



**PROFESSIONAL SCIENCE MASTER'S PROGRAM
BIOMEDICAL SCIENCES & BIOTECHNOLOGY**

2023/2024 BSBT- GENERAL Curriculum

REQUIRED COURSES

Course Number	Course Title	Credits
Fall – Year 1		
BSBT 6072 – 6075 <i>No class on Labor Day</i>	BSBT 6072: Foundations in Biochemistry BSBT 6073: Foundations in Molecular Biology BSBT 6074: Foundations in Cell Biology BSBT 6075: Foundations in Genetics	July 1-Aug Aug 21-Sept 8 Sept 11-Sept 29 Oct 9-Oct 27 1.5 cr. each Fall
BIOL 5024	Introduction to Biotechnology (Denver Campus) <i>Enrollment in this course can be postponed to year two (Discuss with Program Director)</i>	3cr Fall
Electives	<i>See, for example, Core Topics short courses that follow the Foundations Courses (Discuss with Program Administrator and Director)</i>	
Spring – Year 1		
BSBT 6067	Statistics for the Biomedical Sciences	2cr Spring
BSBT 6071	R Programming	1cr Spring
BIOL 5125	Molecular Biology Laboratory (Denver Campus)	3cr Spring
<i>Electives</i>	<i>Contact Program Administrator and Director</i>	
Summer – Year 1		
BSBT 6065	RCR Case Studies	1cr Summer
<i>Electives</i>	<i>Contact Program Administrator and Director</i>	
Fall – Year 2		
ENGL 5175	Writing in the Sciences (Denver Campus)	3cr Fall and Spring
BSBT 6804	Bioinnovation Regulations (<i>Contact Program Administrator or Director if you have taken BSBT 6802 or BSBT 6803</i>)	3cr Fall
BSBT 6061	Project Management	2cr Spring
<i>Electives</i>	<i>Contact Program Administrator and Director</i>	
Spring – Year 2		
BSBT 6801	Biomedical Entrepreneurship	3cr Spring
BSBT 6939- Section 001	Internship (<i>Requires prior discussion with Program Director</i>)	3 - 6cr All Semesters

ELECTIVE COURSES:

Enrollment in elective courses requires prior discussion with the Program Director

The offering and timing of Core Topics courses will be finalized at the start of the semester

BMSC 7810 Core Topics in Biomedical Science *Required for BSBT-MIM **Required for BSBT-SBB	Core Topics A: November 6 - November 28, 2023 (no classes Nov. 22, 23, 24)	
	**001 - Discovering Protein Function and Structure	2/ Fall
	*002 - Microbiology in Biomedical Research	2/ Fall
	*003 - Inflammation	2/ Fall
	004 - Evolutionary Genetics and Genomics	2/ Fall
	005 - Stem Cell Biology to Regenerative Medicine	2/ Fall
	Core Topics B: November 29 - December 15, 2023	2/ Fall
	006 - Gene Regulation and RNA Biology in Disease (PhDs ONLY)	2/ Fall
	007 - The Microbiome in Health and Medicine	2/ Fall
	008 - Principles of Cancer Biology	2/ Fall
009 - Introduction to Animal Models and Experiments in Developmental Biology	2/ Fall	
010 - Exploratory Data Analysis with R/RStudio	2/ Fall	
Course Number	While likely, it is not guaranteed that the courses are always offered in the semester indicated.	Credits/ Time
BIOE 5074	Introduction to Laboratory Animal Research	3/ every other Spring (2024)
BIOL 5494	Population and Evolutionary Genetics	3/ Spring
BIOL 6764	Biological Data Analysis	3/ Spring
BSBT 6062	Principles and Strategies of Effective Teaching	1/ Spring
BSBT 6063	Speaking and Presenting for Scientists and Educators – Delivering Effective Scientific and Educational Presentations	1/ Fall or Spring (enrollment minimum req.d)
BSBT 6110	Intro to Biocomputing	1/ Fall
CANB 7620	Histophysiology	3/ Spring
CLSC 7202	Clinical Outcomes and Applications	3/ Fall
CSDV 7605	Stem Cells and Development	3-cr option/ Spring
ENTP 6020	Business Model Development & Plan	3/ Spring
ENTP 6834	Lean Marketing (online)	3/ Spring
ENTP 6848	Leadership in New Ventures	3/ Spring 2024
ENVS 6230	Environmental Epidemiology	3/ Spring
EPID 6630	Epidemiology	3/ Spring
IDPT 7646	Tissue Biology and Disease Mechanisms	3/ Fall 2024
IMMU 6110	Intro to Bioinformatics (with an Immunology and Microbiology spin!)	3/ Fall
MKTG 4700	Personal Selling and Sales Management	3/ Fall
MOLB 7900	Practical Computational Biology for Biologists: Python	2/ Spring
MOLB 7910	Practical Computational Biology for Biologists: R	2/ every other Spring (2024)
NRSC 7501	Intro to Neuroscience	1/ Fall
NRSC 7610	Fundamentals of Neurobiology	3/ Spring
NRSC 7614	Biological Basis of Psychiatric and Neurological Disorders	3/ Spring
NRSC 7615	Developmental Neurobiology	3/ Spring
PHSC 7345	Nanotechnology and Drug Delivery	2/ Spring
PHSC 7651	Pharmaceutical Biotechnology	3/ Spring
PMED 6110	Pharmacogenomics	3/ Spring
PMED 6210	Multi-Omic Approaches in Personalized Medicine	3/ Spring
PMED 6910	Applications and Challenges in Personalized Medicine (PMED certificate only)	3/ Spring
STBB 7609	Biophysics and Spectroscopy	3/ Spring

38 credits are required for graduation in all BSBT- Program Plans, and graduate students must maintain an overall GPA of at least 3.0 (“B”). No grade below “B-” is accepted for graduation.

Please note:

- Some courses that are listed as elective courses for the BSBT-GEN Master’s Program are required courses for some Graduate Certificate Programs, such as the Graduate Certificate Program in [Personalized and Genomic Medicine](#), [Cannabis Science and Medicine](#), or [Research Management and Compliance](#). If students would like to earn such Graduate Certificate concurrently with the BSBT-GEN program, they will have to discuss this choice with the Directors of the master’s program and those Certificate Programs and also fill in the Intent to [Complete Graduate Certificate Form](#). Students do not have to start the master’s and the Certificate Program at the same time, but the **Certificate will have to be completed by the latest at the time when the master’s is earned.**
- Courses are not guaranteed to be offered in the indicated semester. Faculty availability might require changes. Students are encouraged to check the course availability before planning their semester schedules.
- Before enrollment in any elective courses, it is the student’s responsibility to confirm that they fulfill the pre-requirements that are posted for the course or to inquire with the Course Director which pre-requirements apply.
- If a student would like to enroll in an elective course that is currently not included in the program list of elective courses, students must discuss this choice with the Program Director first, who will evaluate if the elective aligns with the mission and objectives of BSBT-GEN. The alternative elective will **not** be counted towards the degree.

BSBT-GEN Cocurricular Requirements:

For BSBT-GEN students, as part of their graduation requirements, it is mandatory that students:

- attend all BSBT program meetings
- participate in at least one career development workshop and one seminar per semester and document the attendance using a form available on Canvas “BSBT Preparation, Learning and Training Support” course and submit in Canvas.
- will have to document that they conducted at least one informational interview with a person who holds a job that might be a possible career path for the student