

MODUL MASS TRANSFER AND TRANSFORMATION



MASTER PROGRAM OF ENVIRONMENTAL SCIENCE
SCHOOL OF POSTGRADUATE STUDIES
DIPONEGORO UNIVERSITY

A Module Descriptions :

Module design	Mass Transfer and Transformation
Module level, if applicable	
Code, if applicable	
Subtitles, if applicable	
Courses, if applicable	
Semester(s) in which the module is taught	2 nd Semester
Person responsible for the module	
Lecturer	Dr. Jafron Wasiq Hidayat, M.Sc. Prof. Dr. Ir. Hadiyanto, ST.M.Sc.IPU
Language	<i>Indonesian and English</i>
Relations to curriculum	
Type of teaching, contact hours	<i>Lecture: 120 minutes Q&A: 20 minutes Discussion: 20 minutes Presentation: 20 minutes Individual Assignment: 36 minutes</i>
Workload	<i>(Estimated) workload, divided into contact hours (lecture, exercise, laboratory session, etc.) and private study, including examination preparation, specified in hours,¹ and in total.</i>
Credit points	<i>2 credits / 4 ECTS</i>
Requirements according to the examination regulations	<i>Minimum attendance of lectures 75%</i>
Recommended prerequisites	<i>eg existing competences in...</i>

Module objectives/intended learning outcomes	Students know the basics of the equations of Mass, Heat, and Momentum, the process of mass transfer and examples. And also be able to answer questions related to the mass transfer process
Content	This course aims to equip students with knowledge, understanding and application of Mass Transfer and Transformation. The lectures discussed various types of mass transfer and transformation with various aspects. Learning activities include lectures with various approaches and methods that involve students a lot, such as discussions, observation activities in the field to learn to identify problems and solutions, learn to identify problems and their solutions.
Study and examination requirements and forms of examination	• <i>Open book and close book</i> • <i>Multiple choice, case study, interview, practice</i>
Media employed	<i>Powerpoint, youtube, website</i>
Reading list	1. Anantharaman. 2011. Mass Transfer: Theory and Practice. India: Prentice Hall India Learning Private Limited. 2. Delgado. J. M. P. Q. 2017. Heat and Mass Transfer Processes: New Developments and Applications II. Trans Tech Publications Inc 3. Dutta, B. K. 2007. Principles of Mass Transfer and Separation Processes. PHI 4. Mauro, A. and Massarotti, N. 2020. Heat and Mass Transfer in Energy Systems. MDPI 5. Ventras, J. S., and Vrentas, C. M. 2013, Diffusion and Mass Transfer 1st Edition. CRC Press