Master of Science in Biomedical and Translational Science (MS-BATS)

Graduate Student Handbook

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Welcome New Students

The field of research on a national level has seen a steady decline of well-trained clinical investigators capable of conducting high quality studies. For this reason, Dr. Sherrie Kaplan developed the Masters of Science degree in Biomedical and Translational Science (MS-BATS) at UC Irvine School of Medicine in 2012.

This program is the result of the vision, leadership, dedication and support of many here at UC Irvine.

This degree program is designed to address the acute need for researchers trained to meet the increasingly sophisticated demands of the clinical research environment. It provides advanced training in experimental study to bridge the gap between clinical medicine and basic sciences leading to the translation of scientific discoveries into practical applications that benefit society through patient care.

The program brings together a strong interdisciplinary team of UC Irvine faculty in the clinical and basic sciences in order to teach and prepare scientists in the future conduct of clinical research.
Deadlines
Forms and BATS Deadlines
For a 2-year Program Student

**Year 1:** Enrolled as a fulltime BATS student
**Year 2:** Continue enrollment as a fulltime BATS student

**Form** and **Deadline**

**BATS 1, 2, 3**
With Program Director's approval, complete these 3 forms when you have identified research topic and members of your Thesis Committee:
Form 1 - MS BATS Individual Research Plan
Form 2 - Thesis Committee Confirmation
Form 3 - Research Proposal
**Fall Quarter, year 2**

**BATS 299 - Independent Directed Research**
**Fall Quarter, year 2**
and
**BATS 299 Addendum**
**Winter/Spring Quarters, year 2**
It is the student’s responsibility to submit this form in a timely manner. Failure to do so may impact grade.

**Advancement to Candidacy**
Complete this form only when Program Director and your Thesis Committee determines that you are ready to defend.
**Spring Quarter, year 2**

**Final Degree Paperwork**
At the time of defense, complete Master's Thesis Signature Page, Master's Thesis Checklist
**Summer, year 2**

***Refer to your timeline for actual dates***
Forms and BATS Deadlines
For a student who completed the Certificate Program

**Year 1:** Enrolled and successfully completed the Clinical Research Certificate Program

**Year 2:** Enrolled as a fulltime BATS student

*Form* and *Deadline*

**General Petition**
Complete this form if you completed BATS courses through the Certificate program in order to receive credit, accompanied by an official transcript.

**Fall Quarter, year 2**

**BATS 1, 2, 3**
With Program Director’s approval, complete these 3 forms when you have identified research topic and members of your Thesis Committee:
- Form 1 - MS BATS Individual Research Plan
- Form 2 - Thesis Committee Confirmation
- Form 3 - Research Proposal

**Fall Quarter, year 2**

**BATS 299 - Independent Directed Research**
**Fall Quarter, year 2**
and

**BATS 299 Addendum**
**Winter/Spring Quarters, year 2**
It is the student’s responsibility to submit this form in a timely manner. Failure to do so may impact grade.

**Advancement to Candidacy**
Complete this form only when Program Director and your Thesis Committee determines that you are ready to defend.
**Spring Quarter, year 2**

**Final Degree Paperwork**
At the time of defense, complete Master's Thesis Signature Page, Master’s Thesis Checklist
**Summer, year 2**

***Refer to your timeline for actual dates***
Forms and BATS Deadlines
For 1-year (Accelerated) Program Student

Form and Deadline

**BATS 1, 2, 3**
With Program Director’s approval, complete these 3 forms when you have identified research topic and members of your Thesis Committee:
Form 1 - MS BATS Individual Research Plan
Form 2 - Thesis Committee Confirmation
Form 3 - Research Proposal

**Fall Quarter**

**BATS 299 - Independent Directed Research**
Fall Quarter
and
**BATS 299 Addendum**
Winter/Spring Quarters
It is the student’s responsibility to submit this form in a timely manner. Failure to do so may impact grade.

