

University of California, San Diego

**BMS** Biomedical Sciences  
GRADUATE PROGRAM

# Guidelines

**For Students and Faculty  
2016-2017**

**Website:** <http://biomedsci.ucsd.edu>

**UC San Diego Campus Mail Code 0685**

The logo for the Biomedical Sciences Graduate Program (BMS) is displayed on a black background. The letters 'BMS' are large and stylized, with the 'B' in blue, the 'M' in purple, and the 'S' in yellow. To the right of 'BMS', the words 'Biomedical Sciences' are written in white, and 'GRADUATE PROGRAM' is written in teal below it.

# BMS Biomedical Sciences GRADUATE PROGRAM

**Chair:**

Arshad Desai, [abdesai@ucsd.edu](mailto:abdesai@ucsd.edu)  
3052 CMME, Phone: (858) 534-9698

**Vice-Chair:**

Asa Gustafsson, [abgustafsson@ucsd.edu](mailto:abgustafsson@ucsd.edu)  
3266 PSB, Phone: (858) 822-5569

**Director of Program and Student Affairs:**

Gina Butcher, [gbutcher@ucsd.edu](mailto:gbutcher@ucsd.edu)  
5012 BSB, Phone: (858) 534-1823, Fax: (858) 534-0006

**Student Affairs Coordinator:**

Leanne Nordeman, [lnordeman@ucsd.edu](mailto:lnordeman@ucsd.edu)  
5008 BSB, Phone: (858) 534-3982, Fax: (858) 534-0006

**Program Affairs Coordinator:**

Patricia Luetmer, [pluetmer@ucsd.edu](mailto:pluetmer@ucsd.edu)  
5008 BSB, Phone: (858) 822-2001, Fax: (858) 534-0006

# Table of Contents

<b>INTRODUCTION</b>	<b>3</b>
<b>ORGANIZATION OF THE BIOMEDICAL SCIENCES GRADUATE PROGRAM</b>	<b>4</b>
<b>ADVISORY SYSTEM</b>	<b>5</b>
FIRST YEAR ADVISORS	5
THESIS ADVISORS	6
<b>COURSE SEQUENCE</b>	<b>7</b>
REQUIRED COURSES	8
ELECTIVE COURSES	9
<b>LABORATORY ROTATION PROGRAM</b>	<b>9</b>
<b>TEACHING REQUIREMENT</b>	<b>11</b>
<b>PROGRESS TOWARD THE DEGREE</b>	<b>11</b>
TIME TO DEGREE AND LIMITATIONS	11
EXTRACURRICULAR ACTIVITIES	12
SELECTION OF THESIS LABORATORY	12
RESEARCH PROPOSITION EXAM	13
ADVANCEMENT TO CANDIDACY EXAM	13
PRESENTATION AND DEFENSE OF THE DISSERTATION	15
SUMMARY OF EXAM & DEFENSE TIMELINES	16
<b>REPORTS AND EVALUATIONS</b>	<b>17</b>
ANNUAL COMMITTEE REVIEW OF FIRST YEAR PERFORMANCE	17
ANNUAL REVIEW OF PERFORMANCE BEYOND FIRST YEAR	17
SUMMARY OF ANNUAL REVIEW TIMELINE	17
<b>STUDENT AWARDS</b>	<b>18</b>
<b>POLICIES ON STUDENT SUPPORT</b>	<b>18</b>
<b>TERMINAL MASTERS DEGREE</b>	<b>19</b>
<b>LEAVES OF ABSENCE</b>	<b>19</b>
<b><u>GUIDELINES FOR M.D./Ph.D. CANDIDATES</u></b>	
<b>ADMISSIONS, COURSE WORK, ROTATIONS, REGISTRATION</b>	<b>21</b>
SCHEDULE FOR M.D./Ph.D. STUDENTS	23
<b><u>GUIDELINES FOR Pharm.D./Ph.D. CANDIDATES</u></b>	
<b>ADMISSIONS, COURSE WORK, ROTATIONS, REGISTRATION</b>	<b>24</b>
SCHEDULE FOR Pharm.D./Ph.D. STUDENTS	26
<b>UC SAN DIEGO PRINCIPLES OF COMMUNITY</b>	<b>27</b>



## INTRODUCTION

A word to the wise: As a graduate student, you are largely in charge of your own progress and you are responsible for knowing and adhering to the requirements and rules for graduate study. The BMS program has its requirements; the University, through the Graduate Division, has its rules as well. These rules and requirements prescribe increments of progress and provide for a number of rights and responsibilities by you and the University. Know these rules and responsibilities.

## I. ORGANIZATION OF THE BIOMEDICAL SCIENCES GRADUATE PROGRAM

The Biomedical Sciences (BMS) Ph.D. Program is sponsored by the UC San Diego Health Sciences, including the School of Medicine (SOM) and the Skaggs School of Pharmacy and Pharmaceutical Sciences (SPPS). The program offers broad opportunities for advanced studies in disciplines of cell and molecular biology, pharmacology, physiology, genetics, genomics, immunology, microbiology, biochemistry, bioinformatics, cancer biology, endocrinology, neurobiology, stem cell biology, structural and chemical biology, among other areas. The program is designed to develop research scientists who will be well equipped with the knowledge and the skills to solve biomedical problems creatively and independently in the public and the private sectors. A particularly attractive feature of the program is its multidisciplinary character providing students with a broad choice of faculty and laboratories for research training.

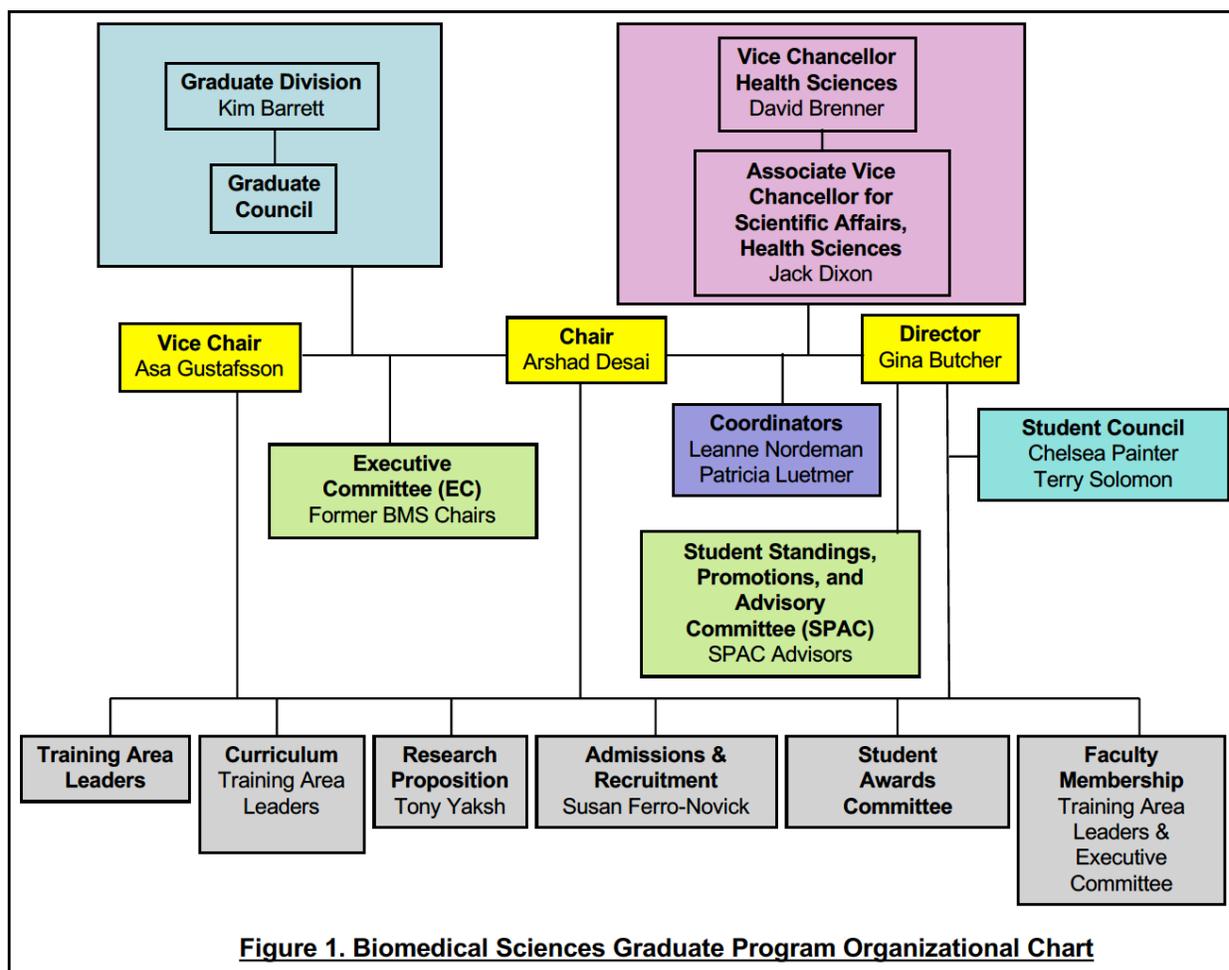
The operation of the BMS Graduate Program is overseen by the Chair, Vice Chair, and a series of committees as outlined in the organizational chart (page 5).

