Department of Biostatistics
Guidelines for Trainees

Note: some of the Training Grants listed below may not be available in 2012-13.

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Biostatistics, Epidemiologic and Bioinformatic Training in Environmental Health (BEBTEH)
Training Grant

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Barbara McKnight, co-Director, Cancer-Epidemiology-Biostatistics Training Grant]
Kenneth Rice, Director, Cardiovascular Biostatistics Training Grant
Barbra Richardson, Director, Clinical Research on AIDS Training Grant
Lianne Sheppard, Director, Biostatistics, Epidemiologic and Bioinformatic Training in
Environmental Health (BEBTEH)
Andrew Zhou, Director, Mental Health Biostatistics Training Grant
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CONTACT INFORMATION

Funding Agencies for Biostatistics Training Grants: National Institutes of Health (NIH): National Institute of Environmental Health Sciences (NIEHS), National Institute of General Medical Sciences (NIGMS), National Cancer Institute (NCI), National Institute of Mental Health (NIMH), National Heart, Lung, Blood Institute (NIHLB), and National Institute of Allergy and Infectious Diseases (NIAID).

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INTRODUCTION

Faculty have secured funding for student tuition and stipends by successfully competing for institutional (T32) training grants funded by NIH. We have prepared this document to help trainees be aware of and understand their roles and responsibilities with respect to this source of funding. This document gives an overview of NIH requirements, perspective on how trainees can help ensure the continued availability of training grant funds for students, as well as details about requirements associated with receiving funding through a department training grant. Please read this document carefully as trainees are responsible for knowing and following the requirements. Also, feel free to contact us with any questions.

PURPOSE OF THE TRAINING GRANTS

Biostatistics is the home or a participating department for multiple training grants from different NIH Institutes. All training grants are intended to provide research training in the biomedical sciences. They share common features described in the next paragraph. They can be distinguished by specific training objectives that reflect the priorities of the funding Institute. The purpose of each training program is briefly summarized below. More detail can be found in the appendices.

Common features of Ruth L. Kirschstein National Research Service Awards (NRSA):
These awards are part of NIH’s primary research training program. Grants such as those housed in the Biostatistics Department are widely regarded as one of the best educational vehicles in the biomedical sciences. All NRSA institutional training grants (T32) share common criteria for recruitment, eligibility, training, and reporting. Details are given throughout this document; briefly these include:

- Ability to attract high quality applicants.
- A plan for and success in recruiting and retaining minorities.
- Restricted eligibility to predoctoral students and postdoctoral fellows who are US citizens or permanent residents.
- A strong training program that reflects the research priorities and scope of the funding agency
- A sound history of successfully training high caliber researchers
- Specific training requirements. Specifically, all trainees must receive training in the ethical conduct of research. All programs should also provide opportunities for research, grantsmanship, publication, and research presentations.
- Annual reporting.

Our progress in meeting these criteria is monitored annually by NIH and peer-reviewed during the competitive grant renewal process every five years. All trainees contribute to the ongoing success of these training programs.

Biostatistics, Epidemiologic and Bioinformatic Training in Environmental Health (BEBTEH) Training Grant (NIEHS; T32ES015459): The purpose of the BEBTEH is to improve quantitative science expertise in the environmental health sciences (EHS) by producing quantitative science researchers with strong EHS skills and EHS researchers with strong quantitative science skills. The fundamental innovation of this program is its unified
structure to bridge EHS with bioinformatics and biostatistics. This is accomplished by bringing more students into the EHS, teaming them with two mentors to provide both EHS and quantitative science guidance, creating a Training Program with both EHS and quantitative components, and providing a strong EHS research engagement for all trainees. The BEBTEH leverages and enhances the existing EHS research portfolio and relevant disciplinary training programs to meet the specific need for more quantitatively skilled researchers in EHS. By building on existing strengths at the University of Washington, BEBTEH intends to enhance the NIEHS mission of understanding the role on environmental exposures in human biology and disease. Cross-disciplinary collaboration is intrinsic to and fostered by this program.

**Cancer-Epidemiology-Biostatistics Training Grant (NCI; T32CA009168):** This training grant is for Ph.D. students who are interested in applications in cancer, and is funded by the National Cancer Institute of the US Public Health Service (PHS) for up to three years per trainee. It is expected that Cancer Epidemiology or Cancer Biology will be the biological specialty of these students, and that this will be reflected in biology elective classes, the biology portion of the general exam, and in applications of the dissertation research.

**Cardiovascular Biostatistics Training Grant (NHLBI; T32HL007183):** This training grant is designed for Ph.D. students who are interested in applications in the cardiovascular area and is funded by the National Heart, Lung, and Blood Institute of the US Public Health Service (PHS). It is expected that the cardiovascular field will be the biological specialty of these students. These traineeships are renewable for up to three years per trainee.

**Clinical Research on AIDS Training Grant (NIAID; T32AI007450):** The AIDS Training Grant will be of interest to Ph.D. students who are interested in obtaining training in the foundations of biostatistical theory and applications. This training grant also offers opportunities for academic enrichment in AIDS issues through special courses, and collaboration with established AIDS researchers in the conduct of clinical, epidemiologic and methodologic biostatistical research in AIDS. The program is funded by the National Institute of Allergy and Infectious Diseases of the US PHS up to three years per trainee.

**Statistical Genetics Training Grant (NIGMS; T32GM081062):** The Statistical Genetics Training Grant is a joint program of the Departments of Biostatistics, Genome Science and Statistics. Trainees take the courses required for the PhD tracks in statistical genetics (Biostatistics or Statistics) or for the Certificate in Statistical Genetics (Genome Sciences). They also receive training in laboratory techniques for genetic data and training in the responsible conduct of research. They are advised by faculty in the three UW departments or at the Fred Hutchinson Cancer Research Center. They may participate in the annual Summer Institute in Statistical Genetics.

**Mental Health Biostatistics Training Grant (NIMH; T32MH073521):** This biostatistics in mental health training program will offer training opportunities to Ph.D. students in biostatistics by providing pre-doctoral stipends during their graduate training, especially for dissertation research on a topic related to mental health, including depression, anxiety disorders, Alzheimer’s and related disease, autism, schizophrenia, bipolar disorders, mood disorders, parasuicide and borderline personality disorders, eating disorders, and posttraumatic stress disorders. Training opportunities offered are long-term in nature with support up to the maximum of three years. This training program provides the opportunity for individuals to
obtain training in such a way that, upon completion of the program, they will possess (1) a high level of competence in the science of biostatistics, (2) knowledge of the mental health content area, and (3) strong communication skills to enable effective interaction with mental health researchers.

Public Health and Behavioral Research in Dentistry (NIDCR; T32DE007132): Although the field of dentistry has produced one of the most successful public health efforts in disease prevention in the recent history of the United States, the campaign to prevent caries has not been a panacea as far as elimination of oral and craniofacial disease in the U.S. population. The recent release of the first Surgeon General’s report on oral and craniofacial health documented that “…a silent epidemic’ of oral diseases is affecting our most vulnerable citizens—poor children, the elderly, and many members of racial and ethnic minority groups”. This training program is designed to address this need by producing personnel who can function as members of interdisciplinary teams of biostatisticians, epidemiologists, health services researchers, behavioral scientists, and clinicians conducting research on oral health issues.

APPOINTMENT INFORMATION

An overview of training grant appointments and benefits is given here. Details can be found in “Appendix A. Appointment, Performance, and Benefit Details”.

