

## Module Handbook for the Course on Climate Change (EN3087)

<b>Module designation</b>	<i>Climate Change (EN3087)</i>
<b>Semester(s) in which the module is taught</b>	<i>1 and 2 (this is an elective course, and the semester to be delivered depending on student's enrolment)</i>
<b>Person responsible for the module</b>	<i>Associate Professor Vo Le Phu; Dr. Ha Quang Khai</i>
<b>Language</b>	<i>Vietnamese and English</i>
<b>Relation to curriculum</b>	<i>Specialisation Environmental Engineering</i>
<b>Teaching methods</b>	<i>Lecture, documentary films, in-class exercises, group discussion/ presentation.</i>
<b>Workload (incl. contact hours, self-study hours)</b>	<i>Total workload: 51 hours Contact hours: 3 hrs/week Private study including examination preparation, specified in hours: 20 hrs</i>
<b>Credit points</b>	<i>3</i>
<b>Required and recommended prerequisites for joining the module</b>	<ul style="list-style-type: none"> <li>- <i>Pre-requisite course: N/A</i></li> <li>- <i>Pre-course: Environmental Law and Policy (EN2025)</i></li> <li>- <i>Parallel courses: Water Resources Management (EN3039); Coastal Zone Management (EN3045); Green Technology (EN4015); Forestry Management &amp; Biodiversity (EN4013)</i></li> </ul>
<b>Module objectives/intended learning outcomes</b>	<p><i>Upon the completion of this course, students are able to achieve the following knowledge and skills:</i></p> <ul style="list-style-type: none"> <li>- <i>Knowledge: Understand what is climate change and climate-related risks; causes and effects of climate change.</i></li> <li>- <i>Skills: Students are able to apply theoretical knowledge for analysing impacts of climate change on natural resources and the environments.</i></li> <li>- <i>Comptences: Identify countermeasures for climate change adaptation and mitigation at both global and local levels to meet the goal of sustainable development.</i></li> </ul>
<b>Content</b>	<i>The purpose of this course is to provide students with basic knowledge of the science of the Earth's climate system, driving forces of climate change, challenges and opportunities of climate change, effects of climate change on global natural resources and environments, and human's responding measures for climate change impacts.</i>
<b>Exams and assessment formats</b>	<ul style="list-style-type: none"> <li>- <i>One (01) Individual Essay (take-home written assignment): students work in 6 week and submit in week 7 or 8 of the course.</i></li> <li>- <i>One (01) Group Works: each group consists of 4-5 students, choose their own topic from week 2. Group presentation in week 7 for about 30 minutes. Assessment of each group is based on an agreed rubric.</i></li> <li>- <i>One (01) Final Exam: quizzes-based and open questions</i></li> </ul>

<p><b>Study and examination requirements</b></p>	<ul style="list-style-type: none"> <li>- All materials (lecture handouts, article papers, reports and case studies) are provided on BK-elearning (BkeL).</li> <li>- Students are required to be at least 90% attendance of theoretical lectures and 100% of individual assignments, discussion, presentation of the course.</li> <li>- Students are provided with ideas of individual essay's topics in Week 2 of the course. Individual essays should be submitted in Week 7 or 8. Maximum length of the essay is 2,500 words (excluded tables, diagrams, figures). Specific requirements of essay will be provided in Week 1</li> <li>- Group works presentation will be performed in Week 7 – 10. Assessment Rubrics for group presentation will be discussed in the 1st week of the course.</li> <li>- The final grade includes in-class exercises (20%); individual essay (20%); group presentation (10%); mid-term exam (20%); and final exam (30%).</li> <li>- Students must have a final grade of 50% or higher to pass the course.</li> <li>- Students must submit individual assignment and must participate group presentation to qualify for entering the final exam.</li> </ul>
<p><b>Reading list</b></p>	<p><b>Textbook and main readings:</b></p> <p>[1]. IPCC (2013). <i>Climate Change 2013: The Physical Science Basis</i>. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535 pp.</p> <p>[2]. IMHEN and UNDP (2015). <i>Special Report on Disaster Risk Management and Extreme Climate Events in Vietnam for Enhancing Climate Change Adaptation</i> (in Vietnamese). Publisher of Vietnam Natural Resources – Environment &amp; Mapping, Hanoi.</p> <p>[3]. Kaya, Y., Yamaji, K., Akimoto, K. (2015). <i>Climate Change and Energy: Japanese Perspectives on Climate Change Mitigation Strategy</i>. Imperial College Press, London.</p> <p>[4]. World Bank (2010). <i>Climate Risks and Adaptation in Asian Coastal Cities: A Synthesis Report</i>. World Bank, Washington, DC.</p> <p><b>Additional readings:</b></p> <p>[5]. UNEP (2009). <i>Climate Change Science Compendium</i>. United Nations Environment Programme, Nairobi.</p> <p>[6]. Dasgupta, S., Laplante, B., Meisner, C., Wheeler, D. and Yan, J. (2007). <i>The Impact of Sea Level Rise on Developing Countries: A Comparative Analysis</i>. World Bank Policy Research Working Paper 4136. World Bank, Washington, DC.</p> <p>[7]. WWF (2009). <i>Mega-Stress for Mega-Cities: A Climate Vulnerability Ranking of Major Coastal Cities in Asia</i>. WWF International, Gland, Switzerland.</p> <p>[8]. Fuchs, R. J. (2010). "Cities at Risk: Asia's Coastal Cities in an Age of Climate Change". Analysis from East-West Center. Asia Pacific Issue, 96(2010): 1 – 12.</p> <p>[9]. Bates, B., Kundzewicz, Z.W., Wu, S. and Palutikof, J.P. (eds). (2008). <i>Climate Change and Water</i>. Technical Paper of the Intergovernmental Panel on Climate Change. IPCC Secretariat, Geneva.</p> <p>[10]. Hardy, J.T. (2003). <i>Climate Change: Causes, Effects and Solutions</i>. John Wiley &amp; Sons, Chichester.</p>