The Executive Committee oversees programmatic and fiscal developments, and its members selectively participate in five major program committees: Admissions and Recruitment, Curriculum, Research Proposition, and Student Awards (see Org chart). The Graduate Student Admissions and Recruiting Committee oversees the admissions process in the winter and recruiting efforts throughout the year. The Curriculum Committee, which includes BMS Training Area Leaders and a subset of Course Directors, oversees the development, the implementation and the evaluation of courses in the BMS program. The Faculty Membership Committee evaluates the applications of new faculty members; it also reviews existing program faculty members and has the authority to terminate faculty membership in the BMS program. The Research Proposition Committee administers the Research Proposition Exam; it also mentors first-year students with their applications for pre-doctoral fellowships and awards. The Student Awards Committee oversees the selection of awardees and presents the awards at the BMS annual retreat. The BMS program values the input of students, who serve on the Admissions and Recruiting Committee and participate in the planning of the BMS annual retreat.

The Student Standing, Promotions and Advisory Committee (SPAC) provides an important advisory system for the students, particularly during their first year in the program. The SPAC committee provides guidance to incoming first-year students in their selection of Thesis advisors.

Currently, there are 187 graduate students and 246 faculty members from UC San Diego and the neighboring Burnham and Salk Institutes. The BMS program is organized into 12 Training Areas: Cancer Biology, Computational & Integrative Biology, Genetics & Genomics, Immunology, Microbiome & Microbial Sciences, Molecular, Cell & Developmental Biology, Molecular Pharmacology, Neurobiology of Disease, Pharmaceutical Sciences & Drug Development, Physiology & Endocrinology, Stem Cell Biology, and Structural & Chemical Biology. 4 cross-disciplinary training programs are also available in the areas of Glycobiology, Quantitative Biology, Anthropogeny and Multi-Scale Biology. BMS faculty members are affiliated with a number of research centers and institutes, including the Moores Cancer Center, the Ludwig Institute for Cancer Research, the Howard Hughes Medical Institute, the Sanford Consortium for Regenerative Medicine, the La Jolla Institute for Allergy & Immunology, the Salk Institute for Biological Studies, the Scripps Research Institute, the Glycobiology Research Training Center, the National Center for Microscopy & Imaging Research, and the Center for Research in Biological Systems. The list of BMS faculty members and their web pages are found at the BMS website: [http://biomedsci-db.ucsd.edu/faculty\\_index](http://biomedsci-db.ucsd.edu/faculty_index)

## Biomedical Sciences Graduate Program Organizational Chart



## II. ADVISORY SYSTEM

### A. OVERVIEW

During the first year of study and prior to the selection of their Thesis advisors, BMS students are guided by their assigned advisors who are members of the SPAC committee. Student advising will be transferred to the Thesis advisors after the students enter the Thesis research laboratories. Student advising will be expanded to include faculty members of the student Thesis committee following the Research Proposition exam. Students are free to contact the Chair and Vice-Chair of the BMS program for advice on concerns that cannot be resolved by their SPAC or Thesis advisors.

### B. FIRST YEAR ADVISORS

Students enter the BMS program without having to commit to any particular laboratory or training area. Prior to the selection of their Thesis advisors, each entering student is assigned an advisor from the Student Standing, Promotions and Advisory Committee (SPAC). The SPAC advisors provide counsel on course work and laboratory rotations, evaluate the student progress in the curriculum, and advise the students in the selection of their Thesis research advisors.

*SPAC Advisors and students should keep in touch at least twice per quarter until a student enters the lab of his/her Thesis advisor. The SPAC advisors should also check periodically on their advisees until the Advancement to PhD Candidacy is completed.*

**The responsibilities of SPAC advisors are:**

1. In consultation with the student, develop a laboratory rotation program during the Fall, Winter and Spring quarters to provide the student with an optimal exposure to the research disciplines that match the student's research interests.
2. Guidance of the student in the selection of a Thesis advisor (see section 3 on Thesis Advisors).
3. Determination that the student is making satisfactory progress in meeting the program requirements, including completion of the Core courses, and the Research Proposition Exam.

**C. THESIS ADVISORS**

The primary advisors of the BMS students are their Thesis Advisors. Students are expected to enter the laboratories of their Thesis Advisors no later than June 30th of the 2016/17 academic year.

**The responsibilities of the Thesis advisors are:**

1. Obligation to provide for the financial support of the student. BMS program will support the first-year students for 10 months during their rotations through different research labs. The program support will terminate as of June 30th of the 2016/17 academic year. Thereafter, the Thesis advisor is expected to be fully responsible for the student. Faculty without stable funding should not take rotation students unless the rotation is for training purposes and both the student and faculty are aware of the situation. Faculty and students should communicate openly about whether the faculty member can support the student prior to the student joining a Thesis laboratory.
2. Guidance of the student in the development of a research project that is original, feasible, and will lead to a Ph.D. thesis and peer-reviewed publication(s).
3. Determination that the student is making progress in meeting the Ph.D. requirements, including (a) the timely completion of the Research Proposition Qualifying examination by Thanksgiving day of the student's second year in the program, (b) the timely completion of the Advancement to Candidacy examination by the end of the Spring quarter of the student's third year in the program, (c) the timely submission of a formal annual evaluation of the student's research progress by the end of each Spring quarter beginning in the student's second year in the program (this evaluation is a requirement for the student's registration for the following year) and (d) a yearly thesis committee meeting where the student updates the committee on the status of his/her work. The committee meeting would ideally occur in conjunction with the annual evaluation in the Spring quarter.

