

## Teaching Assignment Guidelines

10-11-21

These guidelines cover the following topics:

- Timing and nature of the teaching assignment
- Deciding on the teaching site
- Preparing for the assignment
- Teaching evaluation
- Other resources
- Balancing teaching and research
- Reporting on your teaching assignment
- Teaching a second semester
- Tufts IRACDA Program partner institution contact information

The general training plan for IRACDA is outlined on the next page, so that you can see how the research, teaching and enrichment components interweave with each other.

## Tufts IRACDA Training Plan

Year One - Entry into Tufts IRACDA		
<p><b>Research</b> Begin research</p> <p>Responsible Conduct of Research Training</p> <p>Research-focused seminars &amp; journal clubs</p> <p>Tufts IRACDA Research Retreat</p> <p>Attend national research meeting</p>	<p><b>Teaching</b> Workshops on pedagogy</p> <p>Mentor an undergrad or PREP trainee</p>	<p><b>Development of Career Skills</b> Form and meet with Mentoring Team</p> <p>Writing Series #1: Preparing SMT proposal or fellowship applications</p> <p>Other career skills workshops</p> <p>Attend national IRACDA conference</p>
Year Two		
<p><b>Research</b> Continue research</p> <p>Develop publication strategy</p> <p>Research-focused seminars &amp; journal clubs</p> <p>Tufts IRACDA Research Retreat</p> <p>Present at national research meeting</p>	<p><b>Teaching</b> Visits to partner schools</p> <p>Prepare for teaching assignment</p> <p>Attend Graduate Institute for Teaching</p> <p>Workshops on pedagogy</p> <p>Mentor an undergrad or PREP trainee</p>	<p><b>Development of Career Skills</b> Scholar Mentoring Team meetings</p> <p>Writing Series #2: Publications</p> <p>Other career skills workshops</p> <p>Attend national IRACDA conference</p>
Year Three		
<p><b>Research</b> Continue research</p> <p>Work on publications</p> <p>Research-focused seminars &amp; journal clubs</p> <p>Tufts IRACDA Research Retreat</p> <p>Present at national research meeting</p>	<p><b>Teaching</b> Develop and present course at partner school</p> <p>Workshops on pedagogy</p> <p>Mentor an undergrad or PREP trainee</p>	<p><b>Development of Career Skills</b> Scholar Mentoring Team meetings (focus on job search &amp; transition plan)</p> <p>Writing Series #3: Grant writing</p> <p>Job Search Workshops</p> <p>Attend national IRACDA conference</p>
Year Four		
<p><b>Research</b> Complete research &amp; publications</p> <p>Research-focused seminars &amp; journal clubs</p> <p>Tufts IRACDA Research Retreat</p> <p>Present at national research meeting</p>	<p><b>Teaching</b> Additional teaching experience</p> <p>Workshops on pedagogy</p> <p>Mentor an undergrad or PREP trainee</p>	<p><b>Development of Career Skills</b> Scholar Mentoring Team meetings</p> <p>Prepare &amp; rehearse job seminar</p> <p>Coaching during faculty job search</p> <p>Other career skills workshops</p> <p>Attend national IRACDA conference</p>
Begin independent faculty position		

### ***Timing and nature of the teaching assignment.***

To satisfy the goals of the Tufts IRACDA program, each scholar is expected to teach for one semester. The teaching can take many forms depending on the needs of our partner schools, and can range from a special topics course with a small number of students to teaching an introductory course to a large class of 100-300. It may involve you designing a syllabus from scratch or modifying an established syllabus, and in some cases, will also involve an associated laboratory course. Team-teaching is also a possibility and may be a good idea if a new course is being presented. Team-teaching can also be a very enriching experience, especially if your partner sits in on your lectures and is there to discuss everyday concerns and broader pedagogical ideas relevant to the course.

The timing of the teaching assignment is flexible depending on the scholar's previous teaching experience and progress in research. A detailed outline of the teaching training component is given in Table 1. You are required to take the [Graduate Institute of Teaching](#) (GIFT) training before teaching. GIFT is a three-week intensive of specialized workshops on teaching pedagogy offered on the Tufts

Medford Campus in late spring of each year. Topics include: Introduction to college teaching, syllabus and course design, lesson planning, how to engage students in class discussions, teaching with writing, assessing writing, teaching with technology, testing and grading, assessment of learning outcomes, teacher-student relationships, and dealing with conflicts in the classroom. Other pedagogy workshops will be offered during the year. Usually a Course Design Workshop series alternates every other fall with a series on Innovative Teaching.

