Social Sciences and Humanities Research Council of Canada
Natural Sciences and Engineering Research Council of Canada
Canadian Institutes of Health Research

Conseil de recherches en sciences humaines du Canada
Conseil de recherches en sciences naturelles et en génie du Canada
Instituts de recherche en santé du Canada

System-ID: 671670995

# FORM 202 - PART I
## Application for an Undergraduate Student Research Award (USRA)

Reference No.: 683752

Date: 2025/2/12

| Family name of student | Given name | Initial(s) of all given names | Personal Identification no. (PIN) |
|---|---|---|---|
| Heywood | Jocelyn Rose | JR | |

**ACADEMIC BACKGROUND (including ongoing postsecondary degree)**

| Degree | Name of discipline | Institution | Department | Year and month of expected degree completion |
|---|---|---|---|---|
| Bachelor's | Evolution, ecology and conservation | Simon Fraser University | Biological Sciences | 2025/06 |

At the time of application, you are attending a postsecondary institution?
[X] full time? [ ] part time?

Have you ever held a USRA or Experience Award (previously IUSRA) in the past? [ ] Yes [X] No

**SCHOLARSHIPS AND OTHER AWARDS RECEIVED (start with most recent)**

| Name of award | Location of tenure | Period held (yyyy/mm - yyyy/mm) |
|---|---|---|
| | | |

**OTHER INFORMATION**

**OTHER INFORMATION**

Citizenship
[X] Canadian citizen [ ] Permanent resident of Canada [ ] Protected person
Date of issue as stated on official immigration document

Language of correspondence
[X] English [ ] French

Consent to sharing information for joint-funding opportunity (NSERC only)
[X] Yes [ ] No

| Current address | Permanent mailing address (if different from current address) |
|---|---|
| 1850 Grover Ave<br>Coquitlam BC V3J3G6<br>CANADA | |
| If current address is temporary, indicate leaving date | Telephone number at permanent mailing address |
| Telephone number at current address<br>778-686-4517 | Email<br>jocelynheywood10@gmail.com |

Personal information collected on this form and appendices will be stored in the Personal Information Bank for the appropriate program.

Version française disponible

Canada

**PROTECTED WHEN COMPLETED**

SFU

# Unofficial Transcript

Student Name: Heywood, Jocelyn Rose
ID Number: 301393368
Birthdate: Dec 27

Date of Issue: January 29 2025

## Credentials Awarded

## Beginning of Undergraduate Record

### Transfer Credits

**Douglas College** Total Units: **54.00**

**2021 Fall**
Major in Biological Sciences, Bachelor of Science

| Course | Description | Repeated | Units Attempted | Units Completed | Grade | Grade Points | Class Average | Class Enrollment |
|---|---|---|---|---|---|---|---|---|
| CHEM 282 | Organic Chemistry II | | 2.00 | 2.00 | B | 6.00 | B- | 122 |
| MBB 222 | Molecular Biology and Biochem. | | 3.00 | 3.00 | B- | 8.01 | B | 214 |
| PHYS 100 | Introduction to Physics | | 3.00 | 3.00 | B+ | 9.99 | B- | 276 |
| Term Totals: | | | 8.00 | 8.00 | | 24.00 | | |
| Cumulative Totals: | | | 8.00 | 8.00 | | 24.00 | | |

Term GPA: **3.00** Cumulative GPA: **3.00**
Academic Standing: Good Academic Standing

**2022 Spring**
Major in Biological Sciences, Bachelor of Science

| Course | Description | Repeated | Units Attempted | Units Completed | Grade | Grade Points | Class Average | Class Enrollment |
|---|---|---|---|---|---|---|---|---|
| BISC 300 | Evolution | | 3.00 | 3.00 | B- | 8.01 | B- | 43 |
| MBB 231 | Cellular Biology and Biochem. | | 3.00 | 3.00 | B | 9.00 | B | 174 |
| PHYS 101 | Physics for Life Sciences I | | 3.00 | 3.00 | B+ | 9.99 | B | 254 |
| Term Totals: | | | 9.00 | 9.00 | | 27.00 | | |
| Cumulative Totals: | | | 17.00 | 17.00 | | 51.00 | | |

Term GPA: **3.00** Cumulative GPA: **3.00**
Academic Standing: Good Academic Standing

**2022 Fall**
Major in Biological Sciences, Bachelor of Science

| Course | Description | Repeated | Units Attempted | Units Completed | Grade | Grade Points | Class Average | Class Enrollment |
|---|---|---|---|---|---|---|---|---|
| BISC 204 | Intro to Ecology | | 3.00 | 3.00 | A- | 11.01 | B | 100 |
| BISC 333 | Developmental Bio. | | 3.00 | 3.00 | B | 9.00 | B | 75 |
| PHYS 102 | Physics for Life Sciences II | | 3.00 | 3.00 | B | 9.00 | B | 196 |
| Term Totals: | | | 9.00 | 9.00 | | 29.01 | | |
| Cumulative Totals: | | | 26.00 | 80.00 | | 80.01 | | |

