



"Career Preparation and Paths with an Undergraduate Degree in Biological Sciences" Workshop

Gordon Chua
November 24, 2022

Motivation for Workshop

If you could change one thing about your program what would it be and why?

Alumni Response: “More career advice and counselling”

“More information as to what you could actually do with your degree.”

“Regular counselling on what to do with the degree when graduating (for many friends who didn't do medicine and didn't know what options existed outside of research or medicine from a Biosci degree)”

“More discussion on courses to pursue after graduation and maybe a bit more assistance in how to go about that”

“Preparing students for life after Biological Sciences. Most students enter the program wanting to be doctors, dentist, optometrist etc. There should be a medical field statistics class so students have an idea of their chances early on.”



Undergraduate programs in Biological Sciences



Biochemistry: This program explores the chemistry of living organisms and the molecular basis for the changes occurring in living cells. Students obtain the education necessary to unravel the complex chemical reactions that occur in various life forms



Cellular, Molecular and Microbial Biology: This program provides students with a strong foundation in contemporary microbiology and cell biology, with particular emphasis on molecular mechanisms that regulate cell function.



Ecology (Suspended July 1, 2022): This program allows students to study processes that determine distribution and abundance of plants, animals and microbes in natural and human-modified environments. Students learn principles underlying structure and function of ecological systems.



Plant Biology: This program offers students a wide variety of plant biology courses, including courses in plant relationships, structure, function and development, and in the emerging area of plant biotechnology and molecular biology.



Zoology: This program introduces students to structure, function and relatedness among different groups of animals. Advanced courses provide a broad perspective on comparative and integrative animal biology.



Biological Sciences: This program allows students to develop an overview of several aspects of life. These programs permit students to tailor their program to aspects of the biological sciences that are not served by the other programs offered by the Department.

Three new BISI concentrations starting Fall 2023: *Biodiversity and Conservation, Genetics and Evolution, Biotechnology*

Which program/concentration you decide on will depend on your interests and goals.

Program Openhouses 2022

- Information session about the specialized programs, advantages, scholarships, meet your professors, opportunities to set up 507/528/530 independent research projects
- Biochemistry, Cellular, Molecular and Microbial Biology, Ecology, Plant Biology, Zoology: ZOOM meetings to be held in the last two weeks of November (Dates and Times: TBA)
- Deadline to transfer into a program is February 1st through Student Centre via MyUofC
- GPA minimum for entry into specialized programs



Career Plans

1. Think about possible career plans throughout your undergraduate studies rather than leaving it to the end of your degree

- *While family, friends and mentors may have good suggestions for types of degrees and career choices, ultimately you are the one that knows best and it's your life that you have to live.*
- *Having a career plan allows a better rationale for course selection/planning*
- *Be informed of the requirements and deadlines for applications*
- *Career plan should be flexible as interests and expectations can change (good to have a backup career plan just in case)*
- *Talk to individuals in the profession (how is it like, rewards other than \$\$\$, issues)*
- *How can I best make a difference and contribute in a meaningful way to society?*
- *Try to anticipate the job market conditions when you graduate (difficult to predict future)*

"Choose a job you love, and you will never have to work a day in your life."

Course Selection

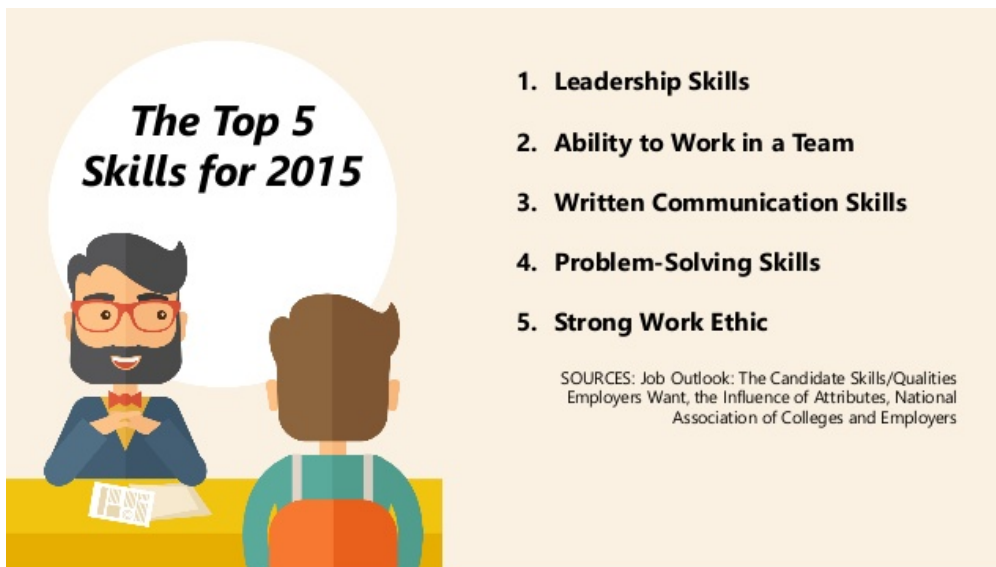
2. Take courses in areas of study that **interest and inspire you**