The teaching assignment will probably most often occur in the spring of the third year. This gives time to get the research project on solid footing, yet the ideas from GIFT are still fresh. In addition, some scholars want to apply for jobs the following fall, and it is an advantage to list this experience on the resume. Summer courses are also available. This option has a potential advantage of being less disruptive to your research. While presenting a summer course requires the same amount of preparation time, the actual teaching takes only six weeks of intensive effort instead of being spread over a full semester.

***Deciding on the teaching site.***

Group visits will be scheduled for the University of Massachusetts, Boston (UMB) and to Bunker Hill Community College (BHCC) in December or early February of the second year. After visiting each partner school, scholars make a decision as to where, when and what they want to teach no later than May 15 of the second year. Each scholar is responsible for contacting the Tufts IRACDA Coordinator at the partner school to schedule the teaching assignment. The Tufts IRACDA Coordinator at each school will serve as the Teaching Mentor or find an appropriate faculty person for this role.

***Preparing for the assignment.***

You should meet with your Teaching Mentor the semester before to go over the syllabus, textbook, course assessment, responsibilities, and available resources. If you are designing your own course, you may need to start this process even earlier. Most scholars find that the student population at our partner schools is very different from what they expected based on their undergraduate and graduate school experiences. Therefore, it is important to discuss this issue ahead of time with your Teaching Mentor and other Tufts IRACDA scholars who have taught at that campus. A table of where and what IRACDA scholars have taught is at the end of this document.

To help you get a feel for the students who will be in your class and better prepare your syllabus and lectures, you are asked to plan some form of “intro” activity before your teaching semester. Some examples are organizing the Careers in Biology workshops offered at the partner schools by Tufts IRACDA, leading a facilitated study group at BHCC, giving guest lectures, designing and testing a new lab exercise, volunteering to judge at poster sessions on campus, or giving a talk at the school’s Biology or Science Club. It should be an activity in which you can interact directly with the students.

Here are some ideas to help you prepare to teach your course:

- Observe one or more sections of the course that you will teach (or a similar course).
- Request a short writing assignment as part of your guest lecture. Tufts IRACDA scholars have often found that writing can be challenging for our partner students, and this can give you a better idea of what to expect.
- Volunteer help partner faculty grade exams. It is also fine to ask to see past exams to get ideas for good exam questions.

<p><b>Table 1. Teaching Training</b></p> <p><u>Year 1</u></p> <ul style="list-style-type: none"> <li>• Workshops on pedagogy</li> </ul> <p><u>Year 2</u></p> <ul style="list-style-type: none"> <li>• Visit partner schools</li> <li>• Decide on teaching assignment</li> <li>• Choose Teaching Mentor</li> <li>• Begin activities to get to know partner students</li> <li>• Graduate Institute for Teaching course</li> <li>• Develop course</li> <li>• Workshops on pedagogy</li> </ul> <p><u>Year 3</u></p> <ul style="list-style-type: none"> <li>• Joint meeting with research &amp; teaching mentors</li> <li>• Continue course development</li> <li>• Teach full semester</li> <li>• Discuss evaluations</li> <li>• Workshops on pedagogy</li> <li>• Present teaching reflections to other scholars</li> </ul> <p><u>Year 4</u></p> <ul style="list-style-type: none"> <li>• Optional teaching</li> <li>• Workshops on pedagogy</li> <li>• Mentor junior IRACDA scholars</li> </ul>
---

- Check out the Tufts IRACDA CANVAS site for syllabi and other resources for courses previously taught by Tufts IRACDA scholars, examples of writing assignments, exam answers, and other types of assessments.
- Consider giving a non-graded pre-assessment test at the beginning of your class. An example of one given for the Tufts Intro Biology course is posted on CANVAS.

Scholars are generally welcome to attend faculty meetings at the partner schools, and if this is of interest to you, please let your mentor know.