**Advancement to Candidacy**
Complete this form only when Program Director and your Thesis Committee determines that you are ready to defend.

**Winter or Spring Quarter**

**Final Degree Paperwork**
At the time of defense, complete Master’s Thesis Signature Page, Master’s Thesis Checklist

**Spring Quarter or Summer**

***Refer to your timeline for actual dates***
Time to Degree
## 2-Year Curriculum

### Master of Science Degree

Biomedical and Translational Science

The curriculum to earn the Master of Science degree in Biomedical and Translational Science (MS-BATS) requires **two years** [six (6) academic quarters plus one (1) summer quarter] of coursework and research training. During their first year, students will focus on required coursework needed to establish a solid foundation in the fundamental disciplines underlying modern biomedical and clinical research. The second year curriculum provides extensive research training where students will choose a research mentor and apply those principals learned during their first year of coursework.

***A total of 50 units is the minimum requirement in order to earn BATS degree.***

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Summer</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
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</thead>
<tbody>
<tr>
<td>Saturday</td>
<td>Ethics in Clinical Research (BATS 296)</td>
<td>Introduction to Medical Statistics (BATS 209A)</td>
<td>Introduction to Clinical Epidemiology (BATS 210A)</td>
<td>Design and Analysis of Clinical Trials (BATS 232)</td>
</tr>
<tr>
<td>Thursday</td>
<td>Health Politics and Policy (BATS 255)</td>
<td>Introduction to Medical Statistics II (BATS 209B)</td>
<td>Quality Efficiency and Cost Effectiveness (BATS 251)</td>
<td></td>
</tr>
<tr>
<td>Thursday</td>
<td>BATS (280) Seminar</td>
<td>BATS (280) Seminar</td>
<td>BATS (280) Seminar</td>
<td></td>
</tr>
<tr>
<td><strong>Year 2</strong></td>
<td><strong>Optional Elective</strong></td>
<td><strong>Optional Elective</strong></td>
<td><strong>Optional Elective</strong></td>
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</tr>
<tr>
<td></td>
<td>Independent Directed Research (BATS 299)</td>
<td>Independent Directed Research (BATS 299)</td>
<td>Independent Directed Research (BATS 299)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MS Thesis Research &amp; Writing (BATS 295)</td>
<td>MS Thesis Research &amp; Writing (BATS 295)</td>
<td>MS Thesis Research &amp; Writing (BATS 295)</td>
<td></td>
</tr>
</tbody>
</table>
**Proposed Timeline for a 2-year Program Student**

***The information below provides a general overview of the timeline to complete the Master of Science degree in Biomedical and Translational Science. Dates may differ slightly for each student.

Registration: **Students are personally responsible** for ensuring that their course enrollment is correct and completed, and **have their fees paid**, no later than the end of the third week of each quarter: https://www.reg.uci.edu/

**Year 1**
1. Follow the **2-Year Curriculum** grid.
2. Refer to **Forms and BATS Deadlines for a 2-year Program Student**
3. Ethics (BATS 296) course may be taken at the start or at the end of Year 1.

**Year 2**

**Fall Quarter**
1. Conduct research, draft your thesis, form your Thesis Committee
2. It is the **student's responsibility** to meet with thesis committee regularly, set meeting agendas, prepare discussion materials. Ask questions early!

**Winter Quarter**
Continue working on your thesis.

**Spring Quarter**
With Program Director's approval, the student confirms with each Committee member that they are ready to advance and plan to defend their thesis in the following quarter. The student is responsible in making sure the **Advancement to Candidacy** form is agreed and signed by each Committee member, submitted to and approved by Graduate Division **one quarter** before the student defends and plan on graduating.

