

Nickolas Hoover

422 Cole road | Guelph, ON, Canada | 519-994-1270 | hoovern@uoguelph.ca | 1024486

University of Guelph
Guelph, ON
50 Stone Rd E
N1G 2W1

Dear Professor Sadanand,

My name is Nickolas Hoover and I am a third-year Mathematical Science (B.Sc.) student with an area of emphasis in Computer Science at the University of Guelph. I am writing to apply for the URA posting on Experience Guelph: *Mobius Researcher*. I would love to contribute to improvements in student engagement for online learning activities as a research assistant. I believe that my problem-solving skills gained through mathematics, statistics and computer science courses along with my experience working as a student lab technician make me a strong candidate for this position.

I am genuinely passionate about mathematics; the challenging and abstract nature of the problems piques my interest and drives me to develop a deep understanding of the material. I am a Dean's Honours List student, and, in the fall of 2019, I was awarded the Gordon Ashton Mathematical Science Scholarship for my performance in my third and fourth semesters of study. I have a solid foundation in both mathematical analysis and computer science, and I am currently furthering my knowledge in functional analysis through courses such as *Numerical Methods* and *Advanced Analysis*. I am proficient in MATLAB, Maple and R. I have lots of experience using MathJax, as well as other libraries for displaying mathematical notation.

Over the past two summers, I have been working as a student lab technician at the Gosling Research Institute for Plant Preservation at the University of Guelph. During my time there, I collaborated with scientists who had backgrounds in biology, biochemistry, plant science and statistics, allowing me to gain cross-disciplinary experience. Some highlights of my experience include:

- Conducting an experiment to assess the effectiveness of 3D printing technology as a means of reducing the square footage required for plant propagation. While carrying out the experiment, I gained experience using laboratory software such as ImageJ by measuring the stem length of seedlings from image files and the Arduino IDE by coding temperature/humidity sensors.
- Assisting in the development of new procedures regarding protoplast fusion between hops plants and other species of plants as a tool for their genetic improvement. As part of my work on this project, I was tasked with analyzing scientific literature and designing a randomized experimental setup to avoid any sort of measure, procedural or response bias.

I am eager to learn more about Mobius and developments in interactive assessments for students. I believe that my experience working in research and my strong knowledge of mathematics, statistics and programming would make me a good fit for this project. I would greatly appreciate the opportunity to discuss this position in person. Thank you for your time and consideration.

Sincerely,

Nickolas Hoover

Nickolas Hoover

422 Cole road | Guelph, ON, Canada | 519-994-1270 | hoovern@uoguelph.ca | 1024486

Summary of Qualifications

- Proficiency in programming languages including C, java and C# acquired by working on both personal projects and assignments for computer science courses.
- Experience with MATLAB, R, ImageJ and Microsoft Excel attained as a student lab technician and through mathematics/statistics courses.
- Conducted experiments to assess the efficiency of 3D printing technology in plant tissue culture.
- Interpersonal skills developed by working with a team of scientists to help institute new techniques applicable to the micro-propagation of cannabis.
- Strong understanding of experimental procedures.
- Fluent in English, French and Serbian.

Education

Bachelor of Science (B.Sc.) - Mathematical Science (MSCI_CS) | Area of Emphasis in Computer Science |
University of Guelph, Guelph, ON | **September 2017 – Present**

- Winner of the Fall 2019 Gordon Ashton Mathematical Science Scholarship for an amount of 1000\$. The award is given to the student having achieved the highest average in their 3rd and 4th semesters of study in a major offered by the Department of Mathematics and Statistics.
- Consistently achieved the Dean's Honours List each semester of study since fall of 2018.

Relevant Experience

Student Lab Technician – Gosling Research Institute for Plant Preservation | Department of Plant Agriculture, University of Guelph, Guelph, ON | May 2018 – August 2018 & May 2019 – August 2019

- Studied scientific articles to extract relevant methods, procedures and results to aid in the experimental development of protoplast fusion between hops plants and other plant species.
- Used laboratory software to analyze data from multiple experimental trials.
- Ensured the quality of plant specimens through micro-propagation.
- Made stock solutions of antibiotics, plant hormones and vitamins.
- Prepared plant tissue culture media.
- Visited a cannabis production facility to help set up a tissue culture lab.
- Participated in organizing the Plant Canada conference held at the University of Guelph.
- Gained a deep understanding of how professional scientific studies are carried out by postdoctoral researchers.

Dishwasher – Mountain Hall | University of Guelph, Guelph, ON | September 2013 – April 2018

- Responsible for providing hospitality services, including customer service.
- Collaborated with kitchen staff to ensure tasks were accomplished in a timely manner.

