

LIST OF COURSES

No.	Course Code	Name of Course	Credits (SKS / ECTS)
SEMESTER I			
1	SF184101	Physics I	4 / 6.4
2	SF184102	Mathematical Physics I	2 / 3.2
3	KM184101	Mathematics I	3 / 4.8
4	SK184101	Chemistry I	3 / 4.8
5	SB184161	Biology	2 / 3.2
6	UG184911	Pancasila	2 / 3.2
7	UG184914	English	2 / 3.2
Total Credits (SKS / ECTS)			18 / 28.8
SEMESTER II			
1	SF184202	Physics II	3 / 4.8
2	SF184203	Physics III	3 / 4.8
3	KM184201	Mathematics II	3 / 4.8
4	SK184202	Chemistry II	3 / 4.8
5	UG184913	Citizenship	2 / 3.2
6	UG184912	Bahasa Indonesia	2 / 3.2
7	UG1849XX	Religion	2 / 3.2
Total Credits (SKS / ECTS)			18 / 28.8

SEMESTER III

1	SF184301	Mechanics I	3 / 4.8
2	SF184302	Waves	3 / 4.8
3	SF184303	Thermodynamics	3 / 4.8
4	SF184304	Mathematical Physics II	4 / 6.4
5	SF184305	Electronics	4 / 6.4
6	SF184306	Methods of Measurements in Physics	2 / 3.2
Total Credits (SKS / ECTS)			19 / 30.4

SEMESTER IV

1	SF184401	Mechanics II	3 / 4.8
2	SF184402	Optics	3 / 4.8
3	SF184403	Modern Physics	4 / 6.4
4	SF184404	Mathematical Physics III	4 / 6.4
5	SF184405	Instrumentation	4 / 6.4
6	SF184406	Material Science	2 / 3.2
Total Credits (SKS / ECTS)			20 / 32

SEMESTER V

1	SF184501	Quantum Physics	4 / 6.4
2	SF184502	Electromagnetic Fields I	3 / 4.8
3	SF184503	Laboratory Physics	2 / 3.2
4	SF184504	Computational Physics I	3 / 4.8
5	SF184505	Optoelectronics	2 / 3.2
6	SF184506	Digital Data Acquisition	2 / 3.2
Total Credits (SKS / ECTS)			16 / 25.6

SEMESTER VI

1	SF184601	Statistical Physics	3 / 4.8
2	SF184602	Electromagnetic Fields II	3 / 4.8
3	SF184603	Laboratory Physics II	2 / 3.2
4	SF184604	Computational Physics II	3 / 4.8
5	SF184605	Methods of Exploration in Geophysics	2 / 3.2
6	UG184916	Insight and Application of Technology	3 / 4.8
Total Credits (SKS / ECTS)			16 / 25.6

SEMESTER VII

1	SF184701	Nuclear Physics	4 / 6.4
2	SF184702	Solid State Physics	4 / 6.4
3	SF184703	Methods of Scientifical Writing	2 / 6.4 [*]
4	UG184915	Technopreneurship	2 / 3.2
5	SF184704	Radiological Physics and Dosimetry	2 / 3.2
6	SF1847XX	Elective Coursess	6 / 9.6
Total Credits (SKS / ECTS)			20 / 35.2

SEMESTER VIII

1	SF184801	Final Assignment	6 / 16 ^{**}
2	SF184802	Laboratory Management	2 / 3.2
3	SF1848XX	Elective Courses	6 / 9.6
4	SF1848XX*	Enrichment courses (Physics of the Universe)	3 / 4.8
Total Credits (SKS / ECTS)			17 / 33.6

ADDITIONAL

1	SF181101	Physics I	4 / 6.4
2	SF181201	Physics II	3 / 4.8
3	SF181103	Physics I	3 / 4.8
4	SF181104	Physics I	3 / 4.8
Total Credits (SKS / ECTS)			13 / 20.8

ELECTIVE COURSES

No.	Kode MK	Nama Mata Kuliah (MK)	SKS / ECTS
SEMESTER VII			
1	SF184711	Metal Physics	3 / 4.8
2	SF184712	Ceramic Physics	3 / 4.8
3	SF184713	Polymer Physics	3 / 4.8
4	SF184721	Microcontrollers and Microprocessors	3 / 4.8
5	SF184722	Building Physics	3 / 4.8
6	SF184731	Fiber Optics	3 / 4.8
7	SF184732	Photonics	3 / 4.8
8	SF184741	Geology	3 / 4.8
9	SF184742	Seismology	3 / 4.8
10	SF184743	Earth Electricity Exploration	3 / 4.8
11	SF184751	Introduction to Particle Physics	2 / 3.2
12	SF184752	Advanced Mathematical Physics	2 / 3.2
13	SF184753	Introduction to Cosmology	3 / 4.8
14	SF184761	Anatomy and Physiology	2 / 3.2
15	SF184762	Medical Imaging Physics	2 / 3.2
16	SF184763	Medical Instrumentation	2 / 3.2

No.	Kode MK	Nama Mata Kuliah (MK)	SKS / ECTS
17	SF184764	Radiobiology	2 / 3.2
Total Credits (SKS / ECTS)			45 / 72
SEMESTER VIII			
1	SF184811	Composite Physics	3 / 4.8
2	SF184812	Semiconductor Physics	3 / 4.8
3	SF184813	Methods of Material Analysis	3 / 4.8
4	SF184821	Electro-acoustics	3 / 4.8
5	SF184822	Instrumentation and Intelligent Control	3 / 4.8
6	SF184823	Heat Transfer	2 / 3.2
7	SF184824	Industrial Instrumentation	3 / 4.8
8	SF184831	Optic Computation	3 / 4.8
9	SF184832	Digital Imaging Processing	3 / 4.8
10	SF184833	Applied Electromagnetics	3 / 4.8
11	SF184841	Seismic Exploration	3 / 4.8
12	SF184842	Earth Potential Field Exploration	3 / 4.8
13	SF184843	Rock Physics and Well Log Analysis	3 / 4.8
14	SF184844	Inversion Model	3 / 4.8
15	SF184851	Group Theory	2 / 3.2
16	SF184852	Relativistic Quantum Theory	2 / 3.2
17	SF184853	Special Topics in Quantum Physics	3 / 4.8
18	SF184861	Biophysics	2 / 3.2
19	SF184862	Radiotherapy	3 / 4.8
20	SF184863	Health Physics and Radiation Protection	2 / 3.2
Total Credits (SKS / ECTS)			45 / 72

ENRICHMENT COURSES

1	SF184899*	Physics of the Universe	3 / 4.8
Total Credits (SKS / ECTS)			3 / 4.8