

## Module Handbook

Module Name:	Genetic Engineering Product
Module Level:	Bachelor
Abbreviation, if applicable:	BIT402
Sub-heading, if applicable:	
Courses included in the module, if applicable:	
Semester/term:	1 / Fourth year
Module coordinator(s):	Junaidi Khotib, S.Si, M.Kes, Ph.D
Lecturer(s):	Dr. rer.nat. Mulja Hadi Santosa
	Junaidi Khotib, S.Si, M.Kes, Ph.D
	Prof. Dr. Sukardiman, MS
Language:	Bahasa Indonesia
Classification within the curriculum:	<del>Compulsory Course</del> /Elective Studies
Teaching format/class hours per week during the semester:	100 minutes lectures, 13 lecture classes/semester
Workload:	Total 22 hours a semester
Credit Points:	2
Requirements:	Student must have taken Pharmaceutical Biotechnology (BIT302) course.
Learning goal/competencies:	<p>Knowledge</p> <ul style="list-style-type: none"> <li>- To understand the concept of genetical manipulation.</li> </ul> <p>Skills</p> <ul style="list-style-type: none"> <li>- Learning to be independent, update about new informations, knowing how to make papers, learning-share and active in discussion.</li> </ul> <p>Competence</p> <ul style="list-style-type: none"> <li>- To understand and able to apply the concept of genetic manipulation in making biopharmaceutical products.</li> </ul>
Content:	Biopharmaceutical products which are made by genetic manipulation, including its methods/making process, therapeutic purposes, and clinical application (specifically: cytokines, interferon, growth factor, therapeutic hormones, therapeutics enzymes, antibody drugs and vaccines)
Study/exam achievements:	<p>Student are considered to be competent and pass if at least get 50% of maximum mark of the exams based learning.</p> <p>Final score (NA) is calculated as follow :</p> <p>20% Exam I + 20% Exam II + 30% Reading Assignment + 30% Paper Presentation</p> <p>Final index is defined as follow :</p> <p>A : 100 &gt; NA &gt; 75            AB : 75 &gt; NA &gt; 70            B : 70 &gt; NA &gt; 65            BC : 65 &gt; NA &gt; 60            C : 60 &gt; NA &gt; 55</p>

	D : 55 > NA > 50 E : 50 < NA
Forms of Media:	Slides, LCD projector, biotechnology videos, eBooks, whiteboard.
Literature:	<ol style="list-style-type: none"> <li>1. Gary Walsh, <i>Pharmaceutical Biotechnology, Concepts and Applications</i>, John Wiley-England, 2007</li> <li>2. Shargel L, Wu-Pong S, Yu ABC, <i>Applied Biopharmaceutics and Pharmacokinetics</i>, 5<sup>th</sup> edition, McGraw Hill Medical, 2004</li> <li>3. Walls G, <i>Biopharmaceutics : Biochemistry and Biotechnology</i>, 2<sup>nd</sup> edition, A John Willey and Sons, Ireland, 2003</li> <li>4. Yuti Chernajovsky &amp; Ahuva Nissim (Eds), <i>Therapeutic Antibodies</i>, Springer-Verlag, Berlin Heidelberg, 2008</li> </ol>
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