



# WPI

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Date XX

Name and Title of PI (s) of T32

Dear Profs. XX

Worcester Polytechnic Institute (WPI) is fully committed to providing an exceptional environment for the training of future leaders in the health sciences. The university fully encourages and endorses your proposed institutional research training program, which will support doctoral student training and faculty research endeavors. This letter details WPI's specific commitments for the NIH T32 training grant entitled: "XX" submitted by your multidisciplinary team.

WPI is pleased to support the above-referenced training grant in several ways, the highlights of which are summarized here. The full extent of our committed activities, resources, policies, procedures, and processes is described in detail following this summary.

## HIGHLIGHTS

- For each year of the T32 award, WPI commits to providing five (5) Fellowship positions from institutional funds. The commitment to each WPI Fellowship includes all typical costs of education, including twelve months' stipend, tuition, and health insurance fee.
- For all recipients of NIH Traineeships, WPI commits to waiving the portion of graduate stipend and tuition above that provided by the T32 award.
- WPI commits to supporting with institutional funds the time and effort for Dr. XX <and Dr. XX> as Program Director <Co-Directors>, at the annual level of 1.5 summer months of salary, or equivalent academic year release time, for each co-director for each year of the award.
- WPI commits to supporting with institutional funds the time and effort of a Training Program Coordinator, as a 0.5 FTE appointment dedicated to providing administrative support to the T32 program.
- WPI commits to supporting with institutional funds the time and effort for program faculty to work on curriculum development activities specifically required for the success of this project, at the aggregate level of \$20,000 in stipend support to be allocated for the faculty who work on curriculum development and training in the first year of the NIH 32 award.
- PI commits to supporting the program's Seminar Series, at the level of \$5,000 per year, with institutional funds.
- WPI commits to supporting the program's trainee-led Annual Research Retreat, at the level of \$10,000 per year, with institutional funds from the offices of the Provost and academic Deans.

## DESCRIPTION OF INSTITUTIONAL COMMITMENT

### TRAINEE PARTICIPANT FINANCIAL SUPPORT

WPI is committed to recruiting and supporting a diverse cohort of talented and creative doctoral students. In addition to its excellent research programs and facilities, WPI offers competitive stipends, health insurance benefits, and a variety of opportunities for professional development and career preparation, detailed elsewhere in the proposal. To support the proposed training program, WPI will supplement the stipend provided by the award to ensure that all PhD trainees are supported at the institutional stipend rate of \$XX per month (July 1, XX). WPI will also waive the portion of tuition not covered by the T32 award. Finally, for every year of the T32 award, WPI will match with five (5) Fellowship positions offering a full year of support for a participating trainee (stipend, tuition, and health fee). These matching funds will be used as first year doctoral research assistantships to support trainee recruitment, or as contingency support for trainees after their participation in the program (if needed).

### CULTURE OF SCIENTIFIC RIGOR, REPRODUCIBILITY, AND RESPONSIBLE CONDUCT OF RESEARCH

WPI is committed to developing and promoting a culture in which the highest standards of scientific rigor, reproducibility and responsible conduct are advanced. WPI promotes objectivity in research with an active and enforced policy on Financial Conflicts of Interest. The policy, which fully incorporates the 2011 PHS revised regulations, was updated in 2017 and applies to all research at WPI, regardless of the funding source. The policy is interpreted and applied so as to be in compliance with those regulations. WPI has determined that this policy will be applied as the *minimum* standard to all allegations of research misconduct, regardless of the funding source(s) or whether the scholarly activity is funded.

The proposed project includes courses and professional development activities designed to inculcate these standards, values and skills not only in the minds and professional behavior of trainees, but also for many other students who will be able to take advantage of these same offerings at WPI in the course of their graduate training.

As described in the application, WPI offers a zero-credit graduate course on Responsible Conduct of Research that will be available to all T32 participants. The purpose of this course is to familiarize pre-doctoral and postdoctoral trainees with basic ethical issues in research confronting scientists and engineers. The course is designed to meet or exceed all NIH requirements for instruction in the responsible conduct of research, as updated in [NOT-OD-10-019 Nov. 24, 2009](#). The course has three broad learning goals for the students/postdocs taking the course: 1) To gain insights into how one can responsibly conduct research throughout their career. 2) To know how to properly address unethical situations. 3) To comprehend that new ethical issues/concerns will arise and that the best way to tackle these will be to discuss ethical situations with colleagues, seek guidance from proper channels, and routinely participate in responsible conduct in research training courses/seminars. In addition, T32 participants will engage in coursework and projects described elsewhere in the proposal focused on ethical practices in experimental design, documentation of research results, data integrity, transparency, and responsible practices for scientific communication.

