Computational Biology & Bioinformatics at Yale

An Interdepartmental PhD Program and a Track within Yale's Combined Program in the Biological and Biomedical Sciences

2009-2010

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Applications to the CBB track are located on the Yale BBS site at
https://www.yale.edu/graduateschool/admissions/apply_online.html

Introduction

Computational Biology and Bioinformatics (CBB) is a rapidly developing multi-disciplinary field. The systematic acquisition of data made possible by genomics and proteomics technologies has created a tremendous gap between available data and their biological interpretation. Given the rate of data generation, it is well recognized that this gap will not be closed with direct individual experimentation. Computational and theoretical approaches to understanding biological systems provide an essential vehicle to help close this gap. These activities include computational modeling of biological processes, computational management of large-scale projects, database development and data-mining, algorithm development and high-performance computing, as well as statistical and mathematical analyses.

Yale has an interdepartmental CBB PhD program. The advantage of an interdepartmental program is that CBB students complete the CBB curriculum (described later in this booklet), and then can do their dissertation research in the laboratory of a faculty member at Yale in any relevant department at Yale, which might be a biological science department, computer science, statistics, applied math, etc. (They do not have to satisfy the PhD requirements of their research advisor's department.)

To enter the PhD program, students apply to the CBB track within Yale's combined program in the Biological and Biomedical Sciences (BBS): http://bbs.yale.edu/apply/index.aspx

We welcome your interest in Yale's CBB program.

Mark Gerstein, PhD
Perry Miller, MD, PhD
Co-Directors, Interdepartmental CBB PhD Program
Co-Directors, CBB Track within Yale's BBS Program

Computational Biology and Bioinformatics
Participating Faculty

(For additional information: http://cbb.yale.edu/faculty.html)

James Aspnes aspnes-james@yale.edu	Professor	Computer Science	AKW 401 432-1232
Joseph Chang joseph.chang@yale.edu	Professor	Statistics	24 Hillhouse Avenue 432-0642
Kei-Hoi Cheung kei.cheung@yale.edu	Associate Professor	Anesthesiology Genetics Computer Science	300 George, Ste 501 737-5783
Ronald Coifman coifman-ronald@yale.edu	Professor	Mathematics Computer Science	AKW 108A 432-1213
Xing-Wang Deng xingwang.deng@yale.edu	Professor	MCDB	OML 352B 432-8908
Thierry Emonet thierry.emonet@yale.edu	Assistant Professor	MCDB	KBT 1048 432-3516
Donald Engelman donald.engelman@yale.edu	Professor	MB&B	BASS 420A 432-5601
Alison Galvani alison.galvani@yale.edu	Associate Professor	EPH EEB	LEPH 403
Mark Gerstein mark.gerstein@yale.edu	Co-Director CBB Professor	MB&B Computer Science	BASS 432A 432-6105
Antonio Giraldez antonio.giraldez@yale.edu	Assistant Professor	Genetics	SHM I-142A 785-5423
William Jorgensen william.jorgensen@yale.edu	Professor	Chemistry	SCL 23 432-6278

Douglas Kankel douglas.kankel@yale.edu	Professor	MCDB	KBT 1118A 432-3532
Kenneth Kidd kenneth.kidd@yale.edu	Professor	Genetics Psychiatry	SHM I 328 785-2654
Tae Hoon Kim taehoon.kim@yale.edu	Assistant Professor	Genetics	SHM I-142B 785-7501
Steven Kleinstein steven.kleinstein@yale.edu	Assistant Professor	Pathology	300 George, Ste 505 785-6685
Michael Krauthammer michael.krauthammer@yale.edu	Assistant Professor	Pathology	300 George, Ste 505 737-1233
Paul Lizardi paul.lizardi@yale.edu	Professor	Pathology	LH 214 785-5107
Elias Lolis elias.lolis@yale.edu	Associate Professor	Pharmacology	SHM 345 785-6233
Shuangge Ma shuangge.ma@yale.edu	Assistant Professor	EPH	LEPH 201 785-3119
Perry Miller perry.miller@yale.edu	Co-Director CBB Professor Director, YCMI	Anesthesiology MCDB	300 George, Ste 501 737-2903
Andrew Miranker andrew.miranker@yale.edu	Associate Professor	MB&B	BASS 318 432-8954
Willard Miranker miranker-willard@yale.edu	Professor (Adj)	Computer Science	AKW 506 432-7226
Annette Molinaro annette.molinaro@yale.edu	Assistant Professor	EPH	LEPH 206 785-4157
James Noonan james.noonan@yale.edu	Assistant Professor	Genetics	SHM I-142C 737-1922
Corey O'Hern corey.ohern@yale.edu	Associate Professor	Mech. Engineering	ML 203 432-4258
Anna Marie Pyle anna.pyle@yale.edu	Professor	MB&B	BASS 334A 432-5633