Appointments:

Appointments to the department training grants are made on a department-specific basis by the training grant Directors, in consultation with the Graduate Program and Admissions Committee. Trainees appointed to a training grant should be willing make a good-faith commitment to the Training Program goals. Commitment to these grant missions is intended to begin at the initial appointment and last until the student receives their Ph.D. or completes their postdoctoral training, even if the source of funding transitions from the grant. At the beginning of their training, all trainees are asked to sign an acknowledgement that they have read this document and understand the program intent.

Eligibility: By NIH regulations, a trainee must be a U.S. citizen or permanent resident. He or she may not hold another federal training grant at the same time. The trainee may be employed up to 10 hours per week in a public-health related position; however, the employment may not be for the trainee’s thesis or dissertation research. Students may work additional hours on a limited basis.

Appointment Period: Appointments are made for one year at a time. Appointment renewals are made annually, and depend upon satisfactory progress, availability of training grant funds, training grant and/or departmental needs, and individual circumstances. NIH limits the total duration of support on any training grant to three years for a postdoctoral trainee and five years for a predoctoral trainee. Some individual training grants impose additional limits on predoctoral trainee appointments to a maximum of three years. Trainees are encouraged to
contact their program director about four months in advance of their end date each year to discuss appointment renewal.

**Postdoctoral Payback Requirement:** Postdoctoral trainees have a payback service or monetary requirement. See Appendix A for details.

**Appointment Procedures:** Appointment forms must be filed annually with NIH. Details on these and other UW procedures are given in Appendix A.

**Benefits:**

**Tuition:** In addition to a stipend, trainees earning a degree at UW will receive partial tuition support or waiver as explained in Appendix A. Funds to cover the remaining tuition not covered by the Training Program are typically earned through a 10 hour per week RA appointment. Establishment of Washington state residency is important for tuition purposes (see Appendix A).

*Charges not covered by department training grants:* The NIH does not cover the surcharge for more than 18 credits/quarter, the UPASS fee, Immunization Fee, MPH Practicum Fee, tuition exemption registration fee, optional or late fees, additional class fees, or union dues.

**Predoctoral Trainee Heath Insurance:** The trainee will be insured by the Graduate Appointee Insurance Plan (GAIP). A predoctoral trainee may elect to insure his/her dependent(s) and pay the applicable premium. See the Appendix A for more information.

**Postdoctoral Trainee Insurance:** A postdoctoral trainee is eligible for UW faculty/staff insurance and a number of other UW benefits. For additional details, see Appendix A.

**Registration and Performance Requirements:** (additional details in Appendix A)

- A pre-doctoral trainee must be registered for at least 10 credits/quarter during the academic year and at least 2 credits during Summer Quarter when supported by a training grant.
- A postdoctoral trainee does not have to be registered, except as necessary to complete a master’s degree within 5-8 quarters, if required as part of the trainee’s postdoctoral training.
- Each trainee must make timely progress toward his/her degree or research goals as defined by the applicable department and their training grant.
PROGRAM OF STUDY AND OTHER EDUCATIONAL REQUIREMENTS

Each training grant has its own program of study that builds upon the existing requirements of the student’s home department. See the “Program Requirements” appendices for specific requirements for each grant (Appendices D-I). In addition, there are some NIH educational requirements that are common to all training grants. These are summarized here with additional detail in Appendix B. Further details may also be available in the “Program Requirements” appendices.

Training in the Ethical Conduct of Research: Instruction in the responsible conduct of research is required of all training grant recipients. This requirement was given new emphasis in November 2009 through NOT-OD-10-019 ([http://grants1.nih.gov/grants/guide/notice-files/NOT-OD-10-019.html](http://grants1.nih.gov/grants/guide/notice-files/NOT-OD-10-019.html)). This requirement is met through specific courses and the Biomedical Research Integrity Series. For all Biostatistics students as well as any other trainees working with human subjects in any capacity, human subjects training and HIPAA training are also required. Detailed information on specific requirements is in “Appendix B. Other Educational Requirements”.

ANNUAL REPORTING

Required Reporting by NIH: All training grants are required to file various reports. Trainee cooperation with providing information for these reports is essential to the continued success of these training programs. The following reports are required by NIH.

- **Annual Progress Report:** Trainees contribute to this annual report to NIH. To complete this requirement trainees submit an individual report to the Program annually and provide additional information as requested.
- **Termination Report:** Trainees must file this report during the last month of their training period or as soon as possible thereafter.
- **Competing Renewal Report:** Trainees contribute to this periodic report every 5 years both while supported on the grant and for 10 years following termination.

The regular reports include detailed information about each current and former trainee, including:

- Research experience, progress, and funding
- Courses taken and progress in meeting the training program requirements
- Instruction in the responsible conduct of research
- HIPAA and human subjects training
- Publications
- Presentations
- Participation in conferences, including any travel funded by the training program
- Program-specific activities
- Former trainees: New positions

Additional details are given in “Appendix C. Reporting and Publications”.
PUBLICATIONS

Publishing of peer-reviewed research is an essential component of doctoral and postdoctoral training. Trainees must acknowledge their source of support on any publications on which effort was spent while supported by a training and/or research grant. Specifically, trainees must include an acknowledgement of their training grant as a source of support on any publication that they worked on while funded by the training grant. In addition, all publications supported by NIH funds in any way must have a PMCID or other approved citation reference. Please see “Appendix C. Reporting and Publications”. Additional information can also be obtained from the Student Services Counselor.
Appendix A. Appointment, Performance, and Benefit Details

Registration and Performance Requirements:

- A pre-doctoral trainee must be registered for at least 10 credits/quarter during the academic year and at least 2 credits during Summer Quarter when supported by a training grant.
  - A student who does not register for a quarter during the academic year, must turn in an on-leave petition to the Registration Office by the 5th day of the quarter. Failure to do so will require reapplication to the Graduate School, which may affect Washington Residence Classification. The leave forms are available in the Graduate Program Offices of participating departments.
- A postdoctoral trainee does not have to be registered, except as necessary to complete a master’s degree within 5-8 quarters, if required as part of the trainee’s postdoctoral training.
- Each trainee must make timely progress toward his/her degree or research goals as defined by the applicable department and their training grant.
  - A trainee who is earning a degree must maintain a 3.0 GPA each quarter or face disciplinary action. A student must achieve a cumulative 3.0 GPA to graduate.

Postdoctoral Payback Requirement: Postdoctoral trainees have a payback service or monetary requirement. A postdoctoral trainee who is on the training grant for 12 months may meet the payback requirement by remaining on the grant for another 12 months (if offered by the appropriate training director). Otherwise the trainee must work at least 20 hours/week in a biomedical research, research training or health-related activities for a continuous 12-month period that must begin within 2 years of termination from the grant. If a trainee stays on the grant for 18 months, he or she will have to payback 6 months. The requirement is prorated for other lengths of training less than 24 months. Complete details are at http://grants.nih.gov/grants/funding/416/phs6031.doc.

Appointments (New and Renewal):

NIH Forms:
All new trainees must complete (sign) PHS form 2271, the DHHS Statement of Appointment. This is accomplished electronically through the Xtrain module of eRA Commons. Xtrain is now the only approach to appointments. Instructions are available from NIH:
- Quick reference sheets: http://era.nih.gov/training_career/index.cfm
- The Animated Online Tutorials and PowerPoint Presentations: http://era.nih.gov/training_career/index.cfm As a general overview, trainees need to take the following steps in the appointment process:
  1. Set up an eRA Commons account. For information, see http://era.nih.gov/files/xTrain_Getting_Started_Trainees.pdf
  2. Respond to emailed requests to process the 2271 form. For information, see http://era.nih.gov/files/xTrain_Initiate_Appointment.pdf
UW New Hire Forms:
Trainees who have not held a UW position in the past 6 months, must complete forms in items 1-2 (predocs) and 1-3 (postdocs) below and mail/deliver them so they arrive at the appropriate departmental payroll office by June 15 for Summer, September 1 for Autumn, December 15 for Winter, or March 15 for Spring. You cannot be appointed until they are received. The I-9 and Criminal History forms CANNOT be faxed or scanned. (Some forms are interactive; some printable.)


