

4. Bachelor of Biology Education

a) Program Study Learning Outcome Bachelor of Biology Education

Aspect	ID	Program Study Learning Outcome
Knowledge and understanding	ILO1	Menerapkan konsep biologi sel dan molekuler, fisiologi, genetika, struktur dan perkembangan, biosistemika, evolusi, dan ekologi pada pembelajaran di sekolah secara inovatif
	ILO2	Menerapkan integrasi pengetahuan teknologi, pedagogi, konten biologi, dan pengetahuan islam dalam pembelajaran biologi secara logis
	ILO3	Menciptakan media kreatif baik manual maupun digital pada pembelajaran biologi
	ILO4	Menganalisis secara kritis permasalahan pembelajaran biologi di sekolah dan masyarakat
	ILO5	Menerapkan prinsip kerja ilmiah biologi secara sistematis
Skills	ILO6	Mengkomunikasikan keputusan terhadap solusi permasalahan pembelajaran biologi di sekolah dan masyarakat secara mandiri dan kolaboratif berdasarkan analisis data
	ILO7	Mampu membaca al quran berdasarkan ilmu tajwid dan qiroah dalam ibadah praktis dengan baik dan benar
Autonomy and responsibility	ILO8	Berpartisipasi dan bertanggung jawab terhadap tugas sesuai dengan peran yang diberikan

b) Subject Matter Bachelor of Biology Education

Legend		type	semester	Credit points	Academic hours	Learning activity
Type	C = Compulsory CE = Compulsory Elective					
Credit points	ECTS Credit Points					
Academic hours	Academic hours per semester					
Learning actifity	L = Lecture La = Laboratory Course P = Practice It = Independent task St = structured task In = internship Pw = project work					
General Knowledge						
NAS6112201	Pancasila and civic education	C	1	4.5	510	L (150) It (180) St (180)
UIN6014203	English	C	1	4.5	510	L (150)

						It (180) St (180)
MAT3003	Basic mathematic	C	1	3	340	L (100) It (120) St (120)
FST6096201	Basic chemistry	C	1	3	340	L (100) It (120) St (120)
FST6096202	Basic Chemistry Practicum	C	1	1.5	170	La (170)
UIN6021204	Arabic	C	1	4.5	510	L (150) It (180) St (180)
UIN6033205	Qira'ah and Worship Practicum	C	1	3	340	P (340)
FST6097114	Basic Physics	C	2	3	340	L (100) It (120) St (120)
FST 6097115	Basic Physics Practicum	C	2	1.5	170	La (170)
UIN6032201	Islamic Studies	C	2	6	680	L (200) It (240) St (240)
NAS6013203	Indonesian	C	2	4.5	510	L (150) It (180) St (180)
FTK6017113	Integration of Qur'an and Hadith in Natural Sciences	C	5	3	340	L (100) It (120) St (120)
UIN6032202	Integrated of Islam and Science	C	7	4.5	510	L (150) It (180) St (180)
Basic Pedagogy Knowledge						
FTK6011203	Educational psychologist	C	2	4.5	510	L (150) It (180) St (180)
FTK6011201	Islamic Education	C	2	4.5	510	L (150) It (180) St (180)
FTK6120104	Management for Education	C	5	3	340	L (100) It (120) St (120)
FTK 6011206	School field introduction I	C	5	1.5	170	Pw (170)
FTK6011202	Akhlak and Moral education	C	7	4.5	510	L (150) It (180) St (180)

