	Tuesday June 19		Wednesday June 20		Thursday June 21	
8:30 - 9 AM	**Coffee & danish**		**Coffee & danish**		**Coffee & danish**	
9 AM - Noon (Coffee break 10:20-10:40 AM)	**Introduction to galaxies**		**Distant galaxies**		**Clusters of galaxies**	
	Topics	**Instructor**	**Topics**	**Instructor**	**Topics**	**Instructor**
	• Quick review of main sequence stars • Galaxy types and the "Hubble Diagram" • Basics of galactic structure and stellar orbits • The Milky Way (structure, tidal streams, Galactic Center) • The Magellanic Clouds and our Local Group	Daryl Haggard (McGill)	• Growing disks in galaxies • Star formation processes • Building bulges in galaxies • Feedback processes at high-redshift	Sarah Gallagher (Western University)	• Definitions and descriptions of galaxy clusters and groups • Cluster/group survey techniques and status of the field • Galaxy populations within clusters and groups: demographics and trends • The hot gas and dark matter halos in clusters/groups • Galaxy cluster/group formation and evolution • AGN feedback processes in galaxy groups/clusters	Tracy Webb (McGill)
	Galaxies in the era of *JWST*	L. Albert & R. Doyon (UdeM)				
Noon - 1:30 PM	**Lunch**		**Lunch**		**Lunch**	
1:30 - 4:30 PM (Coffee break 3:00 - 3:20 PM)	**Local galaxies**		**Numerical methods**		**Cosmological probes**	
	Topics	**Instructor**	**Topics**	**Instructor**	**Topics**	**Instructor**
	• The local galaxy population: basic structure and demographics • The galactic ecosystem: the ISM, star formation, and feedback • Stars, gas, size and mass: local galaxy scaling relations • Galaxy groups and clusters: environmental effects • Isolated galaxies: secular evolution • Nearby galaxies at your fingertips: large galaxy surveys now and in the future	Kristine Spekkens (RMC)	• Numerical simulations: basic concepts • Specific problems in galaxy formation and evolution • Gravity-only simulations • Gas dynamics in simulations. • Subgrid physics: star formation, feedback, chemical enrichment, AGN • Interaction with environment; supergrid physics	Hugo Martel (U Laval)	• How are galaxies a probe of cosmology? • What do we hope to learn by studying the density field? • How do we quantify the statistics of the density field in a way that connects to observations? • What do these functions look like and what are their current state of the art values? • Cosmology as it relates to the growth of structure • The Sunyaev Zeldovich Effect and observations of galaxy clusters • Cluster surveys as a probe of dark energy	Adrian Liu & Matt Dobbs (McGill)