Lynne Regan lynne.regan@yale.edu	Professor	MB&B Chemistry	BASS 322 432-9843
Valerie Reinke valerie.reinke@yale.edu	Associate Professor	Genetics	NSB 396 785-5228
Martin Schultz schultz-martin@yale.edu	Professor	Computer Science	AKW 207 432-1202
Gordon Shepherd gordon.shepherd@yale.edu	Professor	Neuroscience	FMB 236 785-4336
Avi Silberschatz abraham.silberschatz@yale.edu	Professor	Computer Science	AKW 214 432-4713
Dieter Soll dieter.soll@yale.edu	Professor	MB&B Chemistry	BASS 238A 432-6200
Jeffrey Townsend jeffrey.townsend@yale.edu	Assistant Professor	Ecology/Evolutionary Biology	OML 226B 432-4646
David Tuck david.tuck@yale.edu	Associate Professor	Pathology	300 George, Ste 505 785-4562
Gunter Wagner gunter.wagner@yale.edu	Professor	Ecology/Evolutionary Biology	OML 327A 432-9998
Heping Zhang heping.zhang@yale.edu	Professor	EPH Statistics	LEPH 202 785-5185
Hongyu Zhao hongyu.zhao@yale.edu	Professor	EPH Statistics	300 George, Ste 503 785-6271
Steven Zucker steven.zucker@yale.edu	Professor	Computer Science Electrical Engineering	AKW 407 432-6434

CBB Graduate Program Administration

Co-Directors of Graduate Studies

Perry Miller	300 George Street, Suite 501	737-2903
Mark Gerstein	BASS 432A	432-6015

The Directors of Graduate Studies (DGS) are responsible for the overall operation of the graduate program. They monitor student progress through the program, approve course schedules, and coordinate qualifying exams. If you have any concerns regarding your academic progress, registration status, a faculty member or advisor, the DGS is one to approach.

Graduate Program Registrar	Lisa Sobel	300 George Street Suite 501	737-6029

The Graduate School Registrar keeps the graduate student files. She enters graduate student payroll, provides administrative support to the students, the Directors of Graduate Studies, and the Admissions Committee. She handles curriculum, department fellowship information, student forms, and academic schedules and room reservations.

CBB Graduate Students

CBB Graduate Students	Advisor	Location
Pedro Alves	Mark Gerstein	BASS
Raymond Auerbach	Mark Gerstein Michael Snyder	BASS Stanford University
Christopher Bolen	Steven Kleinstein	300 George, Ste 505
Xiaowei Chen	Hongyu Zhao Frank Slack	300 George, Ste 503 KBT
Jamie Duke	Steven Kleinstein	300 George, Ste 505
Lukas Habegger	Mark Gerstein Michael Snyder	BASS Stanford University
Song Huang	Hongyu Zhao	300 George, Ste 503
Jia Kang	Hongyu Zhao	300 George, Ste 503

CBB Graduate Students	Advisor	Location
Kevin Keating	Anna Pyle	BASS
Hugo Lam	Mark Gerstein	BASS
Jing (Jane) Leng	Mark Gerstein James Noonan	BASS SHM
Lucas Lochovsky	Mark Gerstein	BASS
Karen Lostritto	Annette Molinaro	LEPH
ThaiBinh Luong	Michael Krauthammer	300 George, Ste 505
Haisu Ma	Hongyu Zhao	300 George, Ste 503
Laura Mustavich	Hongyu Zhao Kenneth Kidd	300 George, Ste 503 SHM
Rebecca Robilotto	Mark Gerstein	BASS
Jill Rubinstein	Michael Krauthammer Paul Lizardi	300 George, Ste 505 LH
Pavithra Shivakumar	Michael Krauthammer	300 George, Ste 505
Michael Sneddon	Thierry Emonet	KBT
Chong Shou	Mark Gerstein Michael Snyder	BASS Stanford University
Emmett Sprecher	David Tuck	300 George, Ste 505
Kelly Stanton	David Tuck	300 George, Ste 505
Sebastian Szpakowski	Michael Krauthammer Paul Lizardi	300 George, Ste 505 LH
Taiwo Togun	Annette Molinaro David Tuck	LEPH 300 George, Ste 505
Mohamed Uduman	Steven Kleinstein	300 George, Ste 505
Jing (Crystal) Wang	Mark Gerstein James Noonan	BASS SHM