By August 1 of the second year of training, the scholar should submit a teaching plan to Program Director Mitch McVey. An update can be made as your teaching plan evolves. The plan should include the following information:

- The course name, when it will be taught, the target student group and size of class, a brief description, and the proposed teaching mentor.
- What is your timetable for meeting with the teaching mentor, planning the syllabus, choosing textbooks or reading material, redesigning and testing new lab modules, or other preparatory activities?
- What other resources do you need to identify?
- Will you try to incorporate active learning strategies? If so, which ones? (Please remember that you do not have to, and should not, try everything your first time out.)
- How can you make your course more inquiry-based and/or introduce students to research?
- How will you get to know the students at the partner school before you teach your course?
- How might your teaching this course have a positive benefit on our partner school? Examples might be introducing a new course or new lab module, helping to redesign an established course, giving the professor normally responsible for the course a break from teaching, introducing new learning tools, etc.
- How much involvement would you like to have in the host department outside of teaching?
- What will you do to help keep your research moving during the time that you are teaching?

### ***Feedback on your teaching.***

The Teaching Mentor will observe and give feedback at the beginning, middle, and end of the semester. It is your responsibility to work with the mentor to decide on the timing. For example, the first observation is often most helpful if it occurs within the first two weeks of teaching, as it is easier at that time to make adjustments to accommodate unexpected student needs. After each observed lecture, the mentor will fill out an evaluation form that the Tufts IRACDA program has designed (posted on CANVAS). In addition, it is very helpful to meet with the mentor soon after this class to get their direct input. The mentor is also available as a resource when problems or questions arise, and expects to provide this service, so please don't hesitate to make use of this opportunity to learn from an experienced and skilled teacher. Examples of such issues include pacing of the course (how much to cover in each lecture), how much preparation to expect the students to do before each class, how to handle requests for make-up exams or late homework, and how to handle concerns about plagiarism.

The Tufts IRACDA Program Director will also observe a class towards the end of the semester, and we are asking your research mentors to sit in on a class to see what you are doing. It might also be interesting to the students if you allowed your mentor to spend 10-15 minutes talking about the lab's research and projects that undergrads might contribute to. This would be a great time to let your students know about the opportunities at Tufts to get research experience, such as the [Building Diversity in Biomedical Research Summer Program](#) (BDBS) on the Boston campus, the [NSF Research Experiences for Undergraduates Program](#) run by the Biology Department on the Medford campus, the [Postbaccalaureate Research Experiences Program](#) (PREP) run by the Graduate School, and for UMB students, the [Pathways to the PhD](#) program, a three-week mentored, hands-on, research-intensive experience for juniors and sophomores that runs during the January break.

Dawayne Whittington or Sherri Fulp of Strategic Evaluations, Inc., will provide you with instructor evaluation forms to give to the students at the end of the semester. These are useful additions to your Teaching Portfolio for job applications, so please make sure that you get these. In addition, the partner school may also have a teaching assessment tool. You may want to design your own evaluations tailored to the specific objectives of your course; Dwayne is happy to work with you to include your questions on his form. In addition, getting feedback at midterm or after exams can be especially helpful. We have examples available from previous scholars available on CANVAS, and we would like to add any that you develop.

If you will be designing your own questionnaires and anticipate reporting on outcomes in a paper, you may need to get IRB approval ahead of time from the partner school and from Tufts. The IRB process should be initiated several months before your teaching starts. The Tufts IRACDA Program Administrator and the coordinator at each partner school will help with preparation and submission of the necessary forms. You will also need to complete the required IRB training for Tufts and the host institution. IRB approval is not needed if you are simply using a questionnaire to get feedback on your teaching.

### ***Other resources.***

Tufts IRACDA has provided our partners with funding for classroom needs such as teaching supplies and demonstrations, audiovisual equipment, lab equipment, photocopying, software applications, textbooks and other materials to put on reserve in the library. Talk to the Partner Coordinator about what you need, so that it can be ordered, or you can be reimbursed for out-of-pocket expenses. Often publishers will provide you with free examination copies of the textbook. We also have a Lenova laptop that you can use in your class. Green laser pointers/slide changers, which often work better in large classrooms than the red ones, can be checked out for the semester from the Tufts IRACDA Program Administrator.