**IMPORTANT:** Graduate Division Filing Deadlines are strict and non-negotiable.

**Summer Quarter**
1. You must be enrolled as a student in order to earn a degree.
2. You can only defend your thesis when each Committee member agrees you are ready to present your findings.
3. Failure to send the best version of your thesis to your Committee members for review before your actual defense may result in cancelation of your defense presentation.
4. After you defend, you **must** have Committee approval before submitting a thesis electronically. The library is very particular about the format of the thesis. There will be information sessions that will discuss thesis preparation and filing procedures.
5. Last step is paying the Master’s Thesis Submission Fee and submitting **Final Degree Paperwork** to Graduate Division.
Final Degree Paperwork:
- Master's Thesis Submission Checklist
- Master's Thesis/Signature Page Report on Final Examination for the Master's Degree
- Confirmation email of thesis submission electronically
- Confirmation email from UCI Master's Exit Survey

M.S. degree conferred!

Diploma:
You will receive a master’s diploma 4 months later. Diplomas are not automatically mailed. Make sure the Registrar has a correct address before you leave. They will use this address to let you know when to pick up your diploma.
Curriculum for a student who has successfully completed
Clinical Research Certificate Program
Master of Science Degree
Biomedical and Translational Science

The curriculum to earn the Master of Science degree in Biomedical and Translational Science (MS-BATS) requires **two years** [six (6) academic quarters plus one (1) summer quarter] of coursework and research training. During their first year, students will focus on required coursework needed to establish a solid foundation in the fundamental disciplines underlying modern biomedical and clinical research. The second year curriculum provides extensive research training where students will choose a research mentor and apply those principals learned during their first year of coursework.

***A total of 50 units is the minimum requirement in order to earn BATS degree.

<table>
<thead>
<tr>
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<th>Summer</th>
<th>Fall</th>
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</tr>
</tbody>
</table>

**Student successfully complete Clinical Research Certificate Program in Year 1**

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Summer</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday</td>
<td>Health Politics and Policy (BATS 255)</td>
<td>Introduction to Medical Statistics II (BATS 209B)</td>
<td>Quality Efficiency and Cost Effectiveness (BATS 251)</td>
<td></td>
</tr>
<tr>
<td>Thursday</td>
<td>BATS (280) Seminar</td>
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<tr>
<td></td>
<td><strong>Elective</strong></td>
<td><strong>Elective</strong></td>
<td><strong>Elective</strong></td>
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<td></td>
<td>Independent Directed Research (BATS 299)</td>
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</table>
Proposed Timeline for a Student who successfully completed the Certificate Program

***The information below provides a general overview of the timeline to complete the Master of Science degree in Biomedical and Translational Science. Dates may differ slightly for each student.

Registration: Students are personally responsible for ensuring that their course enrollment is correct and completed, and have their fees paid, no later than the end of the third week of each quarter: https://www.reg.uci.edu/

Year 1
Complete course requirements of Clinical Research Certificate Program successfully.

Year 2

Fall Quarter
1. Follow the Curriculum for a student who has successfully completed the Clinical Research Certificate Program grid
2. Refer to Forms and BATS Deadlines for a Student who completed Certificate Program
3. Conduct research, draft your thesis, form your Thesis Committee
4. It is the student’s responsibility to meet with thesis committee regularly, set meeting agendas, prepare discussion materials. Ask questions early!

Winter Quarter
Continue working on your thesis.

Spring Quarter
With Program Director’s approval, the student confirms with each Committee member that they are ready to advance and plan to defend their thesis in the following quarter. The student is responsible in making sure the Advancement to Candidacy form is agreed and signed by each Committee member, submitted to and approved by Graduate Division one quarter before the student defends and plan on graduating.

IMPORTANT: Graduate Division Filing Deadlines are strict and non-negotiable.

Summer Quarter
1. You must be enrolled as a student in order to earn a degree.
2. You can only defend your thesis when each Committee member agrees you are ready to present your findings.
3. Failure to send the best version of your thesis to your Committee members for review before your actual defense may result in cancelation of your defense presentation.
4. After you defend, you must have Committee approval before submitting a thesis electronically. The library is very particular about the format of the thesis. There will be information sessions that will discuss thesis preparation and filing procedures.
5. Last step is paying the Master’s Thesis Submission Fee and submitting Final Degree Paperwork to Graduate Division.
Final Degree Paperwork:
- Master's Thesis Submission Checklist
- Master’s Thesis/Signature Page Report on Final Examination for the Master's Degree
- Confirmation email of thesis submission electronically
- Confirmation email from UCI Master’s Exit Survey

M.S. degree conferred!

