Hanan Anis

Centre en génie entrepreneurial de la conception
genie.uOttawa.ca/entrepreneurship/ceed

Centre for Entrepreneurial Engineering Design
engineering.uOttawa.ca/entrepreneurship/ceed
The Centre for Entrepreneurship and Engineering Design

- Courses
- Competitions
- Rapid Prototyping Facilities
- Professional Development
- Extra Curricular Programs
Prototyping Facilities

MAKERLAB  

RICHARD L'ABBÉ  
MAKERSPACE  

BAC À SOBLE  
SONDBOX

CFF MTC  

CENTRE  
BRUNSFIELD  
CENTRE

JOHN McENTYRE  
TEAM SPACE

ALIMENTÉ PAR  
POWERED BY  
CGEC  
CEED
Richard L’Abbé Makerspace

- Feature 3D printers, VR, 3D scanners, embroidery machines and Laser Cutters.
- Open to community on Sundays

~ 1500 users/year
The Brunsfield Centre

Engineering students can design, fabricate, and test complex prototypes. Machineshop equipment include lathes, milling machines and CNC.

~ 300 users/year
John McEntyre Team space (JMTS)

Provides pre-competitive teams involved in large-scale projects with the space and infrastructure required to succeed.

~ 200 users/year
Client based courses

Undergraduate Level:
- Controlled interaction with clients.
- One client per section.
- Minimum of 3 client meetings.

GNG1103/1503
Engineering Design

GNG2101/2501
Introduction to Product Development

GNG4120
Introduction to Technology Entrepreneurship

Graduate Level:
- Each student team has a client.
- Teams take projects from prototypes to full products.

GNG5140 (new)
Engineering Design

GNG5120
Introduction to Technology Entrepreneurship

Design Focused
Entrepreneurship Focused
Design Day
Showcasing engineering design projects
• 106 teams (700 students)
• 40 judges from community & industry
1st year: Zero Carbon Foot-Print Shed
2nd year: Foot Operated TV Remote
Graduate course (GNG5120): Entrepreneurship
Entrepreneurial Engineering Design ecosystem at uOttawa

- Education: Courses, Hands-on training
- Engagement: Startup week-end, hackathons, summer school, workshops
- Experiential learning: Prototyping facilities, entrepreneurial internships, competitions
- Incubation: - Startup garage (summer program)
  - Masters in entrepreneurship
- Acceleration: Maker Launch

uOttawa.ca
Extracurricular Programs
Visit **JMTS-UOTTAWA.CA** and join now!
Makerspace challenge

- 2014 – Building a prosthetic hand for a 6 year-old Ottawa-area boy
- 2015 – Creating a cost-effective oximeter for the developing world
- 2016 – In conjunction with the Museum of Science and Technology, making interactive wearables for functional fashion
- 2017 – Creating an interactive art installations for the new STEM Complex, incorporating UX principles of engineering and art
- 2018 – VR experience for cancer patients in the Ottawa hospital
- 2019 – Overdose opioid monitor
Interested to get involved?

**Centre for Entrepreneurship and Engineering Design (CEED)**

**Volunteering**
- Makerspace:
  - 1.5 hours: Basic 3D Printing
- Brunsfield Centre:
  - 3 hours: Basic training

**Courses**
- Shadowing: 6 hours Makerspace and 6 hours Brunsfield.
- 1.5 hours: Laser cutting
- 1.5 hours: Arduino
- 3 hours: Mill
- 3 hours: Lathe
- Two intermediate level badges from the list of skills

**Employment**
- 10 hours/week
- Advance badge in each skill of the facility of your choice (through projects)

The different proficiency level badges and the trainings will offer you an opportunity to find employment opportunities with the Centre for Entrepreneurship and Engineering Design (CEED) and other organizations.

CEED hires over 50 students every term in addition to 15 TAs for the courses.
How to Develop Skills

Beginner level Badges unlock repository

Repository
- Instructions
- Documentation
- videos

Costs 20$

Proficiency Project
Demonstrates Students Knowledge and skill

Get Badge + Increase Skill Level

Volunteer Program
- Trainings 3D and Basic
- Shadow 6h in each space
- Access to Task List
- Perform Tasks
- Earn Rewards
  - Makerstore Credit (CC)
  - Learn
Skill Progression

- Tree for every skill
- Repository
  - Videos/Documentation
  - Continued Learning
  - Permanent Reference
  - Self Teaching
- Recommended* hours and knowledge
- Proficiency Projects
- Badge for every level earned
Skills

- Machine Shop Skills
  - Shop Fundamentals
  - Mill
  - Lathe
  - Welding
  - CNC

- Maker Skills
  - 3D Printing
  - Arduino
  - Laser Cutting
  - Virtual Reality
  - Embroidery
  - Soldering
Proficiency Project

- Evaluate Students Skill Level
- Proficiency Project → Integrated Projects?
- Consists of Multiple Parts
  - Made From Different Spaces
  - Incentive To Broaden Skills
  - Branch Machine Space and Makerspace
- Source of Income
Proficiency Project

Arduino Beginner Proficiency Project

Soldering Beginner Proficiency Project

Mill Beginner Proficiency Project

Lathe Beginner Proficiency Project

3D Printing Beginner Proficiency Project
Volunteer Program

- 3D Printing and Basic Training
- Shadowing
  - Get to know CEED
  - 2x3h in each space
  - Hands on Training
- Task List
  - Projects
  - Events
  - Supervision
  - Workshops
- Rewards
What do the students gain?

• Incentive to Learn
• Useful Experience
• Pushed to Explore Broader Avenues
• Opportunities
• Digital Badges
# Upcoming Events and Activities

<table>
<thead>
<tr>
<th>Events &amp; Activities</th>
<th>Dates</th>
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<tr>
<td>CEED spaces</td>
<td>They are open</td>
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<tr>
<td>Entrepreneurial concept Competition</td>
<td>Early February</td>
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<tr>
<td>Simon Nehme entrepreneurship summer school</td>
<td>Last week of April</td>
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