Tentative Schedule for MECH 479 (Term 1, 2022/23)

Week of	Mon	Tue	Wed	Thurs	Fri
Sept 5		Imagine UBC		Lec: Intro Fluid and CFD (Module 1)	
Sept 12		Lec: ODE vs. PDE (Module 2)		Lec: PDE understanding & classification (Module 2)	
Sept 19	Lab 1: Matlab (Module 6)	Lec: PDE understanding & classification (Module 2) HW #1: PDE classification		Lec: PDE understanding & classification (Module 2)	
Sept 26	Lab 2: ANSYS Fluent (Module 6)	Lec/Tut: Taylor Series and FDM (Module 3) HW #2: Taylor Series		Public Holiday	
Oct 3	Lab 3: ANSYS Fluent (Module 6)	Lec/Tut: Taylor Series and FDM (Module 3)	Project #1	Lec: Stability Analysis (Module 4)	
Oct 10	Lab 4: ANSYS Fluent (Module 6)	Lec: Stability Analysis (Module 4) HW#3: Stability Analysis		Lec: Temporal Discretization (Module 4)	
Oct 17	Lab 5: ANSYS Fluent (Module 6)	Lec: Temporal Discretization (Module 4)	Due Project #1	Tut: Temporal Discretization (Module 4)	
Oct 24	Lab 6: ANSYS Fluent (Module 6)	MIDTERM EXAM		Lec: Hyperbolic PDEs and Shock Wave (Module 5)	
Oct 31	Lab 7: ANSYS Fluent (Module 6)	Lec: Integral Methods (Module 5)	Project #2	Lec/Tut: Finite volume and finite element methods (Module 5)	
Nov 7	Lab 8: ANSYS Fluent (Module 6)	Lec: Advanced CFD Discretization Techniques (Module 7) HW#4: Upwind and finite volume/element		Mid-term break	
Nov 14	Lab 9: ANSYS Fluent (Module 6)	Lec: Techniques for Incompressible NS equations (Module 8)	Due Project #2	Lec: Techniques for Incompressible NS equations (Module 8)	Project #3: Coding Navier-Stokes
Nov 21	Lab 10: ANSYS Fluent (Module 6)	Lec: Techniques for Incompressible NS equations (Module 8)		Lec: Advanced CFD Topics: Turbulence Modeling Mesh generation Machine Learning	
Nov 28		Tut: Course Review Questions and Examples		Review	Due Project #3
Dec 11-22	FINAL EXAM				

Important Dates

Dates	Description
Sep-6	Imagine day
Sep-30	National Day for Truth and Reconciliation
Oct-10	Thanksgiving Day
Oct-25	Mid-term exam
Nov 9 - Nov 11	Midterm break
Dec-7	Last day of class
Dec 11 - Dec 22	Final exam period