Noteworthy Numbers & Addresses

BBS Program Director - Lynn Cooley lynn.cooley@yale.edu
NSB 388
203-785-5067

Administrative Director – John Alvaro john.alvaro@yale.edu
SHM L-200C
203-785-3735

Graduate School
Associate Dean Richard Sleight richard.sleight@yale.edu
HGS 132
203-432-2744

Assistant Dean Robert Harper-Mangels robert.harper-mangels@yale.edu
HGS 133
203-432-2744

Registrar Stephen Goot stephen.goot@yale.edu
246 Church Street
203-436-0492
Mr Goot handles course schedule and changes, dissertation progress reports, grades, leave of absence, petitions for degrees, petitions for extended registration, registration forms, SSN, address and name changes.

Financial Aid Office
Associate Director Jennifer Brinley
HGS 130
203-432-7980

Financial Aid Officer Susan Wrzosek
HGS 129
203-432-2899
The office handles paychecks, address changes, and loan applications.

McDougal Graduate Student Center
Director of Student Life Lisa Brandes
HGS 126
203-432-2583

Office of Diversity and Equal Opportunity
Assistant Dean John Mangan
HGS 142

203-432-8093

Admissions Office

Director Robert Colonna
HGS 117B
203-432-2749

This office handles questions related to admission or readmission to the Graduate School.

Other University Offices

Student Financial and Administrative Services (SFAS)
Bursar's Office
246 Church Street
203-432-2700

International Students & Scholars Office
421 Temple Street
203-432-2305

International Center
421 Temple Street
203-432-2305

Night Student Security
Transit Service
203-432-6330

University Police
101 Ashmun Street
203-432-4400 (dispatch)

Yale Visitor Center
149 Elm Street
203-432-2300

Yale University Health Service/Yale Health Plan
17 Hillhouse Avenue

Urgent Care (24/7)	203-432-0123
Student Health	203-432-0312
General Information	203-432-0246

Requirements/Curriculum Overview

Admissions Requirements

Applicants are expected 1) to have a strong foundation in the basic sciences, such as biology, chemistry and mathematics, and 2) to have training in computing/informatics, including significant computer programming experience. The Graduate Record Examination (GRE) General Test is required, and the GRE Subject Test in cell & molecular biology, biology, biochemistry, chemistry, computer science, or other relevant discipline is recommended. Alternatively, the Medical College Admission Test (MCAT) may be substituted for the GRE tests. Applicants for whom English is not their native language are required to submit results from the Test of English as a Foreign Language (TOEFL).

Requirements for the PhD degree

This section outlines the current CBB curriculum, and other requirements for the PhD degree. Because of the interdisciplinary nature of the field, we anticipate that the students will be extremely heterogeneous in their background and training. As a result, a welcoming/advisory committee will help students individually tailor the curriculum to their background and interests. The emphasis will be on gaining competency in three broad "core areas":

- computational biology and bioinformatics
- biological sciences
- informatics (including computer science, statistics, and applied mathematics)

Completion of the curriculum will typically take 4 semesters, depending in part on the prior training of the student. Since students may have very different prior training in biology and computing, the courses taken may vary considerably. In addition, students will spend a significant amount of time during this period doing intensive research rotations in faculty laboratories and attending relevant lectures and seminars.
Specifically, we expect that all students will:

- take at least nine (9) courses as follows:
    - three (3) graduate courses in computational biology and bioinformatics,
    - two (2) graduate courses in the biological sciences,
    - two (2) graduate courses in areas of informatics,
    - two (2) additional courses in any of the three core areas (which may be undergraduate courses taken to satisfy areas of minimum expected competency, as described below),
    - any additional courses required to satisfy areas of minimum expected competency,

- take a one-semester graduate seminar on research ethics,
- participate in intensive research rotations (see section on rotation information),
- attend a CBB seminar series,
- serve as a teaching assistant in two semester courses.

