



Work Process Schedule

Bio-manufacturing Technician (Upstream)		
Job Description: Assist biological and medical scientists. Set up, operate, and maintain laboratory instruments and equipment, monitor experiments, collect data and samples, make observations, and calculate and record results. May analyze organic substances, such as blood, food, and drugs.		
RAPIDS Code: 1102CB	O*NET Code: 19-4021.00	
Estimated Program Length: 1 Year		
Apprenticeship Type: <input checked="" type="checkbox"/> Competency-Based <input type="checkbox"/> Time-Based <input type="checkbox"/> Hybrid		

Suggested On-the-Job Learning Outline

Collect biological specimens.		
Competencies	Date Completed	Initial
A. Conduct research, or assist in the conduct of research, including the collection of information and samples, such as blood, water, soil, plants and animals.		

Monitor operational procedures in technical environments to ensure conformance to standards.		
Competencies	Date Completed	Initial
A. Monitor and observe experiments, recording production and test data for evaluation by research personnel.		
B. Monitor laboratory work to ensure compliance with set standards.		

Interpret research or operational data.		
Competencies	Date Completed	Initial
A. Analyze experimental data and interpret results to write reports and summaries of findings.		

Research microbiological or chemical processes or structures.		
Competencies	Date Completed	Initial
A. Analyze experimental data and interpret results to write reports and summaries of findings.		

Record research or operational data.		
Competencies	Date Completed	Initial
A. Keep detailed logs of all work-related activities.		
B. Input data into databases.		

Prepare biological samples for testing or analysis.		
Competencies	Date Completed	Initial
A. Isolate, identify and prepare specimens for examination.		

Set up laboratory or field equipment.		
Competencies	Date Completed	Initial
A. Set up, adjust, calibrate, clean, maintain, and troubleshoot laboratory and field equipment.		

Clean objects.		
Competencies	Date Completed	Initial
A. Clean, maintain and prepare supplies and work areas.		

Care for plants or animals.		
Competencies	Date Completed	Initial
A. Feed livestock or laboratory animals.		

Analyze chemical compounds or substances.		
Competencies	Date Completed	Initial
A. Conduct standardized biological, microbiological or biochemical tests and laboratory analyses to evaluate the quantity or quality of physical or chemical substances in food or other products.		

Examine characteristics or behavior of living organisms.		
Competencies	Date Completed	Initial
A. Examine animals and specimens to detect the presence of disease or other problems.		

Order materials, supplies, or equipment.		
Competencies	Date Completed	Initial
A. Place orders for laboratory equipment and supplies.		

Suggested Related Instruction Outline

Provider	
Name:	
Address:	
Email:	Phone Number:
Suggested Related Instruction Hours: X	

*CIP Code	Course Title	Contact Hours
26.1104	Computational Biology	
26.0204	Molecular Biology	
26.0701	Zoology/Animal Biology	
26.0406	Cell/Cellular and Molecular Biology	
26.1302	Marine Biology and Biological Oceanography	
26.0708	Animal Behavior and Ethology	
41.0101	Biology/Biotechnology Technology/Technician	
26.0502	Microbiology, General	
26.0709	Wildlife Biology	
26.1304	Aquatic Biology/Limnology	
26.1501	Neuroscience	
26.0503	Medical Microbiology and Bacteriology	
26.0801	Genetics, General	
26.0101	Biology/Biological Sciences, General	
26.0102	Biomedical Sciences, General	
26.1102	Biostatistics	
26.0202	Biochemistry	
26.0508	Microbiology and Immunology	

26.1103	Bioinformatics	
Total		

*If related course number data are available, information displayed includes the Classification of Instructional Programs (CIP) code that best represents the field of study, course, or program. CIP provides a taxonomic scheme that supports the accurate tracking and reporting of educational programs. CIP is developed and maintained by the U.S. Department of Education.