### FACULTY PARTICIPANT SUPPORT

To underscore our determination for this training program to meet its goals, WPI commits to providing additional support for T32 program faculty mentors. WPI's commitments in this area include:

- Supporting with institutional funds the time and effort for program faculty to work on curriculum development, course evaluation, outcomes assessment, and other activities specifically required for the success of this project, at the aggregate level of \$20,000 in stipend support to be distributed among program faculty members.

- Ensuring that the talented junior faculty associated with this T32 proposal are provided with sufficient start-up funding to permit them to fully participate in training graduate students under this program.
- Providing start-up funding for senior faculty associated with this T32 proposal who were either recently recruited to WPI (XX), or promoted to Department Head positions (XX). Institutional start-up funds are provided to ensure that senior faculty have the resources required to transition their successful research programs to WPI as seamlessly as possible while performing administrative duties (where applicable).

Detailed financial information concerning start-up support for each of the participating pre-tenure and senior faculty mentors is included in *Table 4. Research Support of Participating Faculty Mentors*.

### QUALITY OF RESEARCH AND TRAINING ENVIRONMENT

WPI commits to ensuring a positive, supportive and inclusive research and training environment for individuals from all backgrounds, and are committed to providing our students with the best possible graduate education. We know that scientists, engineers, teachers, and researchers face an increasingly competitive world and to best prepare our trainees for their future careers, we offer a number of free professional development programs throughout the year that are open to graduate students and postdoctoral fellows from all disciplines.

Through the Office of Graduate Studies, we run intensive multi-session workshop series on pertinent topics, such as communication skills, career management, pedagogy, leadership, and responsible conduct of research as well boot-camps on thesis/dissertation writing, fellowship writing, and job searches. In addition, WPI commits to the following support specific to the proposed T32 program:

- Institutional funds to support the program's Seminar Series, at the level of \$5,000 per year. These funds may be used to support travel expenses, speaker fees, and other costs associated with bringing distinguished seminar speakers to campus each year to support the training program.
- Institutional funds to support the program's trainee-led Annual Research Retreat, at a level of \$10,000 per year, to support keynote speakers, refreshments, site rental fees (if held off campus), and other costs associated with organization and execution of the T32 program Annual Research Retreat. These funds may be contributed from the Offices of the Provost and academic Deans.

### PROGRAM DIRECTOR AND KEY STAFF SUPPORT

To assure consistent program leadership and program execution, WPI commits to one and one half (1.5) summer months of salary per year (or equivalent) of institutional support for both Dr. XX and Dr. YY as Program Co-Directors. This support will be leveraged to assure protection of sufficient committed time (approximately 12.5% effort each) for oversight, management, and reporting for the proposed program.

In addition, WPI commits to support, with institutional funds, a Training Coordinator, as a 0.5 FTE dedicated to provide administrative support for the proposed T32 program. Responsibilities of the Training Program Coordinator may include:

- Disseminating and collecting applications for T32 program support to eligible trainees
- Posting announcements for program activities such as seminars, symposia, and retreats
- Providing administrative support to participating faculty and trainees involved in planning T32 program seminars, symposia, and retreats
- Coordinating trainee placement in industrial internships

- Coordinating with other WPI offices and programs (Office of Graduate Studies, Morgan Teaching and Learning Center, Career Development Center, Campus Events Office, etc) to support T32 program activities
- Tracking training program outcomes and collecting program participant data
- Tracking program expenditures
- Assisting the Co-Directors with preparing and submitting annual reports

## TENURE AND PROMOTION

WPI considers activities that are integral to excellent graduate training (such as teaching, advising and mentorship) in its tenure and promotion decisions, and commits to continue this practice as a supportive approach for the T32 program. Demonstration of excellence in both scholarship and teaching are clearly defined criteria for evaluation of tenure and promotion cases at WPI. Thus, pre-tenure and tenured faculty participation in the T32 program as research mentors and course instructors is encouraged, and is not expected to adversely affect faculty applications for promotion and tenure.