4. In consultation with the student, select a series of elective classes to expand the student's knowledge in the areas that are relevant and/or complementary to the student's Thesis research project.
5. Guidance of the student in developing skills to communicate scientific ideas in writing and orally, through participation in journal clubs, research meetings, seminars, symposia and the preparation of fellowship applications and manuscripts.
6. Financial Support: Thesis Advisors are obliged to provide financial support of the student for the duration of their Ph.D. The BMS program will support the first-year students for up to 10 months during their rotations through different research labs. Thereafter, the thesis advisor is expected to be fully responsible for the student, which amounts to approximately \$53,000 per year in stipend/tuition and fees for up to 6 years, as well as research resources. Faculty without stable funding should not take rotation students unless the rotation is for training purposes and both the student and faculty are aware of the situation. Faculty and students should communicate openly about whether the faculty member can support the student prior to the student rotating in the lab or joining a thesis lab. If the faculty member loses funding during the time a student is in their lab, it is the responsibility of the faculty member to find alternative sources of support.

### III. COURSE SEQUENCE

#### A. OVERVIEW

The BMS students are expected to complete a series of *required core courses* during the first year.

In the Fall quarter, Ph.D. students in the BMS program will take the core courses BIOM 200A and B, "Molecules to Organisms: Concepts" and "Molecules to Organisms: Approaches". In addition, all BMS students, including the Ph.D., M.D./Ph.D., and Pharm.D./Ph.D. students are required to take a seminar course BIOM 201 "Seminars in Biomedical Research".

In the Winter and Spring quarters, students are **required to take 3 Core courses and 2 Core Seminar courses**.

Two short core courses in Statistics and Scientific Ethics are also required for all students and they are offered in the Winter and the Spring quarters.

A minimum of 12 units per quarter is required, which includes laboratory rotations and Thesis research. According to policies set by the UC San Diego Graduate Council and executed by the Graduate Division ([grad.ucsd.edu](http://grad.ucsd.edu)), graduate students must maintain a 3.0 GPA and cannot have more than 8 units of F or U grades.

B. THE SEQUENCE OF CORE COURSES FOR THE FIRST TWO YEARS:

## REQUIRED COURSES

<b>YEAR I</b>			
<i>Course No.</i>	<i>Title</i>	<i>Units</i>	<i>Evaluation</i>
<b>FALL QUARTER</b>			
BIOM 200A	Molecules to Organisms: Concepts	6	Letter grade
BIOM 200B	Molecules to Organisms: Approaches	2	Letter grade
BIOM 201	Seminar in Biomedical Research	4	Letter grade
BIOM 202	Laboratory Rotation ( <i>one 12-week or two 6-week</i> )	4	S/U
<b>WINTER QUARTER</b>			
BIOM 202	Laboratory Rotation ( <i>one 12-week or two 6-week</i> )	4	S/U
BIOM 285	Statistical Inference	2	Letter grade
<b>Choose 2-3 Core Courses *</b>			
BIOM 253	Pathogens and Host Defense	3	Letter grade
BIOM 254	Molecular and Cell Biology	3	Letter grade
BIOM 255	Molecular Basis of Drug Action and Disease Therapy	3	Letter grade
BIOM 256	Molecular Pathology of Cancer	3	Letter grade
<b>Choose 1-2 Core Seminar Courses *</b>			
BIOM 275	Seminars in Pharmacology	2	Letter grade
BIOM 277	Seminars in Molecular Pathology	2	Letter grade
<b>SPRING QUARTER</b>			
BIOM 202	Laboratory Rotation ( <i>one 12-week or two 6-week</i> )	4	S/U
BIOM 219	Ethics in Scientific Research	1	S/U
BIOM 285	Statistical Inference	2	Letter grade
<b>Choose 2-3 Core Courses *</b>			
BIOM 226	Hormone Action	3	Letter grade
BIOM 252	Genetics and Genomics	3	Letter grade
BIOM 253	Pathogens and Host Defense	3	Letter grade
BIOM 255	Molecular Basis of Drug Action and Disease Therapy	3	Letter grade
<b>Choose 1-2 Core Seminar Courses *</b>			
BIOM 272 & 274	Seminars in Genetics & MCB	2	Letter grade
BIOM 276	Seminars in Physiology	2	Letter grade
<b>SUMMER QUARTER</b>			
<b>Choose lab by June 30<sup>th</sup> and devote full time to thesis work. Begin working on Research Proposition Exam.</b>			

*\*Must take a minimum of 3 Core Courses and 2 Core Seminar Courses over the Winter and Spring quarters.*

**BMS students are expected to devote full-time effort to laboratory research each summer.**

<b>YEAR II</b>			
<i>Course No.</i>	<i>Title</i>	<i>Units</i>	<i>Evaluation</i>
<b>FALL QUARTER</b>			
BIOM 298	Thesis Research	12	Letter grade
BIOM 296	Research Proposition	4	S/U
<b>WINTER QUARTER</b>			
BIOM 298	Thesis Research	12	Letter grade
☛ BGGN 500	<i>Apprentice Teaching or Outreach Activities</i>	4	S/U
<b>SPRING QUARTER</b>			
BIOM 298	Thesis Research	12	Letter grade
☛ BGGN 500	<i>Apprentice Teaching or Outreach Activities</i>	4	S/U
Appointment of Official Thesis Committee			

☛ *Apprentice Teaching requirement: One quarter to be fulfilled in Winter or Spring Quarter*

### C. ELECTIVE COURSES

Students are required to take 15 graduate units as electives; of these at least 8 units must be taken for a letter grade (A-F). Core courses can be taken as electives. Note that the Teaching Requirement constitutes a recognized educational experience and counts as 4 units toward the S/U elective requirement. The elective courses are chosen in consultation with the Thesis advisor. Most elective courses that are currently offered are listed below. Elective courses in BMS are being developed continuously, driven by scientific developments in biomedical research. Elective courses developed by the BMS faculty members are posted on the BMS website. Students should also survey the graduate level course listings offered at UC San Diego through TritonLink for options and availability provided by other graduate programs at the University. Students are encouraged to take elective courses throughout the period of their doctoral training. Students can take any course offered on the general campus or in the School of Medicine, as well as applying for UC San Diego Extension courses through the Graduate Division. Please see the BMS website <http://biomedsci-db.ucsd.edu/curriculum> for examples of elective courses being offered.

## IV. LABORATORY ROTATION PROGRAM

### A. OVERVIEW

The laboratory rotation program is offered to Ph.D. students during their first year of study. MSTP and SPPS students are expected to have completed laboratory rotations before entering the BMS program. A laboratory rotation is designed to introduce students to new techniques and concepts. It should also expose students to the creative aspects of experimental design. Furthermore, the rotations provide the student with the opportunity to explore potential Thesis research projects and to work with potential Thesis advisors and their research groups.

The specific guidelines for the research rotation program are:

1. The first rotation must be with a BMS faculty member listed in the BMS faculty directory [http://biomedsci-db.ucsd.edu/faculty\\_search\\_results?t=all](http://biomedsci-db.ucsd.edu/faculty_search_results?t=all)  
Students can choose to conduct rotations of *either* 12-weeks or 6-weeks in length.
2. Students must devote full time to their rotations and cannot take breaks from the rotation program.

