

Professional Skills Requested from Employers: Master's/PhD Graduates in Biology

This document is part of the Biology Professional Skills package, which also includes the **Individual Development Plan (IDP)** and **Professional Skills Checklist**. The goal of this document is to guide you in identifying the skills most requested from employers which will help you develop your IDP and career.

When recording your notes on what skills you have, be sure to include specific examples on how you performed/learned or achieved these skills. You may be asked in a job interview or want to include the information in a cover letter. See the **Professional Skills Checklist** for ideas on how/where to develop your professional skills.

This document is organized by biology related career categories. The biology-related career categories included are:

- All Careers
- Analyst Careers
- Animal/ Environmental Careers
- Health & Safety Careers
- Laboratory/Research Careers
- Pharmaceutical Careers
- Professional School (e.g., law, medicine)
- Science Communication
- Teaching

All Careers

There are several skills that most employers look for when hiring. These core competencies span many careers/professions.

Skills/Qualifications Most Requested	How and when did you achieve this?
✓ Ability to work independently, prioritize, plan, and execute required procedures.	
✓ The ability to prioritize multiple tasks and manage multiple deadlines.	
✓ Excellent planning and organizational skills	
✓ Developed skills with organizing, understanding, and analyzing multiple	

sources of information and applying them to ideas/problems/issues	
✓ The ability to communicate knowledge and numerical information clearly to varied audiences in written and oral forms.	
✓ The ability to explain complex ideas clearly to others	
✓ Interpersonal and teambuilding skills	
✓ Upholding commitments and meeting deadlines	
✓ The ability to learn new information and apply to it professional demands	
✓ Proficiency with computer software (Office 365, Word, Excel, PowerPoint, Outlook,)	

Analyst Careers

For example: Bioinformatics Specialist, Biostatistician, Biotechnology Analyst, Data Analyst, Epidemiologist, and Science Policy Analyst.

Skills/Qualifications Most Requested	How and when did you achieve this?
✓ Developed knowledge of biostatistical methodology	
✓ The ability to think abstractly about problems, collect various types of data, analyze them, identify limitations/considerations, and arrive at a solution.	
✓ Skills in conducting statistical/mathematical analysis and analyzing and synthesizing the results.	
✓ Experience with analyzing biological data sets (e.g. R studio, SAS)	
✓ Developed skills and knowledge of SQL	
✓ Comfort with complicated data sets	
✓ Knowledge of standards related to data structures and computing	
✓ Developed skills with organizing, understanding, and analyzing multiple sources of information and applying them to ideas/problems/issues.	

✓ Proficiency with computer software (Office 365, Word, Excel, PowerPoint, Outlook,)	
✓ Exceptional detail-orientation	
✓ The ability to communicate complex and numerical information effectively to varied audiences in written and oral forms.	
✓ The ability to translate data into actionable steps	
✓ The ability to prioritize multiple tasks and manage multiple deadlines.	

Animal/ Environmental Related Careers

For example: Animal Services Worker, Animal Care Attendant, Animal Trainer, Ecology Planner, Environmental Educator, Environmental Planning Specialist, Invasive Species Liaison, and Regulatory Specialist.

Skills/Qualifications Most Requested	How and when did you achieve this?
✓ A strong understanding of Animal and/ or Ecology classifications	
✓ Knowledge and experiences of animal handling	
✓ [<i>Ecology related</i>] Knowledge of invasive species management principles and practices	
✓ [<i>Ecology related</i>] Good botanical and wildlife inventory skills	
✓ [<i>Ecology related</i>] Experience working with hand and power tools and habitat restoration equipment	
✓ Excellent planning and organizational skills	
✓ Strong attention to detail	
✓ Comfortable working in challenging physical conditions (i.e., all types of weather, or difficult animal behaviour)	
✓ Developed skills with organizing, understanding, and analyzing multiple sources of information and applying them to ideas/problems/issues	

✓ Proficiency with computer software (Office 365, Word, Excel, PowerPoint, Outlook,)	
✓ Experience maintaining accurate records and files	
✓ The ability to write reports	
✓ The ability to work independently	
✓ Must possess a valid G driver licence in good standing	

Health & Safety Careers

For example: Health Records Professional, Health & Safety Evaluator, and Health & Safety Officer.

Skills/Qualifications Most Requested	How and when did you achieve this?
✓ Strong understanding of biology related healthcare practices	
✓ Experience with regulatory affairs policies and procedures	
✓ Experience providing consultation and guidance on compliance and best practices related to health and safety	
✓ Developed analytical skills to make assessments	
✓ Ability to read, understand, and analyze scientific information/literature	
✓ Strong interpersonal and teambuilding skills	
✓ Proficiency with computer software (Office 365, Word, Excel, PowerPoint, Outlook)	
✓ Experience maintaining accurate records and files	
✓ Ability to work under pressure	
✓ Ability to work independently, prioritize, plan, and execute required procedures.	

