

**University of Victoria**  
**Posting for CUPE 4163 Specialist Instructional (TA) – Fall 2026**

Department: **Mechanical Engineering**

Term of appointment: **TAs are expected to be available from the beginning of the semester (Sep 9, 2026) and available to assist with marking the final examination (exam period is Dec 10-23, 2026).**

Hourly Rate: **\$34.72**

<b>BME 200 - Molecular and Cellular Physiology</b>	Instructor:	<b>K. Valente</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"><li>• Responsible for grading assignments, holding office hours online, and running tutorials online that relate analyzing cells at a molecular level using engineering principles.</li><li>• Responsible for running oral online exams together with the instructor.</li><li>• Position will include running labs (face-to-face or online - still to be confirmed). Labs require a certain level of expertise on microfluidics, PCR and cell culture, in addition to WHMIS and Biosafety certificates from OHSE UVic.</li></ul>		

<b>BME 320 – Engineering Materials with BME Applications</b>	Instructor:	<b>E. Askari</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"><li>• Candidate should have a strong background in material science (including metals, semi-conductors, ceramics and polymers)</li><li>• Candidate should have a strong background in biomedical materials</li><li>• Candidate must be familiar with running laboratory classes</li><li>• Candidate must have excellent time management skills in addition to interpersonal and communication skills</li><li>• Candidate must complete a WHMIS safety training course</li></ul>		

<b>BME 401A/MECH 580 A04 – Biomechanical Modeling</b>	Instructor:	<b>C. Dennison</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"><li>• Knowledge of undergraduate solid and fluid mechanics</li><li>• Experience in liaising with undergraduate and graduate students</li><li>• Asset: familiarity with MATLAB, Python, and Finite Element codes</li></ul>		

<b>BME 410/510/MECH 580 A01 - Bio Printing: 3D Printing Body Parts</b>	Instructor:	<b>K. Valente</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"><li>• Excellent interpersonal and communication skills</li><li>• Previously TA'd this course preferred</li><li>• Expertise in cell culture, 3D Bioprinting using the Cellink bioprinters (BioX or LumenX)</li></ul>		

<b>BME 500 – Medical Device and Systems Design</b>	Instructor:	<b>S. Fardindoost</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"><li>• Background in biomedical engineering or related fields, with a solid understanding of medical devices, design principles, and regulatory standards (e.g., Health Canada, FDA).</li><li>• Strong communication and organizational skills to support student teams, provide feedback on project work, and assist in evaluating design reports and presentations.</li></ul>		



<b>BME 503 – Imaging for Medical Device Design</b>	Instructor:	<b>P. Vakiel</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"><li>• Strong communication and organizational skills to support student teams, provide feedback on project work, and assist in evaluating design reports and presentations.</li><li>• A solid understanding of medical imaging devices, especially ultrasound, is an asset.</li></ul>		

<b>BME 560 – Biomanufacturing Processes and Regulatory Strategy</b>	Instructor:	<b>J. Phelps</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"><li>• Strong background in mammalian cell culture and purification of cell products.</li><li>• Background in bioprocessing and regulatory standards for biologics (e.g., Health Canada, FDA).</li><li>• Strong communication and organizational skills to support student teams and provide feedback on assignments and project work.</li></ul>		

<b>ENGR 110/112 - Design and Communication I</b>	Instructor:	<b>F. Firmani</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"><li>• Primary duty is interacting with student teams online during labs advising students on their design exercises and projects, marking, student feedback. Also time during lecture hour on team learning activities.</li><li>• You must be outgoing, enjoy interacting with students, and able to communicate clearly and effectively in spoken and written English.</li><li>• Background in practical engineering design (concept generation/selection/refinement) and teamwork (conflict management, expectation setting) is essential</li></ul>		

<b>MECH 200A – Intro to Technical Drawing and CAD</b>	Instructor:	<b>V. Ahsani</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"><li>• Excellent interpersonal and communication skills</li><li>• Proficiency with SolidWorks</li><li>• Solid background in Engineering Drawing and descriptive geometry</li><li>• Being familiar with the Engineering Design Process</li><li>• Available to supervise SolidWorks labs/tutorials remotely and in-person</li></ul>		

<b>MECH 240 - Thermodynamics</b>	Instructor:	<b>H. Struchtrup</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"><li>• Strong background and knowledge in thermodynamics</li><li>• Excellent interpersonal and communication skills</li><li>• Must be able to take initiative and be flexible</li></ul>		

