

University of Victoria – Mechanical Engineering

Posting for CUPE 4163 Specialist Instructional (TA)

TA-Marker positions will be solely focused on working within the course instructional team to grade student work. This can include (as examples):

- Generating a grading rubric based on input from the course primary instructor.
- Interpreting a rubric to grade student submissions and to provide concise written feedback.
- Managing grade entry and record keeping in collaboration with the other members of the course's instructional team

TA-Instructor positions encompass those of a TA-Marker plus activities that facilitate student learning in the course, including (as examples):

- Assistance generating teaching materials
- Planning and delivery of tutorial or laboratory sessions
- Facilitating student group activities
- Fielding student questions outside of scheduled course meeting times

Both TA-Marker and TA-Instructor positions require good working knowledge of the course content. The difference between the positions is that TA-Instructors must expect to engage with students in the course in a face-to-face manner and facilitate student learning through active instruction. **Applicants for TA-Instructor positions must be capable of leading classroom sessions, working face-to-face with students and fielding student questions and sourcing solutions to the problems students present.** To qualify for a TA-Instructor position you must:

1. have completed all 4 workshops offered by the Department's Teaching Assistant Coordinator (TAC) – these workshops run in Sep and Jan, **OR**
2. have completed the first two TAC workshops **AND** have your application endorsed by the course's lead instructor – this endorsement will be solicited by the Grad Program Director if TAC workshops 3 and 4 have not been completed. This may result in a request that you meet with the instructor to discuss the position duties and your relevant experience.

Understanding that there is preparatory, and consultation time involved for the responsibilities of a TA-Instructor, the hours allotted for TA-Instructors are higher. TA Instructor positions are set at **70 hours** for the term and a TA-Marker position is **40 hours** for a term. Increases on these nominal values must be requested by the course's lead instructor, and such requests must be justified based on a review of TA responsibilities as recorded in the "TA Checklist of Assigned Duties and Approved Work Schedule" at the start and at the midpoint of the term.

TA Positions for Spring 2026

Both types of positions are available in the courses listed below. When referring to the criteria listed for each position, please note that TA-marker positions associated with a course have a reduced list of responsibilities (not all criteria apply to TA-Marker positions).

Term of appointment:

TAs are expected to be available from the beginning of the semester (Jan 5, 2026) and assist with marking the final examination (exam period is April 7-22, 2026).

Hourly Rate: **\$34.72**

ENGR 141 – Engineering Fundamentals

Instructor:

F. Firmani

Special Skills or Other Requirements:

- Facilitate student led tutorials by assisting and guiding student groups as required in session
- Be confident public speakers and work with the instructors to develop presentations of the tutorial problem sets
- Mentor 1st year engineering students at drop-in seminar sessions
- Work well within a large TA team and independently coordinate tasks with colleagues
- Have excellent interpersonal and communication skills
- Have a good background in statics

MECH 150 – 3D Printing Prototyping Design

Instructor:

A. Brice

Special Skills or Other Requirements:

- Candidates should have extensive knowledge of FDM and SLA printing
- Strong understanding of design for 3D printing including tolerancing, printable geometries, connections/fits, and part orientation
- Knowledgeable with SolidWorks and/or Blender, 3D scanning, mesh manipulation, and 3D slicing software
- Previous experience/comfortable instructing labs (drafting, or 3D printing desirable)

MECH 220 – Mechanics of Solids I

Instructor:

M. Amereh

Special Skills or Other Requirements:

- Completion of an upper-level undergraduate or graduate level course in solid mechanics or continuum mechanics

TA Positions for Spring 2026

MECH 240 - Thermodynamics

Instructor:

S. Gharehkhani**Special Skills or Other Requirements:**

- Strong background and knowledge in thermodynamics
- Excellent interpersonal and communication skills
- Must be able to take initiative and be flexible

MECH 330 - Intro to Mechanical Vibrations

Instructor:

K. Ahmadi**Special Skills or Other Requirements:**

- Solid knowledge of rigid body dynamics, multi-degree of freedom vibrations, and relevant mathematical background (ODEs, Laplace transformations, Fourier analysis, vector and matrix algebra).
- Proficiency with Matlab and Simulink software.
- Duties include: 1. preparing solutions to, consulting with students on, and marking assignments, including Matlab/Simulink component; 2. running lab sessions and marking lab reports; 3. assisting in the marking of midterm and final exams

MECH 335 – Theory of Mechanisms

Instructor:

F. Firmani**Special Skills or Other Requirements:**

- Candidates for the TA position(s) are asked to have an appropriate background in Mechanisms, which involves linkage analysis (position, velocity and acceleration), static and dynamic force analysis, and cam design.
- Candidates are expected to be familiar with software for mechanism design like Working Model 2D.
- At least one laboratory experiment will be assigned to each TA, who will assist students during a three-week period.

MECH 345 – Mechanics of Fluids

Instructor:

S. Gharehkhani**Special Skills or Other Requirements:**

- Candidates should have a strong background in fluid mechanics.
- Previous experience in running labs is an asset
- Previous experience teaching Thermofluidic courses is an asset

BME 350 – Biomedical Engineering Design

Instructor:

J. Giles**Special Skills or Other Requirements:**

- Excellent interpersonal and communication skills are essential.
- Candidates must have demonstrated experience in Engineering Graphics and Drawing. Candidate will be asked to provide tutorials on engineering drawing and graphics.
- Candidates must have demonstrated experience in Engineering Design.

