

SUPPLEMENT 1-A

T. C.
KAFKAS UNIVERSITY
FACULTY OF ENGINEERING AND ARCHITECTURE
DEPARTMENT OF BIOENGINEERING

1. CLASS 1. SEMESTER							1. CLASS 2. SEMESTER								
CODE	TITLE	T	U	L	K	AKTS	CODE	TITLE	T	U	L	K	AKTS		
AIIT-101	Ataturk's principles and history of revolution I	2	0	0	0	1	AIIT-102	Ataturk's principles and history of revolution II	2	0	0	0	1		
TD-101	Turkish Language I	2	0	0	0	1	TD-102	Turkish Language II	2	0	0	0	1		
BM-101	General Biology	3	0	2	4	6	BM-102	Cell Biology for Bioengineers	3	0	2	4	5		
BM-103	Introduction to Bioengineering	3	0	0	3	3	KIM-103	Physical chemistry	3	0	0	3	5		
FIZ-101	Physics I	3	0	2	4	6	FIZ-102	Physics II	3	0	2	4	6		
KIM-101	General Chemistry	3	0	2	4	6	KIM-102	Organic Chemistry	3	0	0	3	4		
MAT-101	Mathematics I	4	0	0	4	6	MAT-102	Mathematics II	4	0	0	4	5		
BM-104	Basic Computer Technologies	0	2	0	1	1	MF-TRS	Technical Drawing	1	2	0	2	3		
TOTAL FOR SEMESTER 1		20	2	6	20	30	TOTAL FOR SEMESTER 2		21	2	4	20	30		
									TOTAL FOR CLASS 1		41	4	10	40	60

2. CLASS 3. SEMESTER							2. CLASS 4. SEMESTER								
CODE	TITLE	T	U	L	K	AKTS	CODE	TITLE	T	U	L	K	AKTS		
YD-201	Foreign language I	2	0	0	0	1	YD-202	Foreign language II	2	0	0	0	1		
BM-201	Biochemistry for Bioengineers	3	0	2	4	4	MF-IST	Statistics and Probability	2	1	0	3	4		
BM-203	Molecular Biology I	2	0	2	3	4	BM-204	Molecular Biology II	2	0	2	3	4		
BM-205	Microbiology	3	0	2	4	4	BM-206	Bioreactors	3	0	0	3	5		
MAT-201	Differential equations	3	0	0	3	5	MF-204	Numerical methods	2	1	0	3	3		
MF-205	Thermodynamics for Bioengineers	3	0	0	3	5	MF-206	Heat transfer	3	0	0	3	5		
MF-ELK	Electrical and Electronic Knowledge	2	0	0	2	3	MF-207	Mass Transfer	3	0	0	3	5		
MF-BIL	Computer Programming	1	2	0	3	4	MF-PRO	Project Design Principles	2	0	0	1	1		
TOTAL FOR SEMESTER 3		19	2	6	22	30	TOTAL FOR SEMESTER 4		18	2	2	19	28		
									TOTAL FOR CLASS 2		37	3	8	41	58

3. CLASS 5. SEMESTER							3. CLASS 6. SEMESTER						
CODE	TITLE	T	U	L	K	AKTS	CODE	TITLE	T	U	L	K	AKTS
BM-302	Applied Genomics and Proteomics	2	0	3	4	5	BM-305	Genetic Engineering	3	0	0	3	4
BM-303	Biomedical Engineering	3	0	0	3	5	BM-306	Biomedical Physiology for Bioengineers	3	0	0	3	5
BM-301	Biomaterials	3	0	0	3	5	MF-302	Fluid mechanics	3	0	0	3	5
MF-MAT	Engineering Mathematics	3	0	0	3	5	MF-GIR	Entrepreneurship	2	0	0	2	3
BM-304	Bioengineering Lab I	0	0	2	2	3	BM-307	Bioengineering Lab II	0	0	2	2	3
BMS-301	Departmental Elective Course I				3	4	MF-EKO	Engineering Economics	2	0	0	2	3
BMS-302	Departmental Elective Course II				3	4	BM-308	Academic English	3	0	0	3	4
							BMS-303	Departmental Elective III				3	4
TOTAL FOR SEMESTER 5							TOTAL FOR SEMESTER 6						
							TOTAL FOR CLASS 3						

