Preferred qualifications:

Demonstrated ability to apply basic thermodynamics concepts in real-world applications
Completion of either or both engineering fluid mechanics and heat transfer courses.
Prior TA experience in Thermodynamics, Fluid Mechanics, and Heat and Mass

SEE 225 - Fluid Mechanics

Mandatory qualifications:

SEE 242 - Computational Methods

Mandatory qualifications:

demonstrated knowledge of numerical methods including applications for root-finding, solving linear systems of equations, integration and differentiation, optimization, error estimation, and solving ODEs.
Demonstrated experience applying engineering software tool, MATLAB, in practical

Preferred qualifications:

Prior experience leading engineering and/or programming lab sessions.

SEE 251- Electric Machines

Mandatory qualifications:

Successful completion of at least one advanced course on Electric Machines and/or AC systems at the senior undergraduate / graduate level at the time of application.
Successful completion of an electric/power lab safety training workshop.
Proven expertise in 3

Demonstrated ability to apply lab safety practices and follow safe work procedures in lab/workshop.
Experience supporting team- and project-based coursework or equivalent.
Prior TA experience in capstone courses is preferred.

SEE 463 - Embedded Computer Systems

Mandatory qualifications:

Demonstrated Experience with a computer programming language (C++, Python) and PLC programming.
Demonstrated experience with Input/Output interfacing for

Preferred qualifications:

Knowledge of Embedded Systems Hardware and Software.
Ability to prepare content, conduct tutorial and labs, and assess students work.
Ability to work with students and troubleshoot their circuits and their codes.

SEE 475 - Special Topics in SEE

Mandatory qualifications:

Up-to-date completion of the following safety modules at SFU: "EHS Safety Essentials (formerly General Lab Safety; includes SFU Safety Orientation)" and "EHS Laboratory Safety (formerly Chemical Safety; includes WHMIS 2015)".
Demonstrated hands-on experience of device fabrication via solution-based methods.
Completion of at least one course in energy harvesting device technologies.

Preferred qualifications:

Prior TA experience.

SEE 476 - Advanced Power Electronics for Sustainable Energy Applications

Mandatory qualifications:

Successfully completed senior undergraduate or graduate level courses in advanced power electronics

Demonstrated proficiency using dedicated power electronics simulation software (e.g., PLECS, PSIM)