



**BIOTECHNOLOGY PROGRAM CURRICULUM**

(From 2015 Batch)

**Total: 133 credits**

**Level AE1**

No	Course	Course code	Credits			Prerequisite
			Theory	Practice	Total	
<b>SEMESTER I</b>			<b>19</b>	<b>2</b>	<b>21</b>	
1	Calculus 1	MA001IU	4	0	4	
2	Physics 1	PH013IU	2	0	2	
3	Biology	BT155IU	3	1	4	
4	Chemistry for Engineers	CH011IU	3	0	3	
	Chemistry Laboratory	CH012IU	0	1	1	
5	Academic English 1	EN007IU, EN008IU	4	0	4	
6	Physical Training 1	PT001IU	3	0	3	
<b>SEMESTER II</b>			<b>18</b>	<b>0</b>	<b>18</b>	
1	Calculus 2	MA002IU	4	0	4	Calculus 1
3	Physics 2	PH014IU	2	0	2	Physics 1
3	Academic English 2	EN011IU, EN012IU	4	0	4	Academic English 1
4	Critical Thinking	PE008IU	3	0	3	
5	Organic Chemistry	CH009IU	3	0	3	Biology
6	Introduction to Biotechnology	BT150IU	2	0	2	
7	Physical Training 2	PT002IU	3	0	3	
<b>SUMMER SEMESTER (1ST YEAR)</b>			<b>6</b>	<b>0</b>	<b>6</b>	
1	Ho Chi Minh's Thoughts	PE012IU	3	0	3	
2	Environmental Science	PE014IU	3	0	3	
<b>SEMESTER III</b>			<b>14</b>	<b>2</b>	<b>16</b>	
1	Genetics	BT162IU	3	1	4	Biology
2	Plant Physiology	BT010IU	3	0	3	Biology
3	Analytical Chemistry	CH013IU	3	1	4	
4	Principles of Marxism	PE011IU	5	0	5	
<b>SEMESTER IV</b>			<b>14</b>	<b>3</b>	<b>17</b>	
1	Biostatistics	BT152IU	2	1	3	
2	Biochemistry	BT156IU	3	1	4	Biology
3	Microbiology	BT164IU	3	1	4	Biology
4	Cell Biology	BT220IU	3	0	3	Biology
5	Human and Animal	BT163IU	3	0	3	

	Physiology					
	<b>SEMESTER V</b>		<b>14</b>	<b>2</b>	<b>16</b>	
1	Revolutionary Lines of Vietnamese Communist Party	PE013IU	2	0	2	
2	Molecular Biotechnology	BT168IU	3	1	4	Genetics
3	Immunology	BT205IU	3	1	4	Biology
4	<i>6 credits from Foundation elective courses</i>		6	0	6	
	<b>SEMESTER VI</b>		<b>12</b>	<b>1</b>	<b>13</b>	
1	Molecular Genetics	BT217IU	3	0	3	Cell Biology
2	Bioinformatics	BT203IU	3	1	4	Biology
3	<i>3 credits from Foundation elective courses</i>		3	0	3	
4	<i>3 credits for Free Electives courses</i>		3	0	3	
	<b>SUMMER SEMESTER (3RD YEAR)</b>		<b>0</b>	<b>2</b>	<b>2</b>	
1	Intership	BT200IU	0	2	2	Accumulated at least 90 credits
	<b>SEMESTER VII</b>		<b>12</b>	<b>3</b>	<b>15</b>	
1	Experimental design	BT216IU	3	0	3	
2	<i>12 credits from Professional Elective courses</i>		9	3	12	
	<b>SEMESTER VIII</b>		<b>0</b>	<b>12</b>	<b>12</b>	
1	Thesis	BT179IU	0	12	12	Accumulated at least 114 credits
<b>TOTAL</b>			<b>133 credits</b>			

No	Course	Course code	Credit			Prerequisite
			Theory	Practice	Total	
<b>Free Elective course (min 3 credits)</b>						
1	Project Management	IS050IU	3	0	3	
2	Introduction to Business Administration	BA115IU	3	0	3	
3	Business Communications	BA006IU	3	0	3	
<b>Foundation Elective courses (min 9 credits)</b>						
1	Plant Science	BT218IU	3	0	3	Biology
2	Marine Biology	BT220IU	3	0	3	Biology
3	Scientific Writing Workshop	BT200IU	2	0	2	
4	Human Pharmacology	BT207IU	3	0	3	
5	Protein Biotechnology	BT172IU	3	1	4	Cell Biology
6	Pharmacology genomics	BT305IU	3	0	3	
<b>Professional Elective courses (min 12 credits)</b>						
1	Medical Genetics	BT211IU	3	1	4	Cell Biology, Genetics
2	Crop Biotechnology	BT214IU	3	1	4	Plant Physiology, Plant science

3	Techniques in Plant Biotechnology	BT201IU	3	1	4	Plant Physiology, Plant science
4	Algal Biotechnology	BT215IU	3	1	4	Plant Physiology, Plant science, Molecular Biotechnology
5	Marine Biotechnology	BT177IU	3	1	4	Marine Biology, Molecular Biotechnology
6	Environmental Biotechnology	BT208IU	3	1	4	Biochemistry
7	Pharmaceutical Biotechnology	BT185IU	3	1	4	Molecular Biotechnology, Biochemistry
8	Molecular Diagnostics	BT184IU	3	1	4	Cell Biology
9	Animal Biotechnology	BT174IU	3	1	4	Human and Animal Physiology
10	Stem Cell Biology	BT212IU	3	1	4	Cell Biology, Human and Animal Physiology
11	Medical Microbiology	BT213IU	3	1	4	Microbiology, Immunology