

BIOTECHNOLOGY ENGINEERING



BASIC TRAINING UNIT

PROFESSIONAL TRAINING UNIT

INTEGRATION AND APPLICATION UNIT

Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9																																				
<table border="1"> <tr><th colspan="2">MATZ0339</th></tr> <tr><td>INTRODUCTION TO CALCULUS</td><td>CR 3</td></tr> </table>	MATZ0339		INTRODUCTION TO CALCULUS	CR 3	<table border="1"> <tr><th colspan="2">MATZ0341</th></tr> <tr><td>CALCULUS I</td><td>CR 3</td></tr> </table>	MATZ0341		CALCULUS I	CR 3	<table border="1"> <tr><th colspan="2">MATZ0342</th></tr> <tr><td>CALCULUS II</td><td>CR 3</td></tr> </table>	MATZ0342		CALCULUS II	CR 3	<table border="1"> <tr><th colspan="2">MATZ0346</th></tr> <tr><td>DIFFERENTIAL EQUATIONS</td><td>CR 3</td></tr> </table>	MATZ0346		DIFFERENTIAL EQUATIONS	CR 3	<table border="1"> <tr><th colspan="2">IBIO2415</th></tr> <tr><td>PHYSICAL CHEMISTRY</td><td>CR 3</td></tr> </table>	IBIO2415		PHYSICAL CHEMISTRY	CR 3	<table border="1"> <tr><th colspan="2">IBIO2306</th></tr> <tr><td>BALANCE OF MASS AND ENERGY</td><td>CR 3</td></tr> </table>	IBIO2306		BALANCE OF MASS AND ENERGY	CR 3	<table border="1"> <tr><th colspan="2">IBIO2321</th></tr> <tr><td>BIOTECHNOLOGICAL UNIT OPERATIONS</td><td>CR 3</td></tr> </table>	IBIO2321		BIOTECHNOLOGICAL UNIT OPERATIONS	CR 3	<table border="1"> <tr><th colspan="2">IBIO3510</th></tr> <tr><td>BIOPROCESS</td><td>CR 3</td></tr> </table>	IBIO3510		BIOPROCESS	CR 3	<table border="1"> <tr><th colspan="2">IBIO1402</th></tr> <tr><td>BIOTECHNOLOGY AND ENTREPRENEURSHIP</td><td>CR 2</td></tr> </table>	IBIO1402		BIOTECHNOLOGY AND ENTREPRENEURSHIP	CR 2
MATZ0339																																												
INTRODUCTION TO CALCULUS	CR 3																																											
MATZ0341																																												
CALCULUS I	CR 3																																											
MATZ0342																																												
CALCULUS II	CR 3																																											
MATZ0346																																												
DIFFERENTIAL EQUATIONS	CR 3																																											
IBIO2415																																												
PHYSICAL CHEMISTRY	CR 3																																											
IBIO2306																																												
BALANCE OF MASS AND ENERGY	CR 3																																											
IBIO2321																																												
BIOTECHNOLOGICAL UNIT OPERATIONS	CR 3																																											
IBIO3510																																												
BIOPROCESS	CR 3																																											
IBIO1402																																												
BIOTECHNOLOGY AND ENTREPRENEURSHIP	CR 2																																											
<table border="1"> <tr><th colspan="2">IBIO1404</th></tr> <tr><td>GENERAL CHEMISTRY</td><td>CR 3,33</td></tr> </table>	IBIO1404		GENERAL CHEMISTRY	CR 3,33	<table border="1"> <tr><th colspan="2">IBIO1410</th></tr> <tr><td>ORGANIC CHEMISTRY</td><td>CR 3,33</td></tr> </table>	IBIO1410		ORGANIC CHEMISTRY	CR 3,33	<table border="1"> <tr><th colspan="2">IBIO1420</th></tr> <tr><td>ANALYTICAL CHEMISTRY</td><td>CR 2,33</td></tr> </table>	IBIO1420		ANALYTICAL CHEMISTRY	CR 2,33	<table border="1"> <tr><th colspan="2">IBIO2421</th></tr> <tr><td>BIOCHEMISTRY I</td><td>CR 3</td></tr> </table>	IBIO2421		BIOCHEMISTRY I	CR 3	<table border="1"> <tr><th colspan="2">IBIO2412</th></tr> <tr><td>BIOCHEMISTRY