

**ADVANCED LABORATORY PRACTICES****Embedded Certificate****Degree Sheet**

2023-2024 Catalog

<b>General Education Courses</b>			<b>13 Credit Hours</b>	<b>Credit Hours</b>	<b>Prerequisites</b>
ENGL	1113	English Composition I		3	[R] [W]
Select One:				3	
ENGL	1213	English Composition II			ENGL 1113
ENGL	2333	Introduction to Technical Report Writing			ENGL 1113
SPCH	1113	Introduction to Speech Communications			[R] [W]
Select One:				3	[M]
MATH	1483	Mathematical Functions and Their Uses			
MATH	1513	Precalculus I			
BIOL	1303	Principles of Biology		3	[R] ICSM 0113
BIOL	1311	Principles of Biology Lab		1	[R] ICSM 0113
<b>Support and Related Courses</b>			<b>9 Credit Hours</b>		
CHEM	1154	General, Organic and Biochemistry		4	[R] [M]
CHEM	1315	General Chemistry I		5	[R] [M]
<b>Technical Occupational Specialty</b>			<b>14 Credit Hours</b>		
BMFT	1002	Aseptic Techniques		2	[R] [W] [M]
BMFT	2203	Bioreactors and Cell Culture		3	BIOL 1303, 1311, BMFT 1002
BMFT	2232	Cell Harvesting		2	BIOL 1303, 1311
BMFT	2254	Downstream Laboratory Operations		4	BIOL 1303, 1311
BMFT	2273	Chromatography		3	CHEM 1315
<b>Total to Graduate</b>				<b>36</b>	

*The courses in this certificate program are included within the Biomanufacturing Technologies A.A.S. degree*

**ADDITIONAL GRADUATION REQUIREMENTS:**

- 2.0 Graduation/Retention GPA
- 9 credit hours earned in residence at OSU-OKC
- Students must complete the prerequisite course with a grade of 'C' or better to advance to the next course in the required sequence

**NOTES LEGEND:**

FA= Fall, SP=Spring, SU=Summer  
 [R] Reading Proficiency/Placement  
 [W] Writing Proficiency/Placement  
 [M] Math Proficiency/Placement