Nickolas Hoover

422 Cole road | Guelph, ON, Canada | 519-994-1270 | hoovern@uoguelph.ca | 1024486

References

- **Name:** Joshua Callaghan
Title: Researcher
Department: Department of Plant Agriculture, University of Guelph
Work Address: Bovey building, 601 Gordon street, Guelph, ON, N1G1Y2
Phone #: 519-639-5242
Email: callaghj@uoguelph.ca
Relationship: Former Supervisor
- **Name:** Andrew Maxwell Phineas Jones
Title: Associate Professor
Department: Department of Plant Agriculture, University of Guelph
Work Address: Bovey building, 601 Gordon street, Guelph, ON, N1G1Y2
Phone #: 519-824-4120 ext. 53016
Email: amjones@uoguelph.ca
Relationship: Former Employer
- **Name:** Sandy Vadori
Title: Manager
Department: Hospitality Services, University of Guelph
Work Address: Mountain Hall, South Ring Road, Guelph, ON, N1G1Y4
Phone #: 519-823-1395
Email: svadori@gmail.com
Relationship: Former Supervisor

Unofficial Transcript

1024486 Nickolas Hoover

Course/Section and Title	Grade	Credits	Repeat	Term
CIS*2750 0204 Software System Dvlmt & Intgrn				W20
MATH*2130 0103 Numerical Methods				W20
MATH*3160 01 Linear Algebra II				W20
MATH*3510 01 Biomathematics				W20
MATH*4200 01 Advanced Analysis				W20
CIS*2430 0209 Object Oriented Programming	077	0.50		F19
CIS*2520 0208 Data Structures	080	0.50		F19
MATH*2270 0107 Applied Differential Equations	083	0.50		F19
MATH*3200 01 Real Analysis	080	0.50		F19
STAT*2050 01 Statistics II	082	0.50		F19
CIS*2500 0210 Intermediate Programming	085	0.50		W19
ECON*1100 DE01 Introductory Macroeconomics	080	0.50		W19
MATH*2210 01 Advanced Calculus II	091	0.50		W19
STAT*2040 DE01 Statistics I	086	0.50		W19
CIS*1500 0105 Introduction to Programming	085	0.50		F18
ECON*1050 02 Introductory Microeconomics	075	0.50		F18
MATH*1160 01 Linear Algebra I	091	0.50		F18
MATH*2000 0101 Proofs, Sets, and Numbers	086	0.50		F18
MATH*2200 01 Advanced Calculus I	093	0.50		F18
BIOL*1070 0231 Discovering Biodiversity	063	0.50		W18
BIOL*1080 0117 Biological Concepts of Health	077	0.50		W18
CHEM*1050 0353 General Chemistry II	071	0.50		W18
MATH*2080 0101 Elements of Calculus II	063	0.50		W18
PHYS*1070 0201 Physics for Life Sciences II	078	0.50		W18
BIOL*1090 0222 Intro to Molecular & Cell Biol	068	0.50		F17
CHEM*1040 0246 General Chemistry I	065	0.50		F17
GEOG*1350 01 Earth: Hazards & Global Change	070	0.50		F17
MATH*1080 0103 Elements of Calculus I	081	0.50		F17
PHYS*1080 01 Physics for Life Sciences	063	0.50		F17

Total Earned Credits 12.00

Total Grade Points 936.50

Cumulative GPA 78.042



Student Financial Services <awards@uoguelph.ca>

Mon 1/20/2020 10:03 AM

Nickolas Hoover



U of G STUDENT FINANCIAL SERVICES

Dear Nickolas (ID: 1024486),

We are pleased to inform you that you have satisfied the demonstrated financial need component and are eligible to apply for positions posted as part of the Undergraduate Research Assistantship (URA) program for the summer 2020.

To fully participate in this program, you are expected to register in the fall 2020 in an undergraduate program and you must engage in full-time research during the summer months. If you wish to register during the summer months in courses, you will be limited to no more than 1.0 credits and you must have your supervisor's approval.

URA opportunities will be posted to the On Campus Jobs & Opportunities section of experienceguelph.ca from January 24 - February 14, 2020 at 11:59 pm.

To view available positions:

- Log into the Student section of the experienceguelph.ca website.
- Select "On Campus Jobs & Opportunities" from the left-hand menu.
- Select "Summer Research Assistantships" from Quick Search menu in the main window.
- Choose to sort the list by title, division, or type.
- Click the title of a position to view details and follow the applications instructions below.