



**Translational Biotechnology**  
**MS Curriculum Requirements**  
**(40 credits)**

<b>Year One (Research Pathway)</b>		
<b>Fall (8 hours coursework; 3 hours research)</b>	<b>Spring (10 hours coursework; 3 hours research)</b>	<b>Summer (2 hours coursework; 1-9 hours research/externship)</b>
<p><b>Required Courses</b> TBIO 711 (3) Fundamentals of Innovation Management TBIO 731 (1) FDA Case Studies BMES 631 (3) Introduction to Regenerative Medicine GRAD 713 (1) Foundations of Scientific Integrity and Professionalism TBIO 797 (3) Research</p> <p><b>Recommended Courses/Electives</b> GRAD 715 (1) Career Planning in the Biomedical Sciences IPP 701 (3) Principles of Pharmacology</p> <p><b>Declare Research Mentor</b></p>	<p><b>Required Courses</b> TBIO 702 (3) Introduction to Translational Medicine IPP 786 (1) Regenerative Medicine Journal Club TBIO 722 (2) Ethics and Policy of Regenerative Technologies MCB 753 (3) Advanced Topics in Regenerative Medicine GRAD 714 (1) Scientific Integrity and Professionalism TBIO 798 (3) Research</p> <p><b>Recommended Courses/Electives</b> GRAD 716 (1) Seminars in Professional Development IPP 702 (1-3) Systems Physiology and Pharmacology</p>	<p><b>Required Courses</b> MMTS 721 (1) Regenerative Medicine Immersion: Fundamental Principles and Clinical Applications TBIO 794 (1-9) Externship TBIO 798 (1-9) Research</p> <p><b>Present Proposed Thesis Project to Committee</b></p>
<b>Year Two</b>		
<b>Fall (4 hours coursework; 3 hours research)</b> <i>*Must register for at least 9 credit hours</i>	<b>Spring (4 hours coursework; 3 hours research)</b> <i>*Must register for at least 9 credit hours</i>	<b>Summer (If not completed in Summer Year 1)</b>
<p><b>Required Courses</b> TBIO 797 (3) Research Elective (3)</p> <p><b>Choose One</b> TBIO 704 (1) Introduction to cGMP Regulations <b>OR</b> TBIO 785 (1) Regenerative Medicine Journal Club</p> <p><b>Recommended Courses/Electives</b> IPP 741 (3) Quantitative Methods Bioscience Elective (3)</p> <p><b>Admission to Candidacy</b></p>	<p><b>Required Courses</b> TBIO 798 (3) Research</p> <p><b>Choose One</b> TBIO 732 (1) Biotechnology Seminar <b>OR</b> IPP 786 (1) Regenerative Medicine Journal Club</p> <p><b>Choose One</b> MCB 753 (3) Advanced Topics in Regenerative Medicine <b>OR</b> Elective (3)</p> <p><b>Recommended Courses/Electives</b> Elective (3)</p> <p><b>Thesis Defense</b></p>	<p>MMTS 721 (2) Regenerative Medicine Immersion: Fundamental Principles and Clinical Applications <i>(If not taken the previous summer)</i></p>

***\*Potential Electives***

BMES 631 (3) Introduction to Regenerative Medicine

BMSC 721 (3) Foundations of Clinical Pharmacology

CRM 701 (3) Research Design and Methods

CRM 702 (3) Data Analysis & Interpretation

CRM 703 (1) Leadership & Professionalism I

CRM 704 (1) Leadership & Professionalism II

CRM 722 (2) Clinical Studies Development

CRM 751 (2) Conflict Resolution & Negotiations

CRM 752 (2) Design Thinking

CRM 761 (2) Project Management

CRM 763 (2) Technical Writing

GRAD 709 (1) Scientific Outreach

IPP 741 (3) Quantitative Methods Bioscience

MCB 701 (6) Molecular & Cellular Biosciences

THSS 730 (4) Introduction to Biostatistics

THSS 731 (2) Introduction to Biomedical Informatics

THSS 735 (0.5) Building Successful Teams

***\*Or other courses with program director approval***