

University of Victoria
Posting for CUPE 4163 Specialist Instructional (TA)

Department: **Mechanical Engineering**
Term of appointment: **TAs are expected to be available from the beginning of the semester (Jan 9, 2023) and to assist with marking the final examination (exam period is April 11-26, 2023).**
Hourly Rate: **\$27.65**

ENGR 141 – Engineering Fundamentals	Instructor: F. Firmani S. Saghatoun
Special Skills or Other Requirements:	
<ul style="list-style-type: none">• 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	

ENGR 446 – Technical Report	Instructor: A. Senini
<ul style="list-style-type: none">• Excellent spoken and written English• Excellent technical writing skills• The ability to understand various complex problems and provide guidance and direction for students• Excellent communication skills• Assignments come every three weeks, when students complete work the assignments should be returned to them in less than five days.• Organized• Experience with Electrical, Software and Biomedical Engineering technical problems is an asset.	

MECH 220 – Mechanics of Solids I	Instructor: P.Wild
Special Skills or Other Requirements:	
<ul style="list-style-type: none">• Completion of an upper level undergraduate or graduate level course in solid mechanics or continuum mechanics	

TA Positions for Spring 2023

MECH 285 - Properties of Engineering Materials Instructor: **R. Herring**

Special Skills or Other Requirements:

- Knowledge of materials' science, preferably from Mech285 course and lab previously taken, or equivalent.
- Excellent communication and organizational skills.
- Requires conducting labs and tutorials, marking labs, assignments and mid-term tests.

BME 320 – Engineering Materials with BME

Applications

Instructor: **K. Valente**

Special Skills or Other Requirements:

- Candidate should have a strong background in material science (including metals, semi-conductors, ceramics and polymers)
- Candidate should have a strong background in biomedical materials
- Candidate must be familiar with running laboratory classes
- Candidate must have excellent time management skills in addition to interpersonal and communication skills
- Candidate must complete a WHMIS safety training course

BME 350 – Biomedical Engineering Design

Instructor: **M. Black**

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.

**BME 401C/520 – Human Factors and Usability
Engineering for Medical Devices**

Instructor: **S. Willerth
(T.Carswell)**

Special Skills or Other Requirements:

- Previously taken BME 401C
- Past experience as a Teaching Assistant (TA)

MECH 320 – Mechanics of Solids II

Instructor: **M. Bras**

Special Skills or Other Requirements:

- 1 position requires experience with COMSOL Multiphysics
- Other position(s) for grading and lab

TA Positions for Spring 2023

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 fairly 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: **TBA**

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

MECH 350 – Engineering Design

Instructor: **N. Dechev**

Special Skills or Other Requirements:

- Excellent interpersonal and communication skills are essential.
- Candidates must have demonstrated experience in Engineering Design.
- Must have completed Mech Eng. Machine Shop safety course, or permission of the Department Machinist to work in the Machine Shop.

MECH 390 – Energy Conversion

Instructor: **A.Rowe**

Special Skills or Other Requirements:

- Ideal candidate will have previously taken course or similar experience
- Preferably has been a teaching assistant for the course before

MECH 400 - Design Project

Instructor: **C. Crawford**

Special Skills or Other Requirements:

- Knowledge of electronics and microcontrollers.
- Excellent communication and organizational skills.
- Classroom participation required.

MECH 410/520 - Computer-Aided Design and Engineering

Instructor: **Z. Dong**

Special Skills or Other Requirements:

- Previously taken MECH 410/520 or equivalent course required
- Knowledge of Siemens NX CAD/CAE (FEA/CFD) required
- Knowledge of Solidworks desirable

TA Positions for Spring 2023

MECH 421/504 – Mechanical Vibrations

Instructor: **TBA**

Special Skills or Other Requirements:

- Ideal candidate will have previously taken course or similar experience
- Preferably has been a teaching assistant for the course before

MECH 442 – Heating, Ventilation, and Air Conditioning Systems (previously MECH 450B)

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 course or similar experience
- Familiar with energy and electrical systems.
- Preferably has been a teaching assistant for the course before

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 450E – Fluids Mechanics II

Instructor: **P. Oshkai**

Special Skills or Other Requirements:

- Candidates should have a strong background in fluid mechanics.
- Previous TA experience in the Thermofluids area is an asset

MECH 458/554 – Mechatronics

Instructor: **K. Zhang**

Special Skills or Other Requirements:

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

MECH 475 – Aircraft Design

Instructor: **A. Suleman
R. Marques**

Special Skills or Other Requirements:

- Ideal candidate will have previously taken course or similar experience

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

Instructor: **K. Valente**

Special Skills or Other Requirements:

- Previously taken MECH/BME 481 or MECH 515.

TA Positions for Spring 2023

MECH 492/540 – Transport Phenomena

Instructor: **H. Struchtrup**

Special Skills or Other Requirements:

- Ideal candidate has interest and background in transport theory and/or thermofluids

MECH 495/535 – Computational Fluid Dynamics

Instructor: **P. Oshkai**

Special Skills or Other Requirements:

- Ideal candidate will have previously taken course or similar experience

MECH 580 – Applied Machine Learning

Instructor: **H. Najjaran**

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 594/595/695 – Seminar

Instructor: **B. Nadler**

Special Skills or Other Requirements:

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