

## LIST OF COURSES

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

**SEMESTER III**

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

**SEMESTER IV**

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

**SEMESTER V**

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

**SEMESTER VI**

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

**SEMESTER VII**

1	SF184701	Nuclear Physics	4
2	SF184702	Solid State Physics	4
3	SF184703	Methods of Scientific Writing	2
4	UG184915	Technopreneurship	2
5	SF184704	Radiological Physics and Dosimetry	2
6	SF1847XX	Elective Courses	6
Total Credits (SKS / ECTS)			20

**SEMESTER VIII SEMESTER VIII**

1	SF184801	Final Assignment	6
2	SF184802	Laboratory Management	2
3	SF1848XX	Elective Courses	6
4	SF1848XX*	Enrichment courses (Physics of the Universe)	3
Total Credits (SKS / ECTS)			17

**ADDITIONAL**

1	SF181101	Physics I	4
2	SF181201	Physics II	3
3	SF181103	Physics I	3
4	SF181104	Physics I	3
Total Credits (SKS / ECTS)			6

**ELECTIVE COURSES**

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

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

#### ENRICHMENT COURSES

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