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## **Graduate Student and Mentor Compact Graduate Program in Biology Federated Department of Biological Sciences Rutgers-Newark and the New Jersey Institute of Technology**

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*Approved by the Graduate Faculty 2017-01-24*

### **Preface: What is the Compact and how may it be used?**

This document describes a cooperative approach to graduate training, jointly developed by the faculty and graduate students. It lists practices intended to establish a productive relationship between a graduate student and his or her mentor(s), as well as expectations that each partner may have for the conduct of that relationship. The document does not set policy or procedure with respect to the graduate program: these are outlined in other official documents.

All graduate students should be provided with a copy of this Compact upon matriculation into the program, and all new faculty members upon hire. It is also recommended that a student and potential advisor discuss the various issues set forth in the Compact prior to signing the Dissertation Advisor Declaration.

It is hoped that the Compact will reduce the frequency with which conflicts arise between students and their mentors. Should such a conflict nevertheless occur the procedure for resolving it is specified in the official program documents, but the Compact provides a starting point and context for that resolution.

### **I. Introduction**

Pre-doctoral training entails both formal education in a specific discipline and an apprenticeship in which the graduate student trains under the supervision of one or more investigators who are qualified to fulfill the responsibilities of a mentor. A positive mentoring relationship between the pre-doctoral student and the research advisor/mentor is a vital component of the student's preparation to become not only an independent and successful research scientist and educator but also an effective future mentor to those under his/her supervision. At the same time the process of mentoring benefits the mentor by honing their powers of explanation, teaching

important skills in management, expanding their scope of research, and perhaps providing a future colleague and collaborator.

Individuals who pursue a graduate degree are expected to take primary responsibility for their own scientific and professional development. This pursuit requires establishment of strong, positive, functional relationships with research mentors, advising committees and institutional staff. Faculty who advise students are expected to fulfill the responsibilities of a mentor, including the provision of scientific training, guidance, instruction in the responsible conduct of research and research ethics and, when available, financial support. The faculty advisor also performs a critical function as a scientific role model for the graduate student.

## II. Core Tenets of Pre-doctoral Training

**Institutional Commitment:** Rutgers University Newark (RU-N) and the New Jersey Institute of Technology (NJIT) are committed to establishing and maintaining high-quality training programs that demonstrate the highest scientific and ethical standards. The Institutions endeavor to ensure that students who complete their programs are well trained, and possess the foundational skills and values that will allow students to mature into independent scientific professionals of integrity. RU-N and NJIT will provide program guidance and oversight for the length of study, stipend levels, benefits, grievance procedures and other matters relevant to the education of graduate students. Lastly, the governing institutions shall continually engage in assessment and evaluation of the Graduate Program to ensure appropriate career development for both students and their faculty mentors.

**Program Commitment:** The Federated Department of Biological Sciences and the Graduate Program in Biology will endeavor to establish an educational and training environment that provides students with the skills necessary to function independently in a scientific setting. This should include scientifically relevant course offerings, research opportunities that are essential to student career development, and a clear timeline of expected progress. The Program will establish clear parameters, publicly displayed and available to all, for outcomes assessment, and closely monitor the progress of graduate students during their course of study. The Program will commit to consistency and timeliness in the distribution of expectations and logistical information including class offerings, teaching assignments, opportunities for career guidance, etc. The program will commit to supporting all students who remain in good academic standing, within any constraints imposed by the respective institutions.

**Mentor Commitment:** The challenges of pursuing a career in the biological sciences are many. While seemingly daunting at times, effective mentoring remains essential to student and faculty success alike. Faculty mentors must commit to dedicating substantial time to graduate student mentees to ensure their effective and timely progress in scientific, professional and personal development. The Mentee-Mentor relationship must be constructed in an environment of mutual trust and respect, thus enabling and fostering healthy interactions that encourage individual growth. Effective mentoring should include teaching the scientific method, providing regular, constructive feedback (criticism and praise), helping to develop a project and timeline that reflects a student's research and career interests, and promoting students' professional development via opportunities such as paper submission, meeting and workshop attendance, paper reviewing, public communication and outreach, etc. Additionally, good graduate school mentors should be careful listeners, actively promote and appreciate diversity, possess and consistently exemplify high ethical standards, recognize the contributions of students in publications and intellectual property and provide a model of the modern scientific enterprise (publication of research findings, pursuit of research funding, etc.).

**Support for a Broad Range of Career Choices:** The Federated Department of Biological Sciences and the Graduate Program in Biology will provide training primarily relevant to

academic and related research careers. It is understood, however, that some students may choose to pursue other career paths. While the program cannot provide training for all possible careers, such choices will be respected and supported. Regular and diverse career guidance activities will be provided, including exposure to academic and non-academic career options

