



# Bioscience Lab Foundations

Youth Apprenticeship

## BIOSCIENCE LAB FOUNDATIONS

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Bioscience Lab Foundations youth apprentices use laboratory equipment and tools to perform biological laboratory procedures. Apprentices must adhere to industry safety and security standards.

**Length of Apprenticeship:** One year. This pathway is the prerequisite to second year Bioscience Applications program.

## COMPETENCIES

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Youth apprentices must complete a **total of 10** competencies. **Nine** must be from the list below. If necessary, employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment.

Competencies
1. Use aseptic technique
2. Prepare glassware and instruments
3. Prepare reagents, solutions, and/or buffers
4. Perform calculations and conversions
5. Weigh and measure substances
6. Operate lab equipment
7. Conduct testing according to protocol
8. Record testing results
9. Maintain testing records
10. Maintain lab inventory

## REGISTERED APPRENTICESHIP BRIDGING OPPORTUNITIES

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The following Registered Apprenticeship is available in this area:

- Biotechnology Lab Support Assistant

## POST-SECONDARY PATHWAY OPPORTUNITIES

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There are several post-secondary pathway opportunities in this area. The following is a partial list.

- Biotechnology Laboratory Technician
- Medical Laboratory Technician



# Bioscience Lab Foundations

Youth Apprenticeship

## ON-THE-JOB LEARNING PERFORMANCE STANDARDS GUIDE

### YOUTH APPRENTICE INFORMATION

<b>Youth Apprentice Name</b>	
<b>YA Coordinator</b>	<b>YA Consortium</b>
<b>School District</b>	<b>High School Graduation Date</b>

### REQUIREMENTS

#### Level One Requirements

Youth apprentices must complete ALL the items listed below. Check completed areas.

- Competency checklist
- Employability Skills checklist (in this OJL Guide) or the DPI Employability Skills Certificate
- Related instruction equal to 1 high school credit or at least 3 college credits
- Career Preparation section (one of the three options; upload certificate if applicable)
- Minimum of 450 work hours

### HOURS

Record the hours the youth apprentice worked.

Total Hours Employed	Company Name	Telephone Number

## RELATED INSTRUCTION

YEAR 1: Indicate which related instruction courses the youth apprentice completed. Check Dual Credit box if the youth apprentice is using the course to meet Career Preparation requirement.

Dual Credit	Course Number and Title	Credits	Instruction Provider
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			
<input type="checkbox"/>			

## CAREER PREPARATION

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Youth apprentices must complete **one of the following options during each year** of Youth Apprenticeship participation and it must be relevant to the Occupational Competencies on the checklist:

1. Student is participating in a local or regional career pathway\*.

Identify the pathway below:

For more information contact the [Wisconsin Department of Public Instruction](#). Additional help may be found on the WI DPI [Wisconsin Pathways – Regional Career Pathways](#) and [DPI Career Clusters and Pathways](#) web pages.

**\*Local and Regional career pathways** as defined by the WI DPI means that a student is participating in or has completed at least one CTE class in a cluster pathway sequence and has completed at least one of the other career pathway components: instructional related course, work-based learning, dual college credit, and/or career and technical student organization.

2. Student has completed one of the following certificates during their YA program or possess current certification earned previously. The certificate earned must be occupationally relevant and YA certificates are excluded.

A copy of the certificate must be uploaded with the completed checklist. Select the certificate from the list below.

- First Aid/CPR  
 OSHA 10  
 Other certificates identified by the [Career and Technical Education \(CTE\) Approved Certifications List](#)

Title of Certification:

3. Student is participating in a [Dual Enrollment Course](#) connected to any postsecondary education provider including UW System, Wisconsin Association of Independent Colleges and Universities (WAICU), and any of the 16 Wisconsin Technical Colleges (WTCS).

College Name:

College Course Title:

Course Number:

For more information on Dual Enrollment opportunities, please contact one of the resources below:

- [WTCS](#)
- [WAICU](#)
- UW System – connect with the college of choice.

## SIGNATURES

The On-the-Job Learning Performance Standards Guide includes a list of competencies youth apprentices learn through mentoring and training at the worksite.

Instructions for the Worksite Employers/Mentors and School-Based or YA coordinators: This document should be reviewed with the employer/mentor, school-based or YA coordinator on a regular basis with the youth apprentice to record progress and plan future steps to ensure completion of the required competencies. Mentors, school-based/YA coordinator, and the apprentice sign below.