3. The duration of each rotation will be determined by agreement between the student and the rotation advisor **prior to the onset** of the rotation. The duration of each rotation **should not be altered** after the student joins the rotation lab.
4. Students must complete 3 rotations with BMS faculty members. Outside rotations with non-BMS faculty members physically located at UC San Diego can be done as an additional rotation, contingent upon approval by the student's SPAC advisor and the BMS Chair.
5. It is possible for a student to enter the laboratory of his or her Thesis advisor as early as the first Winter quarter, for example, after the student completes three 6-week rotations.
6. Students must enter laboratories of their Thesis advisors by the end of Spring quarter. The BMS program will not provide student support beyond the first Spring quarter.

#### B. DEVELOPMENT OF A ROTATION PLAN

Students are required to discuss their plans for rotations with their SPAC advisors. The BMS website posts rotation projects submitted by faculty members. **Access to these project descriptions will be password-protected and only available to BMS students who are participating in the Research Rotation Program.** It is the student's responsibility to approach the faculty of choice and to make the appropriate arrangements for each rotation, e.g., beginning date, duration, project, readings and laboratory orientation. Once discussed with the potential rotation advisor, the rotation plan must be approved by the student's SPAC advisor before the student can begin the rotation. Students should discuss with potential Rotation Advisors, whether the faculty member has funding to support the student for their thesis research in the event that there is mutual interest in the student joining the laboratory. If funding is uncertain, the student should carefully consider whether he/she should rotate in the laboratory, in consultation with the SPAC advisor.

#### C. RESPONSIBILITY OF ROTATION RESEARCH ADVISOR

The success of the rotation program depends on thoughtful and conscientious participation by both students and faculty. BMS faculty are **required** to post rotation project descriptions on the BMS website if they are interested in having students rotate in their laboratories. Access to the project descriptions will be password-protected and only available to first-year students who are participating in the Research Rotation program. Rotation projects should be constructed to introduce students to new concepts and techniques, allowing students to design and conduct experiments. Rotations should not be designed simply "to get more results" for the labs, although carefully constructed rotation projects will inevitably lead to interesting results. Bench and desk space, reagents, and other necessary materials as well as access to the laboratory personnel should be provided for each rotation student to allow integration of the rotation student into the research laboratory of the faculty. Most importantly, faculty should not take rotation students if they do not have funding to support them (see Section II.C.6 above).

#### D. REQUIRED NUMBERS OF ROTATIONS/PETITIONS FOR ADDITIONAL ROTATIONS

Each student must complete a minimum of **three rotations in three different BMS laboratories** before joining a thesis lab. The first rotation must be with a BMS faculty member. Thereafter, students can choose to rotate through a non-BMS lab physically located at UC San Diego, contingent upon the approval of their SPAC advisor and the BMS Chair. BMS students must complete the rotation program by the end of their first Spring quarter and no later than **June 30th of the 2016/17** academic year.

Students unable to enter a Thesis laboratory by June 30th will have to file a petition for additional rotations through the BMS office. The student's SPAC advisor and the BMS Chair will review the petition for additional summer rotations. If the petition is approved, a student can conduct **two and only two** rotations in the summer months. Failure to enter a Thesis laboratory by **August 31 of the 2016/17** academic year will result in **termination** of the student's study in the BMS program.

The recommended number of units for rotations can vary from 4-12, and students should enroll for the S/U (Satisfactory/Unsatisfactory) grading option. For enrollment purposes, each instructor is assigned a Section I.D. number for laboratory rotations (BIOM 202, Directed Study), which can be found in the "Schedule of Classes" under the individual instructor's name. When students select an advisor the grading option will change to a letter grade. Also note that the course number changes to BIOM 299 (Independent Study, 1-12 units, letter grade) following the Advancement to Candidacy.

#### E. BMS DOES NOT SUPPORT SUMMER ROTATIONS FOR ENTERING BMS STUDENTS

All students must start their rotations in the Fall and choose a lab by June 30.

### V. TEACHING REQUIREMENT

Ph.D. students in the BMS program are required to devote one quarter to a teaching experience during their second year of study. The approved TA opportunities are as follows:

- 1) Teaching Assistant in courses administered by the Division of Biological Sciences
- 2) Salk Mobile
- 3) Academic Connections
- 4) STARS Program

No exceptions will be permitted.

As a curriculum requirement for the program, TAs are not a source of supplementary income above the regular stipend.

The Teaching Requirement constitutes a recognized educational experience and counts as 4 units toward the S/U elective requirement.

### VI. PROGRESS TOWARD THE DEGREE

#### A. TIME TO DEGREE AND LIMITATIONS

The Graduate Division at UC San Diego has established a general "Policy on Time Limits to the Ph.D." These strictly enforced University-wide time limits are:

Financial support:	7 years (end of Spring Quarter)
Total registered time:	8 years (end of Spring Quarter)

\*The BMS program graduate students are expected to progress in their study with an accelerated time line and are considered in "good standing" when key milestones are completed within the following timeframe:

<b>Research Proposition Exam</b>	2nd year (Fall Quarter)
<b>Advancement to candidacy:</b>	3rd year (Spring Quarter)
<b>Ph.D. thesis defense:</b>	year 5-7

BMS students who live in campus student housing can stay there up to seven years. Students should consult early with their Thesis advisor and the Chair of the Program if unforeseen problems (e.g. illness, family issues) will impact on meeting any of these time limits.

## B. EXTRACURRICULAR ACTIVITIES

Students have opportunities for extracurricular activities both within and outside of the BMS program. Examples include graduate council elected positions, the admissions committee, the retreat committee, and additional teaching opportunities. Because these activities can take a substantial commitment of time, first and foremost, students must be in good standing and meet the BMS accelerated time line in order to participate. Additionally, approval from the advisor and the BMS Program must be obtained. Please contact the BMS Office to initiate approvals. As with the required Teaching Assistantships, BMS students are not eligible to receive additional pay above the regular BMS stipend.

## C. SELECTION OF THESIS LABORATORY

Each student selects the laboratory in which she/he will conduct thesis research after completion of the required rotations no later than June 30th of the 2016/17 academic year. Students enroll in BIOM 202 for a letter grade (A-F) in the quarter in which the student enters the thesis laboratory.

The Thesis Advisor selection must be approved by the SPAC Advisor and the BMS Chair. Only faculty members of the BMS program can serve as Thesis advisors. However, if after completing the requirement for three rotations in laboratories of BMS members, a student wishes to work with a non-BMS faculty member physically located at UC San Diego, the student must consult with their SPAC advisor and the BMS Chair to request an exception. Please note that such arrangements require the appointment of a Thesis Committee Co-Chair who is a BMS Program Member.

Following selection of a thesis laboratory, the responsibility for the student's progress in the program changes from the SPAC advisor to the thesis advisor. However, students are encouraged to contact their SPAC advisors at any time for additional information and input, and the SPAC advisor should maintain contact with their advisees at least until they advance to candidacy.

Students who choose non-BMS mentors should:

- Maintain regular contact with the Co-Chair of his/her thesis committee. The student should talk to the Co-Chair at least twice per year for guidance in the program and, in addition, is encouraged to communicate with the SPAC advisor for additional information.
- Stay involved with the BMS Program (e.g. retreat, recruiting events, seminars, journal clubs, Wednesday lunch talks).
- Maintain regular access to seminars and journal clubs to round out training experience.