TA Positions for Spring 2026

MECH 360 - Design of Mechanical Elements	Instructor:	N. Dechev
Special Skills or Other Requirements:		
<ul style="list-style-type: none"> • Experience with mechanical design and machine elements • Good interpersonal and communication skills for partial supervision of the MECH 360 Design Project • Experience with Gear Train Design, shafts, bearings and fasteners 		

MECH 380 - Automatic Control Engineering	Instructor:	Y. Shi
Special Skills or Other Requirements:		
<ul style="list-style-type: none"> • Solid knowledge of control theory and related mathematical background (Laplace transformations, matrix algebra and analysis, complex variable theory; transfer-function based analysis and design; frequency-characteristics based analysis design; state-space analysis and design). • Proficiency with Simulink software. Duties include consulting with students on Simulink applications and correction/evaluation of three students' projects. 		

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

MECH 400B – Capstone Design Project	Instructor:	TBD
Special Skills or Other Requirements:		
<ul style="list-style-type: none"> • Technical competency interacting with groups of final year engineering undergraduates. • The TA must be available to attend and participate during the weekly class. • Excellent communication (oral and written) and organizational skills. • Must have experience in engineering design and have completed and undergraduate mechanical engineering design courses. • Experience with programming, microcontrollers, and machine shop practice. 		

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

TA Positions for Spring 2026

**BME 420/520– Human Factors & Usability
Engineering for Medical Devices**

Instructor: **S. Willerth**

Special Skills or Other Requirements:

- Previously taken BME 420
- Experience as a Teaching Assistant (TA)

MECH 422 - Advanced Materials and Processes

Instructor: **S. Tekumalla**

Special Skills or Other Requirements:

- Candidates should have a strong background in materials/manufacturing.
- Previous experience in assisting with group projects is an asset.
- Duties include consulting with students and evaluation of the students' assignments, projects, and term papers.

MECH 431 – Advanced Fluid Mechanics

Instructor: **Peter Oshkai**

Special Skills or Other Requirements:

- Previously taken MECH 531 or experience with fluid mechanics required
- Previous experience being a TA for Advanced Fluid Mechanics (MECH 450E)

**MECH 442 – Heating, Ventilation, and Air
Conditioning Systems**

Instructor: **L. Amlani**

Special Skills or Other Requirements:

- Ideal candidate will have previously taken course or similar experience

MECH 447/542 – Energy Systems

Instructor: **A. Rowe**

Special Skills or Other Requirements:

- Ideal candidate will have previously taken courses or similar experience
- Familiar with energy and electrical systems.
- Preferably has been a teaching assistant for the course before

**MECH 448/580 A01/BME 448/548 – Intro to
Musculoskeletal Biomechanics**

Instructor: **J. Giles**

Special Skills or Other Requirements:

- Ideal candidate will have previously taken courses or similar experience
- Experience with kinematic analysis and spatial transformations is an asset
- 2D and 3D force analysis using first principles and homogenous transformations
- Understanding of stress and strain relationships and formulae
- Strong skills in Matlab

TA Positions for Spring 2026

MECH 450D – Pulp and Paper Technology

Instructor:

B. Dalpke

Special Skills or Other Requirements:

- Previously having taken MECH 450D is an asset but not required

MECH 458/554 – Mechatronics

Instructor:

Y. Shi

Special Skills or Other Requirements:

- Ideal candidate will have previously taken course or similar experience

MECH 475 /538 – Aircraft Design

Instructor:

A. Suleman

Special Skills or Other Requirements:

- Hands-on experience with Atmel microprocessor programming and have taken MECH 458/554

MECH 481/515/BME 481/515 – Biomaterials + Tissue Engineering

Instructor:

K. Valente

Special Skills or Other Requirements:

- Previously taken MECH/BME 481 or MECH 515.

MECH 493 – Design of Thermo-Fluid Systems

Instructor:

S. Gharehkhani

Special Skills or Other Requirements:

- Strong background in Thermofluids and design
- Preferably has been a teaching assistant for the course before
- Responsibilities will include handling and covering the quiz material on pipes, and marking quizzes and exams

MECH 495/535 – Computational Fluid Dynamics

Instructor:

P. Oshkai

Special Skills or Other Requirements:

- Ideal candidate will have previously taken courses or similar experience

BME 499 – Design Project

Instructor:

S. Willerth

Special Skills or Other Requirements:

- Excellent communication and organizational skills.

TA Positions for Spring 2026

MECH 580 A02 - Design of Experiments for Hypothesis Testing and Modelling

Instructor:

C.Valeo

Special Skills or Other Requirements:

- Candidates should have a strong background in statistics
- Previous experience in running labs is an asset
- Previous experience teaching Instrumentation courses is an asset

MECH 594/595/695 – Seminar

Instructor:

K. Ahmadi

Special Skills or Other Requirements:

- Candidate will co-ordinate seminars, introduce speakers, collect feedback, prepare the next term's schedule, and maintain attendance spreadsheet.

MECH 601 – Engineering Analysis

Instructor:

C. Valeo

Special Skills or Other Requirements:

- Thorough understanding of applied engineering mathematics