- Do your research on potential courses and know the prerequisites (checkout course outline, syllabus and learning outcomes on Departmental website)
- Try and not take courses based on lecture time, no labs, friends and sounds easy
- Do not avoid taking 500 level courses because they are too hard
- Take courses that build on certain useful skills (e.g. entrepreneur, statistics)

Development of “Soft Skills”

“It’s not so much the knowledge of facts that’s going to prepare students for a lifetime in the workforce, it’s the ability to think critically, to communicate and to problem solve”

– David Docherty, President, Mount Royal University



1. Certain **500 level courses** that emphasize reading papers, writing proposals and oral presentations
2. **507/528/530** independent research projects
3. **Statistics and bioinformatics** courses

1. 500 level courses for development of soft skills

Thinking back on your studies, what aspect of your studies had the greatest impact and why?

“Courses that emphasized critical thinking into experimental design and papers because they helped me understand the pitfalls and strengths of certain methods of research.”

“The emphasis of higher level CMMB courses on critical thinking into experimental design and research papers. It was essential for a person like myself who was interested in research to understand why certain decisions should be made.”

“Comparing scientific papers in CMMB 531 because it allowed us to look at current research and think independently instead of memorizing and repeating.”

Candidate courses for development of soft skills (check BioSci website for course info and soft skill components):

BCEM 541, BCEM 543, BCEM 547, BCEM 551, BCEM 555, BCEM 575, BCEM 561, BCEM 577, BIOL 313, BIOL 315, BIOL 435, BIOL 453, BIOL 505, CMMB 505, CMMB 519, CMMB 531, CMMB 545, CMMB 549, CMMB 563, CMMB 565, ECOL 413, ECOL 439, ECOL 501, ECOL 527, ECOL 529, PLB 541, PLBI 543, ZOOL 475, ZOOL 515, ZOOL 571, ZOOL 577, ZOOL 595

Additional benefits: good opportunity to know your prof better and getting a strong reference letter (but you have to do a very good job...)

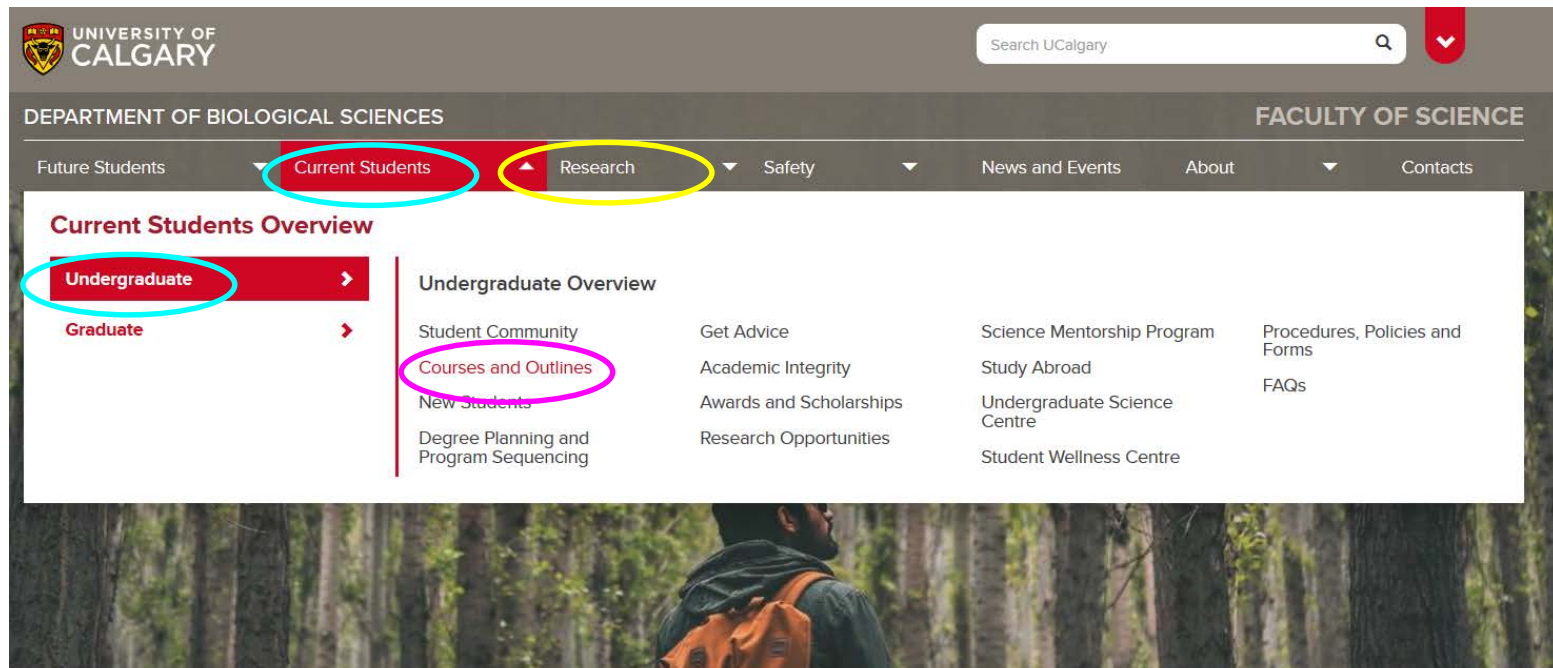
Caveats: Need to have the prerequisites for these courses and enrollment may be limited