4. CLASS 7. SEMESTER							4. CLASS 8. SEMESTER						
CODE	TITLE	T	U	L	K	AKTS	CODE	TITLE	T	U	L	K	AKTS
BM-402	Tissue Engineering	3	0	0	3	5	BM-407	Graduation Thesis Project II	0	2	0	2	6
BM-404	Graduation Thesis Project I	0	2	0	2	6	MF-TS	Faculty Technical Elective	3	0	0	3	4
BM-405	Introduction to Biotechnology	3	0	0	3	5	BM-409	Bio. Main Design II	2	0	0	2	4
BM-406	Bio. Main Design I	2	0	0	2	4	BM-410	Academic Writing	3	0	0	3	4
MF-IGE	Occupational Safety and Engineering Ethics	2	0	0	2	2	BM-411	Bioinformatics	2	2	0	3	4
BMS-401	Departmental Elective Course IV				3	4	BMS-403	Department Elective Course VI				3	4
BMS-402	Department Elective Course V				3	4	BMS-404	Departmental Elective course VII				3	4
TOTAL FOR SEMESTER 7							TOTAL FOR SEMESTER 8						
							TOTAL FOR CLASS 4						

Departmental Elective courses

CODE	TITLE	CREDIT				
		T	U	L	K	AKTS
BMS-451	Plant Biotechnology	3	0	0	3	4
BMS-452	Microbial Kinetic and Modeling	2	0	2	3	4
BMS-453	Protein Engineering	2	0	2	3	4

BMS-454	Biocatalysis	3	0	0	3	4
BMS-455	Food Technologies	3	0	0	3	4
BMS-456	Medical Genetics	3	0	0	3	4
BMS-457	Separation and Purification Processes	2	0	2	3	4
BMS-458	pharmacokinetics	3	0	0	3	4
BMS-459	Law For Engineering	3	0	0	3	4
BMS-460	Hazardous Waste Treatment	3	0	0	3	4
BMS-461	Biosensors	3	0	0	3	4
BMS-462	Biotechnological Investments	3	0	0	3	4
BMS-463	Modern Biotechnology	3	0	0	3	4
BMS-464	Anaerobic Biotechnology	3	0	0	3	4
BMS-465	Special Topics in Molecular Biology	3	0	0	3	4
BMS-466	Bio-Transport Events	3	0	0	3	4
BMS-467	Special Topics in Molecular Biology	3	0	0	3	4
BMS-468	Protein Biotechnology	3	0	0	3	4
BMS-469	Nanotechnology	3	0	0	3	4
BMS-470	Artificial Organs	3	0	0	3	4
BMS-471	Biofuels	3	0	0	3	4
BMS-472	Cellular Therapy and Regenerative Medicine	3	0	0	3	4
BMS-473	Stem Cell Technology	3	0	0	3	4
BMS-474	Cell Culture Systems	2	0	2	3	4
BMS-475	Industrial Ecology and Recycling	3	0	0	3	4
BMS-476	Bioanalytical Chemistry and Bioengineering Applications	3	0	0	3	4
BMS-477	Introduction to Synthetic Biology	3	0	0	3	4
BMS-478	Biosystems Engineering	3	0	0	3	4
BMS-479	Introduction to System Biology	3	0	0	3	4
BMS-480	Recombinant DNA Technology	2	0	2	3	4
BMS-481	Suborder Operations	3	0	0	3	4
BMS-482	Instrumental Analysis	3	0	0	3	4
BMS-483	Enzymes in Industrial Applications	3	0	0	3	4
BMS-484	Computational Biology	2	2	0	3	4
BMS-485	Introduction to Machine Education	2	2	0	3	4
BMS-486	Molecular Cancer Biology	3	0	0	3	4
BMS-487	Pharmaceutical Biotechnology	3	0	0	3	4

BMS-488	Polymer Science and Technology	3	0	0	3	4
BMS-489	Bioprocess Engineering	3	0	0	3	4
BMS-490	Biochemistry and Metabolism Engineering	3	0	0	3	4
BMS-491	Bioenergy Engineering	3	0	0	3	4

Total Credit	160
--------------	-----

Total AKTS	240
------------	-----

Abbreviations

FIZ	Faculty of Arts and Sciences Department of Physics
KIM	Faculty of Arts and Sciences Department of Chemistry
BM	Bioengineering Compulsory
BMS	Bioengineering Elective
MAT	Faculty of Arts and Sciences Department of Mathematics
MF	Engineering faculty
MFS	Engineering faculty
AIIT	Atatürk's Principles And History Of Turkish Revolution
TD	Turkish