



Work Process Schedule

Chemistry Quality Control Technician		
Job Description: Conduct chemical and physical laboratory tests to assist scientists in making qualitative and quantitative analyses of solids, liquids, and gaseous materials for research and development of new products or processes, quality control, maintenance of environmental standards, and other work involving experimental, theoretical, or practical application of chemistry and related sciences.		
RAPIDS Code: 1134CB	O*NET Code: 19-4031.00	
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

Analyze chemical compounds or substances.		
Competencies	Date Completed	Initial
A. Conduct chemical or physical laboratory tests to assist scientists in making qualitative or quantitative analyses of solids, liquids, or gaseous materials.		
B. Set up and conduct chemical experiments, tests, and analyses, using techniques such as chromatography, spectroscopy, physical or chemical separation techniques, or microscopy.		

Clean objects.		
Competencies	Date Completed	Initial
A. Maintain, clean, or sterilize laboratory instruments or equipment.		

Maintain laboratory or technical equipment.		
Competencies	Date Completed	Initial
A. Maintain, clean, or sterilize laboratory instruments or equipment.		

Evaluate quality of materials or products.		
Competencies	Date Completed	Initial
A. Monitor product quality to ensure compliance with standards and specifications.		

Prepare compounds or solutions for products or testing.		
Competencies	Date Completed	Initial
A. Prepare chemical solutions for products or processes, following standardized formulas, or create experimental formulas.		

Set up laboratory or field equipment.		
Competencies	Date Completed	Initial
A. Set up and conduct chemical experiments, tests, and analyses, using techniques such as chromatography, spectroscopy, physical or chemical separation techniques, or microscopy.		

Interpret research or operational data.		
Competencies	Date Completed	Initial
A. Compile and interpret results of tests and analyses.		

Serve on institutional or departmental committees.		
Competencies	Date Completed	Initial
A. Provide and maintain a safe work environment by participating in safety programs, committees, or teams and by conducting laboratory or plant safety audits.		

Assist engineers or scientists with research.		
Competencies	Date Completed	Initial
A. Provide technical support or assistance to chemists or engineers.		

Collaborate on research activities with scientists or technical specialists.		
Competencies	Date Completed	Initial
A. Provide technical support or assistance to chemists or engineers.		

Collect samples for analysis or testing.		
Competencies	Date Completed	Initial
A. Develop or conduct programs of sampling and analysis to maintain quality standards of raw materials, chemical intermediates, or products.		

Monitor processes for compliance with standards.		
Competencies	Date Completed	Initial
A. Develop or conduct programs of sampling and analysis to maintain quality standards of raw materials, chemical intermediates, or products.		

Train personnel in technical or scientific procedures.		
Competencies	Date Completed	Initial
A. Train new employees on topics such as the proper operation of laboratory equipment.		

Prepare scientific or technical reports or presentations.		
Competencies	Date Completed	Initial
A. Write technical reports or prepare graphs or charts to document experimental results.		

Manage scientific or technical project resources.		
Competencies	Date Completed	Initial
A. Order and inventory materials to maintain supplies.		

Operate laboratory or field equipment.		
Competencies	Date Completed	Initial
A. Operate experimental pilot plants, assisting with experimental design.		

Supervise scientific or technical personnel.		
Competencies	Date Completed	Initial
A. Direct or monitor other workers producing chemical products.		

Develop new or advanced products or production methods.		
Competencies	Date Completed	Initial
A. Design or fabricate experimental apparatus to develop new products or processes.		
B. Develop new chemical engineering processes or production techniques.		

Suggested Related Instruction Outline

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

*CIP Code	Course Title	Contact Hours
40.0501	Chemistry, General	
40.0502	Analytical Chemistry	
40.0503	Inorganic Chemistry	
40.0504	Organic Chemistry	
41.0301	Chemical Technology/Technician	
41.0303	Chemical Process Technology	
40.0509	Environmental Chemistry	
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.