

CSU Undergraduate Research Application Seminar

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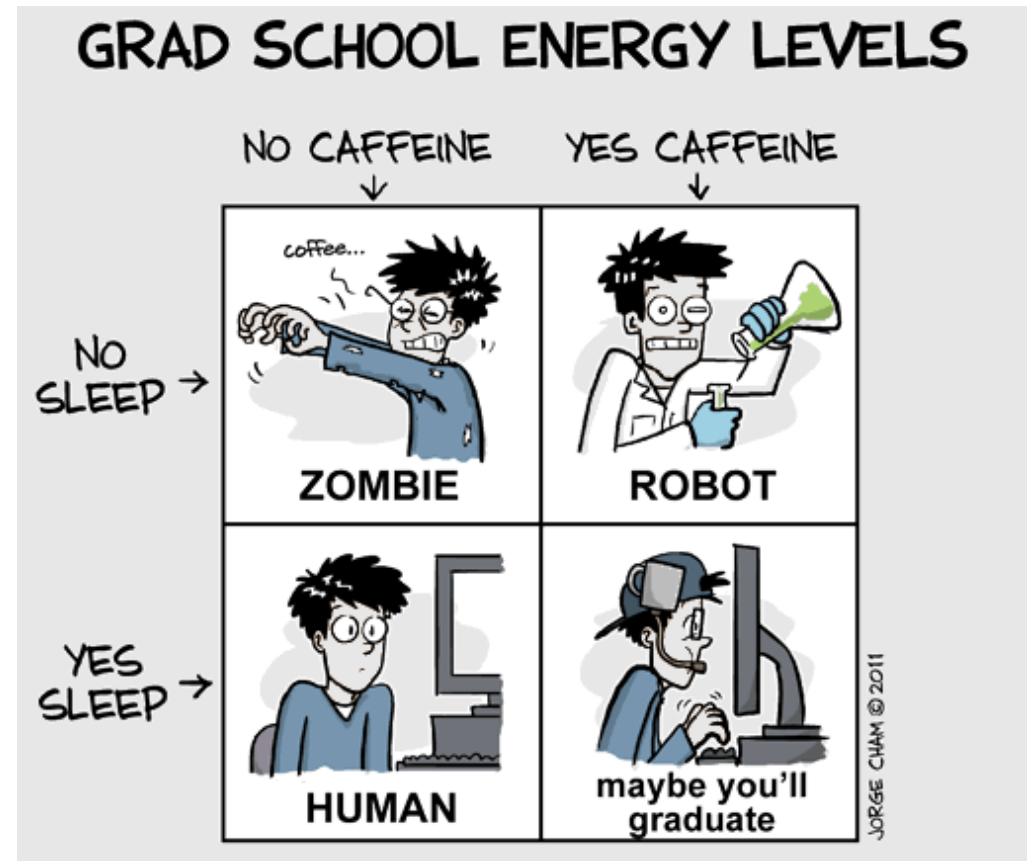


Importance of Research

- Advantages of research in undergrad
 - generate personal interest
 - capacity to become creative and innovative
 - obtain reference letters & potential publication
 - Interact with experts in specific fields
- Future Degrees/Careers
 - required for graduate studies in physical sciences
 - assists with professional applications (Medical & Law School)
 - corporate internships lead to jobs

Overview

- Importance of Research
- Summer Research Opportunities
 - OSOTF Awards
 - NSERC USRA
 - Center for Global Change Science
 - RISE (Germany)
- Course-Based Research Opportunities
 - ROP299
 - CHM499
- Exchange Opportunities
- Alternative Research Options



Summer Research: OSOTF Awards

- Geared toward 2nd or 3rd year undergraduates enrolled in a Chemistry Specialist or similar degree
 - **Application Deadline:** mid-January (2016 deadline passed)
- Ontario Student Opportunity Trust Funds (OSOTF) Awards
 - Requirements:
 - minimum “B” average
 - **registered to be receiving financial assistance (i.e. OSAP)**
 - registered as a U of T full-time student in the natural sciences
 - Canadian citizen or permanent resident of Canada
 - Options:
 - 1) Richard Ivey Foundation Summer Research Experience Scholarship
 - 2) DuPont Canada, Inc. Summer Research Scholarship
 - 3) Xerox Research Centre of Canada Undergraduate Scholarship
 - 4) ChemClub Undergraduate Summer Research Scholarship
- U of T Chemistry Website:
<http://www.chem.utoronto.ca/~undergrd/Summer/Research/home.html>

Summer Research: OSOTF Awards

- Richard Ivey Foundation Summer Research Experience Scholarship
 - 1st, 2nd, & 3rd year students
 - 4 months in the lab of a faculty member
 - Academic performance is considered
 - Preference given to students pursuing Environmental Chemistry
- DuPont Canada, Inc. Summer Research Scholarship
 - 1st, 2nd, & 3rd year students
 - 4 months in the lab of a faculty member
 - Academic performance is considered

Summer Research: OSOTF Awards

- Xerox Research Centre of Canada Undergraduate Scholarship
 - 2nd & 3rd year students
 - 4 months in the lab of the participating faculty member
 - Academic performance is considered

- ChemClub Undergraduate Summer Research Scholarship
 - 2nd & 3rd year students
 - 4 months in the lab of the faculty member
 - min. 75% average
 - Preference given to those who have never performed laboratory research