II</td><td>CR 3</td></tr> </table>	IBIO2412		BIOCHEMISTRY II	CR 3	<table border="1"> <tr><th colspan="2">IBIO2424</th></tr> <tr><td>BIOCHEMISTRY III</td><td>CR 3</td></tr> </table>	IBIO2424		BIOCHEMISTRY III	CR 3	<table border="1"> <tr><th colspan="2">IBIO2309</th></tr> <tr><td>BIOINFORMATICS</td><td>CR 3</td></tr> </table>	IBIO2309		BIOINFORMATICS	CR 3	<table border="1"> <tr><th colspan="2">IBIO3519</th></tr> <tr><td>PLANT BIOTECHNOLOGY</td><td>CR 3</td></tr> </table>	IBIO3519		PLANT BIOTECHNOLOGY	CR 3	<table border="1"> <tr><th colspan="2">IBIO3706</th></tr> <tr><td>PRE-PROFESSIONAL INTERSHIP</td><td>CR 2</td></tr> </table>	IBIO3706		PRE-PROFESSIONAL INTERSHIP	CR 2
IBIO1404																																												
GENERAL CHEMISTRY	CR 3,33																																											
IBIO1410																																												
ORGANIC CHEMISTRY	CR 3,33																																											
IBIO1420																																												
ANALYTICAL CHEMISTRY	CR 2,33																																											
IBIO2421																																												
BIOCHEMISTRY I	CR 3																																											
IBIO2412																																												
BIOCHEMISTRY II	CR 3																																											
IBIO2424																																												
BIOCHEMISTRY III	CR 3																																											
IBIO2309																																												
BIOINFORMATICS	CR 3																																											
IBIO3519																																												
PLANT BIOTECHNOLOGY	CR 3																																											
IBIO3706																																												
PRE-PROFESSIONAL INTERSHIP	CR 2																																											
<table border="1"> <tr><th colspan="2">IBIO1406</th></tr> <tr><td>INTRODUCTION TO BIOTECHNOLOGY</td><td>CR 3</td></tr> </table>	IBIO1406		INTRODUCTION TO BIOTECHNOLOGY	CR 3	<table border="1"> <tr><th colspan="2">IBIO1415</th></tr> <tr><td>APPLIED CHEMISTRY</td><td>CR 3</td></tr> </table>	IBIO1415		APPLIED CHEMISTRY	CR 3	<table border="1"> <tr><th colspan="2">IBIO2303</th></tr> <tr><td>PHYSICS FOR BIOTECHNOLOGY</td><td>CR 3</td></tr> </table>	IBIO2303		PHYSICS FOR BIOTECHNOLOGY	CR 3	<table border="1"> <tr><th colspan="2">IBIO2403</th></tr> <tr><td>GENETICS</td><td>CR 3</td></tr> </table>	IBIO2403		GENETICS	CR 3	<table border="1"> <tr><th colspan="2">IBIO2406</th></tr> <tr><td>MOLECULAR BIOLOGY I</td><td>CR 3</td></tr> </table>	IBIO2406		MOLECULAR BIOLOGY I	CR 3	<table border="1"> <tr><th colspan="2">IBIO2430</th></tr> <tr><td>IMMUNOLOGY</td><td>CR 2</td></tr> </table>	IBIO2430		IMMUNOLOGY	CR 2	<table border="1"> <tr><th colspan="2">IBIO3204</th></tr> <tr><td>MOLECULAR BIOLOGY III</td><td>CR 3</td></tr> </table>	IBIO3204		MOLECULAR BIOLOGY III	CR 3	<table border="1"> <tr><th colspan="2">IBIO3521</th></tr> <tr><td>ANIMAL BIOTECHNOLOGY</td><td>CR 2</td></tr> </table>	IBIO3521		ANIMAL BIOTECHNOLOGY	CR 2	<table border="1"> <tr><th colspan="2">IBIO3512</th></tr> <tr><td>INDUSTRIAL BIOTECHNOLOGY</td><td>CR 3</td></tr> </table>	IBIO3512		INDUSTRIAL BIOTECHNOLOGY	CR 3
IBIO1406																																												
INTRODUCTION TO BIOTECHNOLOGY	CR 3																																											
IBIO1415																																												
APPLIED CHEMISTRY	CR 3																																											