2. Conviction/Criminal History Information: [http://www.washington.edu/admin/hr/forms/employment/criminalhist.pdf](http://www.washington.edu/admin/hr/forms/employment/criminalhist.pdf)

3. Postdoctoral Datasheet: (postdoctoral trainees only) [http://depts.washington.edu/epidem/postdoc_datasheet_new_6-08.pdf](http://depts.washington.edu/epidem/postdoc_datasheet_new_6-08.pdf)
The Program Office of the postdoctoral trainee’s home department will finalize this form, but enter personal information and email to the postdoctoral appointment coordinator.

4. Forms to handle When the trainee receives Employee ID (EID).
   a. Procedure
      - **Obtain the EID from** the payroll coordinator in trainee’s home department after trainees has been appointed in the payroll system.
      - Go to [www.myuw.washington.edu](http://www.myuw.washington.edu).
      - Select Employee Self-Service.
      - Follow additional directions below.
   b. **W4**: Under “Taxes”.
      Enter zero on line 6 if not choosing additional withholding; it cannot be left blank.
   c. **Direct Deposit Form** (optional)—Under “Earnings”:
      - Select Earnings & Direct Deposit.
      - Obtain the first paycheck from your home department’s Payroll Office.
   d. **Affirmative Action Data Form**: Bullet under Employee Self-Service section
   e. **Update Contact Information** right away to receive important job-related information.
      - **Under Address**
        - **Campus Address**: Contact appropriate supervisor to learn if a desk will be provided &
        obtain the campus address.
      - Trainees may use departmental address if they have no other campus address.

5. **Permanent Resident Requirement** (for non-US citizens who are permanent residents only): A notary’s signed statement certifying that the appointee has an Alien Registration Receipt Card (1-151 or 1-551) or the appointee is in possession of other legal verification of such status.

The first paycheck will be available on the first 10th or 25th of the month (as applicable) following the first half-month of employment.
Benefits:

Tuition: In addition to a stipend, trainees earning a degree at UW will receive partial tuition support or waiver as explained below. The remaining tuition not covered by the Training Program is typically made up through a 10 hour per week RA appointment. Establishment of Washington state residency is important for tuition purposes (see below).

Non-resident Differential (NRD) Tuition Waiver: A trainee will receive a waiver of the nonresident portion of tuition for his/her first calendar year in Washington State. S/he must apply for residency for his/her second year in the State. The trainee must follow the rules very carefully from his/her date of arrival in Washington and apply for residency in a timely manner. (See details listed below under "Washington State Residency"). As a brief summary of the steps needed, upon arrival in the State, a trainee must immediately (within 30 days) obtain car license plates, a driver’s license, a Washington State bank account and register to vote. S/he must keep all rent or mortgage receipts and pay stubs and not vote in another state or country. Two months prior to the end of a trainee’s 1st calendar year in the state, s/he must apply for “Washington Resident Classification”. (A student receiving financial support from a resident of another state or country is not eligible for in-state tuition.) Full documentation requirements and application procedures are at http://www.washington.edu/students/reg/residency.html. It is important to note that our training grants do not have funds to pay for the non-resident portion of tuition; if residency or a waiver is not granted, the non-resident portion of tuition may be the responsibility of the trainee.

Washington State Residency: To establish residency for tuition purposes, trainees must establish bona fide domicile, including working and/or volunteering for 20 hours/week, or spouse doing the same in Washington State for one calendar year prior to the start of the quarter for which residency is applied. (International students are not eligible.) Purchasing property and/or enrolling a child in school or preschool can help a trainee qualify for residency. It is important to be involved in community organizations.

Most students who work at least 50% FTE should qualify for WA resident classification by Summer or Autumn Quarter of the calendar year following autumn enrollment. (Predoctoral trainees and 50% RA/TAs are eligible for waiver of the non-resident portion of tuition during their appointment.)

To have the best chance of gaining residency within one year of enrollment, immediately obtain (within 30 days) and keep proof of the following:

a. Washington Driver’s License or Identification Card
b. Washington State License Plates (This cannot wait until your current plates expire if more than 30 days from your arrival in the state.)
d. Establish a bank account & keep proof of the date.
e. Keep all rent receipts & pay stubs.
f. Retain proof of dates of children’s school enrollment.
g. Keep proof of participation in local organizations.
For more information and to apply for next year, visit the Residence Classification Office http://www.washington.edu/students/reg/residency.html, resquest@u.washington.edu, 206-543-4188, 209 Schmitz Hall.

**Partial Resident Tuition Support for Predoctoral Trainees:** Department training grants will pay 60% of resident tuition (excluding the building fee per NIH regulations). The UW waives the Technology Fee for trainees. The remainder of tuition is the trainee's responsibility. Summer charges will depend on the number of credits taken (2 minimum); Seven to eighteen credits are charged full-time tuition. Many trainees obtain 10 hour/week RA/TA positions to supplement their traineeships and provide income to fund the remaining tuition. Per NIH regulations, a RA position must not be for the same work as is funded by the traineeship. Often this is interpreted as not related to the dissertation.

**Partial Tuition Waiver/Support for Postdoctoral Trainees:** A postdoctoral trainee enrolled in a degree program may receive resident tuition funding as for predoctoral trainees or may use the faculty/staff partial tuition exemption. Fellows must be appointed by the first day of the quarter to be eligible for the tuition exemption. The faculty/staff exemption provides a tuition exemption for up to 6 class credits/quarter (not including independent study or thesis/dissertation) for a postdoctoral trainee. Because the tuition scale is not linear, if a participant takes at least 6 courses credits and is also fulltime, the total tuition charge will depend on degree program and type of credits. The grant will pay 60% of the remaining resident tuition (excluding the Technology and Registration Fees, per NIH regulations) if the trainee is required to earn a degree as part of his/her training. See “Faculty/staff tuition exemption procedures” for details.

**Faculty/Staff Tuition Exemption Procedures (Postdoctoral Trainees only):**
- The rules are at http://www.washington.edu/students/reg/tuition_exempt.html.
- Users must provide a completed Request Form to the Registration Office, two weeks in advance of each quarter from http://depts.washington.edu/registra/forms/.
- It must be signed in two places by the appropriate Director (in place of the department chair) or the department chair.
- The form may be mailed to Box 355850, faxed to 206-685-3660 or hand delivered to Schmitz Hall, 2nd Floor Registration Desk.
- Participants must pay the $30 registration fee and $41 Technology Fee.
- A trainee should spread Independent Study and Thesis/Dissertation credits over several quarters along with class credits. If a trainee only registers for independent study or thesis/dissertation credits in a quarter without course credits, he or she will be billed for the full cost.
- **DO NOT register for anything prior to the 3rd day of the quarter or tuition will be charged in full.**
- Registration is on a space-available basis unless the trainee obtains an entry code in advance. (Entry codes cannot be provided for classes not requiring them.)

**Tuition Waivers and Tuition Support Payments:** Waivers and payments will not appear in MyUW until about a week after the appointment and quarter start dates. (If either the non-
resident tuition waiver or the NIH additional support is not showing in MyUW by the end of the second week of the quarter, let the Student Services Counselor know right away.)

