## Instructions

* An instructor must approve the proposal before the University Programs Coordinator (UPC), Animal Care Coordinator (ACC) and Dive and Safety Officer (DSO) each subsequently approve sub-sections;
* Approvals must be obtained from all departments before work begins;
* Approval by the UPC is required for projects that need dive/trawl/dredge collections, permits or the purchase of equipment/supplies;
* Approval by the ACC is required for projects involving animals;
* Approval by the DSO is required for projects involving field or chemical work.

## Responsibilities

### Students

* Complete all relevant sections of this form and email directly to your instructor;
* Get approval from your instructor. Your instructor will approve the science element of the project and should approve it before any other department does. This is because if the project changes, it will need to be approved by all departments again.
* Once the instructor has approved all the project proposals in your class, UP will schedule a ‘Round Table’, where your proposal will be verbally reviewed by UP, Safety, and Animal Care.
* You may begin your project when you’ve received approval from UP, Safety, and Animal Care.
* Check the final page of this document for a pre-trip checklist that will help you ensure that your field work is successful.

### Instructor

* Communicate with UP to arrange for the Round Table as soon as possible (in advance of the course if possible).
* Review student project proposals for feasibility of the science element of the project (approve this before the round table).

### UPC/ACC/DSO

* UP will book the Round Table for each course as soon as possible. At that time, each department will review the appropriate sections:
  + UPC | [Section 1](file:///C:\Users\library\AppData\Local\Temp\UP_Student_Project_Proposal_Fall_V1.1-4.docx#_Section_1_|), [Section 2](file:///C:\Users\library\AppData\Local\Temp\UP_Student_Project_Proposal_Fall_V1.1-4.docx#_Section_2_|_2), and [Section 3](file:///C:\Users\library\AppData\Local\Temp\UP_Student_Project_Proposal_Fall_V1.1-4.docx#_Section_3_|_2)
  + Animal Care | [Section 1](file:///C:\Users\library\AppData\Local\Temp\UP_Student_Project_Proposal_Fall_V1.1-4.docx#_Section_1_|) and [Section 4](file:///C:\Users\library\AppData\Local\Temp\UP_Student_Project_Proposal_Fall_V1.1-4.docx#_Section_3_|_1)
  + Safety | [Section 1](file:///C:\Users\library\AppData\Local\Temp\UP_Student_Project_Proposal_Fall_V1.1-4.docx#_Section_1_|) and [Section 5](file:///C:\Users\library\AppData\Local\Temp\UP_Student_Project_Proposal_Fall_V1.1-4.docx#_Section_4_|_1)

## Section 1 | Basic Information

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| --- |
| Course Name |
| Year |
| Student Name(s) |
| Project Title |

## Section 2 | Research Proposal

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| Research QuestionA brief statement describing your question or hypothesis. (One sentence.) |
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## Section 3 | Resources & Costs

|  |  |
| --- | --- |
| Space e.g.  Deep sea table  Dark room  Shelves in incubator | Quantity e.g.  2  1  1 |
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| --- | --- |
| Supplies Disposable items  e.g.  Petri dishes  Zap straps | Quantity  e.g.  5  10 |
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| --- | --- |
| Equipment Non-disposable items  e.g.  Camera  Stop Watch | Quantity  e.g.  1  2 |
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| --- | --- |
| Chemicals e.g.  Bleach | Quantity e.g.  100ml |
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|  |  |
| --- | --- |
| Anything else? Provide an Amazon.ca link with costs for any item you think UP may need to purchase. | Quantity e.g.  100ml |
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| --- | --- | --- | --- | --- | --- |
| External resources (estimated) Costs paid by UP | | | | | |
| Animals collected and returned by **diving including return dives** | | | | | |
| Item  e.g. Organism | Source  BMSC | Unit  Dive | # of Units  Number of dives | Cost/Unit  $10/hr + boat fee (part of dive team) OR $50/dive + boat fee | Sub total  $amount |
|  |  |  |  |  |  |
| **Animals collected using the Alta or Barkley Star (transportation, dredge or trawl)**. Travel time plus: hard bottom dredge 15 min, mud dredge 30 min, bottom trawl 60 min. | | | | | |
| Item  e.g. Organism | Source  BMSC | Unit  Hours | # of Units  Number of hours | Cost/Unit  $150/hour | Sub total  $amount |
|  |  |  |  |  |  |
| **Copes use** (total time away from dock) | | | | | |
| Item  e.g. Cope | Source  BMSC | Unit  Hours | # of Units  Number of hours | Cost/Unit  $20/hour | Sub total  $amount |
|  |  |  |  |  |  |
| **Chemicals, equipment, or supplies to be purchased** | | | | | |
| Item | Source | Unit | # of Units | Cost/Unit | Sub total |
|  |  |  |  |  |  |
| Estimated Total Cost | | | | |  |