## D. QUALIFYING EXAMINATIONS

The qualifying examination consists of two parts, the Research Proposition Exam and the Advancement to Candidacy Exam. Both are focused on the actual work that will comprise the original

research whose completion will lead to a PhD degree. The examination system is designed to ensure that each student will develop a reasonably broad knowledge in multiple areas (as reflected in the Training Areas). The goal of these qualifying examinations is to ensure attainment of skills needed to identify significant research problems, collect and integrate diverse scientific information, and to develop sound and creative experimental designs to test a scientific hypothesis.

## 1. RESEARCH PROPOSITION EXAM

The Research Proposition is a grant-writing exercise that takes place during the Summer of the 1<sup>st</sup> year and the Fall of the 2<sup>nd</sup> year, *in lieu* of a comprehensive Qualifying Exam. The purposes of the Research Proposition are:

1. To get the student and Thesis advisor to work together at an early stage to develop the student's Thesis research project
2. To have each student choose potential members of his/her Thesis Committee early in the graduate career
3. To teach the student grant writing skills and oral presentation skills
4. To test the student's grasp of core material relating to the student's research project
5. To provide the basis for a fellowship application

Satisfactory performance will permit the student to proceed with full time research. Unsatisfactory performance may necessitate re-writing or re-presenting the oral defense, or result in a recommendation that the student withdraw from the program. No student will pass the Qualifying Exam (written and oral portions) without the concurrence of the BMS Research Proposition Committee representative. The BMS Research Proposition Chair, Dr. Tony Yaksh, shall be notified of failures or any problems that are noted.

## 2. ADVANCEMENT TO CANDIDACY EXAM

### *Selection of a Thesis Committee*

The Graduate Division has specific and strict guidelines on the composition of a Thesis Committee. The Thesis Committee is chosen by the Thesis advisor and the student, with the consent of the Program Chair and the Dean of Graduate Studies and is appointed by the Graduate Division.

The Thesis Committee must have a minimum of 5 members and at least three must be BMS faculty – although it is fine for all members to be BMS faculty if two have a primary appointment in a department in which the Committee Chair has no affiliation, and one of these two must be a tenured UC San Diego faculty member (i.e., a Full Professor or Associate Professor). The Chair of the committee must be a member of the BMS program and will typically be the thesis advisor. A committee chair from outside BMS may not serve as the tenured, outside member. (The rules are complex and may seem to defy logic – please be sure to consult with the BMS Program Director, Gina Butcher, regarding the composition of thesis committees.) You must submit the names of your proposed thesis committee to Gina BEFORE you schedule your advancement to candidacy.

A list of the Thesis Committee Members must be submitted for approval by the end of the Spring quarter of the second year.

The Thesis Committee serves an advisory role in the conduct of the thesis research, the full committee, assembled according to the Graduate Division rules, serves as the student's Advancement to Candidacy Examination Committee.

The intent of establishing the Thesis Committee early in the student's program and **well before** the Advancement to Candidacy is that its members may serve as informed experts and advisors to the student on various aspects of the thesis research. These committees are always to a student's advantage.

Following the successful completion of the Advancement to Candidacy examination, the Thesis Committee must meet as a group with the student **at least annually** to evaluate the student's research progress. Students should prepare and circulate to committee members a progress report in advance of each committee meeting.

#### *Advancement to Candidacy Exam*

The goal of this exam is for the student to apprise the Committee in a clear and comprehensive manner of the thesis research, so that the Committee members can evaluate it fairly and provide advice and direction to the student. **This exam should be completed by the end of the Spring quarter of the third year.**

The Committee is concerned with several issues:

- a) The research program focuses on a significant problem
- b) Methods are appropriate and rigorous
- c) The research has been thoroughly and carefully designed
- d) Pitfalls and alternatives have been considered
- e) The project can be accomplished in a reasonable period of time
- f) Completion of the proposed research will provide appropriate training to support granting the Ph.D, degree
- g) Mentoring is appropriate
- h) Requirements are applied fairly and uniformly to assure high quality of BMS program graduates

For the Committee to carry out its function and to conduct the Advancement to Candidacy examination optimally, the student prepares and submits to the committee a written description of proposed thesis investigation. ***This written document may represent a significantly updated version of the Research Proposition or a new proposal in the format of the Research Proposition (see above).*** The written document should be circulated to the committee at least one week before the oral examination.

The oral presentation at the exam should summarize the written proposal and may supplement the written information. During the oral examination the student should present the overall plan for the research, but should also focus on providing evidence of feasibility, and on the practicality and appropriateness of the methods.

Successful Advancement to Candidacy requires approval from all Thesis Committee members by signing the "Report of the Advancement to Candidacy Exam" form at the time of the exam (available from the BMS office). Advancement to candidacy requires the student to pay a candidacy fee to the cashier prior to submitting the form to the Dean of Graduate Studies for final approval.

**To reiterate the program policy: Students must Advance to Candidacy by the Spring quarter of the third year and must have an annual meeting with their Thesis committee after the Advancement to Candidacy.** The program takes these annual committee meetings very seriously.

They are in the students' interests – always. Students who do NOT have an annual Committee meeting in the prior academic year **will not be permitted to register** in the following Fall quarter.

#### D. PRESENTATION AND DEFENSE OF THE DISSERTATION

The presentation and defense of the dissertation is divided into several steps:

1. When the student and advisor agree that the student's research has reached a satisfactory endpoint (*normally during the student's fifth year in the program*), the student convenes his or her Committee for a pre-defense meeting. At this meeting, the student provides the committee an overview of his or her work and an outline of the thesis. All committee members must approve that the body of work accomplished is sufficient for a thesis and that the student can proceed to writing his or her dissertation.
2. Once having obtained the approval to proceed, the student prepares the written dissertation. This document should present the individual student's research and should be organized into a series of chapters including:
  - Introduction (background and a clear statement of the problem being investigated or hypotheses being tested). This should be a stand-alone chapter that serves as a review of the field, puts the research problem in the context of the field, and clearly summarizes the hypotheses being tested.
  - Results - This section usually consists of several chapters, possibly describing published work (use of text of published or submitted papers is acceptable, but mere insertion of reprints is not acceptable) and unpublished information (organized by Methods, Results, Discussion and Analysis in light of the problem or hypotheses stated in Chapter 1). If data from published or submitted papers is presented, the contribution of the student in multi-author papers must be clearly stated. If a figure is included that presents an experiment in which someone else helped or performed the experiment, this must be explicitly stated.
  - Conclusions (discussion of the findings, larger implications of the work, and suggestions for future experiments). This should also be a stand-alone chapter that puts the findings of the research accomplished in the context of the field and describes how the field has been advanced.
  - References

While there are no strict guidelines, a typical thesis is 100 – 200 pages. The BMS office has some recent dissertations for examples. The Thesis advisors should provide more examples. Students should also consult their Thesis Committee members for input. Typically, preparation of the written thesis requires 2-3 months, depending on whether parts of the thesis have already been published. To save time, students should check with the Graduate Division (534-3555) for the University guidelines (which are strict) on the format of the written thesis. The final version must conform to procedures outlined in the University publication- Instructions for the Preparation and Submission of Doctoral and Masters' Theses (available on the Graduate Division website: [http://grad.ucsd.edu/files/academic-affairs/Dissertations\\_Theses\\_Formatting\\_Manual.pdf](http://grad.ucsd.edu/files/academic-affairs/Dissertations_Theses_Formatting_Manual.pdf)). The Graduate Division has very specific requirements. Check the rules carefully and do so in advance of writing.

