

Unit/Standard Number	 <p style="text-align: center;"><b>High School Graduation Years 2011, 2012 and 2013</b></p> <p style="text-align: center;"><b>Biotechnology CIP 26.1201 Task Grid</b></p>	Proficiency Level Achieved: (X) Indicates Competency Achieved to Industry Proficiency Level
<b>Secondary Competency Task List</b>		
<b>100</b>	<b>DEMONSTRATE GOOD WORK HABITS</b>	
101	Demonstrate professional work habits.	
102	Demonstrate the ability to organize, implement, and trouble-shoot specific tasks.	
103	Demonstrate the ability to work in teams and as an individual.	
<b>200</b>	<b>DEMONSTRATE KNOWLEDGE OF BIOTECHNOLOGY</b>	
201	Define biotechnology and its role.	
202	Demonstrate knowledge of the history of the biotechnology.	
203	Describe the lifecycle of biotechnology product development.	
204	Identify the application of the biotechnology industry.	
205	Describe careers in biotechnology.	
<b>300</b>	<b>DEMONSTRATE LABORATORY KNOWLEDGE AND SKILLS</b>	
301	Demonstrate competency in validating and using laboratory equipment.	
302	Demonstrate competency in using computer office applications.	
303	Perform basic laboratory math skills.	
304	Apply statistical analysis to interpret data.	
305	Demonstrate the ability to use the scientific method.	
306	Properly prepare buffers and solutions.	
307	Demonstrate the concepts of recombinant technology.	
308	Demonstrate the principles of DNA isolation.	
309	Perform Polymerase Chain Reaction (PCR).	
310	Perform electrophoresis.	
311	Perform separation techniques.	
312	Explain and perform aseptic technique.	
313	Demonstrate the concepts of Microbial culture	
314	Demonstrate the concept of Mammalian cell culture	
315	Demonstrate the concept of Laboratory automation	
316	Perform basic spectrophotometer assays	

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<b>400</b>	<b>ETHICS</b>	
401	Demonstrate the knowledge of bioethics.	
402	Demonstrate the knowledge of professional ethics.	
<b>500</b>	<b>DEMONSTRATE SAFETY IN THE BIOTECHNOLOGY LABORATORY</b>	
501	Demonstrate general requirements for laboratory safety.	
502	Identify and use personal protective equipment.	
503	Demonstrate ability to implement safety protocols.	
504	Follow MSDS guidelines for handling, storage, and disposal of hazardous material.	
505	Demonstrate knowledge of safety regulatory agencies, such as OSHA.	
<b>600</b>	<b>DEMONSTRATE THE ABILITY TO WORK IN A HIGHLY REGULATED ENVIRONMENT</b>	
601	Perform documentation according to regulatory agency standards.	
602	Demonstrate an ability to maintain records in accordance with Intellectual Property laws.	
603	Document lab activities and findings according to guidelines.	
<b>700</b>	<b>DEMONSTRATE USE OF APPROPRIATE EQUIPMENT AND INSTRUMENTATION</b>	
701	Use laboratory glassware.	
702	Use volumetric equipment.	
703	Use electrophoresis equipment.	
704	Use spectrophotometer.	
705	Use balances.	
706	Demonstrate knowledge of autoclaves.	
707	Use centrifuges.	
708	Use pH meters.	
709	Demonstrate knowledge of thermocyclers.	
710	Use microscopes.	
711	Demonstrate knowledge of laminar flow hoods.	
712	Demonstrate knowledge of temperature regulating devices (water baths, incubators).	
713	Demonstrate knowledge of chromatographic equipment.	