Term GPA: **3.22** Cumulative GPA: **3.08**
Academic Standing: Good Academic Standing

SFU

Student Name: Heywood, Jocelyn Rose
ID Number: 301393368
Birthdate: Dec 27

Date of Issue: January 29 2025

**2023 Spring**
Major in Biological Sciences, Bachelor of Science

| Course | Description | Repeated | Units Attempted | Units Completed | Grade | Grade Points | Class Average | Class Enrollment |
|---|---|---|---|---|---|---|---|---|
| GSWS 102 | Feminist Action | | 3.00 | 3.00 | B+ | 9.99 | B | 222 |
| Term Totals: | | | 3.00 | 3.00 | | 9.99 | | |
| Cumulative Totals: | | | 29.00 | 83.00 | | 90.00 | | |

Term GPA: **3.33** Cumulative GPA: **3.10**
Academic Standing: Good Academic Standing

**2023 Fall**
Major in Biological Sciences, Bachelor of Science

| Course | Description | Repeated | Units Attempted | Units Completed | Grade | Grade Points | Class Average | Class Enrollment |
|---|---|---|---|---|---|---|---|---|
| BISC 205 | Principles of Physiology | | 3.00 | 3.00 | B+ | 9.99 | B | 139 |
| BISC 360W | Techniques in Ecol & Evo | | 3.00 | 3.00 | A- | 11.01 | B+ | 34 |
| BISC 420 | Community Ecology | | 3.00 | 3.00 | A- | 11.01 | B+ | 56 |
| SPAN 100 | Introductory Spanish I | | 3.00 | 3.00 | A | 12.00 | A- | 79 |
| Term Totals: | | | 12.00 | 12.00 | | 44.01 | | |
| Cumulative Totals: | | | 41.00 | 95.00 | | 134.01 | | |

Term GPA: **3.67** Cumulative GPA: **3.27**
Academic Standing: Good Academic Standing
Honour Roll: Dean's Honour Roll

**2024 Spring**
Major in Biological Sciences, Bachelor of Science

| Course | Description | Repeated | Units Attempted | Units Completed | Grade | Grade Points | Class Average | Class Enrollment |
|---|---|---|---|---|---|---|---|---|
| ARCH 301 | Ancient Visual Art | | 3.00 | 3.00 | B+ | 9.99 | B | 314 |
| BISC 306 | Invertebrate Biology | | 4.00 | 4.00 | A- | 14.68 | B | 63 |
| BISC 309 | Conservation Biology | | 3.00 | 3.00 | A | 12.00 | A | 50 |
| BISC 337 | Plant Biology | | 4.00 | 4.00 | A- | 14.68 | B+ | 58 |
| SPAN 110 | Introductory Spanish II | | 3.00 | 3.00 | B+ | 9.99 | B | 33 |
| Term Totals: | | | 17.00 | 17.00 | | 61.34 | | |
| Cumulative Totals: | | | 58.00 | 112.00 | | 195.35 | | |

Term GPA: **3.61** Cumulative GPA: **3.37**
Academic Standing: Good Academic Standing
Honour Roll: Dean's Honour Roll

SFU

Student Name: Heywood, Jocelyn Rose
ID Number: 301393368
Birthdate: Dec 27

Date of Issue: January 29 2025

**2024 Summer**

Major in Biological Sciences- Concentration in Ecology, Evolution and Conservation, Bachelor of Science

| Course | Description | Repeated | Units Attempted | Units Completed | Grade | Grade Points | Class Average | Class Enrollment |
|---|---|---|---|---|---|---|---|---|
| MASC 430 | Marine Ecology | | 6.00 | 6.00 | A+ | 25.98 | - | 3 |
| Term Totals: | | | 6.00 | 6.00 | | 25.98 | | |
| Cumulative Totals: | | | 64.00 | 118.00 | | 221.33 | | |

Term GPA: **4.33** Cumulative GPA: **3.46**

Academic Standing: Good Academic Standing

**2024 Fall**

Major in Biological Sciences- Concentration in Ecology, Evolution and Conservation, Bachelor of Science

| Course | Description | Repeated | Units Attempted | Units Completed | Grade | Grade Points | Class Average | Class Enrollment |
|---|---|---|---|---|---|---|---|---|
| BISC 410 | Behavioural Ecology | | 3.00 | 3.00 | A | 12.00 | B+ | 60 |
| BISC 474 | Special Topics - EEC | | 3.00 | 3.00 | A- | 11.01 | A- | 15 |
| | Course Topic: ST-Current Iss.in Ecotoxicolog | | | | | | | |
| BISC 475 | Special Topics Biology | | 3.00 | 3.00 | A- | 11.01 | A- | 36 |
| | Course Topic: ST-Marine Mammal Ecotoxicology | | | | | | | |
| BISC 498 | Undergraduate Research I | | 3.00 | 3.00 | A- | 11.01 | - | 1 |
| BISC 888 | Directed Readings | | 1.00 | 1.00 | A- | 3.67 | - | 3 |
| STAT 302 | Experiment/Observational Data | | 3.00 | 3.00 | B | 9.00 | B- | 137 |
| Term Totals: | | | 16.00 | 16.00 | | 57.70 | | |
| Cumulative Totals: | | | 80.00 | 134.00 | | 279.03 | | |