**Charges not covered by department training grants:** The NIH does not cover the surcharge for more than 18 credits/quarter, the UPASS fee, Immunization Fee, MPH Practicum Fee, tuition exemption registration fee, optional or late fees, additional class fees, or union dues.

**Insurance:**

**Predoctoral Trainee Health Insurance:** The trainee will be insured by the Graduate Appointee Insurance Plan (GAIP) starting his/her first January 1, April 1, July 1 or October 1, as applicable if his/her appointment starts by that date. S/he must enroll in GAIP within a month of the eligibility dates above or s/he will not be insured. If the appointment start date is later in an academic year quarter than listed above, the trainee will not be insured until the first of the month after the appointment starts. If s/he starts after July 1 in Summer, s/he will not be insured with GAIP until October 1 unless s/he had UW paid GAIP for the 3 quarters of the previous academic year.

**Enrollment and Benefits Information:**
http://www.washington.edu/admin/hr/benefits/insure/gaip/index.html.

A predoctoral trainee may elect to insure his/her dependent(s) and pay the applicable premium. The trainee (and dependents, if desired) must enroll within 31 days after January 1, April 1, July 1 or October 1 depending on the appointment start date. However, to ensure that providers can verify the insurance in a timely manner, the trainee should enroll in GAIP before the first week of his/her first quarter and be registered for at least 10 credits (2 in Summer) before the first quarter of the appointment. A predoctoral trainee must re-enroll in GAIP each Autumn Quarter supported by the grant to be insured. A trainee who terminates may self-pay GAIP until the end of the plan year on September 30. More information is available at the website above.

**Postdoctoral Trainee Insurance:** A postdoctoral trainee is eligible for UW faculty/staff insurance and a number of other UW benefits.

**If the trainee has not been a UW postdoctoral fellow or regular UW employee (not RA/T, predoctoral trainee or temporary) within the past 6 months s/he must, complete the procedures below within 31 days of the appointment start date:**

- Read the benefits summary at [www.washington.edu/admin/hr/benefits/forms/ben-summaries/res-fellows.pdf](http://www.washington.edu/admin/hr/benefits/forms/ben-summaries/res-fellows.pdf)
- Read the on-line Benefits Orientation at [www.washington.edu/admin/hr/roles/faculty/benorient/index.html](http://www.washington.edu/admin/hr/roles/faculty/benorient/index.html)
- Register for a New Employee Orientation at the same URL shortly after the appointment start date.
- The payroll title is Senior Fellow Trainee (job class code 0442). Postdoctoral trainees are considered acting faculty.
- Consult the appropriate benefits and insurance company websites for insurance coverage and enrollment information.
• Postdoctoral trainees are NOT eligible for the UW Retirement Plan.
• Enroll in a medical, dental and vision plan within 31 days from your start date. The trainee will be eligible for insurance the first 1\textsuperscript{st} of the month after the appointment start date. If the appointment starts on the 1\textsuperscript{st} of the month, insurance will start that day.
• Visit the Postdoctoral Affairs website for more information at http://depts.washington.edu/pdafrs/.
• Join the Postdoctoral Affairs email list at http://mailman1.u.washington.edu/mailman/listinfo/Postdoc-Office/.
Appendix B. Other Educational Requirements:

Ethics requirement: The ethics requirement may be met in one of two ways:
1. Take the Ethical Issues for Biostatisticians class. See the course website for more information: http://courses.washington.edu/bethics/index.html.
2. Attend the Biomedical Research Integrity (BRI) Lecture Series sponsored by the Department of Medical History & Ethics, and produced in collaboration with the Fred Hutchinson Cancer Research Center (FHCRC). These lectures and discussion groups cover nine core areas: data acquisition, management, sharing, and ownership, mentor/trainee responsibilities, publication practices and responsible authorship, peer review, collaborative science, human subjects, research involving animals, research misconduct, and conflict of interest and commitment.
   - Attendance is recorded and reported to the program directors to monitor their trainees' participation. Trainees may participate in several BRI Series over the course of their traineeship, permitting considerable flexibility in meeting the attendance requirement. Many training grants require attendance at 3 lectures and 3 discussion sections. Trainees should not leave attendance until the last year, but should make progress each year. One-year trainees must complete the requirements within 1 summer. Lectures (but not discussions) are videotaped, with tapes available within two weeks of the lecture.
   - Trainees must register for the sessions in early June. Discussion sections fill rapidly. The current budget number for the grant is required, which is available from the Student Services Counselor. Sessions are available at the FHCRC for trainees who work there. Register at http://depts.washington.edu/uwbri/.
   - Trainees must provide the titles and dates of all sessions attended during the previous year as part of the required annual progress report. If a trainee watches videotapes after October instead of attending the lectures, attendance will not be reported to the training program except in the progress report. In addition, the progress report must include any other biomedical research ethics lectures or programs that the trainee has attended.

Additional human subjects training:
CITI (Human Subjects) Course: The Human Subjects divisions of the University of Miami and the FHCRC, in response to an NIH mandate, developed a two-hour tutorial through the Collaborative Institutional Training Initiative (CITI). This tutorial includes a review of the history of abuses of human subjects, ethical principles, regulatory oversight, informed consent, risk-benefit evaluations, equitable selection of subjects and examples of case studies in research ethics. Trainees may take the course and may be required to take it for some of their training-related research. For the UW on-line course, register at http://www.washington.edu/research/hsd/docs/830?dl=true. Trainees must print the certificate at the end of the CITI on-line course. Ask for a certificate (or letter) for attending the in-person course. Send a copy of the certificate to the Student Services Counselor. The certificate should also be noted on the trainee’s Progress Report.

HIPAA Training: Trainees may take the on-line HIPAA training for researchers. Contact Cathy Greenbaum (cathyg@uw.edu) to arrange for a HIPAA access code. (A few days lead time is required.) Print the certificate at the end of the course as this is the only proof of participation
available. Send a copy the certificate to the Student Services Counselor (above) as part of the annual progress report. FHCRC HIPAA training is not acceptable to the UW.
Appendix C. Reporting and Publications:

Required Reporting by NIH: The following reports are required by NIH.

Annual Progress Report: Trainees contribute to this annual report to NIH. To complete this requirement trainees submit an individual report to the Program annually and provide additional information as requested.

Termination Report: Trainees must file this report during the last month of their training period or as soon as possible thereafter.

Competing Renewal Report: Trainees contribute to this periodic report every 5 years both while supported on the grant and for 10 years following termination.

Annual Progress Report — Due annually at the same time each year; timing depends on the specific funding agency:

- It should include all information since entering the appropriate training grant.
- Format it as a report rather than just sending us a copy of your CV.
- Send it to the Student Services Counselor as a Word attachment.

Required Information:

- Faculty research supervisor’s name.
- List of all related coursework, including course numbers and titles
- Progress toward degree, including examinations, committee formation, proposals and research progress.
- IRB approval information, including PI, IRB#, approval or exemption, beginning and end date of IRB approval and official title for all of the projects you are working on. If the original approval has expired, provide the dates of extension. **This information is absolutely required for the grant to be funded for any trainee for the following year.**
- Description of work on all research project(s) (1-2 paragraphs).
- Copy of HIPAA certificate if available and not provided previously.
- Copy of CITI certificate if available and not provided previously.
- Full citations of any publications or manuscripts arising from research you have participated in, including PMCID, NIHMS ID, or URL to the full article (see details below). (The U.S. government requires publications supported by U.S. government funding be available through PubMedCentral.) See [http://www.pubmedcentral.nih.gov/](http://www.pubmedcentral.nih.gov/) and [http://publicaccess.nih.gov/FAQ.htm](http://publicaccess.nih.gov/FAQ.htm) for more information.
- Attendance at required ethics training (For specific Biomedical Research Integrity Series Lectures or Videotapes, or other biomedical research ethics events, include titles of presentations, whether discussion or lecture sessions and the dates).