Transparency and clarity in tenure and promotion procedures are achieved by making available, in writing, the evaluation criteria, policies, and procedures in the WPI Faculty Handbook, and on the WPI Faculty Governance website. In addition, the WPI Committee on Tenure and Academic Freedom (CTAF), which reviews applications for tenure and promotion from Assistant to Associate Professor, and the Committee on Appointments and Promotions (COAP), which reviews applications for promotion from Associate to Full Professor, hold open information meetings each spring. The membership of each committee is elected by full faculty vote, and current committee membership is publicly available on the WPI Faculty Governance website.

We also are proud of the fact that a team of researchers at Worcester Polytechnic Institute (WPI) has received a \$1 million ADVANCE grant from the National Science Foundation (NSF) to examine the university's faculty promotion processes, identify areas of bias that may be impacting female faculty, and implement more equitable policies and practices. The grant, part of an NSF program to increase the participation and advancement of women in academic science, technology, engineering, and mathematics (STEM) careers, comes as universities nationwide are striving to recruit, develop, and retain a more diverse and gender-balanced faculty that better reflects their student bodies and the population as a whole. The project, "ADVANCE Adaptation: Advancing Toward 'FULL' Representation of Women in STEM at WPI," will focus on three key areas: clarifying the new promotion criteria; reducing gender biases in faculty evaluation and workload distribution; and piloting a system of coaches to guide associate professors toward promotion. The grant will fund an external consultant to audit WPI's current promotion policies and develop workshops to help faculty better understand how to document and evaluate multiple forms of scholarship. Working groups of faculty and academic leadership will be supported to develop resources that will make expectations for promotion clearer and more transparent. The research team will also adapt and implement bias training for faculty and administrators at WPI, using a model that's been successful elsewhere. Finally, the research team will engage a combined internal/external advisory board to give feedback on proposed improvement plans, engage university leadership, and communicate those best practices to other higher education institutions.

## DIVERSITY AND INCLUSION

WPI's approach to diversity, inclusion, and equity makes our campus a community where members feel an authentic sense of belonging. WPI defines *diversity* as: "Individual differences (e.g., personality, learning styles, life experiences) and group/social differences (e.g., race/ethnicity, class, gender, sexual orientation, country of origin, physical or cognitive abilities, as well as cultural, political, religious, or other affiliations) that can be engaged in the service of learning." Our institutional definition of *inclusion* is: "The

active, intentional, and ongoing engagement with diversity—in people, in the curriculum, in the co-curriculum, and in communities (intellectual, social, cultural, geographical). This engagement with diversity has the potential to increase one’s awareness, content knowledge, cognitive sophistication, and empathic understanding of the complex ways individuals interact within systems and institutions.” In the institutional context, WPI defines *equity* as: Creating opportunities for equal access and success for historically underrepresented populations, such as racial and ethnic minority and low-income students, in three main areas: *representational equity*: the proportional participation at all levels of an institution; *resource equity*: the distribution of educational resources in order to close equity gaps; and *equity-mindedness*: the demonstration of an awareness of and willingness to address equity issues among institutional leaders and staff

In support of diversity, inclusion and equity as institutional core values, WPI’s published Values Statement reads: “We are a community that stands for civility and respect. We stand for acceptance of others and champion those who may need compassion and understanding. We are an inclusive community that respects peaceful discord and upholds a fundamental belief that all members of our community deserve to feel safe. Our collective mix of thoughts and experiences enrich those fundamental values that have long guided our university. As we navigate through times of change, know that our values remain.”

The university’s efforts to realize its approach to diversity, inclusion and equity are led by the Office of Diversity and Inclusion. One key aspect of its work is directing the campus-wide Project Inclusion program, a three-year initiative to help the university set standards and expectations for a campus environment that is accepting and welcoming to all.

WPI commits to promoting diversity and inclusion at all levels of the research training environment, including trainees, staff, faculty, and leadership. All activities conducted within the proposed T32 graduate training program will occur in alignment with the above institutional values, standards and goals.

To support a diverse and inclusive environment for research and training, WPI offers several specific programs for students typically underrepresented in STEM. WPI has been a part of the Northeast Louis Stokes Alliance for Minority Participation (NeLSAMP) for 18 years, and has provided mentoring and support for undergraduates during this time. In recent years, the focus has shifted from completion of the BS degree to forming a path to the doctorate. In our more recent cohort of students, 100% of current seniors will be going on to PhD programs in STEM.