Department of Biological Sciences Website

<https://science.ucalgary.ca/biological-sciences>

Good resource to search information on:

- **Course descriptions**
- **Program descriptions**
- **Professor profiles**
- **Course Advice: Dr. Lisa Gieg (Associate Head of Undergraduate: imgieg@ucalgary.ca)**



Undergraduate programs

Our department offers six unique undergraduate programs.

[Learn more »](#)



Graduate programs

Obtain your master's or doctorate with the Department of Biological Sciences.

[Learn more »](#)



Research areas

With over 25 different research areas in four different clusters, our department boasts a diverse and prolific portfolio.

[Learn more »](#)

2. 507/528/530 independent research projects

If you could change one thing about your program what would it be and why?

“Co-op terms or mandatory research projects. Regardless of the degree, co-op programs enable students to get real world hands on experience which makes them much more employable after they graduate.”

“As a researcher, I very much enjoyed the research courses: 507 and 528/530. Although I realize that many students aren't interested in research, I think it helps to gain real world experience on what potential career options would be like.”

“I would encourage more students to do an honors thesis, for those that want to get more experience with developing a project. I didn't understand the value until I started graduate school.”

507/528/530 BCEM, BIOL, CMMB, PLBI, ECOL, ZOOL projects are conducted in a research laboratory under the supervision of a faculty member.

507 (one semester, can only enroll after 2nd year)

528/530 (two semesters, can only enroll after 3rd year; research proposal, final report and oral presentation required – better development of soft skills)

507/528/530 independent research projects

Benefits:

- Exciting new scientific discoveries (not simply following a lab manual)
- Development of soft skills (experimental design, data analysis, troubleshooting, oral presentations, writing skills, critical reading of papers)
- Strong reference letter (but have to do a good job...)
- Excellent preparation for graduate school or a research career
- Highly useful for non-research positions (practical experience for job applications)
- Paper authorship in a scientific journal

Caveats:

- Opportunities are limited due to space and funding
- Can also do the project in other Faculties (e.g. Medicine, Kinesiology), but need co-supervisor from Biological Sciences



Cobb lab

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genesis 50:741-749 (2012)

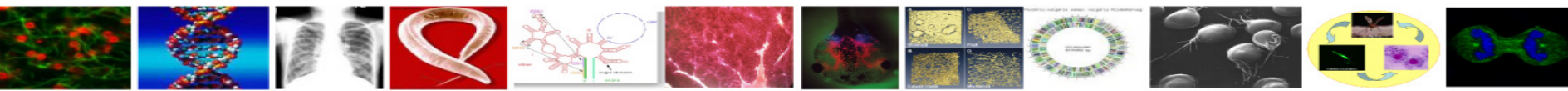
LETTER

A Conditional Allele of *Rspo3* Reveals Redundant Function of R-spondins During Mouse Limb Development

Stanley Neufeld, Jessica M. Rosin, Anshula Ambasta, Kristen Hui, Venessa Shaneman, Ray Crowder, Lori Vickerman, and John Cobb*

Department of Biological Sciences, 2500 University Drive N.W., University of Calgary, Calgary, Canada

Received 12 September 2011; Revised 16 April 2012; Accepted 11 May 2012



What is the best approach to find a research lab (507/528/530, summer research, graduate school)?