Students will typically take 2-3 courses each semester and 3 research rotations during the first year. After the first year, students will start working in the laboratory of their chosen PhD thesis supervisor. Students must pass a qualifying examination normally given at the end of the second year or the beginning of the third year. There is no language requirement.

In addition to the curriculum outlined above, the program has also defined an initial set of guidelines for minimum expected competency in biology, computer science, statistics, and mathematics. Some students may have satisfied all of these areas prior to entering our program. Other students may need to take undergraduate or graduate courses at Yale to satisfy one or more of these specific areas. These guidelines are in evolution and may be refined over time as we get more experience with the program.

Students may be able to waive some course requirements based on graduate coursework completed at other universities where they have been enrolled as a graduate student. Courses must be equivalent to Yale graduate courses, and the Graduate School usually sets a maximum limit of three courses that can waived.

Courses in Computational Biology and Bioinformatics

CBB students are required to take CBB 752, CBB 750, and CBB 740, unless they have taken equivalent graduate courses in their previous education.

CBB 752b Bioinformatics Simulation and Data (spring term in 2009-2010)
CBB 750a Core Topics in Biomedical Informatics (fall term in 2009-2010)
CBB 740a Clinical and Translational Informatics
CBB 645b Statistical Methods in Genetics and Bioinformatics
CHEM 526b Computational Chemistry and Biochemistry

Courses in Biological Sciences

Courses are available in many departments, including Molecular, Cellular, and Developmental Biology, Ecology and Evolutionary Biology, Molecular Biophysics and Biochemistry, Genetics, and Cell Biology. Courses that recent CBB graduate students have taken include the following:

CBIO 602a Molecular Cell Biology
GENE 625a Basic Concepts: Genetics Analysis
GENE 777b Mechanisms of Development
IBIO 530a Biology of Immune System
MBB 600a Principles of Biochemistry I
MBB 743b Advanced EukaryoticMolecular Biology
MCDB 505a Molecular Genetics of Prokaryotes

MCDB 570b Biotechnology
PATH 650b Cellular and Molecular Biology of Cancer
EEB 525b Evolutionary Biology
MCDB 561b Systems Modeling in Biology

Informatics Courses

Computer Science and Related Courses

Courses are available in Computer Science and other departments. Example courses that CBB graduate students might take include the following:

CPSC 524a Parallel Programming Techniques
CPSC 537a Introduction to Databases
CPSC 545b Data Mining
CPSC 562a Graphs and Networks
CPSC 570a Artificial Intelligence
CPCS 577a Neural Networks for Computing
BIS 560b Database Management in Biomedicine and Epidemiology

Statistics Courses

Many CBB students have taken the following statistics courses:

STAT 538a Probability and Statistics for Scientists
STAT 645b Statistical Methods in Genetics and Bioinformatics
STAT 660b Multivariate Statistical Methods

CBB students have also enrolled in the following statistics courses:

STAT 530b Introductory Data Analysis
STAT 541a Probability Theory
STAT 542b Theory of Statistics
STAT 551b Stochastic Processes
STAT 610a Statistical Inference
STAT 612a Linear Models
STAT 661a Data Analysis
STAT 665b Statistical Machine Learning
BIS 623a Applied Regression Analysis

Research Ethics Course

MB&B 676b Responsible Conduct of Research

Optional Focus on Translational Informatics

CBB graduate students (PhD or MS) may elect to pursue an optional focus on "Translational Informatics." Translational research is concerned with bringing bioscience research discoveries into patient care. The CBB Translational Informatics focus emphasizes the intersection of bioinformatics and disease, and includes topics from both bioinformatics and clinical informatics. Examples include 1) research that uses genomic technologies to help better understand the mechanisms of disease, 2) organizing data from the electronic medical record to help define the clinical phenotype of many diseases, 3) building informatics tools that analyze clinical and bioscience data in an integrated fashion, and 4) the computer modeling of disease processes. A CBB student may select this focus area at any time. The overall CBB curriculum is unchanged, but the Translational Informatics focus makes the following specific course requirements:

The following courses must be taken:

- CBB 740a Clinical and Translational Informatics
- CBB 750a Core Topics in Biomedical Informatics
- CBB 752b Bioinformatics Simulation and Data

At least two of the other courses taken must have a major focus on clinical medicine and/or disease. There are many such courses. Examples include:

- GENE 500b Principles of Human Genetics
- CBIO 601a/b Molecular and Cellular Basis of Human Disease
- IBIO 530a Biology of the Immune System
- NSCI 507b Cellular and Molecular Mechanisms of Neurological Disease
- PATH 650b Biology of Cancer
- BIS 540a Fundamentals of Clinical Trials

The PhD dissertation or MS degree project must focus on a topic related to Translational Informatics.

