BIOLOGY (Graduate) – WHAT CAN I DO WITH MY MAJOR?

STUDENTS/ALUMNI

Description on Major

**MS Biology** – trained to pursue doctoral level programs in biology and the health sciences, or applied work (e.g. laboratory technician, teaching, environmental work) in these areas. Students choose courses relevant to one of three areas of concentration: evolutionary biology, organismic biology (e.g. botany, zoology, fisheries), or cell biology.

**MS Molecular Biology and Biotechnology** – trains students for entry into doctoral level programs in biology and the health sciences, but the coursework is more heavily grounded in practical laboratory coursework emphasizing skills relevant to the biotechnology industry. These courses include those that focus on genetic engineering, protein biochemistry, cell culture technology, transgenic technology and bioinformatics/genomics.

What is learned in the classroom?

**MS Biology** - evolutionary biology, organismic biology (e.g. botany, zoology, fisheries), or cell biology

**MS Molecular Biology and Biotechnology** - genetic engineering, protein biochemistry, cell culture technology, transgenic technology and bioinformatics/genomics

Specific Knowledge Skills

- The skills and knowledge to contribute to the discovery of solutions to problems that is often of immediate concern to society, medicine or industry
- Knowledge of life's organisms, how life systems are linked and the ability to study the impact of changes in the environment on these life systems
- Skills in conducting research, data collection and analysis using laboratory/field techniques
- The ability to gather, assess, evaluate, interpret and then communicate technical and scientific data to both the scientific and non-scientific communities
- An understanding of scientific process and the ability to formulate and test hypotheses/ideas using an objective and analytical focus
- The ability to identify and develop effective resources/materials to demonstrate scientific findings

*Wilfrid Laurier University - Biology - A Career Overview*

What is learned through the classroom?

- Operate scientific equipment
- Independent worker
- Information handling & organization
- Curiosity and creativity
- Biology theory & practical knowledge
- Statistical awareness
- Oral & written communication

*UNC-W Career Center - Biology*

Valuable Transferable Skills

Information-Gathering and Communication Skills

- The skills required to identify and access a wide range of relevant information and resources
- The ability to compile and organize facts and information and to comprehend and apply new and/or unfamiliar information to different situations and settings
- Skills in preparing interesting, creative and informative presentations which target diverse audiences
- The ability to develop attractive/effective reports, presentations and materials using current technology
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Thinking, Planning and Organizational Skills
- The ability to learn, understand and interpret information and apply knowledge to new situations
- The ability to set priorities, meet deadlines and effectively plan/manage time, data and resources
- Problem-solving skills and the ability to make well-reasoned decisions, think creatively and search for, identify and consider all sides of an issue
- Skills to effectively analyze and interpret a wide range of information and data to discuss, support and/or reject ideas, opinions, reports, theories and proposals

Teamwork and Management Skills
- Skills enabling you to work effectively as part of a team by identifying your role and contributing, through leading, teaching, motivating and/or encouraging others, to the success of the team
- An understanding of how to successfully identify, plan and contribute to the goals of a project
- The ability to oversee, supervise and/or contribute to a project from beginning to end including determining outcomes, planning details, making decisions, assigning roles and completing task

Wilfrid Laurier University - Biology - A Career Overview

ECU Alumni
- Jason Brown
- Pengda Liu
- Paul Marek
- Pierre Le Pabic
- Stewart Holt
- Richard Hanna
- David Gloeckner
- Christine Voss
- Natalie Amoroso
- Jen Apger
- Khaled Aziz
- Graham Byrum
- Leah Connell
- Sam Fagg
- Lindsey Fix
- Catherine Gouge
- Keyren Corey
- Taylor Frazier
- Kevin Hart
- Sarah Hollis
- Karly Hudson
- Cecilia Krahforst
- David Kunz
- Shelly Lee
- Stewart Lyon
- Mark Metcalf
- John Mohan
- Dan Murolo
- Michael Reubens
- Matt Robinson
- Maitri Shah
- Lynn Swafford
- Evan Twomey
- Justin Yeager

EMPLOYERS

Attributes employers seek on a candidate’s resume - NACE’s Job Outlook 2015
1. Leadership
2. Ability to work in a team
3. Communication skills (written)
4. Problem-solving skills
5. Strong work ethic
6. Analytical/quantitative skills
7. Technical Skills
8. Communication skills (verbal)
9. Initiative
10. Computer skills

Employers rate the importance of candidate skills/qualities - NACE’s Job Outlook 2015
1. Ability to work in a team structure
2. Ability to make decisions and solve problems
3. Ability to verbally communicate with persons inside and outside the organization
4. Ability to plan, organize and prioritize work
5. Ability to obtain and process information
6. Ability to analyze quantitative data
7. Technical knowledge related to the job
8. Proficiency with computer software programs
9. Ability to create and/or edit written reports
10. Ability to sell or influence others
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MORE RESOURCES

Other Career Centers:
- Florida State University
  - Finding and Using Graduate Student Resources
    http://career.fsu.edu/IMAGES/PDFS/Guides/FindingAndUsingGraduateStudentResources.pdf

Other Resources:
- CV Tips - http://www.cvtips.com/
- University Jobs - http://www.universityjobs.com/
- The Versatile PhD - http://versatilephd.com/
- National Postdoctoral Association - http://www.nationalpostdoc.org/
- Postdoc Jobs - http://www.postdocjobs.com/
- PhDs.org - http://www.phds.org/
- GradShare - http://www.gradshare.com
- Science Careers - http://sciencecareers.sciencemag.org/
- North Carolina Biotech Center - http://ncbijobs.ncbiotech.org/
- Sciencejobs.com - http://jobs.newscientist.com/
- Biology Jobs - http://www.biologyjobs.com/
- North Carolina Department of Environmental and Natural Resources - http://agency.governmentjobs.com/northcarolina/default.cfm
- Environmental Jobs and Careers - http://www.ecoemploy.com/
- Environmental Career Opportunities - http://www.ecojobs.com/
- Multicultural Environmental Leadership Development Initiative - http://meldi.snre.umich.edu/
- Health and Human Services - http://www.hhs.gov/careers/
- JobScience - http://jobs.jobscience.com/
- Office of Intramural Training & Education - https://www.training.nih.gov/career_services/jobs
- Great Green Careers - http://www.greatgreencareers.com/
- O*NET - http://www.onetonline.org/
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Articles/Publications:

- Tools & Tips | Outreach - http://sciencecareers.sciencemag.org/tools_tips/outreach

NOTE

It is important to understand that employers hire people, not degrees. The skills and knowledge you develop as a result of your education, as well as in your work and community activities, have the greatest impact on hiring decisions. (Wilfrid Laurier University - A Career Overview)

FOR MORE INFORMATION
East Carolina University Career Services - http://www.ecu.edu/career/