

MSC7000Y: REGENERATIVE MEDICINE 2025-2026

Toronto General Hospital (585 University Ave) Munk 12th floor bridge room 9006

SCHEDULE			
SEPTEMBER 4	9:00AM 10:00AM	Welcome and Course Introduction (incl. JC info) Student Group Introductions and Icebreakers	Dr. Golnaz Karoubi Slaghaniya Neupane, TA
SEPTEMBER 11 VIRTUAL	9:00 AM 10:00 AM	Disease and Pathophysiology of the Liver Organ Preservation - Current and Future Strategies	Dr. Mamatha Bhat Dr. Marcelo Cypel
SEPTEMBER 18	9:00 AM 10:00 AM	Disease and Pathophysiology of the Lung Disease and Pathophysiology of the Kidney	Dr. Cecilia Chaparro Dr. Christopher Chan
SEPTEMBER 25	9:00 AM 10:00 AM	Disease and Pathophysiology of the Heart Regenerative Approaches in the Liver	Dr. Michael McDonald Dr. Sonya MacParland
OCTOBER 2	9:00 AM 10:00 AM	Surgical Innovations for the Heart Transplant Ethics - Current and Emerging Issues	Dr. Terrence Yau Jed Gross
OCTOBER 9	9:00 AM 10:00 AM	Quality of Life: A Transplant Patient Perspective Islet Cell Transplantation	Eddie Sabat Dr. Cristina Nostro
OCTOBER 16	9:00 AM 10:00 AM	Surgical Innovations for the Kidney Large Animal Models in Regenerative Medicine	Dr. Jason Lee Dr. Sarah Lepage
OCTOBER 23	9:00 AM 10:00 AM	Surgical Innovations for the Lung Spinal Cord Repair and Regeneration	Dr. Laura Donahoe Dr. Mohamad Khazaei
OCTOBER 30	9:00 AM 10:00 AM	Introduction to Biomanufacturing and Commercialization Esc and Ips Cells	Dr. Christian Euler Dr. Amy Wong
NOVEMBER 4	ASSIGNMENT #1 DUE (9:00AM)		
NOVEMBER 6	9:00 AM 10:00 AM	Neural Stem Cells 3D Bioprinting for Skin Regeneration	Humna Noman Yufei Chen
NOVEMBER 13	9:00 AM 10:00 AM	Marrow Stem Cells for Regeneration Muscle Stem Cells	Dr. Harry Atkins (V) Dr. Penny Gilbert
NOVEMBER 20	9:00 AM 10:00 AM	Liver Stem Cells JOURNAL CLUB	Dr. Shinichiro Ogawa
NOVEMBER 27 VIRTUAL	9:00 AM 10:00 AM	Corneal Stem Cells Biomaterials for Regeneration of Ocular Tissues	Dr. May Griffith Dr. Laura Wells
DECEMBER 4	9:00 AM 10:00 AM	Organ on a Chip Technologies Musculoskeletal Regeneration and Repair	Dr. Axel Guenther Dr. Alena Zelinka
DECEMBER 11	9:00 AM 10:00 AM	Bioengineered Kidneys Dentistry in Regenerative Medicine	Dr. Ian Rogers Dr. Christopher McCulloch
DECEMBER 16	MIDTERM EXAM DUE (9:00 AM)		
DECEMBER 18	9:00 AM 10:00 AM	Cardiac Regeneration and Repair Bioengineering Approaches for the Generation of Vascularized Human Tissues	Dr. Michael Laflamme Dr. Sara Vasconcelos
WINTER BREAK			

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JANUARY 8 VIRTUAL	9:00 AM 10:00 AM	COVID-19 and Regenerative Medicine Canadian Regulation in Regenerative Medicine	Dr. Duncan Stewart Dr. Yohannes Haile
JANUARY 15	9:00 AM 10:00 AM	Cell Therapy Development: From Academia to Industry IP for Regenerative Medicine	Stacey Ivanchuk Virginie Coindre Michael Penn, Bluerock Therapeutics
JANUARY 22	9:00 AM 10:00 AM	DRAGON'S DEN (Assignment 2)	
JANUARY 29	9:00 AM 10:00 AM	Lab on a Chip Technologies Abstract Writing and How to Present Your Research	Dr. Michael Dryden Humna Noman
FEBRUARY 5	9:00 AM 10:00 AM	Immune Tolerance in Transplantation scRNA Seq Bootcamp	Dr. Stephen Juvet Dr. Rachel Edgar
FEBRUARY 12	9:00 AM 10:00 AM	Ethics in Regenerative Medicine - Gene Editing, Chimeras and Organoids	Zubin Master, Wake Forest Institute
FEBRUARY 19	9:00 AM 10:00 AM	CAR Treg Cell Therapy: from Bench to Clinic JOURNAL CLUB	Dr. Elmar Jaeckel
FEBRUARY 26	9:00 AM 10:00 AM	Clinical Trials in Regenerative Medicine Gene Therapy Applications (Virtual)	Dr. Sabiha Hacıbekiroglu Dr. Carl Richards
MARCH 5 VIRTUAL	9:00 AM 10:00 AM	Endothelial Cells from Stem Cells Stem Cell Manufacturing	Dr. Blair Gage Dr. Michael Kallos
MARCH 8	FINAL EXAM PROJECT TITLE DUE (9:00 AM)		
MARCH 12 VIRTUAL	9:00 AM 10:00 AM	Regeneration of the Brain CRISPR/CAS9 methods to design living cells with new functions	Dr. Karun Singh Dr. Michael Garton
MARCH 20	FINAL EXAM ABSTRACT DUE (9:00 AM)		
MARCH 26	9:00 AM 10:00 AM	Implementation Science (Virtual) Scientific Misconduct	Dr. Justin Presseau Jessica Kozlowski, PhD
APRIL 2	9:00 AM 10:00 AM	Airway Regeneration JOURNAL CLUB	Dr. Golnaz Karoubi
April 9 VIRTUAL	9:00 AM 10:00 AM	Using Mesenchymal Stem Cells, Microvesicles and Growth Factors for Tissue Regeneration Perspectives of Gene Engineered T-Cells	Dr. Bernard Thebaud Dr. Marcus Butler
April 14	9:00 AM – 3:00 PM	REGENERATIVE MEDICINE SYMPOSIUM (Exam presentations)	
April 15	8:00 AM – 3:00 PM	REGENERATIVE MEDICINE SYMPOSIUM (Keynote & Exam presentations)	
April 16	9:00 AM – 4:00 PM	CEAPRO NSERC Professional Development Day (Optional unless CEAPRO funded)	

Notes: Drop date deadline February 27, 2026; Final grades due to SGS by May 8, 2026