WPI has run a successful Research Experiences for Undergraduates (REU) program in Bioengineering geared toward providing research opportunities for women and underrepresented students, funded by the National Science Foundation (NSF). Since 2004, the Bioengineering REU has served 104 students, of which 96% are women and 40% are underrepresented minority participants. Several REU students have continued on for the PhD, including 2 who enrolled at WPI as biomedical engineering PhD students in another NSF-funded program, the Integrated Graduate Education and Research Training (IGERT) training grant. One additional REU alumna recently returned to WPI as an Assistant Professor of Biomedical Engineering (Jeannine Coburn, a faculty mentor on this proposal).

WPI is firmly committed to ensuring the success of its graduate students, in particular its underrepresented minority and female graduate students. Retention efforts, including those focused on academic support, mentoring, community building, and financial support are discussed in depth in the subsequent Trainee Retention Plan section. One example of these efforts is the Underrepresented Minority Graduate Student and Postdoc Mentoring Lunch Reception, an annual event, that brings together underrepresented minority graduate and postdoctoral trainees with faculty and staff for networking and community building, round table discussions on institutional and systematic barriers and challenges, and a keynote talk with a particular focus on overcoming challenges. A similar event also takes place annually for female graduate students and postdocs. Mentoring is a primary focus of these events, in particular connecting trainees with faculty members that can serve as mentors beyond the trainee’s primary research advisor.

## LABORATORY SAFETY

The Office of Environmental Health & Safety (EHS) provides a broad range of services for the protection and promotion of a safe learning, living, and working environment at WPI. This is accomplished through technical support, information and training programs, consulting services, and periodic auditing of health and safety practices and regulatory compliance.

Under the proposed training program, WPI commits to ensuring that the research facilities and laboratory practices will promote the safety of trainees. This includes participation of T32 trainees in EHS laboratory safety training in basic laboratory safety, blood-borne pathogens training, chemical hygiene and hazardous waste management, laser safety training, and other training as required by the T32 program trainees. In addition, EHS commits to maintaining supplies of personal protective equipment (PPE) such as safety glasses and lab coats (and regular cleaning services), maintenance and inspection of lab safety equipment (fire extinguishers, eye wash stations, safety showers, biological safety cabinets, fume hoods, etc.), and making available lab safety supplies (sharps containers, signage, etc.).

## RESEARCH INVOLVING ANIMAL SUBJECTS

The WPI Institutional Animal Care and Use Committee (IACUC) oversees and evaluates WPI's animal program, procedures and facilities to insure that it is consistent with all applicable guidelines, recommendations and regulations, and to ensure the proper care, use and humane treatment of animals used in research. The WPI IACUC reviews protocols for procedures involving animal subjects, inspects facilities, evaluates programs, submits reports to institutional and governmental officials, and maintains IACUC training programs.

## RESEARCH INVOLVING HUMAN SUBJECTS

The Institutional Review Board (IRB) at WPI promotes and supports efforts to conduct innovative research at WPI while also helping researchers understand and comply with the ethical guidelines and regulatory requirements for research involving human subjects. All research that involves human subjects is reviewed by the WPI IRB.

## ACCESS FOR TRAINEES WITH DISABILITIES

WPI commits to ensuring that its research facilities are accessible to trainees with disabilities. The Office of Disability Services (ODS) coordinates accommodation services and provides advocacy and support to assist students with documented physical, learning, sensory, psychological, developmental, and other disabilities in achieving their full potential. This office strives to foster an environment that supports and encourages self-advocacy, independence, and personal growth. ODS currently works directly with over 400 students throughout the year to support accommodation services covering all aspects of academic and campus life. ODS staff also collaborates with faculty, students, and staff to encourage an open and accessible campus community through programming focusing on physical access, universal course design, community awareness, and student peer-support and personal growth. The ODS takes an approach that teaches the student to self-advocate. Once the student requests assistance, a plan is developed that is tailored to the student's needs, which may include assistance with note taking, tests, alternative formats for media, or temporary accommodation. For example, a student with a broken limb may need assistance in completing laboratory experiments, but this is for a short duration. In other cases, the accommodation can be provided on a long-term basis. ODS also provides resources for faculty, instructing them on how to make students feel comfortable enough to disclose a disability, and how to create content that students can access in a variety of ways. We will include ODS in our annual faculty training sessions. In terms of recruiting, we will ensure that all of our printed and web material includes information highlighting WPI's disability services and commitment to accessibility for all students.