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| Permits |
| Registered research sites (See map/binder in the library) |
| Planned activities will not interfere with a registered research project(s) |
| Huu-ay-aht First Nations Lands (See map/binder in the library)  University Programs has an annual permit from the HFN allowing courses to: Observe, measure, photograph/film, collect invertebrate animals for lab activities at BMSC; Collect small amounts of terrestrial plants and seaweeds; Collect small numbers of fish to be counted, identified, measured, and released.  I/we require an additional HFN permit. What is planned goes beyond what is described above as covered under the University Programs permit. |
| Marine species  University Programs has an annual collection permit with the Department of Fisheries and Oceans for marine fish and invertebrates. Enter your collection records into the Biodiversity Database so BMSC can fulfill reporting requirements.  Freshwater and terrestrial animals  Provincial permits are required to collect terrestrial vertebrates, freshwater fish, molluscs and crayfish. It can take several weeks to obtain a permit.  I/we require a provincial permit. |
| Resources Risk Assessment List things that could go wrong and how you will avoid or reduce the impact. Explain how you propose to deal with the most likely and serious situations should they occur.  For example:   * If your project requires a permit, what will you do if it doesn’t arrive in time? * If your experiment requires fragile supplies (i.e. light bulbs) make sure there are extras in case some break. * If your experiment requires animals collected by diving, what will you do if diving is delayed or impossible due to bad weather or other reasons? * If your experiment requires special chemicals, place orders as early as possible to accommodate shipping time and possible back order situations. Have an alternate plan in case the chemicals don’t arrive in time. |
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## Section 4 | Animal Care

Use for invertebrates that you plan to collect (other than cephalopods). Vertebrates and Cephalopods require a different form.

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| Organisms | | |
| Full species name  Include animals to be collected as food for you study animals if applicable).  e.g.  Pisaster ochraceus  Eptatretus stoutii | # req.  e.g.  1  2 | Study/collection site  e.g.  Seppings Island  Trevor Channel |
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| Procedures This information will help staff advise you about best practices. |
| How animals will be collected and transported  e.g. By hand and in a bucket |
|  |
| How animals will be held in the lab  Consider containers, water flow, air flow, food etc. |
|  |
| Chemicals that will be used on animals  e.g. Magnesium chloride |
|  |
| Methods of anesthesia or euthanasia if required  e.g. Magnesium chloride |
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| What will be done with animals at the end of your project  e.g. Return or dispose |
|  |
| Justify the use of any species of local concern |
|  |
| Animal Care Checklist |
| I/We will care for the animals used in this project in a manner appropriate to their needs. This may include feeding, shelter, and escape prevention. |
| I/we have considered alternative procedures that do not involve the use of live animals. |
| I/we will use the minimum number of animals consistent with the objectives of this project. |
| I/we have consulted guidelines posted on the BMSC website regarding methods for animal care, handling, anesthesia and euthanasia. |
| I/we will notify a member of the BMSC Animal Care Committee of any revisions to this animal use proposal. |
| I/we acknowledge that repeated examples of irresponsible animal care will jeopardize my/our opportunity to do future research at BMSC. |
| Animal care risk assessment List things that could go wrong and how you will avoid or reduce the impact. Explain how you propose to deal with the most likely and serious situations should they occur.  For example:   * Crabs and snails are notorious escape artists, so cover tanks and sea tables. * To ensure animals will remain well oxygenated in the event of a water failure, add air stones to all tanks. |
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## Section 5 | Physical Risks

### Field Work

The plan must consider health and safety and include risk assessment, mitigation and contingency plans.