Diploma:
You will receive a master’s diploma 4 months later. Diplomas are not automatically mailed. Make sure the Registrar has a correct address before you leave. They will use this address to let you know when to pick up your diploma.
1-Year Curriculum (Accelerated Path)
Master of Science Degree
Biomedical and Translational Science

The curriculum to earn the Master of Science degree in Biomedical and Translational Science (MS-BATS) requires **one year** [three (3) academic quarters plus one (1) summer quarter] of coursework and research training. Students will focus and establish a solid foundation in the fundamental disciplines underlying modern biomedical and clinical research. Students are expected to develop a study design, conduct research, choose a research mentor, write, defend, and submit thesis in one year, applying the principals learned throughout the year.

***A total of 50 units is the minimum requirement in order to earn BATS degree.***

<table>
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<tr>
<td></td>
<td>Independent Directed Research (BATS 299) or MS Thesis Research &amp; Writing (BATS 295)</td>
<td>Independent Directed Research (BATS 299) or MS Thesis Research &amp; Writing (BATS 295)</td>
<td>Independent Directed Research (BATS 299) or MS Thesis Research &amp; Writing (BATS 295)</td>
<td></td>
</tr>
</tbody>
</table>
Proposed Timeline for 1-year (Accelerated) Student

***The information below provides a general overview of the timeline to complete the Master of Science degree in Biomedical and Translational Science. Dates may differ slightly for each student.

Registration: **Students are personally responsible** for ensuring that their course enrollment is correct and completed, and **have their fees paid**, no later than the end of the third week of each quarter: https://www.reg.uci.edu/

**Fall Quarter**
1. Follow the **1-Year Curriculum (Accelerated Path)** grid
2. Refer to **Forms and BATS Deadlines for 1-year (Accelerated) Program Student**
3. Conduct research, draft your thesis, form your Thesis Committee
4. It is the **student's responsibility** to meet with thesis committee regularly, set meeting agendas, prepare discussion materials. Ask questions early!

**Winter Quarter**
Continue working on your thesis.

**For students who completed “Ethics” (BATS 296) course in summer, before becoming a fulltime MS-BATS student:** You will **Advance** in Winter Quarter, defend your thesis in Spring Quarter

**For students who have completed a whole year of MS-BATS coursework and will enroll in “Ethics” course the following summer:** You will **Advance** in Spring Quarter, defend your thesis in Summer

**Advance:**
With Program Director’s approval, the student confirms with each Committee member that they are ready to advance and plan to defend their thesis in the following quarter. The student is responsible in making sure the **Advancement to Candidacy** form is agreed and signed by each Committee member, submitted to and approved by Graduate Division **one quarter** before the student defends and plan on graduating.

**IMPORTANT:** Graduate Division Filing Deadlines are strict and non-negotiable.

**Defending your thesis:**
1. You must be enrolled as a student in order to earn a degree.
2. You can only defend your thesis when each Committee member agrees you are ready to present your findings.
3. Failure to send the best version of your thesis to your Committee members for review **before** your actual defense may result in cancelation of your defense presentation.
4. After you defend, you **must** have Committee approval before submitting a thesis electronically. The library is very particular about the format of the thesis. There will be information sessions that will discuss thesis preparation and filing procedures.
5. Last step is paying the Master’s Thesis Submission Fee and submitting **Final Degree Paperwork** to Graduate Division.
Final Degree Paperwork:
  o Master's Thesis Submission Checklist
  o Master's Thesis/Signature Page Report on Final Examination for the Master's Degree
  o Confirmation email of thesis submission electronically
  o Confirmation email from UCI Master's Exit Survey

M.S. degree conferred!