FTK6017112	Biology Microteaching	C	7	4.5	510	P (510)
FTK 6011207	School field introduction II	C	8	4.5	510	L (150) It (180) St (180)
Content Knowledge						
FST6095101	Basic Biology	C	1	3	340	L (100) It (120) St (120)
FST6095102	Basic Biology Practicum	C	1	1.5	170	La (170)
FST6095105	Biology Laboratory Engineering	C	1	3	340	L (100) It (120) St (120)
FTK6017114	Basic Ecology	C	2	3	340	L (100) It (120) St (120)
FST6095104	Basic Ecology Practicum	C	2	1.5	170	La (170)
FST6095124	Cell biology	C	2	3	340	L (100) It (120) St (120)
FTK6017101	Cell Biology Practicum	C	2	1.5	170	La (170)
FST6096225	Biochemistry	C	3	3	340	L (100) It (120) St (120)
FST6096126	Biochemistry Practicum	C	3	1.5	170	La (170)
FST6095144	Genetics	C	3	4.5	510	L (150) It (180) St (180)
FST6095115	Genetics Practicum	C	3	1.5	170	La (170)
FST6095107	Plant Structure and Development	C	3	4.5	510	L (150) It (180) St (180)
FST6095108	Practicum of Plant Structure and Development	C	3	1.5	170	La (170)
FST6095110	Structure and Development of Animals	C	3	4.5	510	L (150) It (180) St (180)
FST6095129	Practicum of Animal Structure and Development	C	3	1.5	170	La (170)
FST6095111	Animal Systematics	C	4	3	340	L (100) It (120) St (120)
FST6095112	Animal Systematics	C	4	1.5	170	La (170)

	Practicum					
FST6095114	Animal physiology	C	4	4.5	510	L (150) It (180) St (180)
FST6095135	Animal Physiology Practicum	C	4	1.5	170	La (170)
FST6095116	Plant Physiology	C	4	4.5	510	L (150) It (180) St (180)
FST6095127	Plant Physiology Practicum	C	4	1.5	170	La (170)
FST6095106	Microbiology	C	4	3	340	L (100) It (120) St (120)
FST6095117	Microbiology Practicum	C	4	1.5	170	La (170)
FST6095128	Plant Systematics	C	4	3	340	L (100) It (120) St (120)
FST6095127	Plant Systematics Practicum	C	4	1.5	170	La (170)
FTK6017108	Demographic and living environment education	C	5	3	340	L (100) It (120) St (120)
FTK6017109	Practicum of Demographic and living environment education	C	5	1.5	170	La (170)
FTK6017111	Issues and Ethics in Indonesia Environmental	C	7	4.5	510	L (150) It (180) St (180)
FTK6017106	Biotechnology	C	7	3	340	L (100) It (120) St (120)
FTK6017207	Biotechnology Practicum	C	7	1.5	170	La (170)
FST6095129	Evolution	C	7	3	340	L (100) It (120) St (120)
FTK6017107	Indonesia Biodiversity and Conservation	C	7	3	340	L (100) It (120) St (120)
FTK6017208	Practicum of Indonesia Biodiversity and Conservation	C	7	1.5	170	La (170)
Content Knowledge Pedagogy						
FTK6017102	Strategies of biology learning	C	3	3	340	L (100) It (120)

						St (120)
FTK6017103	Workshop strategies of biology learning	C	3	1.5	170	P (170)
FTK6017106	Evaluation of Biology Learning	C	4	3	340	L (100) It (120) St (120)
FTK6017107	Workshop on Assessment and Evaluation of Biology Learning	C	4	1.5	170	P (170)
FTK6017110	Practicum for biology secondary school	C	5	3	340	L (100) It (120) St (120)
FTK6017109	Study of biology secondary school curriculum	C	5	3	340	L (100) It (120) St (120)
FTK6017105	Biology Lesson Planning	C	5	3	340	L (100) It (120) St (120)
FTK6017206	Workshop of Biology Lesson Planning	C	5	1.5	170	P (170)
FTK6017110	Capita Selecta Biology	C	5	3	340	L (100) It (120) St (120)
FTK6017209	Biology education research proposal seminar	C	5	1.5	170	P (170)
FTK6016149	Statistics for Education	C	4	4.5	510	L (150) It (180) St (180)
UIN6016208	Research methodology	C	5	4.5	510	L (150) It (180) St (180)
Technology knowledge						
FTK6017104	Media and technology for biology learning	C	4	3	340	L (100) It (120) St (120)
FTK6017105	Workshop on Media and technology for biology learning	C	4	1.5	170	P (170)
Specific Skills						
FTK6017301	Study of Basic Science Education Curriculum	CE	6	3	340	L (100) It (120) St (120)
FTK6017302	Capita Selecta Physics for Basic Education	CE	6	3	340	L (100) It (120)