Termination Report: Predoctoral trainees must terminate their appointment shortly after graduating, upon leaving the training program (i.e. no longer being supported by their training grant), dropping out of the UW, or changing from the doctoral to the masters program. Postdoctoral trainees will terminate their appointment after completing training over the time period negotiated with the Director (with a maximum of 3 years), or if other reasons necessitate leaving the program earlier than planned. There are two parts the the Termination report: an internal document sent to the Student Services Counselor with details about training activites, publications, etc, and an external NIH document sent to NIH via xTrain on eRA Commons. Both versions of the Termination report is due in the last month of the training period or as soon as possible thereafter. It must include the following:
● List of all health-related classes taken during degree program.
● Summary of all research while supported by the training grant.
● Current research project(s) and source(s) of funding.
● Full citations of any publications or manuscripts arising from research you have participated in, including PMCID, NIHMS ID, or URL to the full article (see details below).
● Work position after termination and full contact information, both work and home.

Note: Often the CV contains much of this information and can be submitted with a separate report that covers any of the above items not included on the CV.

**Competing Renewal Report:** Due annually every 5 years (possibly more) both while supported on the grant and for 10 years following termination:

● Full citations of any publications or manuscripts from research you have participated in, including PMCID, NIHMS ID, or URL to the full article (see details below).
● Former institution(s), degree, and graduation date.
● Current research projects, including title and description.
● Current position and full contact information.
● Current funding sources, including titles and grant numbers.

**Publications:**

**Funding Acknowledgement:** Trainees must include an acknowledgement of their training grant as a source of support on any publication that they worked on while funded by the training grant. This includes publications directly supported by the training grant (and possibly completed after the training grant funding has terminated) as well as work sponsored by another source (e.g. previous training) that is completed using the training grant funding. It is critical that the actual grant number be included in the publication. Acknowledgements should take the form:

Acknowledgments: This work was supported in part by the UW NIEHS sponsored Biostatistics, Epidemiologic and Bioinformatic Training in Environmental Health (BEBTEH) Training Grant, Grant #: NIEHS T32ES015459.

[Note: This is an example for reference. Italicized text should be replaced with the appropriate grant information.]

While each publication has different criteria for acknowledgments, the NIH has set-up a new database that will be able to search for grants cited by their grant number in publications, so the grant number must appear as one continuous item without spaces between numbers and letters.

Grant numbers for the grants covered by this document can be found with the grant descriptions on pages 3 and 4.

**Citations:**
**Summary:** One of the following must be included in all article citations for NIH applications, proposals, or progress reports, for articles published after April 7, 2008 that were in any way sponsored by NIH funds or staff:

- PubMed Central ID number (PMCID)*
- NIHMS number
- URL (website link) to where the article is openly available (for example, at the Fred Hutch library repository, if your publisher allows this).

*Note: the PMCID (Pub Med Central ID) is NOT the same as the PMID (Pub Med ID), and is not an allowable replacement. See [http://publicaccess.nih.gov/citation_methods.htm#difference](http://publicaccess.nih.gov/citation_methods.htm#difference) for more information.

**Detailed explanation:** As of April 7, 2008, a new federal law authorizes the National Institutes of Health to require that all journal publications be submitted to the NIH PubMed Central Website. A summary description of the requirement of this new law is now available on OSP’s web site: [http://www.washington.edu/research/osp/nihPubLaw.html](http://www.washington.edu/research/osp/nihPubLaw.html).

In brief, NIH is now requiring that the author’s final version of any peer-reviewed journal article resulting from NIH-funded activities must be submitted to the PubMed Central repository, where it will be made available to the public within 12 months after the journal article is published. This new policy has several compliance issues that NIH-funded investigators need to address.

**Copyright:** Authors must ensure that agreements with publishers permit the submission of the author’s manuscript to NIH. OSP has provided a sample letter that may be used by researchers when negotiating contracts with journals: [http://www.washington.edu/research/osp/forms/nihPubmedTemplate.doc](http://www.washington.edu/research/osp/forms/nihPubmedTemplate.doc)

Many of the journals will submit journal articles to PubMed Central automatically, but for those that do not, this letter may be useful.

**Submission of manuscripts:** To facilitate submission of articles to PubMed Central, NIH has developed its NIH Manuscript Submission System (NIHMS); submission can be done by the author or a third party in their lab or department. Peer-reviewed manuscripts accepted for publication after April 7, 2008, authors must submit the final version of the manuscript, and accompanying files, to NIHMS. A tutorial on the NIHMS System is available at: [http://www.nihms.nih.gov/web-help/index.html](http://www.nihms.nih.gov/web-help/index.html).

**Citing PubMed Central ID numbers:** When an author’s manuscript is submitted to NIH, s/he will receive a NIHMS ID number, and once it is available in PubMed Central, it will be assigned a PMC ID number. Effective May 25, 2008, Principal Investigators will need to cite the PMC ID or NIHMS ID numbers for any articles cited in progress reports, new applications, and renewals. These are only needed for articles accepted for publication on or after April 7, 2008, but PMC ID numbers for articles already in PubMed Central may be included as well.

If you have questions regarding this new law, please consult the NIH PubMed Central FAQ (also referenced on the OSP web site): [http://www.pubmedcentral.nih.gov/](http://www.pubmedcentral.nih.gov/)
This information was provided by OSP and the Office of Research Associate Vice Provost for Research and Compliance Operations.

**Instructions for Trainees on how to get NIHMS and PMCID numbers:**

- Once an article is in final manuscript form, the NIH requires that it be submitted on the NIHMS website (http://www.nihms.nih.gov/). The article is immediately given a NIHMS number, which you can use when citing for up to a year. Once the article is published on Pub Med Central (which is NOT the same as Pub Med), it will be given a PMCID number, which can replace the NIHMS number in your citations. Receipt of the PMCID number can take up to a year, but you can get NIHMS numbers immediately.

- If you are not the first author, ask the first author (or your mentor) well in advance of the reporting deadlines to do this.
Appendix D. Program Requirements: BEBTEH Training Grant

Overview

- **Name of Training Grant:** Biostatistics, Epidemiologic, and Bioinformatic Training in Environmental Health (BEBTEH)
- **Leadership:** Lianne Sheppard
- **Participating Departments:** Biostatistics, Occupational and Environmental Health, Epidemiology and Genome Sciences
- **Annual Progress Report Date:** December 1

- **Specific Training Grant Requirements for Biostatistics Students** (in addition to other NIH requirements for all trainees): None
- **Courses:** 1 BEBTEH-approved elective
- **Journal Club:** None required
- **Special Seminars:** None required
- **Work Groups:** None required
- **Presentations:** Present research annually to other BEBTEH-trainees or an EHS-oriented audience
- **Research:**
  - Environmental Health Science research, to be arranged
  - All trainees will participate in research projects during their entire training period. This includes research opportunities during the first two years of pre-doctoral training; we believe research experience prior to the dissertation is an important part of the program. Details will vary by home department and may include laboratory rotations (EOHS and Genome Science) and/or research assistantships (Biostatistics and Epidemiology). Early in the training period research opportunities are likely to be distinct from the dissertation and thus we anticipate them to be more diverse and actively supervised than later when trainees will be expected to focus on an in-depth independent research project.
- **Other:**
  - Participate in BEBTEH annual retreat, attend annual lunch, and participate in a grantsmanship educational opportunity.
• **Annual Lunch and BEBTEH Retreat:** In order to foster communication and a sense of identity among trainees, the Directors will hold two annual meetings of all training grant participants. Each fall there will be a lunch to discuss issues related to program content and requirements. Each spring trainees will attend the BEBTEH retreat. This is combined with the DEOHS Student Research Day. The retreat will begin with the Student Research Day oral and poster presentations. It will conclude with BEBTEH trainee meeting where all trainees will make short presentations of relevant work in progress. The multidisciplinary interaction between BEBTEH trainees is expected to constitute a valuable enhancement to the training program.