Diploma:
You will receive a master's diploma 4 months later. Diplomas are not automatically mailed. Make sure the Registrar has a correct address before you leave. They will use this address to let you know when to pick up your diploma.
Thesis Committee
Selecting a Research Advisor

In this handbook, we have provided Faculty who served as Thesis Committee Chair and Faculty who served as Thesis Committee Member.

1. Your Thesis Committee should provide guidance on your research project and will ultimately judge whether or not you have satisfied the requirements for a master’s degree at your thesis defense.

2. Review the faculty profile: http://www.faculty.uci.edu/. Look for faculty with research activities that may be aligned with your research interest.

3. Once you identify some faculty that might be of interest to you, contact them via email. If they are not able to work with you, ask them if they know of anyone in the department who would be a good fit for you. Have your CV or resume available, detailing your research, work experience, presentations, publications, poster sessions. This will help the faculty member with determining if your experience would be beneficial to their own lab.

4. Schedule a discussion meeting with Program Director to obtain approval of your research project.

5. Student choose at least three faculty members who will comprise of the Thesis Committee.

6. Two members of Thesis Committee must be Academic Senate. One of the Thesis Committee members must be a BATS faculty.

<table>
<thead>
<tr>
<th>Thesis Committee Qualifications:</th>
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<tbody>
<tr>
<td>Chair must be</td>
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<tr>
<td>the primary mentor</td>
<td></td>
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<tr>
<td>a School of Medicine faculty</td>
<td></td>
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<tr>
<td>a member of Academic Senate***</td>
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<tr>
<td>Member must be</td>
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<tr>
<td>affiliated with School of Medicine (desired)</td>
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<tr>
<td>a member of Academic Senate***</td>
<td></td>
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<tr>
<td>(exceptions can be made with adequate notice and justification)</td>
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</tr>
<tr>
<td>Faculty from other UC institutions may serve as Thesis Committee member</td>
<td></td>
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**Definition: ***Academic Senate**

<table>
<thead>
<tr>
<th>Academic Senate</th>
<th>Non-Academic Senate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant Professor</td>
<td>Health Sciences Clinical Assistant Professor</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Health Sciences Clinical Associate Professor</td>
</tr>
<tr>
<td>Professor</td>
<td>Health Sciences Clinical Professor</td>
</tr>
<tr>
<td>Assistant Professor in Residence</td>
<td>Adjunct Assistant Professor</td>
</tr>
<tr>
<td>Associate Professor in Residence</td>
<td>Adjunct Associate Professor</td>
</tr>
<tr>
<td>Professor in Residence</td>
<td>Adjunct Professor</td>
</tr>
<tr>
<td>Assistant Professor of Clinical</td>
<td></td>
</tr>
<tr>
<td>Associate Professor of Clinical</td>
<td></td>
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<tr>
<td>Professor of Clinical</td>
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</tbody>
</table>
7. After you have selected your Committee Chair and Members, provide the name to Program Coordinator to confirm if the faculty member is an Academic Senate member. If the faculty member is not an Academic Senate member, we can request exceptions with justification. There is no guarantee of approval.

8. With Program Director’s approval of your research project, your Committee Chair and Members will sign **BATS 1-3 forms**.

9. Thesis Committee members may not be changed without written approval of Program Director and Graduate Division.

10. Meet with your Thesis Committee regularly. The goal of these meetings is to provide input and feedback on your thesis progress, and to approve of the proposed changes in the direction of your thesis work. **It is your responsibility to schedule these meetings.**
Faculty who served as Thesis Committee Chair

Thomas Ahlering, MD  
Vice Chairman and Professor, Urology  
Chief, Division of Oncological Urology

Yama Akbari, MD, PhD  
Assistant Professor, Neurology, Internal Medicine

Cristobal Barrios, MD  
Health Sciences Associate Clinical Professor, Surgery

Samuel Bederman, MD, PhD, FRCSC  
Spine Surgeon, Assistant Clinical Professor, Orthopaedic Surgery

