



**Cecil College and Jefferson College of Health Professions at Thomas Jefferson University**

**Concentration in Biopharmaceutical Process Development**

**One-year Option (3+1)**

<b>Fall Semester</b>		
<b>Code</b>	<b>Course Name</b>	<b>Credits</b>
BT 303	Molecular Preparatory Techniques	3
BT 310	Fundamental Molecular Techniques	4
BT 405	Applied Microbial Biotechnology	3
LS 301	Molecular Biology	3
LS 304	Biochemistry	3
LS 331	Immunology	3
<b>Total Semester Credits</b>		<b>19</b>

<b>Spring Semester</b>		
<b>Code</b>	<b>Course Name</b>	<b>Credits</b>
BT 320	Cell and Tissue Culture Techniques	4
BT 406	Introduction to Bioinformatics	2
BT 410	Molecular Diagnostic Techniques	4
BT 411	Protein Purification and Characterization	3
BT 403	Human Genetics	3
BT 325	Product Development & Management	3
<b>Total Semester Credits</b>		<b>19</b>

<b>Summer Semester</b>		
<b>Code</b>	<b>Course Name</b>	<b>Credits</b>
BP 401	Basic Engineering for Scientists	2
BP 403	Introduction to Biopharmaceutical Processing	2
BP 404	Introduction to Downstream Unit Operations	4
BP 405	Introduction to Upstream Unit Operations	4
BT 412	Biotechnology Practicum I	3
BT 422	Biotechnology Practicum II	3
BT 432	Biotechnology Practicum III	3
BT 442	Biotechnology Practicum IV	3
LS 416	Comprehensive Examination	0
<b>Total Semester Credits</b>		<b>24</b>

**Summer Semester (OPTIONAL)**

Biotechnology Skill Building Discussion Group

**TOTAL:**

<b>Credits Required for Admission</b>	<b>70</b>
<b>Undergraduate Credits</b>	<b>62</b>
<b>Total Credits to Degree (minimum)</b>	<b>132</b>