• **BEBTEH-approved electives:** The Executive Committee will develop (in consultation with trainees) a list of department-specific BEBTEH-approved electives that will fulfill the BEBTEH elective requirement. Each trainee will be required to take one qualifying elective and will be encouraged to select additional electives from this list. This requirement will help unify the Training Program experience and ensure all BEBTEH pre-doctoral trainees receive formal training in both EHS and quantitative science areas.

The general BEBTEH program of study will follow the outline given here. (Note: postdoctoral trainees will have individualized plans that may not follow this outline.) Additional department-specific details such as curricula, degree requirements, didactic courses, laboratory experiences, qualifying exams, seminars, and journal clubs are available from the participating departments. In general, students in the BEBTEH will be expected to develop expertise in both EHS-related life sciences and quantitative sciences.

There are two phases to the training in the program – the initial *coursework emphasis* phase and the *independent research* phase. Entering students will select a primary mentor who will also be their graduate advisor. They will participate in orientation activities and meet with their mentor to plan their course of study. PhD students typically finish most or all of their required coursework within the first two years in graduate school. Typically written qualifying exams conclude the second year of study although some students place out of first-year classes and take qualifying exams earlier. Research opportunities will be incorporated into this initial coursework phase. Typically the second mentor will be selected in conjunction with the trainee’s research opportunity in order to ensure both the quantitative and EHS training goals of the BEBTEH are met. For instance, many quantitative trainees will have supplemental funding (research assistantship) on a NIEHS-funded grant and will select the PI or a co-I on that grant as the second mentor. During the third year students transition between phases as they finish any remaining required coursework and begin their dissertation research. Often students select their dissertation advisor during this third year and may select different BEBTEH mentors at this time. The general examination follows with presentation of a thesis research proposal. For the remaining years students complete their research toward the PhD. Trainees will be required to participate in some form of research during each year of their traineeship. During their entire course of training they will share common BEBTEH-sponsored activities as well as attend journal clubs and seminars. Each trainee will discuss their progress and plans with one of the BEBTEH Directors annually.
The University of Washington Graduate School requires all Ph.D. candidates to complete 18 graded credits in graduate level courses prior to registering for the General Examination. A minimum cumulative grade point average of 3.00 is required. Each participating department has its own required courses for the Ph.D. In addition BEBTEH trainees must fulfill elective requirements, including at least one BEBTEH-approved EHS or quantitative elective.

BEBTEH trainees will:
- Meet all the requirements of their home department,
- Meet the ethics training requirement,
- Participate in the BEBTEH annual retreat,
- Attend the annual lunch,
- Present their research annually to other BEBTEH trainees or an EHS-oriented audience,
- Participate in a grantsmanship educational opportunity, and
- Take at least one BEBTEH-approved elective.
Appendix E. Program Requirements: Cardiovascular Biostatistics Training Grant

Overview

- **Name of Training Grant**: Cardiovascular Biostatistics Training Grant
- **Leadership**: Ken Rice
- **Participating Departments**: Biostatistics
- **Annual TG Progress Report Date**: 
- **Training Grant Preceptors/Mentors**: 
- **Specific Training Grant Requirements for Biostatistics Students** (in addition to other NIH requirements for all trainees): None
- **Courses**:
  - During their first year as trainees, students will typically take formal core coursework in Applied Biostatistics, Mathematical Statistics, Theory of Linear Models, and Real Analysis. It is not uncommon for course requirements from this first year of the program to be waived when students have already taken equivalent courses. During their second year as trainees, students will typically take formal coursework in Applied Regression Analysis, Advanced Statistical Theory, and Data Analysis and Report Writing.
  - During their first three years as trainees, students will also take formal coursework in electives in Biostatistical Methodology (at least six credits), and biology and/or public health (nine credits).
  - Trainees in this program will be required to take EPI 519 Cardiovascular Epidemiology, or another course that provides similarly detailed coverage of an area of cardiovascular disease. Trainees will also be required to participate for three quarters in the Cardiovascular Epidemiology journal club (conducted under the NHLBI-funded Cardiovascular Epidemiology training program) or another group providing similar discussions of a relevant area of the scientific literature.
- **Journal Club**: None required
- **Special Seminars**: None required
- **Work Groups**: None required
- **Presentations**: None required
- **Research**: None required
Appendix F. Program Requirements: Cancer Epidemiology Biostatistics Training Grant

Overview

- **Name of Training Grant**: Cancer Epidemiology and Biostatistics Training Grant (Cancer-Epi)
- **Leadership**: Biostatistics: Mike LeBlanc; Epidemiology: Tom Vaughan
- **Participating Departments**: Biostatistics and Epidemiology
- **Annual TG Progress Report Date**: May
- **Training Grant Preceptors/Mentors**: Biostatistics: Norman Breslow, Ying Chen, John Crowley, Scott Emerson, Mary Emond, Zideng Feng, Thomas Fleming, Peter Gilbert, Patrick Heagerty, Peter Hoff, Li Hsu, Lurdes Inoue, Kathleen Kerr, Brian Leroux, Margaret Pepe, Ross Prentice, Steven Self, Elizabeth Thompson, Jon Wakefield, Bruce Weir, Jon Wellner, Ellen Wijsman, Lue Ping Zhao. Epidemiology: Melissa Austin, Shirley Beresford, Christopher Carlson, Chu Chen, Gloria Coronado, Scott Davis, Anneclaire DeRoos, Stephen Hawes, Laura Koutsy, Alan Peters, Mary Ann Rossing, Stephen Schwartz, Janet Stanford, Thomas Vaughan, Noel Weiss, Emily White
- **Specific Training Grant Requirements for Biostatistics Students** (in addition to other NIH requirements for all trainees): None
- **Courses**:
  - Ordinarily, one of the two pathways listed below should be followed though well-justified exceptions can be made with the approval of the TG Director:
    - Cancer Epidemiology Sequence: EPI 511 or 512, EPI 524, and EPI 573
    - Cancer Genetics Sequence: GENOME 371, GENOME 372 and EPI 540
  - A program of study for pre-doctoral trainees in Biostatistics also has been defined. This includes one of two sequences of courses, depending on the trainee's experience and interests as listed below. Waivers or substitutions may be approved by the program director. A cancer epidemiology sequence involving EPI 511 or 512-513 (Introduction to Epidemiology or Epidemiologic Methods I & II), EPI 524 (Epidemiologic Studies of Cancer Etiology and Prevention) and EPI 573 (Methods and Issues in Using Biological Measurements in Epidemiologic Research) *See more information under the Epidemiology section above; or a cancer biology/genetics sequence involving GENOME 371 (Introductory Genetics), which requires several biology prerequisites) and EPI 540 (Introduction to Cancer Biology), which is only offered alternate years. A trainee must plan carefully to be able to complete these course requirements while supported by the CTG.
- **Journal Club**: Must attend regularly and lead at least one cancer-epidemiology journal club discussion. Meets 2-3 times per quarter.
- **Special Seminars**: None required
- **Work Groups**: None required
- **Presentations**: None required
- **Research**: Must have cancer related application
Appendix G. Program Requirements: Clinical Research on AIDS Training Grant