<b>MECH 242 - Dynamics</b>	Instructor:	<b>M. Amereh</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"><li>• Knowledge of rigid body dynamics and related mathematical background (vector algebra, matrix algebra, coordinate representation of vector equations using matrix notation)</li></ul>		

- Experience with MATLAB and Simulink (for consulting with students on numerical implementations of solutions to problem sets)
- Duties include consulting with students, grading assignments, and running tutorials

<b>MECH 320 – Mechanics of Solids II</b>	Instructor:	<b>B. Nadler</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Grading quizzes, labs and exams</li> <li>• Lab oversight - monitoring student experiments, enforcing strict safety protocols, and providing one-on-one assistance</li> </ul>		

<b>MECH 342 – Dynamics II</b>	Instructor:	<b>B. Buckham</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Preferably has prior experience with the course or a related subject</li> <li>• Comfortable using Brightspace, MATLAB, and OBS Studio</li> <li>• Has completed undergraduate dynamics courses and is confident in deriving and working with equations of motion for rigid bodies in 3D.</li> </ul>		

<b>MECH 350 – Engineering Design</b>	Instructor:	<b>D. Olender</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Excellent interpersonal and communication skills are essential.</li> <li>• Candidates must have demonstrated experience in Engineering Design.</li> <li>• Must have completed Mech Eng. Machine Shop safety course, or permission of the Department Machinist to work in the Machine Shop.</li> </ul>		

<b>MECH 381 – Control Systems II</b>	Instructor:	<b>H. Najjaran</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• MATLAB and SIMULINK proficiency</li> <li>• Knowledge of classical control (frequency domain)</li> <li>• Familiarity with modern control (time domain)</li> </ul>		

<b>MECH 390 – Energy Conversion</b>	Instructor:	<b>A. Rowe</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• An ideal candidate will have previously taken courses or have similar experience</li> <li>• Preferably have been a teaching assistant for the course before</li> </ul>		

<b>MECH 392 – Mechanics of Fluid II</b>	Instructor:	<b>P. Oshkai</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Strong background in fluid mechanics</li> <li>• Ideal candidate will have previously taken this course or equivalent</li> <li>• Preferably has been a teaching assistant for the course before</li> </ul>		

<b>MECH 395 - Heat Transfer</b>	Instructor:	<b>J. Lee</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Explaining concepts &amp; methods for heat conduction, convection &amp; radiation calculation</li> <li>• Helping students to apply these methods to energy systems, bio systems &amp; manufacturing</li> <li>• Guiding students to recognize examples of HT in daily life (e.g. the kitchen, HVAC)</li> </ul>		

<b>MECH 400A – Capstone Design Proposal</b>	Instructor:	<b>S. Roberts</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Experience with Engineering Design</li> <li>• Experience with machine shop manufacturing, software and electronics</li> <li>• Previous experience setting design criteria/specifications</li> <li>• Excellent communication – verbal and written</li> <li>• The ability to understand various complex problems.</li> <li>• The ability to interact with and guide students to provide project direction for students.</li> </ul>		

<b>MECH 410/520 - Computer-Aided Design and Engineering</b>	Instructor:	<b>Z. Dong</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Previously taken MECH 410/520 or equivalent course required</li> <li>• Knowledge of Siemens NX CAD/CAE (FEA/CFD) and ANSYS required</li> <li>• Knowledge of Solidworks desirable</li> </ul>		

<b>MECH 424 – Materials for Sustainability</b>	Instructor:	<b>B. Yu</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Solid knowledge of materials science (e.g. MECH 285), solid mechanics (e.g. MECH 220), and thermal properties (e.g. MECH240)</li> <li>• Experience in materials selection, using ANSYS Granta EduPack, and/or life cycle analysis package</li> <li>• Excellent communication skills, both verbal and written</li> <li>• The ideal candidate should have a strong interest in sustainable technologies and climate action</li> <li>• This is a project-based learning course. The ideal candidate needs to demonstrate the ability to mentor student teams, support students in project planning, and provide constructive feedback on design proposal.</li> </ul>		

<b>MECH 427 A01 – Exergy Conversion &amp; Storage</b>	Instructor:	<b>A. Rowe</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Knowledgeable in Thermofluids – thermodynamics, heat transfer, fluid mechanics</li> </ul>		