IBIO2303																																												
PHYSICS FOR BIOTECHNOLOGY	CR 3																																											
IBIO2403																																												
GENETICS	CR 3																																											
IBIO2406																																												
MOLECULAR BIOLOGY I	CR 3																																											
IBIO2430																																												
IMMUNOLOGY	CR 2																																											
IBIO3204																																												
MOLECULAR BIOLOGY III	CR 3																																											
IBIO3521																																												
ANIMAL BIOTECHNOLOGY	CR 2																																											
IBIO3512																																												
INDUSTRIAL BIOTECHNOLOGY	CR 3																																											
<table border="1"> <tr><th colspan="2">FISZ0121</th></tr> <tr><td>GENERAL PHYSICS</td><td>CR 3</td></tr> </table>	FISZ0121		GENERAL PHYSICS	CR 3	<table border="1"> <tr><th colspan="2">IBIO1413</th></tr> <tr><td>CELLULAR BIOLOGY</td><td>CR 3,33</td></tr> </table>	IBIO1413		CELLULAR BIOLOGY	CR 3,33	<table border="1"> <tr><th colspan="2">IBIO2409</th></tr> <tr><td>ANIMAL BIOLOGY</td><td>CR 3</td></tr> </table>	IBIO2409		ANIMAL BIOLOGY	CR 3	<table border="1"> <tr><th colspan="2">IBIO2427</th></tr> <tr><td>PLANT BIOLOGY</td><td>CR 3</td></tr> </table>	IBIO2427		PLANT BIOLOGY	CR 3	<table border="1"> <tr><th colspan="2">IBIO2418</th></tr> <tr><td>MICROBIOLOGY I</td><td>CR 3</td></tr> </table>	IBIO2418		MICROBIOLOGY I	CR 3	<table border="1"> <tr><th colspan="2">IBIO2433</th></tr> <tr><td>MICROBIOLOGY II</td><td>CR 3</td></tr> </table>	IBIO2433		MICROBIOLOGY II	CR 3	<table border="1"> <tr><th colspan="2">IBIO3524</th></tr> <tr><td>ENVIRONMENTAL BIOTECHNOLOGY</td><td>CR 3</td></tr> </table>	IBIO3524		ENVIRONMENTAL BIOTECHNOLOGY	CR 3	<table border="1"> <tr><th colspan="2">IBIO1401</th></tr> <tr><td>BIOMEDICAL BIOTECHNOLOGY</td><td>CR 3</td></tr> </table>	IBIO1401		BIOMEDICAL BIOTECHNOLOGY	CR 3	<table border="1"> <tr><th colspan="2">IBIO1407</th></tr> <tr><td>QUALITY AND BIOSAFETY</td><td>CR 3</td></tr> </table>	IBIO1407		QUALITY AND BIOSAFETY	CR 3
FISZ0121																																												
GENERAL PHYSICS	CR 3																																											
IBIO1413																																												
CELLULAR BIOLOGY	CR 3,33																																											
IBIO2409																																												
ANIMAL BIOLOGY	CR 3																																											
IBIO2427																																												
PLANT BIOLOGY	CR 3																																											
IBIO2418																																												
MICROBIOLOGY I	CR 3																																											
IBIO2433																																												
MICROBIOLOGY II	CR 3																																											
IBIO3524																																												
ENVIRONMENTAL BIOTECHNOLOGY	CR 3																																											
IBIO1401																																												
BIOMEDICAL BIOTECHNOLOGY	CR 3																																											
IBIO1407																																												
QUALITY AND BIOSAFETY	CR 3																																											