- Carefully examine the **research profiles of principal investigators** to see whether their work aligns with your interests and career goals; Meet PIs at Openhouses/Research Night
- **How do I know what I am interested in?** What was your favorite course?
- **Read several published papers** to have a feel of the nature of their research
- Contact the professor in a formal email introducing who you are and **explaining why you want to work in their lab (details on next slide)**
- **Find and contact a potential supervisor early:** Lab space and available research projects are limited; Summer scholarship applications such as PURE/NSERC are usually due in Jan-Feb
- Might have to **contact several professors** (may not get your first choice)
- Visit the lab and talk to the principal investigator (discuss possible projects and **expectations of hours/week required**)
- **Speak to lab denizens** to get a few of their experiences in the lab

Guidelines for writing a letter to a prospective research supervisor

- Contact the professor in a formal email **introducing who you are and explaining why you want to work in their lab** (i.e. provide a strong indication that you are genuinely interested in their research).
- Explanations should include what type of research position (e.g. summer research, 507/528/530, volunteering), what courses you have taken, why you are interested in this area, evidence that you have read some of the papers, how would this opportunity aid in your career goals.
- 6-12 well-crafted sentences in letter.
- Attach an **up-to-date CV and transcript**.
- **Professors are busy and they may not reply.** A decision to accept a student is seldom made immediately and sometimes an intended later reply is forgotten (i.e. the professor is not blowing off the student intentionally). Can send a follow-up email as a reminder.
- **In a nutshell, the professor is looking for the following in the letter:** *“Tell me about me and my research and why you would be a good fit in my lab”*.

3. More Statistics and Bioinformatics

If you could change one thing about your program what would it be and why?

“I would try to fit in more options for bioinformatics based programming courses. This is a field that is necessary to have a working knowledge in to succeed as a genomic researcher, and I don’t think I got quite enough exposure to this area.”

“More emphasis on programming and data analysis in CMMB - The ecology program gets this, but it is not a requirement for CMMB. I think some experience with programming (Python or Matlab) would be greatly beneficial.”

“Everyone has to do a research project with a supervisor and add mandatory statistics courses (perhaps more useful than calculus).”

“All should take biology stats because statistics is useful in almost all skills and is very applicable in the real world”

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- **CMMB 549 (Microbial Genetics and Genomics)**
 - **CMMB 563 (Microbial Diversity)**
 - **MDSC 401 (Bioinformatics)**
 - **BIOL 315 (Quantitative Biology I)**
 - **STAT 205 (Introduction to Statistical Inquiry)**
 - **STAT 213 (Introduction to Statistics I)**
 - **STAT 327 (Statistics for the Physical and Environmental Sciences)**
 - **Some professional schools (e.g. Medical) require/recommend a statistics course**

Career possibilities in the programs of Biological Sciences

The Good News: Many relevant fields and opportunities

- Product development, sales and technical support in pharmaceutical and biotechnology industries
 - Quality and safety manager for agriculture and food industries
 - Staff Positions in Alberta Sustainable Resource Development, Environment Canada, and Parks Canada, Water Purification and Waste Treatment Facilities, Resource Companies, or Environmental Consulting Firms
 - Museum curation, Zoos, Fish and Wild Life, Aquaculture
 - Technical positions in research laboratories at universities, government laboratories or industry laboratories (biotechnology, medical, veterinary and environmental labs)
 - Professional schools (e.g. medical, veterinary medicine, dental, optometry, physiotherapy, education, etc.)
 - Careers in an interdisciplinary specialization, when combined with other expertise, such as computer science, law or communications
-

The Bad News: A B.Sc. is primarily not a working degree and usually, but not always requires additional education and/or practical experience to establish a career.

B.Sc.only

- Lab technician
- Technical sales/support of scientific instruments, medical devices, pharmaceutical products
- <https://ca.indeed.com/> (good site to search for jobs in Canada)

Molecular Microbiology Technician (St. George, NB)

The Research and Productivity Council (RPC) - New Brunswick

Molecular Microbiology Technician

The Research and Productivity Council (RPC) is an independent R&D and technical services organization headquartered in Fredericton, New Brunswick. We are looking for a molecular microbiology technician to join our Food, Fisheries and Aquaculture Department. The candidate chosen for this position will be working at RPC's branch laboratory located in St. George, New Brunswick. The successful candidate will join a multi-skilled group of scientists and technicians in a state-of-the-art research and diagnostics laboratory.

Work will consist of fish necropsy, microbiological culture, PCR-based testing, gel electrophoresis, nucleic acid extraction, IFAT, and the development and implementation of other molecular/microbiological tests. The technician will also be involved with sample receiving and preparation, field work, sample analysis, and QA/QC in a commercial laboratory setting.

The successful candidate will be provided with on-the-job training and will be expected to work independently thereafter with the support of scientists and other molecular biology and microbiology technicians. A training period in the Fredericton laboratory may be required depending upon qualifications.

Candidates must have: • a B.Sc. in science with a concentration in molecular biology, microbiology, immunology, biochemistry or equivalent combination of training and experience; an aptitude for multi-tasking and working effectively in a fast-paced, laboratory environment; • an attention for detail and proven problem solving ability, pride in their work, and an aptitude for customer service.