### ***Balancing teaching and research.***

Depending on the type of course you are teaching and the class hours, you may not be able to spend a lot of time in lab during the semester that you are teaching. Plan ahead as to how you might keep things going. Most everyone has found that it is possible to keep their research moving at least a little, and this is a great opportunity to practice the time management skills you will need as a new professor.

Discuss your schedule with your research mentor so that he or she knows that you are planning ahead, but perhaps not to expect to see much of you. Each research mentor has in principle agreed to the idea that the scholar will be away from the lab a lot during the teaching assignment. Please talk to the Program Directors if you feel there is a misunderstanding in this regard.

Some scholars have felt that it was an advantage to be mentoring a student during the teaching semester, so that the student could help keep the project moving forward. A possible option is to try to find a student from Tufts or a local college to work with you during the summer, with the goal of the student continuing in the lab during the school year that you will be teaching. The [Building Diversity into Biomedical Research Summer Program](#) at the Graduate School always needs mentors, and generally looks for them in late March or early April of each year. The [Tufts Summer Scholars Program](#) is another opportunity. The Tufts IRACDA Director, Mitch McVey, and other faculty in the Tufts Biology Department, as well as the teaching mentors at our partner schools, are another great resource for identifying students. Sometimes mentors may have extra money that can be used to support undergrads. Often those funded by NSF have funds that can only be used for that purpose. If your PI has an NIH R01 grant, it is possible to ask NIH for supplemental funds to support a student from an under-represented or economically disadvantaged group (<http://grants.nih.gov/grants/guide/pa-files/PA-12-149.html>). Also, if you decide to mentor a student, please get your research mentor's approval before agreeing to take on this responsibility.

Designating specific blocks of time reserved to be in the lab or working on manuscripts, and sticking to this commitment, is a useful tactic. Most scholars also quickly reach an appreciation that after a certain amount of effort, additional time spent preparing a lecture doesn't buy you much in terms of improvement. Also, team teaching may make it easier, as well as trying to schedule your teaching in a single block that will save on travel time, or teaching during the summer, which is very intense, but for a shorter period of time.

### ***Reporting on your teaching assignment.***

We have found that the other scholars can learn a lot by hearing about your teaching experience, and it can also be helpful for you to reflect on what it meant for you. With this in mind, we ask everyone to report on what they did at a Tufts IRACDA Planning Meeting soon after their semester of teaching is over. We also have a repository of these reflections on the Tufts IRACDA CANVAS site. Here are some questions that you might answer as part of your report (we also welcome any suggestions for others):

- Any particular challenges, and how did you manage?
- What active learning strategies did you try? How did it work out?
- Any tips to share?
- What helped you to keep your research going during the teaching semester?
- What helped you to get up to speed again in the lab after the teaching semester?
- Did you get useful feedback from your teaching mentor?
- What was your research mentor's experience of visiting your class?

### ***Teaching a second semester.***

Requests to teach for a second semester will be considered only if the scholar has made adequate progress in the research in terms of a peer-reviewed, first-author publication. Such requests must be approved by the Tufts IRACDA Directors and the research mentor. Because one objective of the grant is to enhance science teaching at our partner schools, it is best if this additional teaching occurs on one of these campuses. You should be prepared to justify why teaching at a different school would benefit your training.

A question that has arisen concerning second teaching assignments is whether the scholar can be compensated. The following guidelines have been developed because of increased risk of auditing and subsequent penalties that Tufts could face for noncompliance. They do not make sense but we are obliged to follow them. The essence is that NIH expects a scholar funded by a federal grant to put in 100% effort to meet the objectives of that grant. However, this applies to a typical work-week of Monday through Friday. So, if you are supported by Tufts IRACDA, you can only get paid for extra teaching outside of Tufts if it occurs during evenings or on weekends. The guidelines for compensation for teaching at Tufts are in flux, and currently, such teaching needs to occur outside of your home department but is not constrained by the time at which the course is offered.