3. When the student and the advisor agree that the written dissertation is nearing final form, and upon approval of all members of the thesis committee, the student schedules a public

research seminar immediately followed by a closed thesis defense. The Academic Senate requires that the student must submit a draft of the written dissertation to each member of the doctoral committee at least four weeks before the final examination. If recommended by the thesis committee, the closed defense may be held prior to the public presentation. Several months' notice may be needed to find a date compatible with all members of the committee. Note that the public defense must be advertised to the university community in advance of the meeting. Following a successful examination and approval of the thesis, the committee signs the thesis and the Final Report form.

4. A final exit meeting with the Graduate Division is required for the degree. The student submits the approved thesis with the Final Report, and Degree and Diploma application to the Graduate Division. Upon approval by the Dean of the Graduate Division, the student files the dissertation with the University Archivist in the Mandeville Special Collections Library of Geisel Library, who accepts it on behalf of the Graduate Council, a subcommittee of the Academic Senate. Acceptance of the dissertation by the University Archivist and filing the Final Report with the Graduate Division represent the final steps in the completion of all requirements for the Ph.D. in Biomedical Sciences.

#### E. SUMMARY OF EXAM & DEFENSE TIMELINES

<b>Research Proposition Exam (BIOM296):</b>	<b>Spring/Year 1 to Fall/Year 2</b>	
<u>Task</u>	<u>Time</u>	<u>Responsible parties</u>
Research Proposition Meetings, Abstract, Committee Assignment, Oral Exam	Summer and Fall quarter	Students and BIOM 296 Chair – Tony Yaksh, Thesis Advisor, and Research Prop Committee
<b>Advancement to Candidacy:</b>	<b>Spring/Year 2 to Spring/Year 3</b>	
<u>Task</u>	<u>Time</u>	<u>Responsible parties</u>
Selection of Thesis Committee Consisting of 5 members, complying with Graduate Division regulation. <i>Submit proposed Committee to Gina</i>	Spring quarter of student's second year	Student and Thesis Advisor
Submission of a written Thesis proposal to the Thesis Committee	One week before the Advancement to Candidacy Exam	Student and Thesis Committee
Advancement to Candidacy Exam	Spring quarter of student's third year.	Student and Thesis Committee
<b>Thesis Defense:</b>	<b>BMS recommendation- Spring/Year 5 to Fall/Year 6</b>	
<u>Task</u>	<u>Time</u>	<u>Responsible parties</u>
Pre-defense meeting	BMS recommendation- prior to writing the Thesis	Student and Thesis Comm.
Submission of written Thesis	BMS recommendation- two weeks prior to public defense of Thesis	Student

	Academic Senate recommendation- four weeks prior to public defense of Thesis	
Thesis defense	BMS recommendation- No later than the end of the fifth spring quarter (Note: Graduate Division deadline- No later than the end of the seventh Spring quarter)	Student and Thesis Comm.
Submission of Approved Thesis	(Necessary for Degree)	Student

## VII. REPORTS AND EVALUATIONS

### A. ANNUAL COMMITTEE REVIEW OF FIRST-YEAR PERFORMANCE

The Student Standing, Promotions and Advisory Committee (SPAC) meets periodically to review the performance of each first-year student in laboratory rotations, formal class work and in meeting the degree requirements. At the end of Spring Quarter of the first year, the student's SPAC advisor evaluates the student's performance with a written documentation submitted to the Program office. Where necessary, SPAC advisor consults directly with the student. The importance of this evaluation is emphasized by the fact that it forms the basis of a recommendation to the BMS Chair concerning whether the student should continue in the degree program at the end of the first year.

### B. ANNUAL REVIEW OF PERFORMANCE BEYOND FIRST-YEAR

During the Fall Quarter of the Second Year, the performance of the student on the Research Proposition Exam will be evaluated by the members of the Research Proposition Committee, and the results will be conveyed in writing to the student and the Program Office. At the end of the Spring Quarter of the Second Year, the thesis advisor will submit a written evaluation of the student's progress. ***In all subsequent years, the annual review of the student's performance should coincide with an annual thesis committee meeting to be held in the Spring Quarter.*** This evaluation should indicate the degree to which students are, over all, progressing satisfactorily in their studies; their strengths and weaknesses in research and, where applicable, as teaching assistants. These evaluations should contain cogent and clear advice to students. This evaluation is made available to students to read and respond as desired. A copy of this evaluation is sent to the Graduate Division to be made part of the students' permanent files. Students must participate in this annual evaluation by discussing their progress with advisors and thesis committee members and by adding their written comments to the evaluation. When completed, the evaluation must be approved by the BMS chair.

### C. SUMMARY OF ANNUAL REVIEW TIMELINE

***\*\*\*\* The students and faculty should note that Graduate Division must have on file a satisfactory Spring Evaluation before financial support for the following Fall Quarter will be approved. \*\*\*\****

<u>Year</u>	<u>Deadline of Review</u>	<u>Responsible parties</u>
Year-1	End of Spring Quarter	SPAC advisors
Year-2	End of Spring Quarter	Thesis Advisors
Year-3	End of Spring Quarter	Thesis Committees
Year-4	End of Spring Quarter	Thesis Committees
Year-5	End of Spring Quarter	Thesis Committees
Year-6 (if applicable)	End of Spring Quarter	Thesis Committees

## VIII. STUDENT AWARDS

Students are encouraged to apply for external competitive fellowships. Students who obtain such awards will receive a one-time \$2,000 bonus. (If the student is in their first year and has not joined a lab yet, BMS will provide the bonus. If the student is in a thesis lab, the thesis advisor will provide the bonus.

In addition, the following awards recognize excellence in the performance of students during their Ph.D. training and are overseen by the BMS Awards Committee:

### A. OUTSTANDING DISSERTATION AWARD

The Outstanding Dissertation Award recognizes and rewards a graduate student whose thesis has been identified by the BMS Program Awards Committee, following nomination by the thesis advisor and one committee member, as outstanding among all those submitted during the previous year.

#### *Award*

The recipient will receive a cash award of \$1,000 and be invited to speak at the annual BMS retreat.

#### *Eligibility*

To be eligible for the award, the nominated student must have defended his or her thesis during the period July 1, 2016 – June 30, 2017.

#### *Nomination Procedure*

The nomination should include nomination letters from the thesis advisor and one committee member. The letter should comment on:

- Clarity and composition of written thesis
- Scholarship demonstrated in the thesis
- Contribution of the thesis to the research

### B. OTHER AWARDS

The following awards are also in place *when applicable*:

Best talk awards at the annual BMS retreat  
Poster awards at the annual BMS retreat

## IX. POLICIES ON STUDENT SUPPORT

A standard support level (\$33,000 annually or \$2750/month) has been set by the BMS Program for all BMS graduate students.

During the first year, the BMS program will be responsible for supporting the student's tuition and fees for *three quarters* (Fall, Winter and Spring) or until they enter their Thesis lab. Thereafter, BMS students will be supported by their Thesis advisors, by Fellowships and/or by Training Grants.

*The thesis advisor is responsible for the student's support as soon as the student enters the advisor's laboratory. Students should discuss their intentions with potential Thesis Advisors in advance and during the rotation periods to avoid funding problems that would prohibit students from joining the laboratories of interest.*

Thesis advisors who support student GSRs (Graduate Student Researchers) at a level of 25% or more are required by UC San Diego policy to contribute to the campus-wide GSRTF (Graduate Student Researcher Tuition/Fees) pool. This fund is drawn upon to cover the cost of students' UC San Diego tuition and fees.