**Completion of
507/528/530
could be
beneficial**

Previous experience in a diagnostics laboratory with an accredited quality management system would be considered an asset. This posting is for a full time permanent position with a 6 month probationary period and is starting as soon as possible. Normal working hours are from 8:15am to 4:30pm but overtime during the week and periodically on weekends will be required.

RPC offers a challenging work environment and competitive compensation. For more information about us, visit our website at www.rpc.ca.

Please forward a covering letter and résumé (including the names of three references) quoting reference #MMTSG1116 to:

Executive Director Research and Productivity Council 921 College Hill Road Fredericton, N.B. E3B 6Z9

Fax: (506) 452-1386 Email: careers@rpc.ca

TECHNICAL SUPPORT REPRESENTATIVE

Mandel Scientific Company Inc - Guelph, ON

TECHNICAL SUPPORT REPRESENTATIVE

Mandel Scientific Company Inc., a leading distributor and manufacturer of scientific equipment and supplies, has an immediate opening for a Technical Support Representative. We are seeking a highly motivated and enthusiastic candidate. The Technical Support Representative will be responsible for technical and sales support for the company's full line of chromatography, biotechnology and analytical instruments, consumables and accessories. In addition, this position will be responsible for supporting the sales process through quotations, tenders and other related documentation. The position will be based in our **Guelph, ON** office.

The ideal candidate will have:

**Completion of
507/528/530 could
be beneficial**

- A University undergraduate degree or college diploma in a scientific discipline.
- Laboratory experience with hands-on experience in molecular biology, life sciences, microbiology and/or analytical techniques.
- Excellent organization, prioritization, problem-solving and communication skills
- Knowledge of Windows-based software programs.
- Ability to set priorities, manage multiple projects and deadlines
- Fluency in French (both written and spoken) would be considered an asset.

Interested candidates should forward their resume in confidence by January 16th, 2016 to:

Mandel Scientific Company Inc.

Attn: Technical Sales Support Manager

2 Admiral Place

Guelph, Ontario N1G 4N4

Fax: (519) 763-2005

careers (a) mandel.ca

NO PHONE CALLS OR AGENCIES PLEASE - ONLY THOSE SELECTED FOR AN INTERVIEW WILL BE CONTACTED

Job Type: Full-time

Required education:

- Diploma/Certificate



QUALITY ASSURANCE TECHNICIAN

Food Safety & Food Technology

Are you a dedicated foodie? Do you have a passion to work with a food manufacturer who is helping people to eat healthy while being easy on the planet at the same time? If you want to work in a rapidly growing Company that is revolutionizing the natural channel by creating healthy meat-free meals, then you may be the person Garden Protein International is looking for!

We're looking for a Quality Assurance Technician who thrives in a fast pace environment, to join our continually growing team working full-time at our Richmond, BC facility.

Does this sound like you...

- You apply critical thinking and analysis to solve problems and provide best practice and solutions?
- You love working with food and ensuring food safety?
- Have flexibility to work rotating shifts and weekends?

The company is SQF Level 3 certified. You will be responsible for monitoring product safety and quality, production process and personnel GMP practice. A degree in Food Sciences, Food Technology, or Microbiology is preferred. You will need to identify report and investigate deviations to procedures, systems or standards and assist will implementing corrective actions and follow ups. We are looking for someone who has experience with assisting in the continual implementation and maintaining of food safety programs.

If you not only have the career credentials we're looking for but also love to work in a supportive and fun work environment, please e-mail your resume and cover letter to: hr@gardein.com or visit our careers page at <http://gardein.com/contact-us/>

When applying, please include "QA Technician" in the subject line.
We thank all applicants that apply, but only short-listed candidates will be contacted. No phone calls please.

Zoo Careers

Job Openings

Administrative Assistant, Animal Care

Banquet Cook

Chef de Partie

Concessions Customer
Service Representatives

Guest Relations Customer
Service Representatives

Retail Customer Service
Representatives

Skating Rink Attendants

Supervisor, Custodial

Volunteer

Administrative Assistant, Animal Care

Job summary:

Accountable to the Operations Manager, this position supports the Animal Care team with tasks of a routine and general nature including data entry and file/record maintenance, preparation of documents and materials related to animal transports, office administration and meeting minutes.

Responsibilities:

- Organizes and maintains keeper daily reports and assures accuracy and completeness of information in proper format.
- Assists in preparation of animal transport materials, health certificates, and required permits for incoming and outgoing animal transports.
- Assists in maintaining the Calgary Zoo animal care library.
- Assists with data entry, including morbidity, mortality and pathology records into the zoo's husbandry and medical database.
- Assists with the maintenance of pages, libraries and permissions within the team SharePoint site.
- Responsible for team meeting and events logistics, including scheduling meeting spaces and equipment, taking minutes.
- Maintains files and records by photocopying, scanning and filing a variety of documents.
- Maintains inventory of office supplies.
- Maintains confidentiality.
- Other tasks and projects as required.