Overview

- **Name of Training Grant:** Clinical Research AIDS Training Grant
- **Leadership:** Barbra Richardson and Peter Gilbert
- **Participating Departments:** Biostatistics
- **Annual TG Progress Report Date:** May
- **Training Grant Preceptors/Mentors:** Elizabeth Brown, Ying Chen, Tim DeRouen, Deborah Donnell, Thomas Fleming, Peter Gilbert, Elizabeth Halloran, Sarah Holte, Jim Hughes, James Dai, Suzanne May, Steve Self
- **Specific Training Grant Requirements for Biostatistics Students** (in addition to other NIH requirements for all trainees): None
- **Courses:** Trainees in this program will be required, at a minimum, to take the following three 3-credit courses: Principles of STD/HIV Research (UCONJ 555), BIOST 524, and an epidemiology/global health course on topics relevant to HIV/AIDS research.
  - UCONJ 555: “Principles of STD/HIV Research”. In its course description, this course “provides MD and PhD fellows and graduate students a comprehensive overview of the current state of knowledge in specific areas of STD/HIV research, including study design, laboratory methods, production of instruments for data collection, and methods for data analysis”.
  - Biostat 524: “Design of Medical Studies”. This course provides in depth training in design, conduct and analysis of clinical trials, with focus on current developments and topics of controversy. Taught annually by this training grant’s PI, T. Fleming, the course draws heavily from his previous and ongoing experiences in HIV/AIDS research. Throughout the course, each HIV/AIDS biostatistical trainee will collaborate on a research team with 3 clinical and epidemiological colleagues. This group will develop a draft NIH grant proposal for the design and conduct of a clinical trial; the proposal will be defended orally in a mock site visit at the completion of the course, and this research team will also serve as scientific reviewers of another team’s proposal.
  - An epidemiology course on topics particularly relevant to HIV/AIDS research.

- **Journal Club:** None required
- **Special Seminars:**
  - Attend at leave HIV/AIDS-related seminars per year. Seminars are offered by several different groups at UW and FHCRC.
  - The Vaccine and Infectious Disease Division Faculty Seminar Series at FHCRC. Seminars are every Tuesday and are frequently HIV/AIDS-related. (A current schedule may be found at: http://www.fhcrc.org/science/vidd/docs/VIDD_Seminar_Room_Reserv_2011_2012_Revl.pdf)
  - CFAR sponsors several HIV/AIDS-related seminars throughout the year (detailed information at: http://depts.washington.edu/cfar/news-events/cfar-seminar):t
The Kenya Research Program in the Department of Global Health has weekly presentations on global health research in Kenya with many HIV/AIDS-related talks. A current schedule can be found at: http://www.kenyaresearchgroup.org/presentation-schedule.

The UW International AIDS Research and Training Program holds frequent seminars on HIV/AIDS research. (Detailed Information at http://depts.washington.edu/iartp/seminar.)

- **Working Groups:**
  - HIV/AIDS Related Seminars/Working Groups - Trainees in this program will be required to attend the Statistical Center for HIV/AIDS Research and Prevention (SCHARP) Statistical Sciences Brown Bag Series. These talks are based on research experiences at SCHARP, which provides statistical collaboration for the HIV Vaccine Trials Network, the HIV/AIDS Microbicide Trials Network, the HIV Prevention Trials Network and CHAVI, as well as Gates Foundation initiatives in HIV/AIDS research.
  - UW Department of Biostatistics Working Group in Randomized Clinical Trials - Trainees in this program are encouraged to join the UW Department of Biostatistics Working Group in Randomized Clinical Trials (RCT-WG)
  - Center for AIDS Research (CFAR)-sponsored seminars - Trainees in this program will be encouraged to attend some of the Center for AIDS Research (CFAR)-sponsored seminars that are held on a regular basis. Among these are the CFAR Pathogenesis Seminar, the AIDS Clinical Research Conference, the Social and Behavioral Issues in HIV Research Seminar Series and the Statistical and Epidemiological Methods in AIDS/HIV Research Seminars. If a trainee attends one or more of these seminars on at least a monthly basis, this activity could replace the required attendance at the SCHARP Brown Bag Series. More detailed information about the CFAR-sponsored seminars is provided at http://depts.washington.edu/cfas/cfar/ Trainees will also be strongly encouraged to participate in HIV/AIDS related journal clubs and working groups such as the Kenya Research Group (KRG). KRG meets every Wednesday to discuss HIV/AIDS related research ongoing in Kenya and provides a great opportunity for collaborative work. Again, regular attendance at HIV/AIDS related journal club and/or working groups could replace the required attendance at the SCHARP Brown Bag Series.

- **Presentations:** None required

- **Research:**
  - Encouraged to spend approximately a day per month interacting with colleagues at the UW Center for AIDS Research (CFAR) working on HIV/AIDS research projects.
  - Research Presentation - Biostatistics students usually give at least one public seminar on some aspect of their research. This is mostly commonly done as part of the student-organized Informal Seminar Series. Trainees on this grant will be asked to give one or more research presentations on topics relevant to HIV/AIDS.
and infectious disease. These presentations could take place in the annual student poster session, in the informal seminar series, at a conference, or in some other setting.

- **Other:**
  - **RA** – Trainees are encouraged to have RA positions in a HIV/AIDS-related field.
  - **IARTP Collaboration** - Trainees will be encouraged to interact and collaborate with scholars in the International AIDS Research and Training Program (IARTP) in order to increase their exposure to international HIV/AIDS research. This will include encouraging attendance of the AIDS Training Grant trainees at the monthly IARTP Research Seminars and encouraging AIDS Training Grant trainees to collaborate on the statistical aspects of the IARTP Scholar’s proposals and publications.
Appendix H. Program Requirements: Statistical Genetics Training Grant

Overview

- **Name of Training Grant**: Statistical Genetics Training Grant
- **Leadership**: Bruce Weir
- **Participating Departments**: Biostatistics
- **Annual TG Progress Report Date**:
- **Training Grant Preceptors/Mentors**: Biostatistics: Bruce Weir (Director), Sharon Browning, Katie Kerr, Barbara McKnight, Timothy Thornton, Jonathan Wakefield, Ellen Wijsman, Daniela Witten. Statistics: Elizabeth Thompson (Associate Director), Joshua Akey, Philip Green, Mary Kuhner, Debbie Nickerson. Medicine: Brian Browning, Gail Jarvik. Epidemiology: Karen Edwards.
- **Specific Training Grant Requirements for Biostatistics Students** (in addition to other NIH requirements for all trainees): None
- **Courses**: For latest degree requirements refer to the Department of Biostatistics Graduate Program website.
  - Students within the Statistical Genetics Ph.D. tracks follow the same set of five core classes that constitute the Certificate Program, namely the core sequence BIOST/STAT 550-1-2, GENOME 562 and Genome 540 or 541. Additionally, students are expected to participate in the **Statistical Genetics Seminar** throughout their time in the Ph.D. track.
  - Statistics and Biostatistics students who have not previously taken Genetics or Genome Sciences classes will also need to take the Genome Sciences GENOME 371 class and one additional class in Genome Sciences as introductory background (See **Background courses**). GENOME 371 may often be audited in Summer; the other class (normally a 400-level class) should be taken for credit.
  - Students in the Statistics Statistical Genetics Ph.D. pathway are required to take only 2 of the 5 Statistics Ph.D.-level core course sequences, instead of the generally required 3 sequences, in order that the requirements of the Statistical Genetics pathway not unduly lengthen time to graduation. All other requirements of the Statistics Ph.D. program apply, so that, generally, these students must then take the two prelim exams related to the two core sequences which they take.
  - Biostatistics students in the Statistical Genetics track are excused BIOST/STAT 571 and the new (2009--) Methodology qualifying exam.
- **Journal Club**: None required
- **Special Seminars**: None required
- **Work Groups**: None required
- **Presentations**: None required
● **Research**: None required