Employer/Mentor Signature	Employer/Mentor Signature
Employer/Mentor	Employer/Mentor
Business/Company	Business/Company
Date Signed	Date Signed
School-Based and/or YA Coordinator Signature	School-Based and/or YA Coordinator Signature
School-Based and/or YA Coordinator	School-Based and/or YA Coordinator
School District or Organization	School District or Organization
Date Signed	Date Signed
Youth Apprentice Signature	Youth Apprentice Signature
Youth Apprentice	Youth Apprentice
School District / High School	School District / High School
Date Signed	Date Signed

## EMPLOYABILITY SKILLS

Youth apprentices must demonstrate key employability skills.

The DWD YA program employability skills requirement may be attained and demonstrated through two processes. (See options listed below.) Employability skills must be completed for every year a student is in the program. The DPI Employability Skills Certificate may be counted as meeting one of those two years, provided the certificate is earned in the same year the student is enrolled in youth apprenticeship or they can complete the YA Employability Skills in the OJL. The Employability Skills Certificate must be obtained through the DPI.

1. If a student has successfully completed a Wisconsin Department of Public Instruction (DPI) State-Certified Cooperative Education, [Co-Op Employability Skill certification](#) then they have met the YA Employability Skills requirement for that year. A copy of the student's DPI Co-Op Employability Skill Certificate must be maintained on file with their YA regional consortium.

Earned Wisconsin Employability Skills Certificate (checked if applicable) or,

2. Completed and rated "Employability Skills" through this YA OJL guide as described below.

<b>3</b>	<b><i>Exceeds Expectations:</i></b> Exceeds entry-level criteria; requires minimal supervision; consistently displays this behavior
<b>2</b>	<b><i>Meets Expectations:</i></b> Meets entry-level criteria; requires some supervision; often displays this behavior
<b>1</b>	<b><i>Working to Meet Expectations:</i></b> Needs improvement; requires much assistance and supervision; rarely displays this behavior

The following skills are required of all youth apprentices.

Employability Skills	Rating		
	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<b>Competency and Rating Criteria</b>  1. Develops positive work relationships with others. <i>Examples of qualities and habits that the employee might exhibit include . . .</i> <ul style="list-style-type: none"> <li>• Interacts with others with respect and in a non-judgmental manner</li> <li>• Responds to others in an appropriate and non-offensive manner</li> <li>• Helps co-workers and peers accomplish tasks or goals</li> <li>• Applies problem-solving strategies to improve relations with others</li> <li>• When managing others, shows traits such as compassion, listening, coaching, team development, and appreciation</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Employability Skills	Rating		
Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>2. Communicates effectively with others <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Adjusts the communication approach for the target audience, purpose, and situation to maximize impact</li> <li>• Organizes messages/information in a logical and helpful manner</li> <li>• Speaks clearly and writes legibly</li> <li>• Models behaviors to show active listening</li> <li>• Applies what was read to actual practice</li> <li>• Asks appropriate questions for clarity</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>3. Collaborates with others <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Works effectively in teams with people of diverse backgrounds regardless of sex, race, ethnicity, nationality, sexuality, religion, political views, and abilities</li> <li>• Shares responsibility for collaborative work and decision making</li> <li>• Uses the problem-solving process to work through differences of opinion in a constructive manner to achieve a reasonable compromise</li> <li>• Avoids contributing to an unproductive group conflict</li> <li>• Shares information and carries out responsibilities in a timely manner</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>4. Maintains composure under pressure <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Uses critical thinking to determine the best options or outcomes when faced with a challenging situation</li> <li>• Carries out assigned duties while under pressure</li> <li>• Acts in a respectful, professional, and non-offensive manner while under pressure</li> <li>• Applies stress management techniques to cope under pressure</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>5. Demonstrates integrity <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Carries out responsibilities in an ethical, legal and confidential manner</li> <li>• Responds to situations in a timely manner</li> <li>• Takes personal responsibility to correct problems</li> <li>• Models behaviors that demonstrate self-discipline, reliability, and dependability</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Employability Skills	Rating		
Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>6. Performs quality work</p> <p><i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Carries out written and verbal directions accurately</li> <li>• Completes work efficiently and effectively</li> <li>• Performs calculations accurately</li> <li>• Conserves resources, supplies, and materials to minimize costs and environmental impact</li> <li>• Uses equipment, technology, and work strategies to improve workflow</li> <li>• Applies problem-solving strategies to improve productivity</li> <li>• Adheres to worksite regulations and practices</li> <li>• Maintains an organized work area</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>7. Provides quality goods or services (internal and external)</p> <p><i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Shows support for the organizational goals and principles by own personal actions</li> <li>• Displays a respectful and professional image to customers</li> <li>• Displays an enthusiastic attitude and desire to take care of customer needs</li> <li>• Seeks out ways to increase customer satisfaction</li> <li>• Produces goods to workplace specifications</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>8. Shows initiative and self-direction</p> <p><i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Prioritizes and carries out responsibilities without being told</li> <li>• Responds with enthusiasm and flexibility to handle tasks that need immediate attention</li> <li>• Reflects on any unsatisfactory outcome as an opportunity to learn</li> <li>• Improves personal performance by doing something different or differently</li> <li>• Analyzes how own actions impact the overall organization</li> <li>• Supports own action with sound reasoning and principles</li> <li>• Balances personal activities to minimize interference with work responsibilities</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Employability Skills	Rating		
Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p>9. Adapts to change <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Shows flexibility and willingness to learn new skills for various job roles</li> <li>• Uses problem-solving and critical-thinking skills to cope with changing circumstances</li> <li>• Modifies own work behavior based on feedback, unsatisfactory outcomes, efficiency, and effectiveness</li> <li>• Displays a "can do" attitude</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>10. Demonstrates safety and security regulations and practices <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Follows personal safety requirements</li> <li>• Maintains a safe work environment</li> <li>• Demonstrates professional role in an emergency</li> <li>• Follows security procedures</li> <li>• Maintains confidentiality</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>11. Applies job-related technology, information, and media <i>Examples of qualities and habits that the employee might exhibit include . . .</i></p> <ul style="list-style-type: none"> <li>• Applies technology effectively in the workplace</li> <li>• Assesses and evaluates information on the job</li> <li>• Assesses training manuals, website, and other media related to the job</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>12. Fulfills training or certification requirements for employment <i>Examples of this requirement may include . . .</i></p> <ul style="list-style-type: none"> <li>• Participation in required career-related training and/or educational programs</li> <li>• Passing certification tests to qualify for licensure and/or certification</li> <li>• Participation in company training or orientation</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>13. Sets personal goals for improvement <i>Examples of this requirement may include . . .</i></p> <ul style="list-style-type: none"> <li>• Setting goals that are specific and measurable</li> <li>• Setting work-related goals that align with the organization's mission</li> <li>• Identifying strategies to reach goals</li> <li>• Reflecting on goal progress to regularly evaluate and modify goals</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## OCCUPATIONAL COMPETENCIES

