

 <b>FLORIDA ATLANTIC UNIVERSITY</b>	<b>NEW/CHANGE PROGRAM REQUEST</b> <b>Graduate Programs</b>		UGPC Approval _____ UFS Approval _____ Banner Posted _____ Catalog _____
	Department Biomedical Science College Medicine		
<b>Program Name</b> Master of Science Biomedical Science		<input type="checkbox"/> New Program <input checked="" type="checkbox"/> Change Program	<b>Effective Date</b> <small>(TERM &amp; YEAR)</small> Spring 2020
<p><b>Please explain the requested change(s) and offer rationale below or on an attachment</b></p> <p>The Master of Science Biomedical Science would like to change the core requirements from 12 credits to 9 credits. The Biomedical Data and Informatics would be moved from the core requirements to the electives options. Below would be the new core requirements (9 credits):</p> <ol style="list-style-type: none"> <li>1. Intensive Biomedical Writing PCB 6933 - 3 credits</li> <li>2. Human Genetics PCB 6665 - 3 credits</li> <li>3. Advanced Molecular and Cellular Biology PCB 5532 - 3 credits</li> </ol> <p>Please see attached for track catalog changes. We also wanted to add the course requirements for both the non-thesis and thesis option in the catalog.</p> <p>Course Catalog Changes Rationale:</p> <p>Non-thesis catalog changes          Our office changed from 4 required core courses to 3 required core courses. Non-thesis students are now able to take more elective courses to fulfill their 30 credit MS Biomedical Science program (21 elective credits).</p> <p>Thesis catalog changes          Our office changed from 12 required core courses to 18 required core courses by adding the thesis requirement course credits in the core requirements which includes the 9 credits of core courses and a minimum of 9 thesis credits (thesis related research and master research credits).</p>			
<b>Faculty Contact/Email/Phone</b> Dr. Marc Kantorow 561-297-2910 mkantor@health.fau.edu		<b>Consult and list departments that may be affected by the change(s) and attach documentation</b>	
<b>Approved by</b> Department Chair <u>Jani Robinson</u> College Curriculum Chair <u>Maria Hunter</u> College Dean <u>[Signature]</u> UGPC Chair _____ UGC Chair _____ Graduate College Dean _____ UFS President _____ Provost _____		<b>Date</b> 7/30/19 7/30/19 7-31-19	

Email this form and attachments to [UGPC@fau.edu](mailto:UGPC@fau.edu) one week before the UGPC meeting so that materials may be viewed on the UGPC website prior to the meeting.

**GRADUATE COLLEGE**

**JUL 31 2019**

Received

## Master of Science with Major in Biomedical Science

Students interested in pursuing advanced studies in biomedical science may obtain a degree of Master of Science (M.S.) with Major in Biomedical Science, taking either the thesis or non-thesis option. The thesis option is oriented toward those students interested in pursuing biomedical research or careers in academia. The non-thesis program is an option for students seeking to solidify their knowledge base in order to apply to appropriate professional schools or pursue careers in the biomedical sciences industry.

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### Admission Requirements

All program applicants must have an undergraduate grade point average of 3.0 in the last 60 credits and competitive Graduate Record Exam (GRE) scores (scores are valid for five years). These are minimum requirements that are necessary for consideration for admission to the program. Higher scores will increase applicants' chances for admission. Prerequisites of the master's degree program include one year each of biology, chemistry and physics; one semester each of biochemistry and organic chemistry; and at least two upper-division biology classes. A personal statement explaining career goals is required as well as three letters of recommendation, at least two of which must be from former professors.

### Recency of Credits

No credit that is more than seven years old at the time the M.S. in Biomedical Science degree is awarded may be counted toward the degree.

### Degree Requirements

#### *Non-Thesis Option*

This option requires a minimum of 30 graduate-level credits. With their advisor's approval, students design a course of study courses offered in the Charles E. Schmidt College of Medicine as well as courses in related departments and colleges chosen from the following list.

