

Module Handbook

Module Name :	Basic Biology
Module Level :	Bachelor
Abbreviation, if applicable :	BID101
Sub-heading, if applicable :	
Courses included in the module, if applicable :	
Semester / term :	1 / First year
Module coordinator(s) :	Junaidi Khotib, S.Si, M.Kes, Ph.D
Lecturer(s) :	Junaidi Khotib, S.Si, M.Kes, Ph.D
	Dr.rer nat. Mulja Hadi Santosa
	Prof. Dr. Djoko Agus Purwanto, MSi
	Prof. Dr. Sudjarwo, MS
Language :	Bahasa Indonesia
Classification within the curriculum :	Compulsory Course / Elective Studies
Teaching format / class hours per week during the semester :	100 minutes lectures, 13 lecture classes/semester
Workload	Total 22 hours a semester
Cedit Points :	2
Requirements :	
Learning goals/competencies :	<p>Knowledge</p> <ul style="list-style-type: none"> – To understand the concept of human cellular biology and basic concepts of basic biology. <p>Competence</p> <ul style="list-style-type: none"> – To understand and able to explain the concept of microscopic structure of cell at cellular, molecular, genomics levels. – To understand and able to explain the concept of the chemical composition of cells and the functions of biomembran and organelles. – To understand the biochemical process inside the cell, inter and intracellular signalling induced by endogenous and exogenous substances. – To understand and able to explain the concept of genetics (DNA-RNA, gene structure, DNA replication) and gene expression (transcription, translation), and its variations. – To understand and able to apply the concept of cell cycle and diseases related to cell cycle, and the influence of endogenous and exogenous substances. – To understand and able to explain the concept of cellular and molecular changes caused by chronic exposure endogenous and exogenous substances.
Content :	Cell structure and its properties; biomembrane structure, function and the transport of exogenous substance through it; organelles structure and function and its metabolic processes; energy synthesis in cell; cell communication; structure and properties of DNA, genes and chromosomes; gene expression and regulation; cell

	cycles, cells meiosis and mitosis; mutations; protein biosynthesis; apoptosis and tumor.
Study/exam achievements :	<p>Student are considered to be competent and pass if at least get 40% of maximum mark of the exams based learning.</p> <p>Final score (NA) is calculated as follow : 50% Exam I + 50% Exam II</p> <p>Final index is defined as follow :</p> <p>A : $100 > NA \geq 75$ AB : $75 > NA \geq 70$ B : $70 > NA \geq 65$ BC : $65 > NA \geq 60$ C : $60 > NA \geq 55$ D : $55 > NA \geq 40$ E : $40 < NA$</p>
Forms of Media :	Slides and LCD Projector, whiteboards.
Literature :	<ol style="list-style-type: none"> 1. Albert B, Johnson A, Lewis J, Raff M, 2007, Molecular Biology of The Cell, 5th edition, Garland Science 2. Lodish H, Berk A, Kaiser CA, Krieger M, 2012, Molecular Cell Biology, 7th edition, Massachusetts Institute of Technology 3. Franklin TJ and Snow GA, 2005, Biochemistry and Molecular Biology of Antimicrobial Drug Action, 6th edition, USA: Springer 4. Anonim, 2005, Inside The Cell, NIH 5. Bolsover SR, Shephard EA, White HA, Hyams JS, 2011, Cell Biology, 3rd edition, USA, Willey Lis 6. Watson JD, Baker TA, Bell SP, Gann A, Levine M, Losick R, 2012, Molecular Biology of the Gene, (7th Edition)