

Appendix B: Formal Training in Translational Research

Please use this appendix to create an outline of curriculum coursework adding up to 100 hours per year. The courses under the base curriculum are required, while the specialized training elective courses are to be chosen at the mentee’s discretion towards the best fit to the project.

BASE CURRICULUM

These general courses are **required** for all trainees. However, they may be spread out among the two years duration.

1. FAVOR T32 Immersion Workshop	20 hours
--	-----------------

This immersion workshop is designed specifically for the FAVOR T32 trainees, and will be taught principally by participating T32 mentors in various 2-hour sessions.

2. Training in Clinical Research (TICR) Summer Workshop	20 hours
--	-----------------

The Summer Clinical Research Workshop (SCRW) includes four courses that are the starting point for all clinical research training at UCSF. These courses introduce the field of clinical research by providing instruction in the design of clinical research studies, collecting and managing clinical research data, and preparing for a career in clinical research. For individuals who will participate in clinical research in a supportive capacity, the Workshop alone is sufficient training. For others desiring to be independent investigators, the workshop serves as introductory material for the more advanced [ATCR](#) (Advanced Training in Clinical Research Certificate Program) and [Master's Degree in Clinical Research Program](#).

This program offers the following courses:

- *Designing Clinical Research* (EPI 150.03 for one month, EPI 202 for two months).
- *Database Management Systems for Clinical Research* (EPI 218)
- *Opportunities and Challenges of Complex Biomedical Data: Introduction to the Science of “Big Data”* (BIOSTAT 202)
- *Introduction to Statistical Computing in Clinical Research* (BIOSTAT 212)

Visit <http://tocr.ucsf.edu/courses/summerworkshop.html> for more detail on course information and the enrollment process of both TICR and ATCR.

3. Scientific Writing Course (Pamela Derish)	20 hours
---	-----------------

The course objective is for participants to learn specific ways to marshal the details of a biomedical research paper or grant proposal into a clear, concise and comprehensible story that will be understandable to an interdisciplinary readership (papers), or meet the agency’s review criteria (proposals). By carefully deconstructing published examples and their own writing, participants learn how precise word choice can eliminate jargon and ambiguities, how simple, direct sentences can describe complex science, and how organizing and developing ideas into paragraph form makes scientific writing logical and persuasive. Participants will also

learn that although they may think they have described a concept, experiment, or result in an early draft, careful reading will typically reveal information gaps, unrecognized assumptions, and faulty reasoning. All of these problems can be fixed if the writer learns how to spot them, and how to revise them. The format of the course is as follows:

- Part 1:** Writing fundamentals (3 weeks)
- Part 2:** Reports of original research (4 weeks)
- Part 3:** Journal Submission, Peer Review & Authorship (1 week)
- Part 4:** Grant proposals (2 weeks)

The course combines didactic presentations with rewriting examples of unclear writing in class and outside of class. Weekly homework assignments include rewriting all or part of a manuscript written by the participant. Participants will receive detailed feedback on their writing from the course instructor.

Visit <http://sciencepubs.surgery.ucsf.edu/scientific-writing-course.aspx> for more detail on course information and the enrollment process.

4. Biostatistical Methods for Clinical Research (BIOSTAT 200 - Judith Hahn)	36 hours
--	-----------------

The course is an introduction to the study of biostatistics covering types of data, their summarization, exploration and explanation. Also, the trainees will look at concepts of probability and their role in explaining uncertainty, and end with coverage of inference applied to means, proportions, regression coefficients and contingency tables. Throughout the 13-week course, the trainees will attend a combination of lectures and computer labs wherein the software program STATA will be used.

Visit <http://tcr.ucsf.edu/courses/schedule/biostat200.html> for more detail on course information and the enrollment process.

SPECIALIZED TRAINING

These courses are “**electives**” offered to enable the trainees to develop the specialized skill sets and expertise appropriate for their specific area of research focus and long-term career goals. The choice of additional didactic coursework will be individualized with each trainee working in close concert with their faculty mentors and the Steering Committee to design a course of specialized training that is specifically tailored. Specialized courses that cannot be audited will require additional funding support from the Department of Surgery, and will be discussed with each trainee prior to enrollment.

The curriculum will be designed taking into account the background, special interests and overall professional goals of the trainee so as to optimize their experience, productivity and chances for future success as an innovative, independent clinician-scientist. Many of these courses are offered through BMS and QB3 and can be audited at no cost. There are some one year degrees, i.e. Masters in Translational Medicine, which would require competitive acceptance and a separate funding source to be identified in conjunction with the mentor.

One position every year will recruit candidates that are interested in pursuing any one of these available degree programs at UCSF:

- Designing Clinical Research (1 month)
- Advanced Training In Clinical Research Certificate Program (ATCR) (1 year)
- Master’s in Clinical Research (2 years; candidates interested in this program will be identified prior to starting the fellowship)
- Modern Methods in Drug Discovery (5 weeks)
- Idea to IPO (course in bio entrepreneurship, 12 weeks)
- Translational Challenges: Diagnostics, Devices & Therapeutics (12 weeks)
- Master’s in Translational Medicine (1 year)

Training in Clinical Research (TICR) Program

Courses relevant to FAVOR trainees offered by the TICR program are available for enrollment. Depending on the FAVOR trainee background and career interests, they may be advised by mentors to take these courses.

Visit http://ticr.ucsf.edu/courses/schedule/course_descriptions.html for a full list of available courses under the TICR program.

Biomedical Sciences (BMS) Graduate Program

Courses relevant to FAVOR trainees offered by the BMS program are available for enrollment. Depending on the FAVOR trainee background and career interests, they may be advised by mentors to take these courses. BMS mini courses are also available each spring semester.

Visit <http://bms.ucsf.edu/courses> for more detail on the entire list of BMS core courses, and <http://bms.ucsf.edu/academic-program/electives> for elective or mini courses.

Quantitative Biosciences (QB3) Program

Courses relevant to FAVOR trainees offered by the QB3 program are available for enrollment. Depending on the FAVOR trainee background and career interests, they may be advised by mentors to take these courses. BMS mini courses are also available each spring semester.

Visit <http://qb3.org/ucsf/education/courses> for a full list of available courses under the QB3 program.

Seminars

Seminars are attended by both trainees and faculty members/mentors.

1. Transplant Seminar Series

Frequency: Monthly, but varies according to presenter's availability

Location and Schedule: Contact Susanna.Cheng@ucsf.edu for information.

2. Human Immunology Seminar

Frequency: Every second Tuesday of the month

Location: HSW-1057

Schedule: Contact Susanna.Cheng@ucsf.edu for information.

Journal Clubs (JC)

Journal clubs are attended by both trainees and faculty members/mentors.

1. Immunology Journal Club

Frequency: Weekly – Thurs 9-10 am

Location: Parnassus N-217

Schedule: <http://immunology.ucsf.edu/immunology-journal-club>

2. BMS Journal Club

Frequency: Weekly – Thurs 12-1 pm

Location: Parnassus N-225

Schedule: <https://bms.ucsf.edu/events/bms-journal-club>

3. Nephrology Journal Club/Renal Grand Round

Frequency: Selected Wednesdays

Location: N729

Schedule: Contact Deborahann.Gilman@ucsf.edu for information.