<table border="1"> <tr><th colspan="2">FGLZ0192</th></tr> <tr><td>LANGUAGE AND DIGITAL COMMUNICATION</td><td>CR 4</td></tr> </table>	FGLZ0192		LANGUAGE AND DIGITAL COMMUNICATION	CR 4	<table border="1"> <tr><th colspan="2">FGLZ0180</th></tr> <tr><td>RESEARCH AND ACADEMIC WRITING</td><td>CR 3</td></tr> </table>	FGLZ0180		RESEARCH AND ACADEMIC WRITING	CR 3	<table border="1"> <tr><th colspan="2">FGHZ0932</th></tr> <tr><td>CITIZENSHIP, CULTURE AND HISTORY</td><td>CR 3</td></tr> </table>	FGHZ0932		CITIZENSHIP, CULTURE AND HISTORY	CR 3	<table border="1"> <tr><th colspan="2">IBIO1419</th></tr> <tr><td>BIOSTATISTICS I</td><td>CR 3</td></tr> </table>	IBIO1419		BIOSTATISTICS I	CR 3	<table border="1"> <tr><th colspan="2">IBIO2422</th></tr> <tr><td>BIOSTATISTICS II</td><td>CR 3</td></tr> </table>	IBIO2422		BIOSTATISTICS II	CR 3	<table border="1"> <tr><th colspan="2">IBIO2436</th></tr> <tr><td>MOLECULAR BIOLOGY II</td><td>CR 3</td></tr> </table>	IBIO2436		MOLECULAR BIOLOGY II	CR 3	<table border="1"> <tr><th colspan="2">FGHZ0913</th></tr> <tr><td>ECONOMY, ETHOS AND SOCIETY</td><td>CR 3</td></tr> </table>	FGHZ0913		ECONOMY, ETHOS AND SOCIETY	CR 3	<table border="1"> <tr><th colspan="2">TITA7441</th></tr> <tr><td>PROJECT MANAGEMENT IN BIOTECHNOLOGY</td><td>CR 2</td></tr> </table>	TITA7441		PROJECT MANAGEMENT IN BIOTECHNOLOGY	CR 2	<table border="1"> <tr><th colspan="2">TITA7442</th></tr> <tr><td>BIOTECHNOLOGY PROJECTS</td><td>CR 3</td></tr> </table>	TITA7442		BIOTECHNOLOGY PROJECTS	CR 3
FGLZ0192																																												
LANGUAGE AND DIGITAL COMMUNICATION	CR 4																																											
FGLZ0180																																												
RESEARCH AND ACADEMIC WRITING	CR 3																																											
FGHZ0932																																												
CITIZENSHIP, CULTURE AND HISTORY	CR 3																																											
IBIO1419																																												
BIOSTATISTICS I	CR 3																																											
IBIO2422																																												
BIOSTATISTICS II	CR 3																																											
IBIO2436																																												
MOLECULAR BIOLOGY II	CR 3																																											
FGHZ0913																																												
ECONOMY, ETHOS AND SOCIETY	CR 3																																											
TITA7441																																												
PROJECT MANAGEMENT IN BIOTECHNOLOGY	CR 2																																											
TITA7442																																												
BIOTECHNOLOGY PROJECTS	CR 3																																											
		<table border="1"> <tr><th colspan="2">IBIO1603</th></tr> <tr><td>RESEARCH METHODOLOGY</td><td>CR 2</td></tr> </table>	IBIO1603		RESEARCH METHODOLOGY	CR 2			<table border="1"> <tr><th colspan="2">IBIO1610</th></tr> <tr><td>INTEGRATIVE RESEARCH PROJECT</td><td>CR 2</td></tr> </table>	IBIO1610		INTEGRATIVE RESEARCH PROJECT	CR 2																															
IBIO1603																																												
RESEARCH METHODOLOGY	CR 2																																											
IBIO1610																																												
INTEGRATIVE RESEARCH PROJECT	CR 2																																											
16,3	15,7	16,3	15	15	16	15	13	13																																				

Core curriculum areas

	Theoretical Foundations
	Communication and languages
	Epistemology and research methodology
	Integration of knowledge, contexts and culture
	Professional Practice
	Curricular Integration Unit

Total Credits	135,32
Total hours	6528