John Billimek, PhD  
Associate Professor In-Residence, Health Policy Research Institute  
Department of Medicine

Daniela Bota, MD, PhD  
Associate Professor, Neurology  
Medical Director, Neuro-Oncology Program

Matthew Brenner, MD  
Professor, Medicine

Robert Bristow, MD  
The Philip J. DiSaia Chair, Gynecologic Oncology  
Professor, Obstetrics & Gynecology  
Director, Division of Gynecologic Oncology

Belinda Campos, PhD  
Associate Professor, Chicano/Latino Studies  
Program in Medical Education for the Latino Community (PRIME-LC)

Bharath Chakravarthy, MD  
Assistant Professor of Clinical EM, Emergency Medicine  
Vice Chair of Research and Academic Affairs, Emergency Medicine

Hoda Anton-Culver, PhD  
Professor and Chair, Epidemiology  
Director, Genetic Epidemiology Research Institute  
Professor, School of Social Ecology

Brian Cummings, PhD  
Professor, Physical Medicine and Rehabilitation

Hamid Djalilian, M.D.  
Professor, Otolaryngology
Gregory Evans, MD  
Chair, Plastic Surgery  
Professor, Surgery

Christian Fox, MD  
Professor and Chair, Emergency Medicine

John Fruehauf, MD, PhD  
Professor, Clinical Medicine, Biomedical Engineering, and Biological Chemistry  
School of Medicine

Sidney Golub, PhD  
Research Professor, Microbiology & Molecular Genetics  
Unit Director for Clinical Research Ethics, Institute for Clinical and Translational Science

Sheldon Greenfield, MD  
Professor, Medicine  
Executive Co-Director, Health Policy Research Institute

Joshua Grill, PhD  
Associate Professor, Psychiatry and Human Behavior  
Director, MIND  
Associate Director, Alzheimer’s disease Research Center

Wirachin Hoonpongsimanont, MD, MS  
Assistant Professor, Emergency Medicine  
Director, EM Clerkship and EMRAP, Department of Emergency Medicine

Susan Huang, MD  
Professor, Medicine and Division of Infection Diseases  
Director, Epidemiology and Infection Prevention

Sherrie Kaplan, PhD, MPH  
Assistant Vice Chancellor, Healthcare Evaluation and Measurement  
Executive Co-Director, Health Policy Research Institute  
Director, MS-BATS Program  
Professor, Medicine and Anesthesiology & Perioperative Care

Antoine Khoury, MD, FRSCSC, FAAP  
Chief, Pediatric Urology  
Walter R. Schmid Professor, Urology and Pediatric Urology

Jaime Landman, MD  
Professor and Chair, Urology

Thay Lee, PhD  
Professor in Residence, Orthopaedic Surgery  
Vice Chair for Research, Orthopaedic Surgery  
Professor in Residence, Biomedical Engineering
Shahram Lotfi Pour, MD, MPH  
Professor, Emergency Medicine and Public Health

Kim Lu, MD  
Assistant Clinical Professor, Pediatric Pulmonary Research

Shaista Malik, MD, PhD, MPH  
Professor, Cardiology  
Associate Vice Chancellor, College of Health Sciences  
Executive Director, Susan Samueli Integrative Health Institute

Tahseen Mozaffar, MD  
Professor and Chair, Neurology

Dana Mukamel, PhD  
Professor, Medicine

Hannah Lui Park, PhD  
Associate Professor, Medicine  
Program Director, Athena Breast Health Network  
Associate Director, Genetic Epidemiology Research Institute

Dara Sorkin, PhD  
Associate Professor, Medicine

Krishnansu Tewari, M.D.  
Professor and Division Director, Obstetrics & Gynecology

Ping Wang, MD  
Professor, Medicine and Biological Chemistry  
Director, Center for Diabetes Research and Treatment  
Division Chief, Endocrinology, Diabetes and Metabolism Medicine