Rotations

All students are required to take at least three rotations. This can be supplemented with a fourth rotation in the summer after the second semester.

Rotation schedule for 2009 -2010 (approximate):

Late September – November 30
December 1 – March 6
March 23 – May 30

The laboratory rotation provides students with the opportunity to broaden their scientific experience in Computational Biology and Bioinformatics and in ultimately choosing the laboratory for their thesis research. The CBB Registrar maintains a notebook with short reports about all the rotations that CBB students have done in the past. Entering students are encouraged to consult this resource.

Students should take time early on to acquaint themselves with the science that is being conducted in the labs of the CBB faculty. For example:

- Visits to group meetings are encouraged. Schedules for group meetings are generally listed on the faculty websites (http://cbb.yale.edu/faculty.html has links). After reviewing the work being conducted in the lab of your interest, make an appointment to speak with the P.I. and have ready an idea of the type of work you are interested in.
- Several BBS departments schedule retreats during the fall to acquaint BBS students with the research being performed by their faculty. All first year BBS students are invited. The CBB Retreat is scheduled for September 11, 2009 in New Haven.
- The CBB program schedules sessions where certain CBB faculty describe their research interests.

What happens during rotations?

Students are expected to devote non-classroom time to the rotation. This works out to approximately 15-20 hours per week. You will be given space and are expected to join in discussions with the group. Your project should be discussed with the PI or a senior member of the lab at the beginning of the rotation. Although completing a well-defined project may be possible, the short rotation period may not allow this. The most important aspect of the rotation is familiarizing yourself with the work of the lab and participating in meetings, discussions, and seminars.

Although no grades are given for rotations, both student and PI are required to submit evaluations at the end of the rotation. Forms will be sent by the registrar. It is expected that the forms will be returned within a two week period.

Teaching Assistantships

All students are required to serve as teaching assistants in two semester-long courses during their training period. Appointments as a teaching assistant counts for a portion of the normal stipend for the appropriate term. Teaching provides the student the opportunity to develop teaching skills under the guidance of faculty. Attendance at all classes and discussion sessions is essential. On average, PhD students should expect to spend about 10 hours per week on teaching and grading class assignments. TAs and faculty should remain clear on what is expected of their assignment. TAs are normally expected to grade exams. It is imperative that TAs remain aware of exam deadlines and make arrangements with faculty in case there should be any conflicts.

As an interdepartmental program, CBB allows teaching assistantships in a wide variety of courses. The CBB Registrar maintains a list of all the courses in which CBB students have been TAs. This is a useful starting point for finding a TA. In June each year, a list of available TA opportunities in the fall and spring semesters within the BBS departments is emailed to all CBB students. Students who wish to teach in the following academic year should fill out the form indicating which courses they would like to TA in and return the form the CBB Registrar, Lisa Sobel. She, in turn, forwards each student's request to the registrar of the appropriate department, where the TA selection is made. The forms should be returned as soon as possible as class requests fill up quickly. Students should consider contacting faculty well in advance of the selection notice to convey their interest in assisting in specific courses.

If students are interested in teaching outside BBS, e.g., Computer Science, Bioengineering, Statistics, etc., they should contact the registrar within each program. Email the CBB Registrar (lisa.sobel@yale.edu) for a listing of contacts.

Qualifying Exam/Admission to Candidacy/Dissertation

During the fourth semester and no later than the fifth semester, the student undertakes a series of activities which lead to admission to candidacy for the PhD degree.

1. In the fourth semester student should select a qualifying exam committee consisting of his/her dissertation advisor and at least two additional faculty members. The registrar must be notified once the committee has been selected and approved by the advisor.

2. The student prepares a 1-2 page double spaced preliminary research proposal and distributes it to his/her committee.

3. The student meets with the qualifying committee to discuss the preliminary proposal. At this meeting, the committee also identifies 3 or 4 additional topic areas on which the student will be questioned during the oral qualifying exam.

