

Module Handbook

Module Name :	Synthesis Chemistry Practical Work
Module Level :	Bachelor
Abbreviation, if applicable :	KIO205
Sub-heading, if applicable :	
Courses included in the module, if applicable :	
Semester / term :	2 / Second year
Module coordinator(s) :	Prof. Dr. Tutuk Budiati, MS.
Lecturer(s) :	Prof. Dr. Tutuk Budiati, MS.
	Dra. Suzana, MSi., Apt.
	Prof. Dr. Achmad Syahrani, MS., Apt.
	Dr. Hadi Poerwono, MSc., Apt.
	Dr. Marcellino Rudyanto, MSi., Apt.
	Kholis Amalia Nofianti, S.Farm., Apt., MSc.
	Dr. Juni Ekowati, MSi., Apt.
Language :	Bahasa Indonesia
Classification within the curriculum :	Compulsory Course / Elective Studies
Teaching format / class hours per week during the semester :	200 minutes lectures, 13 lecture classes/semester
Workload	Total 43 hours a semester
Cedit Points :	2
Requirements :	
Learning goals/competencies :	<p>Knowledge</p> <ul style="list-style-type: none"> - To understand the concept of development drug substance (natural and synthetic materials) and basic concepts and principles in applying practical laboratory synthesis. <p>Skills</p> <ul style="list-style-type: none"> - Critical thinking, comprehensive and scientifically. - Active learning, discuss to make a decision. <p>Competence</p> <ul style="list-style-type: none"> - To have an ability to apply the concept of synthesis based on the basic theories of organic chemistry. - To develop the basic skills in practical chemistry.
Content :	<p>Tutorial: Extraction, distillation, recrystallization, chromatography</p> <p>Practice : Synthesis involving the reaction of halogenation, esterification, acetylation, diazotized, nitration, formation of ether, hydrolysis and reduction (example: synthesis of iodoform, acids acetyl salicylic, acetanilide, orange II, p-nitroasetanilida, p-nitranilin, aniline etc.) And insulation compounds chemistry of natural materials (ethyl-p-methoxycinnamate, caffeine)</p>

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 : 50% Exam I + 50% Exam II</p> <p>Final index is defined as follow : A : 100 > NA > 75 AB : 75 > NA > 70 B : 70 > NA > 65 BC : 65 > NA > 60 C : 60 > NA > 55 D : 55 > NA > 50 E : 50 < NA</p>
Forms of Media :	Board, LCD projector , and tools and materials laboratory experiments chemical synthesis
Literature :	<ol style="list-style-type: none"> 1. Cason J, Rapoport H , 1970, Laboratory Text in Organic Chemistry, 3th edition., New Jersey. Prentice Hall Inc. 2. Cerfontain H. , 1972, Practicum Organische Chemie, Groningen, Wolters-Nordhoff NV. 3. Sugihara JM , 1969, Laboratory Exercises in Organic Chemistry, 4th edition, Minnesota, Burgess Publishing Company. 4. Vishnoi AI., 1979, Advanced Practical Organic Chemistry, 1st edition, Sahibabas, Vikas Publishing House, Pvt. Ltd. 5. Vogel AI , 1968, A Textbook of Practical Organic Chemistry, 3rd edition, London, English Language Book Society and Longmans Green & Co. Ltd.
	6. Vogel AI , 1996, A Textbook of Practical Organic Chemistr, 5th edition., London., English Language Book Society and Longmans Green & Co. Ltd.
	7. Robert, Gilbert Rodewald Wingrove., 1974, An Introduction Modern Experimental Organic Chemistry
	8. Schoffstall AM., Gaddis BA, Druelinger ML , 2000, Microscale and Miniscale Organic Chemistry Laboratory Experiments, United State of America. Mc Graw Hill Companies, Inc.
Notes	The course is more synthesis reaction based as compared to organic chemistry I