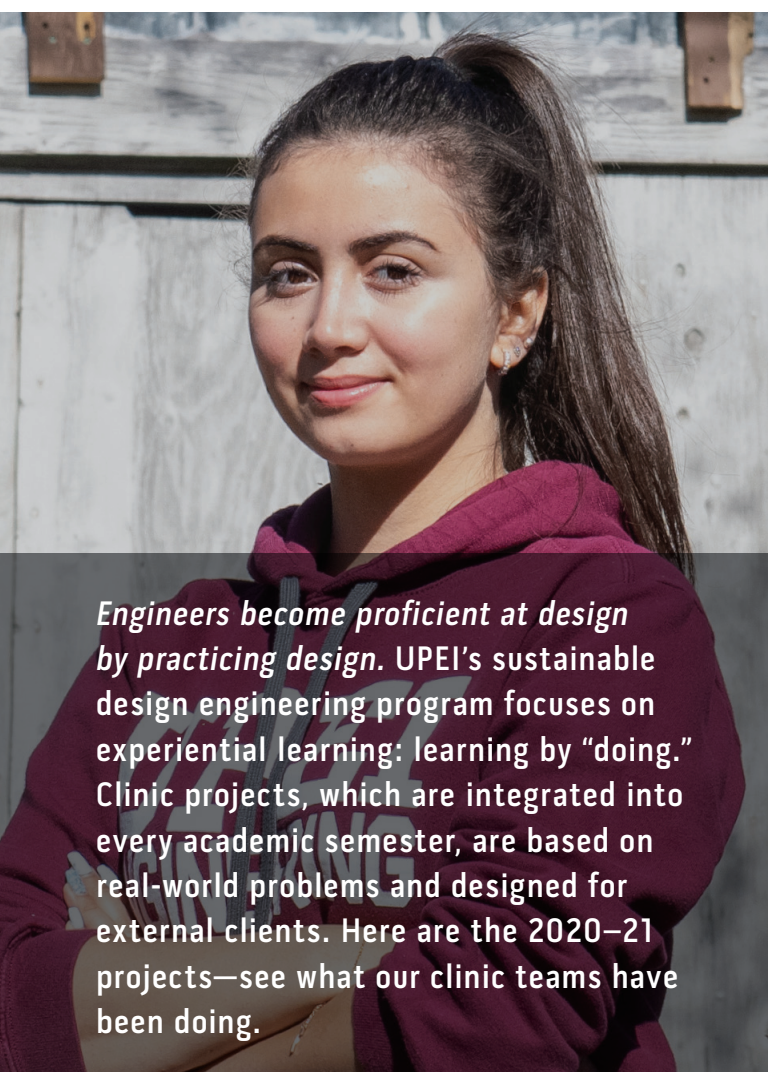


UPEI FACULTY OF
SUSTAINABLE DESIGN ENGINEERING

INDUSTRY CLINIC PROJECTS 2020–2021



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*

PROJECTS

- COVID-19 mitigation strategies
- Traffic control along Gulf Shore Parkway
- Protection of piping plover nesting areas
- Offgrid mobile visitor accommodation for Greenwich Park



2ND YEAR DESIGN

PARTNER

ATLANTIC AQUA FARMS, *Oyster Bed, PEI*

PROJECT

Separating oyster clusters

PARTNER

BRICKS 4 KIDZ, *Scotchfort, PEI*

PROJECT

LEGO cleaning and sorting

PARTNER

CAVENDISH FARMS CORPORATION, *New Annan, PEI*

PROJECT

Trench cleaning system

PARTNER

BOUTIQUE MAAEMO, *Montreal, Que.*

PROJECT

Dispenser for zero-waste store

PARTNER

NATURE'S CROPS INTERNATIONAL, *Kensington, PEI*

PROJECT

Design of a packaging line

PARTNER

NORCAN MARINE, *Montague, PEI*

PROJECT

Design and construction of scale models for a tow tank

PARTNER

PEI ANALYTICAL LABORATORIES, *Charlottetown, PEI*

PROJECT

Soil health drying process

3RD YEAR DESIGN

PARTNER

ASPIN KEMP & ASSOCIATES (AKA), *Montague, PEI*

PROJECT

Design and construction of a towing platform and wave absorber for a tow tank

PARTNER

BELL ALIANT CENTRE, *Charlottetown, PEI*

PROJECT

Review of proposed mechanical systems improvements

PARTNER

CANADIAN SPACE AGENCY, *Ottawa, Ont.*

PROJECTS

- Detailed design and prototyping of CubeSat electrical power subsystem
 - CubeSat - supervisory control and data acquisition
-

PARTNER

CAVENDISH FARMS CORPORATION, *New Annan, PEI*

PROJECT

- Freeze tunnel optimization
 - Biogas heat exchanger auto cleaning cycle
-

PARTNER

ISLAND ABBEY FOODS, *Charlottetown, PEI*

PROJECT

Lozenge material transfer

PARTNER

UPEI FACILITIES MANAGEMENT, *Charlottetown, PEI*

PROJECT

Mapping of UPEI underground utilities

4TH YEAR DESIGN

PARTNER

ASPIN KEMP & ASSOCIATES (AKA), *Montague, PEI*

PROJECT

Design of a dynamometer combined with testing protocols and procedures, and data acquisition tools for a tow tank

PARTNER

CANADIAN SPACE AGENCY, *Ottawa, Ont.*

PROJECTS

- CubeSat - communications and data handling
 - CubeSat - detailed mechanical design and payload
-

PARTNER

CAVENDISH FARMS CORPORATION, *New Annan, PEI*

PROJECT

Co-generation feasibility study

PARTNER

CANADIAN SPECIAL OPERATIONS FORCES COMMAND (CANSOFCOM), *Quebec, Que.*

PROJECT

Passive wind measurement

PARTNER

PARKS CANADA, *Charlottetown, PEI*

PROJECT

Cavendish Campground net-zero photovoltaic project



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



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