Core - 9 credits		
Advanced Molecular and Cellular Biology	PCB 5532	3
Human Genetics	PCB 6665	3
Special Topics (such as Biomedical Writing, Intensive Biomedical Writing)	PCB 6933	3
Electives - 21 credits		
Biomedical Data and Informatics	BSC 6459	3
Integrated Morphology 1	BMS 6102C	4
Integrated Morphology 2	BMS 6104C	4
Clinical Microbiology	BMS 6303	3
Autonomic Function and Diseases	BMS 6523	3
Fundamentals of General Pathology	BMS 6601	3
Brain Diseases: Mechanism and Therapy	BMS 6736	3
Bioinformatics	BSC 6458C	3
Cognitive Neuroscience	ISC 5465	3
Macromolecules and Human Disease	GMS 6301	3
Molecular Basis of Disease and Therapy	GMS 6302	3
Host Defense and Inflammation	MCB 6208	3
Advanced Molecular Genetics of Aging	PCB 5245	3
Neurobiology of Addiction	PCB 5844	3
Advanced Cell Physiology	PCB 6207	3
Molecular Basis of Human Cancer	PCB 6235	3

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Advanced Immunology	PCB 6236	3
Problem-Based Immunology	PCB 6238	3
Tumor Immunology	PCB 6239	3
Molecular Biology of the Cardiovascular System and Cardiac Disease	PCB 6705	3
Adult Neurogenesis	PCB 6848	3
Physiology of the Heart	PCB 6885	3
Directed Independent Study (maximum of 6 credits allowed)	PCB 6905	1-3
Special Topics (general)	PCB 6933	1-8
Graduate Seminars	PCB 6934	1
Biological Vision	PSB 5117	3
Principles of Neuroscience	PSB 6037	3
Neuroscience 1	PSB 6345	3
Neuroscience 2	PSB 6346	3
Developmental Neurobiology	PSB 6515	3

### **Thesis Option**

This option requires a minimum of 30 credits consisting of coursework chosen from the list below, a minimum of 6 thesis credits, 3 thesis-related research credits. Students design a course of study and research with the guidance and approval of the advisors and thesis committees. Thesis students are required to make a formal research proposal to their committees within their first year prior to enrollment in thesis credits. In addition, upon completion of their research, they must make a formal thesis presentation and defense in the semester they plan to graduate. All thesis students must also receive certification of completion of the Responsible Conduct of Research program. The RCR program, which is offered jointly through the Graduate College and Division of Research, covers the nine instructional areas of RCR. All four components are mandatory in order to receive certification of completion.

Students wishing to change their admission from the thesis option to the non-thesis option must submit to the Graduate Program Committee a letter of request that states the justification for the change and a letter from the thesis advisor in support of the request. An interview with the Graduate Program Committee may be required. A maximum of 6 credits from the thesis career can be applied toward the non-thesis career upon approval by the Graduate Program Committee. PCB 6974 and PCB 6971 credits are non-transferable.

<b>Core Thesis Requirements- 18 credits</b>		
Advanced Molecular and Cellular Biology	PCB 5532	3
Human Genetics	PCB 6665	3
Special Topics (such as Biomedical Writing, Intensive Biomedical Writing)	PCB 6933	3
Master's Thesis (may be taken multiple times; 6 credits minimum; 12 credits maximum)	PCB 6971	1-12
Thesis-Related Research (may be taken multiple times; 3 credits minimum; 6 credits maximum)	PCB 6974	2-3
<b>Electives</b>		
Biomedical Data and Informatics	BSC 6459	3
Integrated Morphology 1	BMS 6102C	4
Integrated Morphology 2	BMS 6104C	4

Clinical Microbiology	BMS 6303	3
Autonomic Function and Diseases	BMS 6523	3
Fundamentals of General Pathology	BMS 6601	3
Brain Diseases: Mechanism and Therapy	BMS 6736	3
Bioinformatics	BSC 6458C	3
Cognitive Neuroscience	ISC 5465	3
Macromolecules and Human Disease	GMS 6301	3
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Neuroscience 2	PSB 6346	3
Developmental Neurobiology	PSB 6515	3