Term GPA: **3.61** Cumulative GPA: **3.49**

Academic Standing: Good Academic Standing

Honour Roll: Dean's Honour Roll

**2025 Spring**

Honours in Biological Sciences- Concentration in Ecology, Evolution and Conservation, Bachelor of Science (Honours)

| Course | Description | Repeated | Units Attempted | Units Completed | Grade | Grade Points | Class Average | Class Enrollment |
|---|---|---|---|---|---|---|---|---|
| BISC 490 | Research Design | | 5.00 | 0.00 | | 0.00 | - | 1 |
| BISC 491 | Research Technique | | 5.00 | 0.00 | | 0.00 | - | 3 |
| BISC 492W | Research Reporting | | 5.00 | 0.00 | | 0.00 | - | 2 |
| Term Totals: | | | 15.00 | 0.00 | | 0.00 | | |
| Cumulative Totals: | | | 95.00 | 134.00 | | 279.03 | | |

Term GPA: **0.00** Cumulative GPA: **3.49**

**End of Undergraduate Record**

- - - End of Transcript - - -

Social Sciences and Humanities Research Council of Canada | Conseil de recherches en sciences humaines du Canada
Natural Sciences and Engineering Research Council of Canada | Conseil de recherches en sciences naturelles et en génie du Canada
Canadian Institutes of Health Research | Instituts de recherche en santé du Canada

# FORM 202 - PART II
## Application for an Undergraduate Student Research Award

In accordance with the *Privacy Act*, this information will be accessible to the student. **Read the instructions before you complete this application.**

System ID: 671671148

Date: 2025/02/12

| Family name of student/Reference No. | Given name | Initial(s) of all given names |
|---|---|---|
| Heywood/683752 | Jocelyn Rose | JR |

| Name and title of proposed supervisor | Email of proposed supervisor |
|---|---|
| Côté, Isabelle / 110683 Professor | imcote@sfu.ca |

| Institution/Organization that will administer the award | Department |
|---|---|
| Simon Fraser University (NSERC,SSHRC,CIHR) | Biological Sciences (CRSNG,CRSH,IRSC) |

| Personal identification no. (PIN) (proposed supervisor) | Telephone | Proposed Start Date |
|---|---|---|
| **Valid** 110683 | 1-778-7823705 | 2025/05/05 |

**PROPOSED RESEARCH PROJECT**

| Title of proposed research project | Research subject code |
|---|---|
| Population trajectories of an invasive mudsnail in BC | 4700 |

Outline of proposed research project

Invasive species typically attain exceedingly high densities in the habitats in which they are introduced. Given that the strength of impacts usually relate to abundance, understanding the determinants of population trajectories of invasive species is critical. In BC, the Japanese mud-snail Batillaria attramentaria, which is native to the northwestern Pacific Ocean, has become superabundant on some muddy shores since its introduction in the early part of the 20th century. However, its distribution remains patchy and its abundance is variable. To examine and understand the trajectories of population change of Batillaria, the student has already compiled all previous published and unpublished BC survey data. The aim of this study is to resurvey these 20+ sites, which range from Quadra Island to Sooke to the shores of Greater Vancouver, in the summer of 2025. The project will begin with an assessment of the interchangeability of the different methods used to survey Batillaria in the past. The student will then re-survey all sites that have previous density estimates as well as measure potential correlates of population increase, including beach features, mud characteristics and mud snail population size structure. By creating time-series that range in length from 2 to 12 years, this effort will produce the first robust estimates of population density change in Batillaria, an invader that is spreading across coastal British Columbia, as well as increase our ability to predict where Batillaria might become superabundant.

Outline of the student's role

This will be a self-standing project for Jocelyn, although the project is embedded within a larger project on temperate marine invaders which I am pursuing mainly with undergraduate students. She will be responsible for designing and conducting all surveys, measuring all biotic and abiotic potential correlates of population change, and analysing these data at SFU. She will be responsible for the statistical analyses and for writing the first draft of the MS.

Expected quality of the training and mentorship to be received

In the field, for safety, Jocelyn will always be accompanied by a Côté lab member, most often myself, my lab manager Beth Oishi, or another summer student with relevant field experience. Jocelyn will be trained in survey design, invertebrate identification, and sediment collection and analysis techniques. She will have a senior PhD student assigned as stats mentor. She will be part of an active and inclusive research group and treated as a graduate student.