Youth apprentices must complete a **total of 10** competencies. **Nine** must be from the list below. If necessary, employers can substitute **1** competency with another occupationally appropriate skill. That skill should be added to the competency list for assessment.

### Rating Scale

3: Exceeds entry level criteria | Requires minimal supervision | Consistently displays this behavior

2: Meets entry level criteria | Requires some supervision | Often displays this behavior

1: Needs improvement | Requires much assistance and supervision | Rarely displays this behavior

Occupational Competencies	Ratings		
Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p><b>1. Use aseptic technique</b></p> <ul style="list-style-type: none"> <li>• follow safety protocols and precautions</li> <li>• wear the appropriate Personal Protective Equipment (PPE)</li> <li>• disinfect surfaces before and after use</li> <li>• gather all materials prior to beginning procedure</li> <li>• prevent unwanted air current flow from doors and windows</li> <li>• sterilize equipment, reagents and/or supplies</li> <li>• hold caps or tops when removing them</li> <li>• prevent unwanted exposure to uncontrolled environment</li> <li>• keep lids on as much as possible</li> <li>• avoid talking, sneezing, coughing when working with exposed analytes</li> <li>• discard contaminated materials properly</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>2. Prepare glassware and instruments</b></p> <ul style="list-style-type: none"> <li>• follow safety protocols and precautions</li> <li>• wear the appropriate Personal Protective Equipment (PPE)</li> <li>• disinfect glassware and instruments before and after use</li> <li>• use proper solution of detergent</li> <li>• remove all residual matter</li> <li>• place cleaned and dried items in sterilization pouches or wraps</li> <li>• label and seals items properly</li> <li>• document cleaning procedure</li> <li>• return clean glassware and instruments to proper storage locations</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Occupational Competencies	Ratings		
Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<b>3. Prepare reagents, solutions, and/or buffers</b> <ul style="list-style-type: none"> <li>• follow safety protocols and precautions</li> <li>• wear the appropriate Personal Protective Equipment (PPE)</li> <li>• determine the concentration and amount required</li> <li>• calculate the amount of solute and solvent</li> <li>• verify calculation accuracy</li> <li>• measure the solute and solvent</li> <li>• combine solute and solvent appropriately</li> <li>• return solute and solvent to proper storage area</li> <li>• label and store prepared item</li> <li>• clean work area</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4. Perform calculations and conversions</b> <ul style="list-style-type: none"> <li>• identify unknown values</li> <li>• determine the calculations or conversions and formulas</li> <li>• verify calculations or conversions with worksite professional</li> <li>• record calculations or conversions</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5. Weigh and measure substances</b> <ul style="list-style-type: none"> <li>• follow safety protocols and precautions</li> <li>• wear the appropriate Personal Protective Equipment (PPE)</li> <li>• verify equipment is usable and current for calibration</li> <li>• select appropriate unit for measurement</li> <li>• record measurements in appropriate units</li> <li>• clean work area</li> <li>• convert measurements</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6. Operate lab equipment</b> <ul style="list-style-type: none"> <li>• follow safety protocols and precautions</li> <li>• wear the appropriate Personal Protective Equipment (PPE)</li> <li>• Choose correct equipment for the task</li> <li>• Verify equipment is available for use and in working order</li> <li>• Verify safety requirements and any Personal Protective Equipment (PPE) needed for equipment use</li> <li>• Inspect equipment and work area for safety considerations</li> <li>• Prepare equipment for safe operation</li> <li>• Monitor equipment for safe operation while operating</li> <li>• Follow shut down procedures</li> <li>• Label equipment not operating as expected</li> <li>• Report abnormal equipment conditions</li> <li>• Document use</li> <li>• Clean work area</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Occupational Competencies	Ratings		
Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<p><b>7. Conduct testing according to protocol</b></p> <ul style="list-style-type: none"> <li>Follow safety protocols and precautions</li> <li>Wear the appropriate Personal Protective Equipment (PPE)</li> <li>choose correct equipment for the task</li> <li>prepare reagents, solutions, and/or buffers</li> <li>prepare controls</li> <li>identify the sample(s) to be tested</li> <li>prepare samples for testing</li> <li>test sample(s)</li> <li>use aseptic lab technique and standard/universal precautions</li> <li>records results</li> <li>clean glassware and instruments</li> <li>dispose of chemical, biohazardous, or infectious waste</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>8. Record testing results</b></p> <ul style="list-style-type: none"> <li>select appropriate forms/records</li> <li>use appropriate note-taking methods</li> <li>record results, readings, measurements, calculations, times, etc. with appropriate scientific units</li> <li>record your identification</li> <li>report discrepancies or unexpected results</li> <li>document final testing data</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>9. Maintain testing records</b></p> <ul style="list-style-type: none"> <li>follow data security procedures</li> <li>select appropriate forms/records</li> <li>label and/or code documents</li> <li>file forms/records in appropriate location</li> <li>use appropriate computer codes, formatting, macros, charts, spreadsheets, etc.</li> <li>verify data prior to entry/storage</li> <li>update data in files</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>10. Maintain lab inventory</b></p> <ul style="list-style-type: none"> <li>check incoming containers for damage or contamination</li> <li>verify items ordered match the purchase order and description</li> <li>identify defective items</li> <li>process defective items</li> <li>perform inventory checks</li> <li>maintain proper storage levels</li> <li>rotate items to minimize old and outdated inventory</li> <li>monitor temperature and atmospheric controlled spaces</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Occupational Competencies	Ratings		
Competency and Rating Criteria	Minimum Rating of 2 for EACH Check Rating		
	1	2	3
<b>Competency Substitute</b> (if you replaced a competency above, note the competency and rating)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>			



# Post-Program Completion Survey

Youth Apprenticeship

## YA POST-PROGRAM COMPLETION SURVEY: EMPLOYER FEEDBACK

Employers complete the following information. YA Coordinators will enter this into the Post-Program Completion Survey.

YA Employer Post-Program Completion Questions	
Will you offer or have you offered the Youth Apprentice a continuing position with your company?	<input type="checkbox"/> Yes <input type="checkbox"/> No
If continuing position offered to youth apprentice, did they accept?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>If yes, please answer the questions below:</b>	
Was the offer for full time or part time work?	<input type="checkbox"/> Full-time <input type="checkbox"/> Part-time
Title of the position offered:	
What is the wage of the continuing employment offer?	
If applicable, will the youth apprentice advance to a Registered Apprenticeship?	

## YA POST-PROGRAM COMPLETION SURVEY

The [Post-Program Completion Survey](#) form is to be provided to each student completing the Youth Apprenticeship program to capture information on the student's plans after leaving the program. This **form should be completed by the Youth Apprenticeship Coordinator** to capture information from the Youth Apprentice and the Employer after successfully completion of the Youth Apprenticeship Program.

The form should be completed during the final meeting between the student, mentor, and Youth Apprenticeship Coordinator, when the final checklist or On-the-Job Learning (OJL) Guide is filled out and signed. Information captured on this form must be entered online using the Youth Apprenticeship Online Data Application (YODA) System.

DWD is an equal opportunity employer and service provider. If you have a disability and need assistance with this information, please dial 7-1-1 for Wisconsin Relay Service. Please contact the Division of Employment and Training at 888-258-9966 and press 6 to request information in an alternate format, including translated to another language.