Qualifications:

- Degree, Diploma or Certificate in related area (i.e. Administrative, Information Management, Records Management, Biology, etc.)
- 2+ years of pertinent experience working in an office environment.
- Advanced computer skills, including MS Word and Excel; SharePoint skills considered an asset.
- Knowledge of the Zoological Information Management System would be an asset.

Grower Technologist

Cannabis At Work - Victoria, BC

Grower Technologist

Under the direction of the VP of Operations, the grower technologist is a member of the Production Team that assists in the care and maintenance of plants. The position requires a dedicated, focused professional with strong attention to detail and flexibility. The responsibilities include, but are not limited to the following:

Core Responsibilities:

- Follow Standard Operating Procedures (SOP) for all cultivation activities during medical marijuana processing, at all times, to result consistent quality marijuana products;
 - Conduct lot coding and tracking of individual marijuana plants and the resultant harvested bulk and finished marijuana products;
 - Responsible for sanitation of equipment and production areas, preparation and maintenance of nutrient reservoirs and irrigation system;
 - Assure all marijuana products are free from contamination risk at all processing stages right from propagation to final packaging;
 - Implement standard procedures that maximize equipment safety, sanitation practices, maintenance support and assure consistent quality product output;
 - Ensure regulatory requirements needed for premises and equipment used for cultivation, harvest, preparation, packaging, storage, infusion and sale of marijuana incidental are maintained in clean and sanitary conditions;
 - Monitor for Quality Control checks to ensure process and product Quality in line with site Quality Assurance team;
 - Perform safe and effective harvesting, trimming, drying and converting cannabis bulk product into high-quality marijuana products;
 - Ensure that refuse and waste products are managed and destroyed as per the current approved Standard Operating Procedures (SOP);
 - Maintain, check and review of Lot Production Record for each cannabis batch. Track and record clone, plant and product transfer across cultivation rooms and vault;
 - Oversee general facility maintenance of cultivation/production areas and apply problem-solving skills to overcome daily cultivation/production issues;
 - Maintain a clean and tidy workspace and displays a high standard of cleanliness.
 - Collaborate with Production Supervisor in daily cultivation tasks, job training and review of cultivation staff work schedule and performance;
 - Collaborate with other department associates in all areas to improve process performance and safety;
 - Employ professional and clear communication practices to maintain a positive and progressive team atmosphere;
 - Other responsibilities as assigned by Department Supervisors/Leads and Managers.
- Product packaging alongside client care team.

Qualifications:

- Production Horticulture Diploma or a degree in Biology, Agriculture, Horticulture, or equivalent would be preferred;
- Proficient with computers;
- Trustworthy and hard-working;
- Passion and ambition for excelling in and advancing the medical marijuana industry;
- Knowledge of the Health Canada's Access to Cannabis for Medical Purposes Regulations;
- Must have the ability to obtain A/RPIC security clearance status as per Health Canada's Access to Cannabis for Medical Purposes Regulations;
- Knowledge of plant diseases, insects and fungi, as well as plant treatment processes and options.
- Must have accountability, proactive behaviour, strong attention to detail. Can follow company policies and contribute towards the goal of achieving Production targets within set timelines.
- Works well alone and in a team environment.
- Good communication and documentation skills.

Junior/Intermediate Biologist

Alberta Conservation Association - Lethbridge, AB

Alberta Conservation Association (ACA) is looking for an enthusiastic individual with great communication skills to join our team to work with agricultural producers within southern Alberta on our MULTISAR project. MULTISAR is a habitat stewardship project that has been operating for 15 years on Alberta's grasslands. It is a partnership managed between Alberta Conservation Association, Alberta Environment and Parks, and the Prairie Conservation Forum. The focus is on voluntary collaboration of producers to enhance and maintain habitat for multiple species (www.multisar.ca).

You would promote ACA and the MULTISAR project, plan and conduct wildlife surveys, implement on the ground enhancements, and write reports. Communication skills and knowledge of grazing practices, riparian management, and the cattle industry are important as you would be working directly with producers and other professionals to develop a ranch plan for their property to enhance wildlife habitat and benefit their overall ranching operation. You will collaborate with other ACA projects (fisheries, upland game bird, riparian, etc.) when opportunities arise to achieve multiple objectives on the landscape.

Wildlife surveys would include early morning point count surveys for grassland birds on preselected properties in southern Alberta. This will mean early starts and driving to the sites prior to sunrise. Past experience or a good understanding of grassland birds and how to ID them from sight and sound is crucial. Other surveys experience with raptors, bats, snakes, amphibians, burrowing owls, or short-horned lizards is an asset. Experience with riparian and/or range management would be beneficial. Familiarity with using a GPS unit and maps is expected and is essential to navigate to required field sites. You will have excellent writing skills, organizational skills, data management skills, experience with ArcGIS and Microsoft Office, and be able to record data thoroughly and neatly. Long field days are unavoidable and you may be required to stay out at field camps for portions of the spring/summer.