● **Other**:
  
  o Trainees in this program must satisfy the Ph.D. requirements for their home department: Biostatistics, Statistics or Genome Sciences.
  
  o Trainees in the Departments of Biostatistics or Statistics must also satisfy the requirements of the track in Statistical Genetics.
  
  o Trainees in the Department of Genome Sciences must also satisfy the requirements of the Graduate Certificate in Statistical Genetics.
Appendix I. Program Requirements: Mental Health Biostatistics Training Grant

Overview

- **Name of Training Grant:** Mental Health Biostatistics Training Grant
- **Leadership:** Andrew Zhao
- **Participating Departments:** Biostatistics
- **Annual TG Progress Report Date:**
- **Training Grant Preceptors/Mentors:**
- **Specific Training Grant Requirements for Biostatistics Students** (in addition to other NIH requirements for all trainees): None

**Courses:**

- Ph.D. candidates must take 34 quarter units of theoretical courses primarily in mathematics and statistics. These courses cover applied mathematical analysis, probability, and statistical estimation and inference on a graduate level. Students take a minimum of 27 applied units including Linear Models and Topics in Applied Regression Analysis (2 quarters). The large majority of Ph.D. students also take Design of Medical Studies, Statistical Methods for Categorical Data, Multivariate Statistical Methods and Statistical Methods for Survival Analysis.

- Students on this training grant will be required to take two additional new statistics courses on mental health in the Department of Biostatistics: (1) the Analysis of Missing Data in Mental Health and (2) Measurement, Design, and Analysis Techniques in Mental Health. Recent changes in courses constituting the core curriculum for the Ph.D. have moved away from classical multiple linear regression and towards computer intensive, non-parametric and exploratory data analyses. Increased emphasis is given to random and mixed effects models, generalized linear models, longitudinal data techniques, generalized estimating equations, use of the S statistical language, bootstrap methods and non-parametric regression—for publication in biometrics, medical, or public health journals. We have listed required and elective graduate courses in the graduate program in biostatistics with detailed descriptions in Appendix E.

- In the Ph.D. program in Biostatistics, students are required to take at least nine credits from a list of biology and public health-related graduate course electives. The possible electives cover a broad range from molecular and cellular biology or genetics to psychosocial epidemiology. Students in this training grant will be strongly encouraged to take elective courses from the following list of available courses on mental health in the Departments of Psychiatry and Behavioral Sciences, Psychology and Epidemiology.
  - The trainees in the program are required to select at least two courses from this list. A trainee will select these two required courses in consultation with the Director and Co-Director of the training program as well as the trainee’s preceptors so that the two chosen courses can best introduce the trainee to the content area in mental health for his/her dissertation topic.
- HuBio 563 Brain and Behavioral: Major psychiatric disorders are defined and described, and a systematic approach to differential diagnosis is presented. Conceptual development, pathogenesis, epidemiology, nomenclature, and the terminology used in psychiatry are discussed. Human and animal Behavioral genetics, including the genetics of normal variation as well as extreme phenotypes represented by Behavioral, psychiatric and neurological disorders.
- PSYCH SM 407 Behavioral Genetics: Human and animal Behavioral genetics, including the genetics of normal variation as well as extreme phenotypes represented by Behavioral, psychiatric and neurological disorders.
- PSYCH 410 Child and Adolescent Behavioral Disorders: Introduction to psychopathology in children and adolescents, and an overview of principal modes of intervention.
- PSYCH 462 Developmental Psychopathology: Major theories in developmental psychopathology, such as disorders of cognitive, emotional and social functioning observed in children (diagnosis, assessment and psychotherapy).
- PSYCH 572 Approaches to Child Treatment: Major approaches to child psychotherapy, including specific applications, issues in treatment, and research.
- PSYCH 574 Community Psychology: Overview of key issues and concepts in the field of community psychology. History of field and overview of different models used to conceptualize system-level mental health issues and delivery systems. Emphasizes theory and research rather than intervention.
- PSYCH 575 Anxiety Disorders: General topics related to primary anxiety disorders (panic, OCD, GAD, posttraumatic stress disorder, and specific phobias), including diagnosis, theory, and treatment.
- PSYCH 750 Special Topics in Neuropsychopharmacology: Mental health aspects, neuroanatomy, mechanisms, and biological issues relevant to neuropsychiatric illnesses, as well as quantitative genetics.
- PSYCHIATRIC DIDACTICES: An introduction to diagnosis and treatment of DSM-IV disorders; introduction to psychopharmacology; introduction to psychotherapies; and the history of psychiatry.
- EPI 546 Psychosocial Epidemiology: Topics include occurrence and distribution of mental illness; classification of psychiatric disorders; treatment-based vs. community-based studies; epidemiology of depression and schizophrenia; familial transmission; developmental epidemiology; and mental illness and violence.
- SOC 527 Measurement of Basic Sociological Concepts: Conceptualization and measurement problems in sociology, using major concepts as illustrations of basic issues.
- SOC 526 Causal Approach to Theory Building and Data Analysis: Theory construction and testing from a causal models perspective. Path analysis, standardized versus unstandardized measures, feedback models, identification problems, estimation in overidentified models, difference
equations, differential equations, stability conditions. Multiplicative models as alternatives to additive ones.

- **Journal Club**: None required
- **Special Seminars**: None required
- **Work Groups**: None required
- **Presentations**: None required
- **Research**: None required
- **Other**:
  - **Dissertation** - By discussing with our mental health preceptors and statistical colleagues and searching statistical literature in mental health (e.g. Kraemer et al., 1987, Arch Gen Psychiatry; 1100-1106), we have come up with a list of some examples of statistical issues facing mental health research that can be potential dissertation topics of our trainees: (1) selection bias in observational studies of the association between comorbidity and depression, (2) informative drop-out and non-adherence in randomized efficacy and effectiveness studies of new interventions for mental health disorders, (3) longitudinal latent class models in mental health studies, (4) exploratory analyses of high dimensional imaging data, (5) analysis of multiple informant data, (6) analysis of skewed mental health care costs, (7) cost-effectiveness analysis of mental health studies, (8) adjusting for error in the imperfect gold standard when estimating the accuracy of psychological scales using longitudinal data, (9) using latent class analysis to develop a criterion for defining disability, and (10) statistical methods for using genotyping error to identify genome changes of relevance to the mental disorder. Our trainees will also be encouraged to choose other dissertation topics that may arise from their collaborative works with their mental health and biostatistics preceptors.
Guidelines for Trainees

Acknowledgement of Receipt and Understanding

I acknowledge that I have received and read the Department of Biostatistics Guidelines for Trainees. In particular, I acknowledge that

- I understand that my commitment to the department’s training grant mission is intended to begin with my initial appointment and last until I receive my Ph.D. or complete my postdoctoral training, even if the source of funding transitions from a training grant.

- NIH traineeships have specific additional requirements in addition to those of my home department and the University of Washington. I will complete those requirements. In particular, I recognize that I will be asked for updates about my activities for ten years after I leave the training program.

- I will make a good-faith effort to contribute to the future success of my designated training grant through choices I make during and after training. I will be mindful of the training grant’s mission when considering my training and career options.

__________________________________________            ________________
Trainee signature                                      Date

__________________________________________
Trainee name (printed)

__________________________________________
Name of training grant (printed)

__________________________________________            ________________
Training Grant director signature                      Date