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| Purpose and participants | | |
| State the purpose of your field activity  For example to observe animals, to bring back animals etc. | | |
|  | | |
| List the team members and their duty in the field e.g.  Student 1: Piloting the boat.  Student 2: Diving for collection. | | |
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| Field conditions and hazards | | |
| Field sites  e.g. Seppings | Water and/or environmental conditions and hazards  e.g. Shallow waters | Mooring/anchoring techniques or equipment required  e.g. Back anchor |
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| Field Site Risks  Talk to foreshore staff. Name the person who taught you to use the technique/equipment. | | |
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| Boat Drivers (includes copes, raider, skiffs only)  If you plan to use a boat, list the driver(s) and the person with whom they did a checkout. | | |
|  | | |
| Capacity of vessels/vehicles  What is the boat capacity; what gear will be carried and approximately how much does it weigh? | | |
|  | | |
| Type of vessel/vehicle and maximum capacity  List the vessels/vehicles to be used and their maximum passenger capacity given weight of gear. | | |
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| First Aid  List members of your group who have first aid training, and their level of training. | | |
|  | | |
| Dangerous weather/sea conditions  Explain how you will avoid dangerous weather/sea conditions. | | |
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| Safety Equipment   * What equipment will you carry into the field to use in the event of an accident? * What equipment will you carry into the field to protect you from the environment? * What communication device(s) will you use? Include channels if appropriate. Explain who you will contact and how in the case of an emergency. * What maps or charts will you carry into the field? | | |
|  | | |
| Outside limits  Justify field work outside regular working hours (M-F 8:30-4:30) or at sites outside the BMSC boundaries. Explain what is planned, why it is necessary and what precautions you will take. | | |
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| Field risk assessment Given the field activities you have planned, list what might go wrong and explain how you propose to deal with the most likely and serious situations.  For example:   * Flat tire: Know how to fix a flat. If you get one, call in if you expect to be late and attempt to fix the flat. If you can’t fix the flat, wait for another traveler to help or call for assistance. * Thick fog while boating: Learn to navigate using a chart and compass. Know how to use lights and signals. * Working at an exposed field site: Wear a life jacket and have someone with a throw line spot waves when you need to turn your back to the ocean. * Oncoming logging trucks: Know how to use the radio. Listen to the radio while driving. Communicate between vehicles by walkie-talkie. When you become aware of an oncoming truck, pull over and stop as soon as possible. * Changing weather could leave you stranded for extended periods. How will you be prepared to deal with this situation |
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### Lab work

If your project includes the use of chemicals, complete the following three lines. Otherwise, proceed to Lab Risk Assessment.

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| --- |
| My/our WHIMS trained supervisor is |
|  |
| The MSDS binder in our lab contains sheets for the chemicals we will use. |
| I/we have read the applicable MSDS sheets. |

|  |
| --- |
| Lab risk assessment List things that could go wrong and how you will avoid or reduce the impact. Explain how you propose to deal with the most likely and serious situations should they occur.  For example:   * If you plan to use hazardous chemicals: read the MSDS sheet, wear a coat/glasses/gloves and work in a fume hood. If you have a spill, contact your instructor, UPC, Research Coordinator or DSO. While waiting for help, contain the spill using supplies in the spill kit. * If you plan to boil something on a Coleman stove: keep the stove away from wood siding, do not leave the stove unattended, and keep the hose nearby in case of a fire. * If you will use an electric saw to cut shells: wear hand and eye protection, and ear protection if the process will be noisy. |
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Use this page as a resource for all boat trips. You do not need to fill this page out for approval at the round table, it is meant to be a resource only.

**Before you depart on a field trip, ensure you have:**

☐ Checked with foreshore staff for after hours permission1

☐ Checked the weather and marine conditions

☐ Checked the chalkboard in the sail plan cubby for any relevant new info about the boats

☐ Signed out life-jackets, safety bucket, radio, and nautical chart

☐ Checked for adequate fuel

☐ Brought your PCOC or SVOP and supporting first aid documents with you

☐ Checked the reservation sheet to make sure no one else has reserved your boat

☐ Have a check-in person for after-hours returns

☐ Filled out a sail plan

☐ *If collecting animals:* Set up a sea table to quickly transfer your animals to upon return

☐ *If collecting animals:* Brought any collection permits for animal collections with you

☐ *If collecting animals:* Brought all of your field equipment with you (e.g. containers for transporting animals)

☐ *If related to a student independent project:* Received approvals for carrying out your research from a) your instructor, b) UP, animal care and safety officer (one-time permission before project begins).

☐ *If travelling in low visibility or between sunset and sunrise:* Have working navigation lights

**Upon return from a field trip, ensure you have:**

☐ Completed your sail plan

☐ Reported your return to your Check-in person *if applicable*

☐ Rinsed (with freshwater) and put away all of your gear (e.g. wetsuits)

☐ Noted any issues with the boat on the chalkboard in the sail plan cubby

1 Advance Permission from Foreshore Staff required for trips:

* **After sunset** (including those that leave during daylight)
* **Outside inlets after hours** (work hours are Monday to Friday 8:30 am to 4:30 pm excluding holidays)
* **Outside BMSC boundary any time**
* **A check-in with foreshore also required for trips outside inlets if red sign is up during normal work hours.**

Permissions *not* required for trips:

* **During normal working hours, within the BMSC boundary, when the green sign is up.**
* **Exclusively daylight trips restricted to the inlets.**