

# FAST TRACK BIOMEDICAL SCIENCES, BS TO BIOLOGY, MS

## Program Description

The university allows the opportunity for high-achieving students to waive a select number of undergraduate credits in order to obtain a graduate degree at an accelerated pace. Students interested in the Fast Track in Biomedical Sciences must meet the following application criteria:

- Currently seeking a BS in Biomedical Sciences at A& M-Corpus Christi.
- Minimum of a 2.75 GPA in the BIOL 1406-07 and CHEM 1411-12 courses
- Students must have a 3.0 cumulative GPA (and a science and mathematics GPA of 3.0) by the fifth (5th) semester of university enrollment, with successful completion of coursework in the following: Genetics, Microbiology, Organic Chemistry I, Organic Chemistry II and two other upper-level courses (Physiology or Pathophysiology or Cell Biology).
- Transfer students from Del Mar College, Alamo Colleges, Austin Community College or other two-year institutions may enter as juniors in the 5th semester if they have a 3.0 or greater OR they meet one of the requirements below:
- a GRE combined score of 300 OR
- Grades of "B" or higher in the following courses or equivalents will allow entry into the program with two semesters to complete Organic Chemistry I and II, if they have both overall and science and mathematics GPA of 3.0 or higher:

Code	Title	Hours
BIOL 1414 -1415	Intro to Biotechnology I and II	8
BITC 2441	Molecular Biology Techniques OR BITC 1403 Principles of Biochemistry OR BITC 2431 Cell Culture Techniques	4
BITC 2486	Internship	4
OR		

- a Major Field Test score in the four required Biology subsections of 153 or greater OR
- one first author, peer-reviewed paper in a journal OR author on two peer-reviewed papers (any order).

If accepted to the Fast Track program, the student will be given permission to enroll in prescribed graduate courses during their last semester of undergraduate studies. Six hours of upper level undergraduate courses will "double-count" and will replace up to six graduate hours. Students will be allowed to continue enrollment in the graduate program upon successful completion of the undergraduate degree.

The BS and MS degrees will be awarded sequentially (i. e., upon completion of each degree) and not simultaneously.

In their undergraduate portion, students are strongly advised to take DIS (BIOL 4396/BIMS 4396) or the Research and Design course (BIOL 4350—

3 SCH) or the Directed Independent Research (BIOL 4399 3-6 SCH, max 6) course to formulate a topic.

## Admissions Requirements

Applicants must provide the following at the time of application:

- A completed application form. Application fees are waived for Fast Track applicants.
- Official transcripts of all college and university coursework.
- An essay (not more than 1000 words) describing educational and career goals and interests as they relate to program faculty.
- A faculty member must be willing to serve as the chair of the applicant's Graduate Advisory Committee and the applicant must include a summary of discussions with faculty members in their essay. Students must contact potential advisors prior to and during the application process to discuss research opportunities in faculty member labs.
- Applicants who do not have a faculty member willing to serve as their committee chair at the time of the transition from BS to MS cannot remain in the program.
- Official GRE scores by the time the student is reclassified to MS.

## Revised Core BIMS Fast Track Courses

Code	Title	Hours
BIOL 2416	Genetics	4
BIOL 2421	Microbiology	4
BIOL 2300	Science Communication	2-3
or BIMS 2200	Professional Skills	
CHEM 3411	Organic Chemistry I	4
CHEM 3412	Organic Chemistry II	4
PHYS 1401	General Physics I	4
PHYS 1402	General Physics II	4
BIMS 3401	Pathophysiology	4
or BIOL 3430	Physiology	
BIOL 3410	Cell Biology	4
CHEM 4401	Biochemistry I	4
BIMS 3403	Molecular Biology	4
BIMS 4406	Immunology	3-4
or BIOL 3345	Cell Physiology	
MATH 3342	Applied Probability and Statistics	3-4
or MATH 1442	Statistics for Life	
MATH 2413	Calculus I	3-4
or BIOL 3325	Biostatistics	
Any two BIMS courses <sup>1</sup>		6-8
<b>Total Hours</b>		<b>57-63</b>

<sup>1</sup>

(also see Table of Fast Track Transition courses: BIOL 3425 (Funct. Anat) OR BIMS 4333 (Med Entomol) or BIMS 4428 (Medicolegal Death) or BIMS 4334 (Hum Genet) OR BIMS 4335 (Endocrinol) OR any BIMS courses.

## Fast Track Transition courses

A maximum of 6 SCH of coursework may be taken as graduate work. Courses should be taken in last semester of senior year.

Code	Title	Hours
BIMS 4410	Histology	4
or BIMS 5410	Cells and Tissues	
BIOL 4304	Biology of Viruses	3
or BIOL 5304	Virology	
BIMS 4323	Neurobiology	3
or BIMS 5323	Neurosciences	
BIMS 4311	Biology of Cancer	3
or BIMS 5311	Principles of Oncology	
BIMS 4327	Introduction to Toxicology	3
or BIMS 5327	Toxicology	
BIOL 4340	Genomics, Proteomics and Bioinformatics	3
or BIOL 5340	Genomics, Proteomics and Bioinformatics	
BIMS 4330	Biological Basis of Aging	3
or BIMS 5330	Biology of Aging	
BIMS 4374	Medical Microbiology	3
or BIMS 5374	Molecular Medical Microbiology	
BIMS 4375	Mechanisms of Microbial Pathogenesis	3
or BIMS 5375	Microbial Pathogenesis	
BIOL 4408	Microbial Diversity and Ecology	4
or BIOL 5408	Microbial Ecology	
BIOL 4311	Biological Bases of Behavior	3
or BIOL 5311	Cellular Bases of Behavior	

Any other 5000 and 6000-level courses would then be taken as graduate courses with the consent of the Graduate Advisory Committee.

## Graduate Required Courses for MS

Code	Title	Hours
MATH 6315	Statistical Methods in Research I	3
BIOL 5392	Thesis Proposal	3
BIOL 5393	Thesis Research	3
BIOL 5394	Thesis Submission	3
BIOL 5102	Graduate Defense Seminar	1
Plus 23 SCH minimum		23
<b>Total Hours</b>		<b>36</b>