Brian Wong, MD  
Professor and Vice Chairman, Otolaryngology  
Professor, Surgery School of Medicine

Jason Zell, DO  
Associate Professor, Medicine and Epidemiology
Faculty who served as Thesis Committee Member

**Gurpreet Ahuja, MD**
Assistant Professor, Otolaryngology
Division Chief of Otolaryngology, CHOC

**Yama Akbari, MD, PhD**
Assistant Professor, Neurology, Internal Medicine

**Gregory Albers, MD, FACG**
Clinical Professor of Medicine, School of Medicine
Vice Chair of Education, Medicine

**Craig Anderson, PhD, MPH**
Research Specialist, Emergency Medicine

**Hoda Anton-Culver, PhD**
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Professor, School of Social Ecology

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Vice Chair of Research and Academic Affairs, Emergency Medicine

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Professor, Clinical Obstetrics and Gynecology

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Chief, Pediatric Pulmonology Division

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Clinical Professor, Cardiology

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Professor, Philosophy, School of Humanities

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Donald Bren Professor, Molecular Biology and Biochemistry

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Director, Clinical Trial Research

Jun Wu, PhD
Professor, Public Health

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Associate Professor of Surgery, Neurosurgery, UCLA School of Medicine

Nathan Wong, PhD, MPH
Professor, Medicine and Epidemiology
Director, Preventive Cardiology

Argyrios Ziogas, PhD
Adjunct Professor, Epidemiology
Guideline on Thesis Structure
Thesis Structure

Chapter 1 – Introduction (3-5 pages)
- Background
- Identify the problem
- Ask no more than three research questions
- What are you going to do to move science along?
- What is your directional hypothesis?
- Where are you headed?

Chapter 2 – Background (6-8 pages)
- Thorough literature review
- What do we know about the problem?
- Be sure to read primary sources (do not cite secondary sources without reading primary sources)

Chapter 3 – Methods (8-10 pages)
- What are you going to do?
- Describe your study and sample
- Research design
- Key study measures
- Data collection strategies/measures (data abstract, patient questionnaire...)
- Statistical methods/analytic plan

Chapter 4 – Results (10+ pages)
- What you found
- Tables, figures, charts, graphs, pictorial data presentations
- No interpretations
- Tie back to research questions

Chapter 5 – Discussion (8+ pages)
- “So what?”
- What do we know now that we didn’t know before?
- Why is this important?
- How have you advanced science?
- Where does this leave us and where do we go next?
- Next steps
Contents of Master’s Thesis – Opening Pages

Title Page

- Author's name as it appears on official University records
- List the degree earned
- The full name of each committee member

Words used in the manuscript title are the access points for researchers who may use keyword-searching techniques to identify works in various subject areas. Use word substitutes, not symbols or formulas, to ensure effective retrieval from on-line indexes. Use concise titles containing words descriptive of the work; emphasis should be on nouns, with easily identifiable key words.

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- If a copyright statement is not being included, insert a blank sheet of 100% cotton paper as a substitute. The University Archives strongly recommends that you include a copyright statement.

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- All sections of the manuscript are listed in the table of contents except the title page, the copyright page, the dedication page, and the table of contents. The sections to be included in the table of contents are: lists of symbols, figures, tables, and illustrations, acknowledgments, curriculum vitae, abstract, introduction, each chapter, bibliography, and each appendix.
- Novels and collections of poems are not exempt from the requirement to include a table of contents.

Acknowledgments Page

- You must acknowledge grants and other funding assistance.
- If you have used copyrighted material of your own or others, you must include a statement to inform the reader that permission has been granted and state the source of the permission.
- You may also acknowledge the contributions of professors and friends.