**Tufts IRACDA PROGRAM PARTNER INSTITUTION  
CONTACT INFORMATION**

<b>Org.</b>	<b>Name</b>	<b>Title</b>	<b>Address</b>	<b>Phone</b>	<b>Email</b>	<b>Notes</b>
University of Mass.	Brian White	Associate Professor. Coordinator, Teaching Mentor	Dept of Biology 100 Morrissey Blvd. ISC 2320, Boston, MA 02125-3393	617-287-6630 cell 781-504-6384	brian.white@umb.edu	<a href="http://intro.bio.umb.edu/BW/">http://intro.bio.umb.edu/BW/</a>
	Megan Rokop	Assoc. Prof., Honors College Teaching Mentor	Honors College 100 Morrissey Blvd. Boston, MA 02125-3393		<a href="mailto:Megan.Rokop@umb.edu">Megan.Rokop@umb.edu</a>	<a href="https://www.umb.edu/faculty_staff/list/meganrokop">https://www.umb.edu/faculty_staff/list/meganrokop</a>
Bunker Hill Community College	Elizabeth Dunphy	Coordinator, Teaching Mentor	Dept of Science 250 New Rutherford Avenue, D350A Boston, MA 02129-2995	617-228-3322 Cell 617-372-1196	EDunphy@bhcc.edu	<a href="https://www.bhcc.edu/academics/divisions/scienceengineeringandmathematics/">https://www.bhcc.edu/academics/divisions/scienceengineeringandmathematics/</a>

**Teaching at partner schools (2008-2018). \*1<sup>st</sup> time an existing course taught by IRACDA**

Semester	Scholar	Course Title	School	Class Size	Comments
Spring 2008	J Kowalski J Liu	Senior Seminar – Cancer Biology	PMC	18	Team-taught; new topic; introduced Clickers, sequenced writing and end-of-term poster symposium; taught again by Professor Bear in Spring, 2009
Summer 2008	C LaFratta	General Chemistry I*	UMB	75	Provided much needed break to the Chem. faculty; introduced new in-class demos
Spring 2009	A Hinton	General Biology*	BHCC	20	Revision of existing course (lecture + lab); developed new lab module, introduced Clickers . . .
Spring 2009	J McCreedy	General Biology*	BHCC	18	Revision of existing course (lecture + lab); developed new lab module, introduced Clickers
Spring 2009	J Sorg	Microbiology*	BHCC	18	Revision of existing course (lecture + lab); developed new lab module
Spring 2009	B Bolling	Food fights: controversy in nutrition science	UMB	19	New course for freshmen in Honors Program
Fall 2009	Mark Carlson	Intro to Biology for Majors*	UMB	400	Provided relief time for Course Director, Dr. White, to conduct educational research
Fall 2009	Yan Lin	General Chemistry I	BHCC	16	Revision of existing course (lecture + lab) New lab module
Spring 2010	Monica Hall-Porter	Senior Seminar –Estrogen & Women's Health	PMC	15	New topic for this course
Spring 2010	Jason Kuehner	Genetics*	BHCC	18	Revision of existing course (lecture + lab) New lab module
Spring 2010	Irvin Pan	Virology	UMB	37	New upper level course
Spring 2011	Lina Dahlberg	Senior Seminar – Neuro-degenerative Disease	PMC	20	New topic for this course
Spring 2011	Melissa Koch	Genetics	BHCC	20	Revision of existing course (lecture + lab) New lab module
Spring 2011	Francisco Maldonado	Microbiology	BHCC	20	Existing course (lecture + lab); developed new lab 2009
Spring 2012	Selena Ahmed	Evolutionary Biology*	UMB	40	Revised existing course; introduced active learning strategies into a previously purely lecture-based course
Spring 2012	Elyse Bolterstein	Cell Biology*	BHCC	20	Revised existing course; Introduced new lab module, course blog, video recording of student presentations, poster session
Spring 2012	Jane Kim	Genetics	BHCC	20	Introduced case studies, POGIL, a virtual Mendelian genetics lab, & new lab module using <i>Drosophila</i> , thus extending revisions by previous scholars
Spring 2012	Jason Gavenonis	Org. Chem. 1*	UMB	60	Revision of existing course, professor on sabbatical
Spring 2012	Mara Shainheit	Popular Pathogens Unraveled	UMB	20	New course. For first time in Honors Program, students presented final projects in poster session open to UMB community.
Spring 2012	Candice Etson	Physics I*	UMB	82	Revision of existing course
Fall 2012	Candice Etson	Physics II*	UMB	37	Revision of existing course; course release time for regular course director
Fall 2012	Fathima Nazeer	Genetics & Mol. Biology	PMC	12	New course, now part of PMC Biology Curriculum
Spring 2013	Candice Etson	Life in the Cell	UMB	21	New course, 1st Year Seminar for Honors Program
Spring 2013	Annette McGehee & Leslie Mebane	Cell Biology*	UMB	137	Revision of existing course, revamped lab manual to make it less cook-book, professor on sabbatical
Spring 2013	Kate O'Toole	Neurobiology*	UMB	60	Revision of existing course; new spring offering of over-subscribed fall course; new lab modules
Fall 2013	David Cantu	Cell Biology	BHCC	15	Introduced new lab module & active learning strategies
Spring 2014	Candice Etson	Planetary Astronomy*	UMB	50	
Spring 2014	Edward Wlotko	Statistics for Behavioral Sciences*	UMB	34	Revision of existing course; Introduced case studies & other active learning strategies