Summer Research: NSERC USRA

- NSERC Undergraduate Student Research Awards (USRA)
 - Requirements:
 - minimum “B” average
 - registered as a U of T full-time student in the natural sciences
 - Canadian citizen or permanent resident of Canada
 - Details:
 - 1 USRA per year
 - \$4 500 (NSERC) + \$1125 min. (University) for a full 16-week period
 - can be taken at a different university other than U of T
- Application:
 - 1) Application Form (found online)
 - 2) Résumé
 - 3) Cover letter
 - Summarize academic achievements, special research interest, etc.
 - 4) Un-official copy of your transcript downloaded or printed from the web
 - Download from ROSI/ACORN & print a copy with your name

Summer Research: Center for Global Change Science

- Summer Internship Program

- Requirements:

- undergrads with an interest in climate research in the fields of Chemistry, Biology Geology, Geography, Forestry, and Physics
 - *preference* for Canadian citizen or permanent resident of Canada

- Details:

- 3 - 4 months in the summer
 - \$2 000/month
 - select a supervisor from a list of faculty (<http://www.cgcs.utoronto.ca/people.htm>)

- Application:

- 1) Cover letter (1 page)

- Express in interest in global change science

- 2) Official copy of your transcript ordered from ACORN/ROSI

- Application Deadline: February 19, 2016.**

- Center for Global Change Science Website:

- <http://www.cgcs.utoronto.ca/Assets/CGCS+Digital+Assets/CGCS+2016.pdf>

Summer Research: RISE

- RISE: Research Internships in Science and Engineering

→Requirements:

- min. 2 years of undergrad
- must be returning to studies (not graduating)
- currently studying at a North American or British institutions

→Details:

- 3 months in the summer
- Germany
- €600/month + travel stipend

- Application can be found their website

→**Application Deadline: Late January (2016 deadline passed)**

- RISE Website: <https://www.daad.de/rise/en/>

Research Courses

- 2nd Year
 - ROP299Y: Research Opportunity Program
- 3rd Year
 - no research course offered*
- 4th Year
 - CHM499Y: Introduction to Research in Chemistry



ROP299: Research Opportunity Program

- An opportunity for a 2nd year student to work on the research project for a professor in return for 299Y course credit
- Eligible: Undergraduates that have completed between 4 – 9 credits
- Summer Project:
 - 13 weeks (14 – 16 hr/week)
- Fall/Winter Project
 - 26 weeks (7 – 8 hr/week)
- ROP projects will be listed during Reading Week 2016
- Steps:
 - 1) Read 299Y Project Descriptions (found online)
 - 2) Complete Application Form & email to the ROP Office
 - **Application Deadline: Late February/Early March**
- Evaluation:
 - Interim 2-page progress report
 - A final substantial piece of written work
- ROP299 Website: <http://www.artsci.utoronto.ca/current/focus/course/rop/299>

CHM499: Introduction to Research in Chemistry

- Research under the supervision of a faculty member
- Approx. 260 hours of work during the academic year
→26 weeks (10 – 12 hr/week)
- Strongly encouraged for Chemistry Specialists
- Limited course enrollment
- Encouraged to visit the chemistry faculty website to find areas and groups of interest
- **Application Deadline:**
February 12, 2016

Student No.	Campus	<input type="checkbox"/> UTM	<input type="checkbox"/> UTSc	<input type="checkbox"/> St. George
<input type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Given Names	Surname		
Permanent Address		Summer Address		
Tel. No.		Tel. No.		
Email address (ending in utoronto.ca)				

Program of Study (please select the one you are registered in)					
<input type="checkbox"/> Biological Chemistry	<input type="checkbox"/> Chemical Physics	<input type="checkbox"/> Chemistry Specialist			
<input type="checkbox"/> Environmental Chemistry	<input type="checkbox"/> Materials Science	<input type="checkbox"/> Synthetic & Catalytic Chemistry			
<input type="checkbox"/> Chemistry Major	<input type="checkbox"/> Other (please specify) _____				
Chemistry sub-disciplines of interest: (select maximum of three and indicate order of preference, i.e. 1, 2, 3)					
<input type="checkbox"/> Analytical	<input type="checkbox"/> Biological	<input type="checkbox"/> Environmental	<input type="checkbox"/> Inorganic		
<input type="checkbox"/> Materials	<input type="checkbox"/> Organic	<input type="checkbox"/> Physical	<input type="checkbox"/> Polymer		
Please list ALL the courses that you intend to take in the upcoming academic session.					
<u>CHM499Y</u>	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Alternative Research Opportunities

- Getting a research position without a grant or course:
 - volunteer in a lab
 - work-study placements
- Tips & Tricks
 - email a professor expressing your interest
 - meet them face-to-face
 - strongly encouraged for science specialists & majors
 - search opportunities in different departments
 - talk to professors whose courses you excelled in



List of Programs

- ROP299
- ROP499
- OSOTF Awards
- NSERC USRA
- Center for Global Change Science
- RISE
- University of Toronto Excellence Awards
- ICE: Inorganic Chemistry Exchange
 - Exchange within Canada
 - http://web.uvic.ca/~lisarose/about_ice.html
- 3rd Year International Exchanges (eg. CHM398H/399Y)
 - Through Center for International Experience
 - <http://www.chem.utoronto.ca/~undergrd/Summer/Research/others.html>
- St. Michael's Hospital Research
 - Summer medical research
 - <http://stmichaelshospitalresearch.ca/future-students-trainees/undergraduate-students/>
- Genentech
 - Biotech research company in California offering summer internships
 - <http://www.gene.com/careers/academic-programs/interns-co-ops>