### **III. Compact of Understanding between Student and the Mentor**

#### ***Commitments of Graduate Students***

- I acknowledge that I have the primary responsibility for the successful completion of my degree. I will be committed to my graduate education and will demonstrate this by my efforts in the classroom and in research. I will maintain a high level of professionalism, self-motivation, engagement, scientific curiosity and ethical standards.
- I will meet regularly with my research advisor and provide him/her with updates on the progress and results of my activities and experiments.
- I will work with my research advisor to develop a thesis/dissertation project. This will include developing the concept for the research in the early stages and establishing a timeline for each phase of my work, and this should be mutually agreed upon in writing. I will strive to meet the established deadlines.
- I will work together with my research advisor to select a thesis/dissertation committee. I will commit to meeting with this committee as stipulated by specific guidelines of the graduate program. I will be responsive to the advice of and constructive criticism from my committee. Importantly, I will inform my committee of any changes to my research plan and/or successful participation in the program.
- I will be knowledgeable of the policies and requirements of my graduate program, graduate school and institution. I will commit to meeting these requirements, including teaching responsibilities.
- I will attend and participate in laboratory meetings, seminars and journal clubs that are part of my educational program.
- I will comply with all institutional policies, including academic program milestones. I will comply with both the letter and spirit of all institutional safe laboratory practices and animal-use and human-research policies at my institution.
- I will participate in my institution's Responsible Conduct of Research Training Program and practice those guidelines in conducting my thesis/dissertation research.
- I will be a good lab citizen. I will agree to take part in shared laboratory responsibilities and will use laboratory resources carefully and frugally. I will maintain a safe and clean laboratory space. I will be respectful of, tolerant of and work collegially with all laboratory personnel. I am committed to maintaining a research space that is free of harassment, inequality or bias.
- I will maintain detailed, organized and accurate research notes (in a format, physical or digital, agreed on with my mentor) that reflect the product of my effort as a trainee. I am aware that such notes and other research data and products have shared ownership, generally including the trainee, the supervisor, the institution and in many cases one or more funding organizations, and that all such notes and other intellectual products must therefore remain with my supervisor upon graduation. However, I do have the right to take a copies of my notes and other intellectual property in which I have a stake with me after I complete my thesis/dissertation. I will discuss this with my mentor prior to leaving the program.

- I will openly discuss my expectations and constraints pertaining to work-life balance and endeavor to reach a mutual agreement with my mentor. If things change, I will inform my mentor in a timely manner.
- I will discuss policies on authorship and attendance at professional meetings with my research advisor. I will work with my advisor to submit all relevant research results that are ready for publication in a timely manner and, whenever possible, prior to my graduation.
- I acknowledge that it is primarily my responsibility to develop my career following the completion of my doctoral degree. I will seek guidance from my research advisor, career counseling services, thesis/dissertation committee, other mentors and any other resources available for advice on career plans.
- I will routinely seek funding opportunities as relevant to my research, career interests and progress within the program.

### ***Commitments of Research Advisors***

- I will be committed to mentoring of the graduate student for the duration of his or her graduate career, including any subsequent period in which related activities continue, such a preparation of results for publication or seeking out and apply for the next career opportunity. I will be committed to the education and training of the graduate student as a future member of the scientific community.
- I will be committed to the research project of the graduate student. I will help to plan and direct the graduate student's project, set reasonable and attainable goals, and help establish a working timeline for completion of the project. This will include establishing a timeline for each phase of the student's research project, as the establishment of reasonable project goals is essential for career development.
- I will be committed to meeting one-on-one with the student on a regular basis and providing constructive criticism and praise as appropriate.
- I will be committed to seeking external financial resources for the graduate student whenever possible, in order for him/her to conduct high-quality thesis/dissertation research.
- I will be knowledgeable of, and guide the graduate student through, the requirements and deadlines of his/her graduate program as well as those of the institution, including teaching requirements and human resources guidelines.
- I will work together with the graduate student to select a thesis/dissertation committee. I will ensure that this committee meets as required by the guidelines of the program to review the graduate student's progress and to make mutually agreed upon adjustments.
- I will lead by example and facilitate the training of the graduate student in complementary skills needed to be a successful scientist, such as oral and written communication skills, grant writing, lab management, animal and human research policies, the ethical conduct of research and scientific professionalism. I will encourage the student to seek opportunities in teaching, if not required by the student's program.
- I will be committed to establishing a functional laboratory environment that encourages sound laboratory practices, responsible use of laboratory resources and respect for policies governing common use facilities.
- I will not require the graduate student to perform tasks unrelated to his or her training program if they will significantly impact progress and professional development. Should the need for such tasks arise in a lab, we will discuss the time commitment and impact with a goal of finding a mutually agreeable solution.
- I recognize that the requirements of externally funded research programs, coursework, and teaching duties can sometimes constrain the schedule of a graduate student. I

commit to working with the student to not let these interfere with the student's pursuit of his/her thesis/dissertation research.

- I will openly discuss expectations pertaining to work-life balance and reach a mutual agreement.
- I will implement reasonable practices/policies on authorship as related to any work product of the student, whether data or intellectual, that contributes to information used for publication or other presentation. General lab publication policies will be shared with all members of the lab, and authorship of specific products will be openly discussed from the beginning of the relevant work.
- I will acknowledge the graduate student's scientific contributions to the work in my laboratory and I will work with the graduate student to publish his/her work in a timely manner prior to, or shortly after, the student's graduation.
- I will discuss intellectual policy issues with the student with regard to disclosure, patent rights and publishing research discoveries.
- I will encourage the graduate student to attend scientific/professional meetings and make an effort to secure and facilitate funding for such activities.
- I will provide career advice, as well as honest and timely letters of recommendation for a student's next phase of professional development. I will respect and support career choices that differ from the academic research model.
- I will provide for every graduate student under my supervision an environment that is intellectually stimulating, emotionally supportive, and safe. I am committed to maintaining a research space that is free of harassment, inequality or bias in accordance to Rutgers/NJIT policies.
- Throughout the graduate student's time in my laboratory I will be supportive, equitable, accessible, encouraging and respectful. I will foster the graduate student's professional confidence and encourage critical thinking, skepticism and creativity. I will seek feedback in improving in these manners, as warranted.

*Adapted from [www.aamc.org/gradcompact](http://www.aamc.org/gradcompact)*