Semester	Scholar	Course Title	School	Class Size	Comments
Summer 2014	Denise Cook	Mol. Basis of Disease	UMB	10	New course which taught students to critically read and evaluate primary research papers. Her rubric has been adopted by other TEACRS scholars.
Fall 2014	Candice Etson	Introduction to Astronomy*	UMB	80	Revision of existing course
Spring 2015	Tess Killpack	Anatomy & Physiology II*	PMC	13	Revised existing course to be focused on problem solving with very little lecture. Updated lab portion. Introduced literature research and writing activities.
Summer 2015	Nathan Schiele	Introduction to Engineering*	BHCC	20	Revision of existing course, 1st time offered in the summer
Summer 2015	Kearney Gunsalus & Amy Yu (co-taught)	Genetics*	UMB	30	Revised existing course, 1st time offered in summer, & thus popular with students who could not fit it in otherwise. Transitioned traditional lecture to more active-learning format. Provided compendium of online resources to UMB faculty.
Fall 2015	Laverne Melon	Sex & Gender: From Brain to Behavior	UMB	20	New course in Honor's College. Introduced students to original research through articles and guest speakers, and to tools needed to evaluate breakthroughs reported in popular media. Invited Anne Fausto-Sterling, Brown U. for seminar on Gender Identity open to the entire UMB community & part of day-long visit interacting with UMB faculty & students. Course used as example in Honor's College application for independent course standing.
Spring 2016	Eric Luth	Neurobiology	UMB	48	2 <sup>nd</sup> time spring version of over-subscribed course offered by TEACRS; new lab module based on his research & primary literature exercise now used by course director. Gave director opportunity to revamp lab. New lab equipment.
Spring 2016	Jerrica Breindel	Anatomy & Physiology*	BHCC	19	Revision of existing course; new lab module on breast cancer; new lab equipment provided
Spring 2016	Whitney Stoppel	Biomedical Engineering	UMB	18	New course in Honor's College on artificial organs, prosthetics, and biomaterials; got highest ratings of all Honor's seminars that semester
Spring 2017	Margot Schwalbe	Marine Biology	UMB	23	New course in Honor's College
Spring 2017	Katie Mattaini	Biochemistry of metabolic diseases	PMC	5	New course; much-needed expansion of elective offerings, will be incorporated into Biology curriculum in coming years.
Spring 2017	Walter Adams	Microbiology*	UMB	80	Revision of existing course; course release time for regular course director; introduced new lab exercise
Spring 2018	Lauren Crowe	Cell Biology	BHCC	20	Revision of existing course. Introduced a flipped classroom
Spring 2018	Rob Wickham	Anatomy & Physiology II	PMC	20	Revision of existing course
Spring 2018	Morgan Hawker	General Chemistry*	UMB	70	Revision of existing course
Spring 2019	Amy Rohlfing	Microbiology	PMC	15	Revision of existing course
Spring 2020	Elizabeth Draganova	Biochemistry II	PMC	10	New course
Fall 2020	Jesus Romo	Science in All Colors: Diversity in Scientific Fields	UMB	15	New course in Honor's College
Spring 2021	Anne McCabe	Microbial Pathogenesis & Disease Treatments	UMB	20	New upper-level course
Fall 2021	Raziel Rodriguez-Rojas	Cell Biology	BHCC	20	Revision of existing course