4. The student prepares a 15-20 page double spaced dissertation prospectus in the form of a research proposal, which should contain: a brief literature review indicating the present state of the field of intended research; a specific question or questions that will be addressed; and a research plan including the materials and methods to be used; preliminary results, if any; work to be undertaken in the future; and a provisional timetable for completion of the dissertation. The prospectus is distributed to the committee, and the qualifying exam is scheduled for late in the fourth semester or early in the fifth semester.

5. During the qualifying exam, the student presents and discusses his/her research prospectus and is questioned on it and on the several topic areas previously identified by the committee.

Completion and approval of the dissertation prospectus and oral exam as well as the requirement of at least two honors grades during the first two years satisfies the Graduate School's requirement for Admission to Candidacy.

In each subsequent year, the student continues his/her research and meets with the committee to discuss progress. In the final year, the student prepares and defends the dissertation before the committee and receives their comments, which should be addressed in the final version before submission to the Graduate School.

Annual dissertation progress report

Following Admission to Candidacy, students are required to submit an annual "Report on Dissertation Progress" to the Graduate School, mapping out their achievements in the past year, and goals for the upcoming year. This form must be completed on-line by the students, their advisors, and the DGS. The online address is http://www.yale.edu/sis/dpr. The report is due to the Graduate School by May 1.

Where to get forms

Many of the forms that graduate students will need to fill out during their studies, including petitions for degrees, can be downloaded at:

http://www.yale.edu/graduateschool/home/forms.html

Deadlines

There are 2 deadlines for submission of the dissertation to the Graduate School: October 1 for a December degree and March 15 for a May degree. Deadlines for submitting the

dissertation may change slightly each year, so students are advised to check the academic calendar for the exact date. The Graduate School does not make exceptions to these deadlines, which have been picked to give readers adequate time to evaluate the dissertation.

Readers

Upon receipt, the Graduate School will send the dissertation out for evaluation by 3 readers, with at least 2 having tenure or a tenure track appointment at Yale. After all reader evaluation forms have been returned to the Graduate School and all requested changes to the dissertation have been made, the DGS will sign the form recommending award of the PhD degree. Then the Graduate School Degree Committee and finally the Yale Corporation will vote to approve conferral of the degree.

MS Degree (en route to PhD)

A Master's degree may be obtained by a CBB PhD student who is en route to obtaining a PhD degree or who leaves Yale prior to receiving a PhD degree. Requirements include: 1) completion of two years (four semesters) of study, 2) completion of required coursework (nine courses must be taken at Yale), 3) successful completion of three research rotations, and 4) satisfying the Graduate School requirement of two Honors grades.

CBB Events

Seminars

CBB hosts several seminars during the academic year. These are listed on the CBB calendar located at http://cbb.yale.edu/calendars.html. In addition to CBB, there are seminars within several departments that CBB students will be interested in and encouraged to attend.

Departments/Centers which sponsor seminars include:

MB&B - http://info.med.yale.edu/calendar/listview.php3?calendar_id=19
MCDB - www.biology.yale.edu/seminars/index.html
Genetics - http://info.med.yale.edu/calendar/listview.php3?calendar_id=24
Center for Genomics and Proteomics - http://cgp.yale.edu
Computer Science - www.cs.yale.edu/calendars/department.html

Journal Club

The CBB students have a journal club in CBB that is also open to postdocs, undergrads and grad students from other departments.

Topics of interest are selected by a different student each month. Often students report on their own research in progress. Journal Club meetings are posted on the CBB Calendar: http://info.med.yale.edu/calendar/listview.php3?calendar_id=60.

Other Talks

Talks given at the University and other institutions that may be of interest to the Computational Biology and Bioinformatics students are listed on the Gerstein Lab Bioinfo calendar http://calendar.yahoo.com/public/yalebioinformatics.
Events of particular CBB interest are marked "*CBB*."

Financial Support

For the duration of their studies all students receive a stipend, which increases yearly (in 2009-2010 the amount is $29,600*****), full tuition, health coverage, and a yearly allotment for travel to scientific meetings or courses. The Graduate School Payroll System (GSPS) is a semi-monthly payroll; checks are paid on the 15th and the last day of each month. Students usually have their checks deposited directly to their banks. Financial support comes from University fellowships, National Institutes of Health (NIH) Training Grants, the National Science Foundation, and private foundations.