REQUIRED

- Minimum: B.Sc. in Biology or similar field with related experience.
- Valid Class 5 driver's license (supply drivers abstract prior to start date).
- Self-motivated with a strong work ethic.
- First Aid Class C with AED
- Excellent interpersonal skills and demonstrated proficiency building and maintaining positive professional partnerships.
- Detail oriented with solid organizational and time management skills.
- Excellent written and verbal communication skills.
- Ability to ID birds by sight and sound
- Past wildlife survey experience including point counts
- Excellent computer knowledge and proficient using various Microsoft programs (e.g., Word, Excel, Access, and PowerPoint) and GIS (ArcGIS platforms).
- GPS and Map interpretation
- Collaborative working style

Postgraduate Training in the Life Sciences Field

- **Professional Schools** (e.g. Medical, Vet-Med, Dental, Optometry, Physiotherapy, Chiropractor)
- **Graduate School** (research scientist/officer/manager at university/government/industry labs, professor/instructor at college/university)
- **Genetic Counsellor** (M.Sc. at UBC, Toronto, Manitoba, McGill)
- **RCMP Forensic Scientist** (University of Manitoba)
- **Other Professional Masters programs** (Medical Biotechnology, Community Health Sciences - CSM; Public Health - U of A)
- **Practical programs from technical schools** (e.g. Medical Lab Technologist (SAIT), Ultrasound Specialist (SAIT) Clinical Genetics Technologist (BCIT), X-Ray/MRI technician)
- **Start your own company/consulting firm** (e.g. FREDsense Technologies, Solve-Bio, Polymath Inc.)

Graduate School (M.Sc. or Ph.D.)

- Opportunity to further develop soft skills and acquire work experience
- Opportunity for **higher level jobs** that require more qualifications

M.Sc. (2-3 years)

- More versatile and less specialized than Ph.D.
- Well-defined research project
- Professional M.Sc. [MBA, M.Sc. (Genetic Counselling, Public Health, etc.)]

Ph.D. (4-6 years)

- Research intensive and for those seeking a career in research
- Requires deep critical thinking of research project
- More academic freedom and control over research project
- Academia (Professors, Journal Editor) and Industry (Lead Scientists)

Graduate school (Department of Biological Sciences, U of C)

- Minimum stipend (\$25,000/year); guaranteed 2 years and 4 years for M.Sc. and Ph.D., respectively
- Stipend comes from a combination of TA-ships, scholarships, research grants
- Opportunity to transfer to a Ph.D. from B.Sc., but need to show good progress on research project and pass the Ph.D. candidacy exam

Graduate school can be carried out in **other Departments or Universities.**



Medical Laboratory Technology

● Open for Fall 2017

LENGTH: 2 Years

CREDENTIAL: Diploma

AVAILABLE: Full Time Classroom

[Highlights](#)[Program Details](#)[Admission Requirements](#)[Courses](#)[Costs](#)[Contact](#)[APPLY NOW](#)

Program Highlights

Learn to be an integral member of the healthcare industry and train to perform and evaluate diagnostic laboratory tests – a vital role in the treatment and prevention of disease – working in hospitals, medical or research labs and scientific supply companies. This is an intensive program that includes courses in anatomy, chemistry and analysis techniques.

[Download Program PDF](#)

97%
Grad Employment Rate

\$62,500
Median Starting Salary



Mounting shortage of medical lab techs hurts most in rural Alberta, expert says

Medical lab technologists are raising the alarm about a shortage in their profession in Alberta and across the country.

Posted: Apr 04, 2017 9:26 AM MT

Last Updated: Apr 04, 2017 10:43 AM MT



Diagnostic Medical Sonography

● Closed for Fall 2018

LENGTH: 26 Months

CREDENTIAL: Diploma

AVAILABLE: Full Time Classroom



[Watch video](#)

[Highlights](#)
[Program Details](#)
[Admission Requirements](#)
[Courses](#)
[Costs](#)
[Contact](#)
[APPLY NOW](#)

Program Highlights

Train to perform ultrasound procedures and help monitor patient health in hospitals and community clinics through this specialized program covering all the key aspects of ultrasound technology, as well as anatomy and patient care.

