MODUL

TRANSFER AND MASS TRANSFORMATION

MASTER PROGRAM OF ENVIRONMENTAL SCIENCE
SCHOOL OF POSTGRADUATED STUDIES
DIPONEGORO UNIVERSITY

Modul Description :

Modul design	Mass Transfer and Transformation
Modul level, if applicable	
Code, if applicable	
Subtitles, if any	
Course, if applicable	
Semester(s) in which the Modul is taught	Semester 2
Modul responsible*	
Teaching Lecturer	Dr. Jafron Wasiq Hidayat, M.Sc. Prof. Dr. Ir. Hadiyanto, ST.M.Sc.IPU
Language	*Indonesian and English*
Relationship with curriculum	
Type of teaching, hours of contact	*Studying:1 x 120 minutes x 16 meetings = 32 hours/week* *Q&A:1x 20 minutes 16 meetings = 5.3 hours/week* *Discussion:1x 20 minutes 16 meetings = 5.3 hours/week* *Presentation:1x 20 minutes 16 meetings = 5.3 hours/week* *Individual assignments: 36 minutes/day = 3 hours/week* *Total work for 1 semester = 100 hours = 4 ECTS*
Workload	*(Estimated) workload, divided into contact hours (lectures, exercises, laboratory sessions, etc.) and personal study, including test preparation, specified in hours,[1]and overall.*
credit points	*2 credits / 4 ECTS*
Requirements according to the exam regulations	*Lecture attendance of at least 75%*
Recommended prerequisites	*For example, competence in…*

Modulthe desired learning objectives/outcomes	Students know the basics of the equations of Mass, Heat and Momentu, the process of mass transfer and examples And also able to answer questions related to the process of mass transfer
Fill	This course aims to equip students with knowledge, understanding and application of Mass Transfer and Transformation. Lectures discuss 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 their solutions, learn to identify problems and their solutions.
Study and examexam requirements and forms	• *Open the book and close the book* • *Multiple choice, case studies, interviews, practicals*
Media used	*Powerpoint, youtube, website*
Reference	1. Anantharaman. 2011. Mass Transfer: Theory and Practice. India: Prentice Hall India Learning Private Limited. 2. Delgado. JMPQ 2017. Heat and Mass Transfer Processes: New Developments and Applications II. Trans Tech Inc. Publications 3. Dutta, BK 2007. Process Principles of Mass Transfer and Separation. PHI 4. Mauro, A.and Massarotti, N. 2020. Heat and Mass Transfer in Energy Systems. MDPI 5. Ventras, JS, and Vrentas, CM 2013, Diffusion and Mass Transfer First Edition. CRC Press