## ANTI-HARASSMENT AND ANTI-DISCRIMINATION MEASURES

WPI has proper policies, procedures, and oversight in place to prevent discriminatory harassment and other discriminatory practices. The university's approach to preventing sexual misconduct is comprehensive and progressive. All members of the WPI community are protected by and guided by the standards and regulations of Title IX, which prohibits discrimination based on sex in educational programs and activities.

WPI is committed to creating a safe environment for everyone. It is committed to providing a learning, living, and working environment free from gender-based discrimination. It expresses the community's expectations in the Sexual Misconduct Policy, updated and approved in May 2018, which is administered by the university's Title IX Office. This policy specifically addresses unlawful discrimination based on sex, sexual orientation, or gender, including gender identity or gender expression, and reflects compliance with Title VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Massachusetts state law and other federal laws. Discrimination includes, but is not limited to, sexual harassment, sexual assault, interpersonal violence, and stalking.

## RESPONDING TO ALLEGATIONS OF DISCRIMINATION; ADMINISTRATIVE/DISCIPLINARY ACTIONS

WPI acknowledges that it has a responsibility to inform NIH if the PD/PI or other senior/key personnel are unable to fulfill their obligations because of administrative or disciplinary action against them, or for any other reason. In response to evolving federal policies on harassment, WPI has adopted a procedure whereby the Office of Sponsored Programs is notified by our Title IX coordinator when administrative or disciplinary action is taken against a member of the faculty. The Office of Sponsored Programs will then report the action to the relevant agency(-ies) as required. Similar procedures will be followed for other types of disciplinary action.

## POST-T32 TRAINEE SUPPORT

The proposed T32 training program was designed and is supported by experienced faculty who collectively have a strong track record of mentoring graduate students, securing external funding support for research, supporting successful predoctoral and postdoctoral fellowship applications. Thus, it is the expectation that T32 faculty mentors will have the resources to support trainees beyond the T32 support period.

In the event that a lapse in funding is encountered, WPI commits to providing continued stipend and tuition support for post-T32 trainees to allow them to successfully complete their predoctoral training. In general, WPI is committed to providing full support for all PhD candidates who maintain good academic standing and progress toward achieving degree program milestones (including coursework, passing qualifying examinations, etc.).

## RESOURCES TO SUPPORT ACHIEVEMENT AND EVALUATION OF PROGRAM OUTCOMES

WPI commits to providing institutional resources that support expert evaluation of the T32 training outcomes annually, as well as long-term program assessment through maintaining contact with T32 program alumni. The following WPI offices and centers will serve as resources to support T32 participant training, and assist T32 program faculty and staff with post-T32 trainee communication:

- WPI's Morgan Teaching and Learning Center is a faculty-led educational center that offers programs, services, resources, training and funding to maintain and strengthen instructional effectiveness and student learning at WPI. Dr. Kimberly LaChasseur, Research and Evaluation Associate in the Morgan Teaching and Learning Center, will be a primary resource for the T32 training program in the area of program evaluation. The Center also supports innovation in the curriculum and in teaching practice, and fosters campus-wide dialogue on the art, science and practice of teaching.

- As mentioned elsewhere, WPI commits to support with institutional funds a 0.5 FTE Training Program Coordinator, whose duties will include tracking activities and outcomes for this T32 program.
- WPI's Career Development Center (CDC) offers extensive career services to help students (and alumni) identify and achieve their career goals. The CDC also works closely with employers and corporate partners to find full-time, part-time, summer internship or co-op positions. In addition, the CDC tracks and reports data on alumni employment post-graduation.
- The Office of Lifetime Engagement encompasses Alumni Relations, and works closely with the WPI Alumni Association and the University Advancement division. They maintain contact information for all WPI alumni that will enable continued T32 trainee follow up and communication.

The Facilities & Other Resources and Trainee Recruitment and Retention sections of the application provide additional detailed descriptions of the staff, facilities, and educational resources to be made available by WPI to the T32 program to assure its success.

To summarize--in supporting this proposed T32 Predoctoral Training Program proposal, WPI is pleased to provide a comprehensive set of institutional commitments, support vehicles, and assurances, all underscoring our fundamental intent to make this project a great success for the student participants, the participating faculty, and all others who engage with us in this endeavor.

Sincerely,

Winston Soboyejo  
Provost