100%

Grad Employment Rate

\$78,025

Median Starting Salary

Potential combinations of postgraduate degrees with your B.Sc. in Biological Sciences

Interdisciplinary expertise and training provides versatility, greater opportunities and competitiveness in the job market

- **Business (MBA):** e.g. Administrator for Federal/Provincial Health, Hospital or CFO of a Biosciences Company
- **Law:** e.g. Patent law for Biotech products, Health Regulatory Agencies (Provincial/Federal)
- **Engineering:** e.g. Product development of biomedical (surgical) and biotech devices, Construction of Health/Research facilities
- **Language/Music:** e.g. Education
- **Communication:** e.g. Journalism, Scientific Officer for Grant Funding Agencies, Journal Editor
- **Computer Science:** e.g. Bioinformatics, Stock Market Analysis, Software Development for Health Data Organization and Management, and Data Model Building and Analysis for Industry (e.g. Oil and Gas)

Undergraduate Science Centre

“One-Stop Shop for Faculty of Science Undergraduates”

<https://science.ucalgary.ca/current-students/undergraduate/undergraduate-science-centre>

The screenshot shows the University of Calgary Faculty of Science website. The header includes the university logo and a search bar. The main navigation bar has links for Future Students, Current Students (highlighted), Research, Connections, Departments & Programs, About, and Contacts. The 'Current Students Overview' section is active, with 'Undergraduate' selected. Below this, a table titled 'Undergraduate Overview' lists various resources categorized into Program Advising, Student Experience, Science Internship Program, and Undergraduate Opportunities. The 'Undergraduate Science Centre' link is highlighted in the Science Internship Program column.

Program Advising	Student Experience	Science Internship Program	Undergraduate Opportunities
<ul style="list-style-type: none">Science Advising Check InScience Student HandbookStudent Registration SupportDegree Planning and Program SequencingFAQs	<ul style="list-style-type: none">IDEAS Fund ApplicationScience Mentorship ProgramScience Ambassador ProgramScience Collaborative SpaceScience SquadStudent Advisory Council	<ul style="list-style-type: none">Employer InformationStudent InformationUndergraduate Science CentreContact UsUndergraduate FormsAdditional Support and Resources	<ul style="list-style-type: none">Awards and ScholarshipsMitacs Globalink ProgramResearch OpportunitiesStudy AbroadUSC Upcoming Events

Programs and advising

Departments & Multidisciplinary Programs
Degree planning
Science Program Advising

Student resources

Student Success Centre
Awards and scholarships
Career Services
See all

Science opportunities

Science Internship Program
Student experience
Study abroad
Research

Links to Health and Wellness, Student Access, Rights and Advocacy, International Student Support, IT Computing, Books and Supplies, Parking and Transit, Food and Housing

Student Success Centre

<https://www.ucalgary.ca/student-services/student-success>

UNIVERSITY OF CALGARY

STUDENT SUCCESS CENTRE

News and Events ▾ Advising ▲ Learning ▾ Writing Contact ▾

Advising Overview

Academic Improvement	Exploratory Advising	Scholarships and Awards
Considering Grad School	<ul style="list-style-type: none">Exploring Degree ProgramsNavigating Open StudiesConsidering UCalgaryExploratory Workshops	New Student Registration Assistance: Advising
		Thrive Priority Support Network

support staff will help you enhance your skills and achieve your academic goals.

[Register for a workshop](#) [Book an appointment](#)

- Advising Support
- Learning Support
- Writing Support
- Math Support
- First Years Scholars Program
- Academic Turnaround
- Success Seminars
- Scholarship Application Preparation

University of Calgary CareerLink

<https://elevate.ucalgary.ca/home.htm>



- Support for help in achieving career goals and job search goals

Services

- One-on-one appointments with a career development specialist
- Career workshops on a variety of topics to help prepare you for success
- [Career Fairs & other events](#) to connect you with potential employers
- [Resume and cover letter support](#) to improve your chance of landing an interview
- [Online resources](#) - career planning tools and insights on what to do with your degree
- Formal assessments to get to know yourself



Five tips for increasing academic success

1. Define your **academic goals** at the start of each year

Provides direction and increases your focus

2. **Think critically**, not memorization

High school is predominantly memorization, university requires students to develop good critical thinking skills

3. **Study smarter**, not harder

When and where are you the most productive? Save your hard tasks when you are the most productive

4. If you fall behind, **don't give up**

Inform your Profs/TAs about your situation, they know the course and are best suited to provide good suggestions

5. Stretch yourself **academically**

Take courses outside your program that can potentially help with gaining useful skills for your career (e.g. entrepreneur, creative writing)

Why complete your B.Sc. Degree?

- People in the outside world are more **impressed with a B.Sc. degree** than a comment that they completed a bunch of courses in a program in the University.
- It also will give you a **great sense of achievement**.
- **Your B.Sc. will always remain**, even if you decide to do something else later in life.
- **Prerequisite** to postgraduate programs, professional schools and jobs

“Your undergraduate studies in the Department of Biological Sciences at the University of Calgary is a terrific opportunity to learn about new areas that interest and inspire you, as well as the development of soft skills. You will always have your B.Sc. Degree, nobody get take that away from you. It represents a valuable launch pad to build a successful career and make a difference in society.”