						St (120)
FTK6017303	Basic Physics Practicum for Secondary School	CE	6	3	340	L (100) It (120) St (120)
FTK6017304	Science Learning for lower Secondary School	CE	6	3	340	L (100) It (120) St (120)
FTK6017305	Practicum of Science Learning for lower Secondary School	CE	6	3	340	L (100) It (120) St (120)
FTK6017306	Teaching Biology in Secondary School	CE	6	4.5	510	L (150) It (180) St (180)
FTK6017307	English for Biology Education	CE	6	6	680	L (200) It (240) St (240)
FTK6017308	IB Curriculum	CE	6	4.5	510	L (150) It (180) St (180)
FTK6017309	biology laboratory safety procedure	CE	6	4.5	510	L (150) It (180) St (180)
FTK6017310	School biology laboratory management	CE	6	4.5	510	L (150) It (180) St (180)
FTK6017311	Microtechnics	CE	6	6	640	La (640)
FTK6017312	Biology Education Entrepreneurship	CE	6	3	340	L (100) It (120) St (120)
FTK6017313	Applied Biology	CE	6	3	340	L (100) It (120) St (120)
FTK6017314	National and international biology education research studies	CE	6	4.5	510	L (150) It (180) St (180)
FTK6017315	National and international biological research studies	CE	6	4.5	510	L (150) It (180) St (180)
FTK6017316	Experimental design	CE	6	6	640	La (640)
FTK6017317	Non-profit internship	CE	6	9	1020	Pw(1020)
UIN6021206	Community Service Program	CE	6	6	680	Pw(680)
FTK6017318	Programmed internship competency 1	CE	6	6	680	Pw(680)
FTK6017319	Programmed internship	CE	6	6	680	Pw(680)

	competency 2					
FTK6017320	Programmed internship competency 3	CE	6	6	680	Pw(680)
FTK6017321	Programmed internship competency 4	CE	6	6	680	Pw(680)
FTK6017322	Collaborative research on proposal writing	CE	6	6	680	Pw(680)
FTK6017323	Collaborative research implementation	CE	6	6	680	Pw(680)
FTK6017324	Collaborative research dissemination	CE	6	6	680	Pw(680)
FTK6017325	Academic Writing	CE	6	6	680	Pw(680)
FTK6017326	Volunteer activities 1	CE	6	6	680	Pw(680)
FTK6017327	Volunteer activities 2	CE	6	6	680	Pw(680)
FTK6017328	Volunteer activities 3	CE	6	6	680	Pw(680)
FTK6017329	Volunteer activities 4	CE	6	6	680	Pw(680)
FTK6017330	Project activity 1	CE	6	6	680	Pw(680)
FTK6017331	Project activity 2	CE	6	6	680	Pw(680)
FTK6017332	Project activity 3	CE	6	6	680	Pw(680)
FTK6017333	Project activity 4	CE	6	6	680	Pw(680)
FTK6017334	Elective courses 1	CE	6	4.5	510	Pw(510)
FTK6017335	Elective courses 2	CE	6	4.5	510	Pw(510)
FTK6017336	Elective courses 3	CE	6	4.5	510	Pw(510)
FTK6017337	Elective courses 4	CE	6	4.5	510	Pw(510)
FTK6017338	Elective courses 5	CE	6	4.5	510	Pw(510)
FTK6017339	Elective courses 6	CE	6	4.5	510	Pw(510)
FTK6017345	Teaching Assistant 1	CE	6	6	680	Pw(680)
FTK6017346	Teaching Assistant 2	CE	6	6	680	Pw(680)
FTK6017347	Teaching Assistant 3	CE	6	6	680	Pw(680)
FTK6017348	Teaching Assistant 4	CE	6	6	680	Pw(680)
FTK6017349	Teaching Assistant 5	CE	6	6	680	Pw(680)
Thesis						
UIN6013311	Thesis	C	8	9	1020	Pw (1020)

5. Bachelor of Physics Education

a) Program Study Learning Outcome Bachelor of Physics Education

Aspect	ID	Program Study Learning Outcome
Knowledge and understanding	ILO1	Understanding the fundamental concepts of education and learning theories in designing, implementing, and evaluating innovative physics instruction by leveraging Information and Communication Technology (ICT), and the surrounding environment
	ILO2	Comprehending the concepts and principles of managing a