* Students who win competitive awards, such as NSF predoctoral fellowships, receive a $4000 stipend bonus (for a total stipend of $33,600 in 2009-2010).

Special note to international applicants Financial aid for students who are neither U.S. citizens nor U.S. permanent residents is very limited. Although approximately 20% of each entering class is international, on average, we are able to admit less than 5% of our non-U.S. applicant pool. Please take this into consideration before applying to the Program.

Health Coverage

If you are an enrolled student attending Yale at least half time and working towards a Yale degree, you receive many YHP services, including primary care, at no charge. You do not have to sign up or pay extra to obtain this coverage, which is called YHP Basic. Your status as a Yale University undergraduate, graduate, or professional student automatically makes you a student member of the health plan. If you are eligible for YHP Basic, you are also required by the University to obtain additional coverage for hospitalization and specialty care.

Here, you have two options:

1. You can purchase Yale Health Plan's Hospitalization/Specialty Coverage, with or without Prescription Plus. Full details on each of these plans, including dates of coverage and waiver deadlines, may be found in the student handbook, found on-line at http://www.yale.edu/yuhs/pdf/studenthb.pdf.

2. You can have other coverage, either by being a dependent on someone else's plan (parents' or spouse's or domestic partner's) or by purchasing other coverage on your own. You will still be able to use YHP specialty services, but your other insurance will be billed for them as well as for any services obtained outside YHP, even if you are referred by a YHP clinician. If you choose option 2, you must give formal notice that you are waiving YHP Hospitalization/Specialty Coverage. You must give this notice each academic year. If you choose option 1 but do not want the additional Prescription Plus coverage that is automatically included, you must give formal notice of waiving Prescription Plus.

You provide notice in either situation by submitting a waiver form that you will receive by mail. If you have not received it by the beginning of the semester, call Member Services at 203-432-0246. If you are waiving YHP Hospitalization/Specialty Coverage, you will be asked to provide proof of alternate coverage. No proof of alternate coverage is needed if you are waiving only Prescription Plus. Waivers for the full year or the fall term must be submitted annually by September 15, and by January 31 for those enrolling during the spring term.

If you do not submit this waiver by the deadline, you will be billed through your SFAS (Student Financial and Administrative Services) account for YHP Hospitalization/Specialty Coverage and Prescription Plus. Your SFAS account must be cleared in order for you to register for classes or graduate.

If you waive YHP coverage you may change your mind and revoke your waiver by submitting a revoke waiver form before September 15 or January 31 deadlines, your coverage will begin retroactive to the beginning of the term. If you miss these deadlines you must wait until the next term in which you are eligible.

If you lose your non-YHP hospitalization insurance coverage, you must either revoke your waiver and enroll in a YHP plan or select another hospitalization insurance carrier. If you choose to enroll in the YHP plan you must do so within 30 days of the loss of other coverage. YHP's coverage begins the day following the other plan's termination date. Premiums are not prorated, and you must pay for the full-term cost of the YHP plan.

You may also enroll your eligible dependents in any of the plans for you which you are eligible. Details may be found in the online student handbook.

Housing

Whether you are coming to Yale as a single student, or as a family, a variety of housing options are available to you. It is the goal of the Graduate Housing Office to provide opportunities for graduate and professional students to develop a sense of community while residing in University Housing. You may take advantage of social functions planned specifically for the dormitory or apartment where you live, joining a residence council, child playgroups and educational forums on relevant topics for students and their families. The possibilities are as varied as those who wish to participate.

University Housing is not available for all those who may be eligible due to space constraints. Applications are accepted starting April 1st and the assignment process will begin mid to late April.

The Graduate Housing experience is unique. The benefits and rewards of living in the Yale graduate community are long lasting.

Graduate Housing is administered out of two offices located on the ground floor of Helen Hadley Hall, 420 Temple Street. Office hours are Monday - Friday from 9:00 AM - 4:00 PM. Apartment information: (203) 432-8270. Dormitory information: (203) 432-2167. The website at http://www.yale.edu/gradhousing/ provides detailed information about the apartment and dormitory options, including locations, rates, and floor plans.

Yale's **Off-Campus Housing** office maintains a searchable database of housing available for rent in the New Haven area. The website at http://www.yale.edu/gradhousing/ochousing/index.html is accessible from Yale networked computers or with a password obtained by emailing offcampushousing@yale.edu.