References Section Bibliography

- Format the references or bibliography in the style most commonly used in your academic discipline (including the placement of references at the end of each chapter if necessary).
- Appendices
  - List each appendix separately in the table of contents.
  - Tables, figures, charts, or photos are placed at the end of the manuscript form an appendix and should not be listed in a list of figures, list of tables, or list of illustrations in your preliminary pages.
UCI Biomedical and Translational Science Research Training Program Resources

Employment
https://uci.edu/about/employment.php

Faculty Profile System
http://www.faculty.uci.edu/

Financial Aid
http://www.ofas.uci.edu/content/

Graduate Division
https://www.grad.uci.edu/

International Center
http://www.ic.uci.edu/

Parking
http://www.parking.uci.edu/

Registrar
http://www.reg.uci.edu/
Important Contacts:

MS-BATS Program Office
100 Theory Building, Suite #110
Irvine, CA 92697-5800

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Forms

BATS 1-3
BATS 299
BATS 299 Addendum
Graduate Division DocuSign forms: https://www.grad.uci.edu/academics/DocuSignForms.php
BATS Form 1
Individual Research Plan
(To be submitted two quarters before degree completion)

Student Name:
Date:

Area of research interest:

Description of proposed study design:

Proposed Timeline:
Develop study design/Conduct Research (Quarter/Year):
Write Thesis (Quarter/Year):
Defend/Submit Thesis (Quarter/Year):

_______________________________________  ________________________
Thesis Committee Chair Signature  Date
BATS Form 2
Thesis Committee Confirmation

Date:  
BATS Student:

__________________________________________  ______________________________________________
Name                                                                                      Signature

Chair of Thesis Committee:  

__________________________________________  ______________________________________________
Name                                                                                      Signature

Thesis Committee 1st Member:  

__________________________________________  ______________________________________________
Name                                                                                      Signature

Thesis Committee 2nd Member:  

__________________________________________  ______________________________________________
Name                                                                                      Signature
BATS Form 3
Research Proposal

Student Name:
Date:

Synopsis of Proposal (Include brief background, hypothesis, research methodology, and proposed time frame):

Approved by:

___________________________
Chair of Thesis Committee
Signature
Date

___________________________
1st Member of Thesis Committee
Signature
Date

___________________________
2nd Member of Thesis Committee
Signature
Date
Student Name:  
Student ID:  
Mentor's Name:  
Mentor's E-mail Address:  

Research Topic:  
Provide a description of the research project outlining the background, objective and design methods. (2000 character limit). This section should be submitted to Dr. Sherrie Kaplan within 4 weeks of enrollment.

Background: State the problem or question your research is designed to address.  
Objective: Briefly describe the specific aims/goals of the project and impact the results may have in the research field.  
Design/Methods: Describe the strategy, methodology and analyses to be used.
Final Report Instructions: The final report must be submitted within 5 business days of the end of the quarter. Late report may impact grade. Failure to submit a report will result in an “F” grade for the quarter.

Students are required to submit a final report describing in detail the research project. The final report will be evaluated for accuracy and scientific/technical merit. Overall score will determine the final grade. Final Report should include at minimum the Title, Introduction, Research Aims, Design/Methods and Analysis and Results. Use Arial or Helvetica typeface, font size 11, with one-half inch margins all around. Text should be double spaced. Report may not exceed 10 pages.

1) Research Summary
   Provide a summary of your research project from last quarter. Describe in full all progress made to date. Give a concise description of the research strategy, timeline and methodological approach. Include, if applicable, study population, sample size, exclusion criteria, ethical and safety issues considered and protocol development.

2) Description of work accomplished this quarter.
   Include NEW details regarding research, data analysis performed, any modifications to aims, methods or procedures, any problems encountered and how you resolved or intend to resolve the issues. (No more than 10 pages)

3) Provide updated Bibliography
   Bibliography is not included in the 10-page limit. Provide an updated list of references cited. Each reference must include the names of all authors, the article and journal title, book title, volume number, page numbers, and year of publication. (No page limit)

4) Provide updated Appendix
   Appendix is not included in the 10-page limit. Appendix may include images, graphs, questionnaires, presentations or other materials which are essential for the review of the report. (No page limit)