

BACHELOR OF SCIENCE (INDUSTRIAL BIOLOGY)

SSCBH 20202021

YEAR 1

SEMESTER 1

Code	Course	Credit	Pre-req
SSCB 1613	Microbiology (+Lab)	3	
SSCG 1112	Introduction to Biomolecules	2	
UHLB 1112	English Communication Skills	2	
SSCM 1023	Mathematical Methods 1	3	
SSCM 1103	Statistics	3	
UHMT 1012	Graduate Success Attributes	2	
UHMS 1182	Appreciation of Ethics and Civilisations (Local)	2	
UHLM 1012	Malay Language Communication (International)	2	

17 credit

SEMESTER 2

Code	Course	Credit	Pre-req
SSCG 1703	Cellular and Molecular Biology	3	
SSCG 1123	Cellular Biochemistry and Metabolism (+Lab)	3	SSCG 1112
SSCB 1422	Introduction to Biotechnology	2	
SSCG 1103	Bioorganic Chemistry	3	
SSCK 1203	Analytical Chemistry for Engineering	3	
SSCK 1891	Analytical Chemistry Practical	1	
UHS 1022	Philosophy and Current Issues (Local)	2	
UHMS 1182	Appreciation and Current Ethics and Civilizations (International)	2	
UHS 1022	or Philosophy and Current Issues (International)	2	

17 credit

YEAR 2

SEMESTER 1

Code	Course	Credit	Pre-req
SSCG 2713	Genetic Engineering (+Lab)	3	SSCG 1703
SSCB 2513	Introduction to Bioprocess Engineering (+Lab)	3	SSCB 1613
SBSD 1033	Principles of Management	3	
UHLB 2122	Academic Communication Skills	2	UHLB 1112
UKQ* 2**2	Co-curriculum and Service Learning	2	
UHL* 1112	Foreign Language	2	

Total 15 credit hours

SEMESTER 2

Code	Course	Credit	Pre-req
SSCB 2503	Fermentation Technology (+Lab)	3	SSCB 2513
SSCB 2823	Enzyme Technology and Biocatalysis (+Lab)	3	SSCG 1123
SSCG 2423	Bioethics in Research and Development	3	
SHAF 1013	Principles of Marketing	3	
UHIT 2032	Sciences and Technology Thinking	2	
U*** 2**2	Elective of Knowledge Enhancement Cluster or Elective of Generic Skills Cluster	2	

Total 16 credit hours

YEAR 3

SEMESTER 1

Code	Course	Credit	Pre-req
SSCB 3513	Bioprocess Engineering	3	SSCB 2513
SSCB 3313	Tissue Culture Technology (+Lab)	3	
UBSS 1032	Introduction to Entrepreneurship	2	
<i>Elective (Choose 9 credits)</i>			
SSCB 3713	Techniques in Molecular Biotechnology*	3	SSCG 2713
SSCG 3673	Physiology and Screening of Industrial Microorganisms*	3	SSCB 1613
SSCB 3633	Food Microbiology	3	
SSCB 3653	Industrial Microbiology	3	
SSCG 3213	Biological Control and Environmental Conservation	3	

17 credit

SEMESTER 2

Code	Courses	Credit	Pre-req
SSCG 3823	Biocomputation and Bioinformatics	3	
SSCB 3403	Research Methodology	3	
SHAD 1043	Organizational Behaviour	2	
UHLB 3132	Professional Communication Skills	1	UHLB 2122
UKQT3001	Extracurricular Experiential Learning	1	
<i>Elective (Choose 6 credits)</i>			
SSCG 3603	Virology	3	
SSCG 3303	Immunology	3	
SSCB 3703	Molecular Biotechnology	3	
SSCG 3723	Gene expression	3	

18 credit

Note : *Compulsory Elective Courses

Short Semester

Code	Course	Credit
SSCU 3905	Industrial Training	5 (HW)

5 credit

YEAR 4

SEMESTER 1

Code	Courses	Credit	Pre-req
SSCB 4313	Application of Tissue Culture (+Lab)	3	SSCB 3313
SSCU 4902	Undergraduate Project I**	2	
<i>Elective (Choose 9 credits)</i>			
SSCB 4813	Protein Separation Techniques in Biotechnology	3	SSCB 2823
SSCB 4113	Applied Microbial Biochemistry and Biotransformation*	3	SSCG 1123
SSCB 4513	Biorefinery Technology	3	
SSCB 4213	Industrial Waste Management	3	
SSCB 4533	Pharmaceutical Biotechnology	3	

14 credit

SEMESTER 2

Code	Courses	Credit	Pre-req
SSCU 4904	Undergraduate Project II	4	SSCU 4902
<i>Elective (Choose 9 credits)</i>			
SSCB 4243	Biosensor Technology (+Lab)*	3	SSCB 2823
SSCB 4203	Environmental Biotechnology	3	
SSCB 4223	Bioremediation and Biodegradation	3	
SSCG 4723	Gene Therapy	3	

13 credit

Note : **Must be 4-th Year Student

Total Credit = 132