<b>MECH 443/541 – Advanced Thermodynamics</b>	Instructor:	<b>H. Struchtrup</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Good knowledge of Thermodynamics</li> <li>• Ideal candidate will have previously taken course or similar experience</li> </ul>		

<b>MECH 446/MECH 546 – Intro to Ocean Engineering</b>	Instructor:	<b>B. Robertson</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Knowledge of ocean waves and basic hydrodynamics</li> <li>• Hydrodynamic modelling software (ProteusDS, WEC-Sim, OrcaFlex, etc)</li> <li>• Excellent interpersonal and communication skills</li> <li>• Must be able to take initiative and be flexible</li> </ul>		

<b>MECH 450A/MECH 580 A07 - Nuclear Science, Materials, and Techniques</b>	Instructor:	<b>B. Sawicka</b>
<u>Special Skills or Other Requirements:</u>		

- Experience grading qualitative and quantitative assessments (with answer keys)
- Strong writing communication skills
- Some familiarity with Course Spaces, and inputting grades and comments

<b>MECH 450D/580 A03 – Engineering Optimization</b>	Instructor:	<b>R. Marques</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Solid knowledge of linear algebra (matrix algebra and determinants) and calculus (differential calculus and Taylor series).</li> <li>• Excellent interpersonal and communication skills (for consulting with students)</li> <li>• Proficiency with MATLAB software and knowledge of programming in Python are required (for marking students' assignments).</li> </ul>		

<b>MECH 458/554 - Mechatronics</b>	Instructor:	<b>H. Najjaran</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Hands-on experience with C programming</li> <li>• Atmel microprocessor programming</li> <li>• Previously taken MECH 458/554</li> </ul>		

<b>MECH 459/558 - Fundamental of Hybrid Electric Vehicles</b>	Instructor:	<b>Z. Dong</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Previously taken MECH 459/558 required</li> <li>• Knowledge of MATLAB/Simulink required</li> <li>• Knowledge of ADVISOR and AUTONOMIE required</li> </ul>		

<b>MECH 473 – Ferrous + Non-Ferrous Metal</b>	Instructor:	<b>R. Herring</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Previously taken materials science or materials engineering course (eg. Mech 285) required.</li> <li>• Ideal candidate will have previously taken course or similar experience</li> </ul>		

<b>MECH 483 /MECH 510/BME 525 – Mech/Energy Conv. for Living Cells</b>	Instructor:	<b>S. Fardindoost</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Ideal candidate has a background and an interest in the workings of living cells</li> <li>• Preferably have been a teaching assistant for the course before</li> </ul>		

<b>MECH 487 – Sensors and Actuators</b>	Instructor:	<b>N. Dechev</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Excellent interpersonal and communication skills</li> <li>• Must be able to take initiative and be flexible</li> </ul>		

<b>MECH 594/595/695 - Seminar</b>	Instructor:	<b>K. Ahmadi</b>
<u>Special Skills or Other Requirements:</u>		
<ul style="list-style-type: none"> <li>• Candidate will coordinate seminars, introduce speakers, collect feedback, prepare the next term's schedule, and maintain attendance spreadsheet</li> </ul>		

**ASE 501 - Autonomous Aircraft Systems**

**Guidance, Navigation and Control**

Instructor:

**M. Bras**

Special Skills or Other Requirements:

- Strong background in aircraft dynamics, flight mechanics, and feedback control systems
- Knowledge of guidance, navigation, and control concepts for autonomous aircraft systems, including stability augmentation, attitude control, and guidance/position control
- Experience with mathematical modelling and simulation of dynamic systems using MATLAB/Simulink
- Strong communication and organizational skills and a student-support mindset
- Familiarity with state-space methods, linearization, stability analysis, control-loop design, and basic estimation or sensor-fusion concepts is an asset
- Previous experience with UAVs, autonomous systems, robotics, aerospace systems, or control-related research/projects is preferred

**ASE 502 - Advanced Electric and Hybrid Flight**

**Propulsion Systems**

Instructor:

**TBD**

Special Skills or Other Requirements:

- Strong background in aircraft propulsion, thermodynamics, and aircraft performance
- Knowledge of jet engines, gas turbines, and electrified or hybrid-electric aircraft propulsion systems
- Ability to support students with engine cycle analysis, propulsion calculations, and performance assessment
- Strong communication and organizational skills
- Experience with MATLAB, Python, Excel, or similar tools for analysis and simulation is preferred