There are 2 different sources to pay the graduate student stipends at UC San Diego. Both are considered taxable income.

- 1) Salary (GSR): salary paid via "payroll" -- mandatory deductions.
- 2) Stipend (Fellowship/Training Grant): stipend paid via Student Business Services -- no deductions so you are responsible for paying taxes on your own when you file your tax return.

During the summer you may be subject to student FICA deductions of 8.95% (7.5% for DCP and 1.45% for Medicare). DCP is UC San Diego's alternative to social security taxes for students. Graduate students are exempt from these deductions during the academic year (otherwise you would pay social security taxes all year like the staff/faculty).

The BMS Program does not permit students to have outside jobs, because completion of the Ph.D. thesis research projects will demand the students to devote full effort. Earnings from employment (i.e. Teaching Assistantships, GSA etc.) may be used to bring stipends up to the standard support level (\$33,000/year), but they may not be used to increase earnings above the standard support level.

## **X. TERMINAL MASTERS DEGREE**

The BMS program offers a Terminal Master's degree to students who do not complete the Ph.D. requirements but who satisfactorily complete the core and advanced course work requirements, three laboratory rotations, the Research Proposition examination, and have a GPA of at least 3.0 (Graduate Division requirement). Award of the degree requires approval of the student's advisor and the Chair of BMS.

## **XI. LEAVES OF ABSENCE**

A student is expected to be in continuous residence until the thesis is awarded. Absence from the university in excess of four working days for any types of personal reasons require the prior approval of the student's SPAC advisor (prior to selection of a Thesis laboratory) or the Thesis advisor. Vacations or time away from the lab may be taken only upon approval by the Thesis Advisor. First-year students should not schedule vacations prior to selecting a thesis laboratory.

A student may request a leave of absence for a maximum of one year when conditions established by the Graduate Division are met. If the student does not return from leave by the Graduate Division deadline date, he or she must reapply for admission. Extension of a leave of absence beyond one year will be made only under exceptional circumstances. Leaves of absence for childbearing and parenting (primary responsibility for care of children under 5 years of age) will be granted for up to

three quarters. Approved leaves for these purposes will not count in a full year (3-quarter) leave limit applicable to all graduate students. Professional obligations, e.g. post-graduate training or service by physicians, will not be considered as reasons for extension of a leave of absence. Students who are considering a leave are encouraged to consult with the BMS Director to discuss requirements and options.

# GUIDELINES FOR BMS M.D./Ph.D. CANDIDATES

---

## I. ADMISSIONS REQUIREMENTS

M.D./ Ph.D. applicants must meet all requirements for graduate admission to the Biomedical Sciences Program, except that the MCAT exam scores may be submitted in place of the GRE exam scores. Copies of Academic Records may be submitted by the School of Medicine. Students are evaluated during their second year of study for matriculation into the Ph.D. program during their third year.

## II. COURSE WORK AND ROTATIONS

- A. M.D./Ph.D. students are required to take the Fall seminar course (BIOM 201) and to complete all Biomedical Sciences advanced course work (electives) as required of other graduate students in the program. Graded core courses for first year graduate students in the Biomedical Science Program are not required for UC San Diego medical students. The applicability of previous course work toward the Biomedical Sciences Graduate Program course requirements will be evaluated on an *ad hoc* basis. However, elective requirements (15 units total; 8 for a letter grade) are the same for all students.
- B. M.D./Ph.D. students must have conducted research in at least two laboratories of UC San Diego faculty other than their thesis advisor. Laboratory rotations taken during elective time in medical school can fulfill this requirement. At least one laboratory experience must have been in the laboratory of a member of the BMS Program. Based on their rotation experience, M.D./Ph.D. students admitted into the BMS program must be able to choose a thesis lab during the summer after their 2<sup>nd</sup> year of medical school and be ready to participate in the Research Proposition Exam as they begin the graduate program.
- C. M.D./Ph.D. students are required to successfully complete the Research Proposition Exam during the Fall quarter of their first year of Ph.D. training in the BMS Graduate Program (which would generally be the year after completion of the first two years of medical school). This is a requirement for further advancement in the graduate program. M.D/Ph.D. students are also expected to successfully complete the Advancement to Candidacy Exam by the end of their second year in Ph.D. training and must complete the exam by the end of the Fall quarter of their third year of Ph.D. training. Failure to complete these requirements on time will result in blockade of registration and financial support until the requirement is met.
- D. M.D./Ph.D. students must also satisfy the one-quarter Teaching/Outreach requirement as described in Section V of the general guidelines.

### **III. REGISTRATION REQUIREMENTS**

- A. The Graduate Council imposes the following requirements:
  - 1. If in any given quarter a student is spending the majority of his/her time within the graduate program the student must be registered as a graduate student that quarter.
  - 2. To receive the Ph.D. degree a student must be registered as a graduate student for a minimum of 6 academic quarters, three of which are continuous. Graduate Division has waived the requirement that students be registered as graduate students in the quarter they receive their degree if they are registered in the School of Medicine during that quarter.
- B. The School of Medicine requires, for medical licensing, that students be registered for a minimum of 11 quarters in the medical school.

### **IV. COMPLETION OF RESEARCH WORK/RETURN TO CLINICAL TRAINING**

All requirements for the Ph.D. degree must be completed prior to leaving the graduate program to return to clinical training (including junior year core clerkships). This includes passing of the Research Proposition examination, teaching requirement, Advancement to Candidacy, writing and defense of the thesis, and submission of the completed thesis manuscript to the library, according to Graduate Division guidelines. With the above requirements in mind, a typical quarterly program of registration for an M.D./Ph.D. student in the Biomedical Sciences Graduate Program is shown below. The normal time to degree for M.D./Ph.D. students is 7 years.

## SCHEDULE FOR M.D./Ph.D. STUDENTS

Summer	Fall	Winter	Spring
<b>YEARS 1 and 2 M.D.</b>			
Full time registration (M) and course work in School of Medicine 2 or 3 laboratory rotations completed in Summers of years 1 and 2 of Medical School <b>Research Proposition</b> completed during Summer/Fall of year 1 of Ph.D.			
<b>YEAR 3 M.D. (Year 1 of Ph.D.)</b> * †			
Final Lab rotation (If necessary) (M*) Research Proposition (G)	Thesis Lab (G) BIOM 201 Research Proposition (G)	Thesis Lab (G)	Thesis Lab (G) BIOM 219 & BIOM 285 (G) Appointment of an Official Thesis Committee (G)
<b>YEAR 4 M.D. (Year 2 of Ph.D.)</b> * †			
Thesis Lab (M*)	Thesis Lab (G)	Thesis Lab (G)	Thesis Lab (G) Advancement to Candidacy
<b>YEAR 5 M.D. (Year 3 of Ph.D.)</b> * †			
Thesis Lab (M*)	Thesis Lab (G)	Thesis Lab (G)	Thesis Lab (G) Ph.D. Defense (G)
<b>YEAR 6 M.D.</b>			
Clinical Core (M)	Clinical Core (M)	Clinical Core (M)	Clinical Core (M)
<b>YEAR 7 M.D.</b>			
Clinical Electives (M)	Clinical Electives (M)	Clinical Electives (M)	Clinical Electives (MD)

(M) = Registration in School of Medicine

(G) = Registration in Graduate Program

(M\*) = Full time laboratory work, but registration in the School of Medicine

\* = The elective courses may be taken at any time during graduate studies

The graduate program does not require registration during the summer; these quarters can be counted toward the School of Medicine 11 quarter registration minimum.

