The Canadian/Norwegian Student Sounding Rocket Program (CaNoRock)

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The Andøya Rocket Range
CaNoRock Exchange Details

- Week-long course in sounding rockets, payload, telemetry and instrument design at the Andøya Rocket Range in Norway (70°N).
- February 3 to 7, 2020
- Build, test and launch a 5 kg payload to 10 km altitude
- Earn possible course credit*
- Participate in student workshops
- UofA and CSA funding covers the majority of fees and travels costs

* Depends on the Faculty/Program.
Eligibility and Selection Criteria

Eligibility:
• Targeted to U of A undergrads in the Faculties of Science and Engineering
• Several spots available

Selection Criteria:
• GPA
• Career ambitions in space
• Demonstrated Leadership and Teamwork
• Related projects & experience (tech. expertise)
• Presentation, ability to represent the university, compliance with application requirements
• Interview of short-listed candidates
Submit via email by 23:59 on Dec. 9, 2019 to isset@ualberta.ca

- Résumé
- Unofficial transcripts (BearTracks)
- One page essay describing
  - Why you would like to participate
  - How you meet the criteria
  - Why you are an ideal candidate
- Short-list candidates may be contacted for a brief interview
General Criteria

• Ten to Thirty applications per campaign.
• 10 spots for Canadian students.
• 3 spots for U. Alberta this time.
• B- GPA is the minimum cut-off.
• Essay carries significant weight.
Demonstrate Your Potential

• Career Aspirations
  – Show your homework (ISSET, CSA, ESA, Aerospace, etc.)
  – Interest, plan, implementation?
  – How will CaNoRock help you achieve your goals?

• Leadership and Teamwork
  – How have you shown leadership?
  – How have you shown you can work effectively in a team?
  – How is it relevant?

• Technical Expertise
  – What is your academic background and how is it relevant?
  – What projects have you worked on and how is it relevant?
  – How has your work experience prepared you for this?

• Represent the UofA

YOU ARE EVALUATED ON WHAT YOU PRESENT
Task Groups

- Rocketry
- Experimenters
- Payload
- Telemetry
- Atmospheric Physics
FAQ

• No – You don’t get to handle the explosive bit.
• Yes – There is a report required at the end.
• Yes – We expect you to do some outreach.
• Yes – You do need a valid passport.
• Yes – You really do need travel insurance.
• No – You don’t have to speak Norwegian.
Three year program was officially “launched” in January 2011 by Canada’s ambassador to Norway, John Hannaford. Extended to 5 years until 2016. Renewed in 2017 for 5 years.
CaNoRock Agreements in Place

Expanded Canadian pilot program is a tri-University collaboration (U. Alberta, U. Saskatchewan, U. Calgary) supported by memorandums of understanding. Now with inclusion of the Royal Military College.
CaNoRock at Full Capacity

C$1M funding over 5 years from CSA Communications and Public Affairs for 20 Canadian students per year (2 missions/year).
CaNoRock & CaNoSat

Proposed ten year launch schedule showing undergraduate training, graduate training and science missions

CaNoRock – Canadian Norwegian Student Rocket & Exchange Program

CaNoSat – Canadian Norwegian Student Satellite

Both funded by Norway 2011
To fly on MaxiDusty

Funded by Norway 2011
UiO: ICI-4

To be funded by Norway?
To fly on ICI-5

3U Cube:
To be funded by Norway & Canada

Funded by Norway 2011
UiT: MaxiDusty

To be funded by Norway?
UiO: ICI-5

To be funded by Canada?

Kolbjørn Blix Dahle, Head of Marketing, Andøya Rocket Range
AlbertaSat Student Team: Ex-Alta 1

- More than 60 students, 10 faculty advisers.
- Designed and built the first Alberta-built satellite!
- Record breaking crowd-funding campaign.

albertasat.ca/
Ex-Alta 1: first Alberta-built satellite!

- Launched on April 18, 2017 with 38 other cubesats to the ISS.
- Deployed from the ISS on May 26, 2017.
- Returning data daily. Approximately 1.5 year mission.
Ex-Alta 1: first Alberta-built satellite!

- Mission was completed on November 13, 2018, when Ex-Alta 1 re-entered the atmosphere.
U. Alberta Balloon Launches

ISSET-Students – AlbertaSat Team
Student Team for Alberta Rocketry Research (STARR)

New student engineering project group working on building U of A’s first amateur rocket to compete at the intercollegiate rocket engineering competition in 2020.

Members can get involved with:

- Modelling/simulation
- Fabrication and building
- Research in rocketry
- Many more

ISSET-Students – STARR Team
Institute for Space Science, Exploration and Technology (ISSET)

- Established in 2007 building on long-standing excellence in space research to take advantage of new opportunities
- Interdisciplinary Institute with faculty members from across departments in Science and Engineering
- www.isset.ualberta.ca

ISSET Students Group

- ISSET Students’ goal is to increase the awareness of Canadian space science and technology and provide opportunities for University of Alberta students to become involved in space related activities.
- https://www.facebook.com/UASISET/
Acknowledgments

- This program is undertaken with the financial support of the Canadian Space Agency and the U. Alberta Teaching and Learning Enhancement Fund.
- This collaboration would not have been possible without the support and cooperation of: the Canadian Space Agency, the Andøya Rocket Range, the Norwegian Centre for Space-related Education, the Institute for Space Science, Exploration and Technology (ISSET), and the Universities of Oslo, Tromso, Calgary, Saskatchewan and Alberta.
Thank you for your time

Movie from CaNoRock XV:
https://youtu.be/oCdtudhbLCg