/course.html

Drug Development: From Molecule to Prescription (Weill Cornell PHAR.tbd, Spring Q3Q4)
Course Directors: Lorraine Gudas (WCM) & Ignacio Rodriguez (Roche)
Website: n/a - 2018 syllabus available on file

NMR Spectoscopy of Macromolecules (NYSBC/Columbia GU6270, Spring, even yrs)
Director: Arthur Palmer (CU) & Ann McDermott] (CU)
Website: http://nysbc.org/nmr-course/
Website: *see Columbia course website when Spring 2018 is posted*

Quantitative Understanding of Biology I (Weill Cornell PBSP.5005.01, Fall Q1Q2)
Director: Jason Banfelder (WCM)
Website: http://physiology.med.cornell.edu/people/banfelder/qbio/

Synthetic Methods in Organic Chemistry I (Columbia GU4148, Fall)
Directors: Tristan Lambert (CU) & Tomislav Rovis (CU)
Website: http://www.columbia.edu/cu/bulletin/uwb/subj/CHEM/G4148-20163-001/

Synthetic Methods in Organic Chemistry II (Columbia G8149, Spring)
Director: TBA
Website: n/a – not offered in Spring 2017