# GUIDELINES FOR BMS Pharm.D./Ph.D. CANDIDATES

---

## I. ADMISSIONS REQUIREMENTS

PharmD/PhD applicants must meet the requirements established by the BMS Program for admission of PharmD/PhD applicants. GRE test scores are not required and Copies of Academic Records may be submitted by the School of Pharmacy. Students are evaluated during their second year of study for matriculation into the Ph.D. program during their third year.

## II. COURSE WORK AND ROTATIONS

- A. PharmD/PhD students are required to take the Fall seminar course (BIOM 201) and to complete all Biomedical Sciences advanced course work (electives) as required of other graduate students in the program. Graded core courses for first year graduate students in the Biomedical Science Program are not required for UC San Diego PharmD students. The applicability of previous course work toward the Biomedical Sciences Graduate Program course requirements will be evaluated on an *ad hoc* basis. However, elective requirements (15 units total; 8 for a letter grade) are the same for all students.
- B. PharmD/PhD students must have conducted research in at least two laboratories of UC San Diego faculty other than their thesis advisor. PharmD/PhD students will be guided to complete these laboratory rotations taken during the summers before the first year, between the first and second years, or between the second and third years of the pharmacy school curriculum to fulfill this requirement. At least one laboratory research experience must have been in the laboratory of a member of the BMS Program. The evaluations of student performance during these rotations will be an important part of the application file for acceptance into the BMS program.
- C. PharmD/PhD students are required to successfully complete the Research Proposition Exam during the Fall quarter of their first year of PhD training in the Biomedical Sciences Graduate Program. This is a requirement for further advancement in the graduate program. PharmD/PhD students are also expected to successfully complete the Advancement to Candidacy Exam by the end of their second year in Ph.D. training and must complete the exam by the end of the Fall quarter of their third year of Ph.D. training. Failure to complete these requirements on time will result in blockade of registration and financial support until the requirements are met.
- D. The significant teaching and outreach experience that is comprised within the PharmD curriculum will satisfy the 1-quarter Teaching/Outreach requirement as described in Section V of the general guidelines. Thus PharmD/PhD students will not be required to perform additional teaching or outreach during their research studies in the BMS program.

### **III. REGISTRATION REQUIREMENTS**

- A. The Graduate Council imposes the following requirements:
  - 1. If in any given quarter a student is spending the majority of his/her time within the graduate program the student must be registered as a graduate student that quarter.
  - 2. To receive the Ph.D. degree a student must be registered as a graduate student for a minimum of 6 academic quarters, three of which are continuous.
- B. The School of Pharmacy requires, for licensing, that students be registered for a minimum of 12 quarters in the pharmacy school.

### **IV. COMPLETION OF RESEARCH WORK/RETURN TO PHARMACY TRAINING**

All requirements for the Ph.D. degree must be completed prior to leaving the graduate program to return to pharmacy training. This includes completion of the Research Proposition and the Advancement to Candidacy examinations, writing and defense of the thesis, and submission of the completed thesis manuscript to the library, according to Graduate Division guidelines. With the above requirements in mind, a typical quarterly program of registration for a PharmD/PhD student in the Biomedical Sciences Graduate Program is shown below. The normal time to degree for PharmD/PhD students is 7-8 years.

## SCHEDULE FOR Pharm.D./Ph.D. STUDENTS

Summer	Fall	Winter	Spring
<b>YEARS 1 and 2</b>			
Full time registration (P) and course work in the Pharmacy School 2 or 3 laboratory rotations completed in summers between years 1-2 and years 2-3 (*P)			
<b>YEAR 3 (Year 1 of Ph.D.)</b> ☛			
Final Lab rotation (If necessary) (P*) Research Proposition (G)	Thesis Lab (G) BIOM 201 Research Proposition (G)	Thesis Lab (G)	Thesis Lab (G) Appointment of an Official Thesis Committee (G)
<b>YEAR 4 (Year 2 of Ph.D.)</b> ☛			
Thesis Lab (M*)	Thesis Lab (G)	Thesis Lab (G)	Thesis Lab (G) Advancement to Candidacy
<b>YEAR 5 (Year 3 of Ph.D.)</b> ☛			
Thesis Lab (M*)	Thesis Lab (G)	Thesis Lab (G)	Thesis Lab (G) Ph.D. Defense (G)
<b>YEAR 6 (Year 3 of Pharm. D.)</b>			
Pharmacy (P)	Year 3 Curriculum	Year 3 Curriculum	Year 3 Curriculum
<b>YEAR 7 (Year 4 of Pharm. D.)</b>			
Pharmacy (P)	Clinical Core		Clinical Core

(P) = Registration in SKAGGS School of Pharmacy

(G) = Registration in Graduate Program

(P\*) = Full time laboratory work, but registration in the School of Medicine.

The graduate program does not require registration during the summer; these quarters can be counted toward the School of Pharmacy 12 quarter registration minimum.

## **UC San Diego Principles of Community**

The University of California, San Diego is dedicated to learning, teaching, and serving society through education, research, and public service. Our international reputation for excellence is due in large part to the cooperative and entrepreneurial nature of the UC San Diego community. UC San Diego faculty, staff, and students are encouraged to be creative and are rewarded for individual as well as collaborative achievements.

To foster the best possible working and learning environment, UC San Diego strives to maintain a climate of fairness, cooperation, and professionalism. These principles of community are vital to the success of the University and the well being of its constituents. UC San Diego faculty, staff, and students are expected to practice these basic principles as individuals and in groups.

- We value each member of the UC San Diego community for his or her individual and unique talents, and applaud all efforts to enhance the quality of campus life. We recognize that each individual's effort is vital to achieving the goals of the University.
- We affirm each individual's right to dignity and strive to maintain a climate of justice marked by mutual respect for each other.
- We value the cultural diversity of UC San Diego because it enriches our lives and the University. We celebrate this diversity and support respect for all cultures, by both individuals and the University as a whole.
- We are a university that adapts responsibly to cultural differences among the faculty, staff, students, and community.
- We acknowledge that our society carries historical and divisive biases based on race, ethnicity, sex, gender identity, age, disability, sexual orientation, religion, and political beliefs. Therefore, we seek to foster understanding and tolerance among individuals and groups, and we promote awareness through education and constructive strategies for resolving conflict.
- We reject acts of discrimination based on race, ethnicity, sex, gender identity, age, disability, sexual orientation, religion, and political beliefs, and, we will confront and appropriately respond to such acts.
- We affirm the right to freedom of expression at UC San Diego. We promote open expression of our individuality and our diversity within the bounds of courtesy, sensitivity, confidentiality, and respect.
- We are committed to the highest standards of civility and decency toward all. We are committed to promoting and supporting a community where all people can work and learn together in an atmosphere free of abusive or demeaning treatment.
- We are committed to the enforcement of policies that promote the fulfillment of these principles.

We represent diverse races, creeds, cultures, and social affiliations coming together for the good of the University and those communities we serve. By working together as members of the UC San Diego community, we can enhance the excellence of our institution.