MODULE HANDBOOK

Climate Change Phenomena and Impacts

Andry Rustanto, S.Si, M.Sc.

Undergraduate Study Program for Geography
Faculty of Mathematics and Natural Sciences
Universitas Indonesia

Module designation	Climate Change Phenomena and Impacts
Semester(s) in which the module is taught	Fifth (5th) Semester
Person responsible for the module	Andry Rustanto, S.Si, M.Sc.
Lecturer	1. Nurul Sri Rahatiningtyas, S.Si., M.Si. 2. Faris Zulkarnain, S.Si., M.T. 3. Andry Rustanto, S.Si, M.Sc. 4.
Language	Bahasa Indonesia
Relation to curriculum	Elective
Teaching methods	Student-centered Learning and combination with Cooperative Learning
Workload (incl. contact hours, self-study hours)	1. Lectures: 150 minutes per week per semester 2. Assignment: 180 minutes per week per semester 3. Independent study: 180 minutes per week per semester 4. Minutes x weeks x semester: 510 x 14 x 1 = 7140 minutes per semester 5. Midterm Examination: 100 minutes per semester 6. Final Examination: 100 minutes per semester 7. Total workload per semester: 7340 minutes / 122 hours 20 minutes
Credit points	3 (Three)
Required and recommended pre-requisites for joining the module	1. Principles and Perspective in Physical Geography 2. System and Process of Physical Geography
Module objectives/intended learning outcomes	This course is one of the elective course in Geography Department, University of Indonesia that should be taken by students at fifth term. After completing this course, students are expected to be able to explain the conception of climate change ; be able to analyze the phenomenon of climate change and its impact spatially and temporally on the life of the earth; its vulnerability; and the process of adaptation and mitigation
Content	1. The basic concept of climate change 2. Climate change driving factors 3. Impact of Climate Change 4. Efforts to adapt and climate change mitigation
Examination forms	-
Study and examination requirements	1. Individual Score (20%) 2. Group and Presentation Score (25%) 3. Mid Examination (30%) 4. Final Examination (25%)

Reading list	Intergovernmental Panel on Climate Change. (2021). AR6 Climate Change 2021: The Physical Science Basis . Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press. In Press. Fares, A. (2021). Climate Change and Extreme Events. Elsevier. Cracknell, A.P., & Varotsos, C.A. (2021). Understanding Global Climate Change: Modelling the Climatic System and Human Impacts. CRC Press. Newton, D.E. (2020). The Climate Change Debate: A Reference Handbook. ABC-CLIO Uscinski, J. E., K. Douglas, S. Lewandowsky, J. E. Uscinski, K. Douglas, and S. Lewandowsky, 2017, Climate Change Conspiracy Theories, in Oxford Research Encyclopedia of Climate Science: Oxford University Press. https://www.ipcc.ch/reports/ https://science2017.globalchange.gov/