


UPEI FACULTY OF
SUSTAINABLE DESIGN ENGINEERING

INDUSTRY CLINIC PROJECTS 2019–2020



Engineers become proficient at design by practicing design. UPEI's sustainable design engineering program focuses on experiential learning: learning by "doing." Clinic projects, which are integrated into every academic semester, are based on real-world problems and designed for external clients. Here are the 2020–21 projects—see what our clinic teams have been doing.



UNIVERSITY
of Prince Edward
ISLAND

Faculty of
SUSTAINABLE
DESIGN ENGINEERING

1ST YEAR DESIGN

PARTNER

PARKS CANADA, PEI NATIONAL PARK, *PEI Locations*

PROJECT

Solutions for climate change

2ND YEAR DESIGN

PARTNER

STANDARD AERO, *Slemon Park, PEI*

PROJECT

Fixture for blasting turbine blades

PARTNER

STEPSCAN TECHNOLOGIES INC., *Charlottetown, PE*

PROJECT

Design of equipment for conducting sensor crosstalk testing

PARTNER

UPSTREET CRAFT BREWING, *Charlottetown, PEI*

PROJECT

Design of system to dispose of spent grain

PARTNER

WESTERN HOSPITAL, *Alberton, PEI*

PROJECT

Dispenser design for incontinence pads

2ND YEAR DESIGN

PARTNER

ATLANTIC AQUA FARMS, *Georgetown, PEI*

PROJECT

Design a device to remove socking material and rope from backlines

PARTNER

CANADIAN SPACE AGENCY, *Ottawa, Ont.*

PROJECT

Ground support equipment for SpudNik-1 CubeSat

PARTNER

CAVENDISH FARMS CULINARY CENTRE,
Charlottetown, PEI

PROJECT

Design of specialty food product

PARTNER

CONNIE MACDONALD, *Charlottetown, PEI*

PROJECT

Solution to urban noise pollution for a residential property

PARTNER

HABITAT FOR HUMANITY PEI, *Charlottetown, PEI*

PROJECT

Home water usage audit and analysis

PARTNER

NINE YARDS STUDIO, *Charlottetown, PEI*

PROJECT

Urban periscope design for a Charlottetown park

PARTNER

PEI ANALYTICAL LABS, *Charlottetown, PEI*

PROJECT

Automation of rainmaker test apparatus

PARTNER

QEH FOUNDATION, *Charlottetown, PEI*

PROJECT

Development of a coin and cash donation collector

3RD YEAR DESIGN

PARTNER

ACADIAN SUPREME, *Wellington, PEI*

PROJECT

Design improvements for cleaning lobster holding tanks

PARTNER

AGRICULTURE AND AGRI-FOOD CANADA,
Charlottetown, PEI

PROJECT

Design of temperature-controlled containers for plant research trials

PARTNER

CANADIAN SPACE AGENCY, *Ottawa, Ont.*

PROJECT

Design of ground station for SpudNik-1 communications

PARTNER

CANADIAN TIRE CORPORATION, *Bolton, Ont.*

PROJECT

Lift assist device for heavy pails and buckets

PARTNER

CAVENDISH FARMS, *New Annan, PEI*

PROJECT

System design improvements for water and energy recovery

PARTNER

EASTERN FABRICATORS, *Georgetown, PEI*

PROJECT

Design of lobster claw/knuckle automated cutting system

PARTNER

ISLAND ABBEY FOODS, *Charlottetown, PEI*

PROJECT

Automated process to measure gummy weight

PARTNER

QEH PHYSICAL MEDICINE, *Charlottetown, PEI*

PROJECT

Obstacle course design to assist with rehabilitation

4TH YEAR DESIGN

PARTNER

CANADIAN SPACE AGENCY, *Ottawa, Ont.*

PROJECT

Payload and structure design for SpudNik-1 CubeSat

PARTNER

CAVENDISH FARMS, *New Annan, PEI*

PROJECT

Optimization of primary clarifiers

PARTNER

DEFENCE RESEARCH AND DEVELOPMENT CANADA,
Valcartier, Que

PROJECT

Design and implementation of a radio frequency signal measurement system

PARTNER

MDS COATING TECHNOLOGIES, *Slemon Park, PEI*

PROJECT

Automated system for mixing and loading powder to 3D printer

PARTNER

NORCAN MARINE, *Montague, PEI*

PROJECT

Scaling Norcan 222 hull design and performance for fishing boat application

PARTNER

PEI DEPARTMENT OF AGRICULTURE AND LAND,
Charlottetown, PEI

PROJECT

Yield monitoring system for potato harvesters

PARTNER

THALES CANADA, *Ottawa, Ont.*

PROJECT

Software tool to optimize fuel efficiency of BC ferries



upei.ca/engineering/industry-partnership/design-clinic-program



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