Laboratory/ Research-Related Careers

For example: Agronomist, Biologist, Biotechnology Scientist, Clinical Research Coordinator Food Scientist, Laboratory Technician, Microbiologist, Molecular Biologist, and Researcher.

Skills/Qualifications Requested	How and when did you achieve this?
✓ Solid understanding of biological processes, and pharmaceuticals	
✓ Experience in experimental design and trouble shooting	
✓ Laboratory safety (Following protocols, chemical handling materials safety, disposing of biological specimen, sanitizing lab equipment, recording precision, incident reports...)	
✓ Ability to perform routine bench and instrumental analysis	
✓ Experimental skills (i.e., Data collection, observational methods, sterile techniques...)	
✓ Experience working with laboratory instruments (proper use of lab/biomedical instruments (i.e., balances, centrifuges, optical microscope), calibration skills, preparing animal and plant tissues, maintenance, and troubleshooting)	
✓ Recognizing critical, abnormal, and unacceptable tests results and following up according to protocols	
✓ Conducting statistical analysis	
✓ Read, understand, and analyze scientific information/literature	
✓ Proficiency with computer software (Office 365, Word, Excel, PowerPoint, Outlook, ZOOM)	
✓ Ability to work under pressure	
✓ Ability to work independently, prioritize, plan, and execute required procedures.	
✓ Experience drafting scientific presentations, reports or publications.	

✓ Communicate effectively to varied audiences in written and oral forms	
✓ Public speaking to a variety of audiences	

Pharmaceuticals Careers

For example: Account Representative, Pharmaceuticals Sales Representative, and Technical Sales Representative.

Skills/Qualifications Requested	How and when did you achieve this?
✓ A background in science with knowledge of pharmaceuticals	
✓ Experience with sales	
✓ Negotiation Skills	
✓ Developed skills with organizing, understanding, and analyzing multiple sources of information and applying them to ideas/problems/issues	
✓ Proficiency with computer software (Office 365, Word, Excel, PowerPoint, Outlook,)	
✓ The ability to translate technical information into easy-to-understand information	
✓ Strong interpersonal skills	
✓ The ability to work under pressure	

Professional School (i.e., law, medicine)

There are several skills applicants to professional schools (i.e., law, medicine) are asked to demonstrate. The specific competencies may differ from program to program.

Skills/Qualifications Requested	How and when did you achieve this?
✓ The ability to think abstractly about problems, collect various types of data, analyze them, identify limitations/considerations, and arrive at a solution.	
✓ Developed skills with organizing, understanding, and analyzing multiple sources of information and applying them to ideas/problems/issues	
✓ Developed research skills	

✓ The ability to prioritize multiple tasks and manage multiple deadlines.	
✓ Strong interpersonal and teambuilding skills	
✓ The ability to explain complex ideas clearly to others	
✓ Communicate effectively to varied audiences in written and oral forms	
✓ Excellent planning and organizational skills	
✓ Experience maintaining accurate records and files	
✓ Strong attention to detail	
✓ Ability to work independently, prioritize, plan, and execute required procedures	
✓ Upholding commitments and meeting deadlines	
✓ Ability to adapt to stressful or changing situations even under difficult situations	
✓ The ability to learn new information and apply to it professional demands	

Science Communication Careers

For example: Medical Editor, Medical Science Liaison, Nature Interpreter, Scientific Designer, Science Editor, Science Writer, Public Relations Manager, and Technical Writer.

Skills/Qualifications Requested	How and when did you achieve this?
✓ A background in science	
✓ Experience proofreading science related content	
✓ Experience with fact checking technical materials	
✓ Knowledge and experience of technical writing skills	
✓ Meticulous attention to detail	
✓ Developed skills with organizing, understanding, and analyzing multiple sources of information and applying them to ideas/problems/issues	

✓ Ability to read, understand, and analyze scientific information/literature	
✓ Proficiency with computer software (Office 365, Word, Excel, PowerPoint, Outlook,)	
✓ The ability to translate technical information into easy-to-understand information	
✓ Communicate effectively to varied audiences in written and oral forms	
✓ Public speaking to a variety of audiences	

Teaching Careers

For example: Adult Educators, College/University Educators, Educational Publishing, Instructional Technologist, Public school teacher, or Training and Development Specialist.

Skills/Qualifications Requested	How and when did you achieve this?
✓ Developed instructional skills with a familiarity with a variety of teaching methods	
✓ Experience teaching including lesson planning, delivery and evaluation	
✓ Outstanding expertise in specified subject area	
✓ Ability to help students with diverse educational backgrounds and learning abilities	
✓ Public speaking experience to a variety of audiences	
✓ The ability to translate technical information into easy-to-understand information	
✓ The ability to communicate effectively to varied audiences in written and oral forms	
✓ Excellent planning and organizational skills	
✓ The ability to prioritize multiple tasks and manage multiple deadlines.	

✓ Upholding commitments and meeting deadlines	
✓ Strong interpersonal skills	
✓ Patience during challenging situations	
✓ Proficiency with computer software (Office 365, Word, Excel, PowerPoint, Outlook,)	