**Course Syllabus**

**TU103 Life and Sustainability (2/2018)**

**Programs: BAS/BBA/BE/IAC/SPD – Thammasat Tha Prachan**

1. **Lecturers**

Module 1. Room 1: Assoc. Prof. Dr. Chalie Charoenlarpnopparut (chalie@siit.tu.ac.th)

Rooms 2 and 4: Dr. Rick Levinthal – Course Coordinator (ricklev@hotmail.com)

Room 3: Dr. Amnart Thamrongmas (armsiit@gmail.com)

Room 5: TBA

Module 2. Rooms 1 and 4: Asst. Prof. Dr. Supreedee Rittironk (sdr@tu.ac.th)

Rooms 2 and 5: Dr. Winyu Ardrugsa

(Ardrugsa@ap.tu.ac.t )

Room 3: Aj. Hansa Srilertchaipanit

(Hansa@ap.tu.ac.th)

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Module 3. Rooms 1 and 4: Aj. Chol Bunnag (cholb@econ.tu.ac.th) Rooms 2 and 5: Dr. Nuttavikhom Phanthuwongpakdee (manateedugong@yahoo.com)

Room 3: Aj. Chantanee Ngernpermpoon (chantanee.ngernpermpoon@wfp.org, chngern@gmail.com)

1. **Class Date and Time:** Saturday 9:00-12:00 and 1:00-4:00

 **Classrooms:**

 **Morning:**

 Room 1: TBA

 Room 2: TBA

 Room 3: TBA

 **Afternoon:**

 Room 4: BE 101

 Room 5: SA 102

1. **Course Objective**

This course provides an introduction to the importance of life-cycle systems perspectives in understanding major challenges and solutions to achieving more sustainable societies in this changing world. Students will learn about the relationship between mankind and the environment in the context of energy and resource use, consumption and development, and environmental constraints. Furthermore, an examination of social conflict and change from the life-cycle perspective will be used to develop an understanding of potential solution pathways for sustainable lifestyle modifications.

1. **Expected Learning Outcomes**

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| **Morals and Ethics** | **Knowledge** | **Cognitive Skills** | **Interpersonal skills & responsibilities** | **Numerical, Communication and IT skills** |
| **1** | **2** | **3** | **4** | **5** | **6** | **1** | **2** | **3** | **4** | **1** | **2** | **3** | **4** | **1** | **2** | **3** | **4** | **5** | **1** | **2** | **3** | **4** |
| **⚫** | **⚫** | **⚫** | **x⚫** | **⚫** | **⚫** | **x⭘** | **x⚫** | **⚫** | **x⚫** | **⚫** | **⚫** | **⚫** | **⚫** | **x⚫** | **⚫** | **x⚫** | **⚫** | **⚫** | **⭘** | **x** | **x** | **x** |
| **ทักษะอื่น ๆ (Other skills)** | **ทัศนคติอื่น ๆ (Other attitudes)** |
| S1: Systematic thinking | A1 : Awareness for the public and awareness of the external impact that they may cause to society. |
| S2: Well-rounded thinking | A2 : Seeing that sustainability is near and one of the main reasons is the behavior of students in everyday life. |
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1. **Grading Criteria:**

Module 1 = 25% (10% participation and 15% project)

Module 2 = 25% (10% participation and 15% project)

Module 3 = 25% (10% participation and 15% project)

Final Exam = 25%

1. **Reference Material**

Each module will provide reading material and worksheets. There is no text for the students to purchase.

 **7. Course plan**

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| **Week** | **Date** | **Topic** | **Content** |
| *Module 1: Environmental Science* |
| 1 |  19 January | Concept of life and sustainability | Scope and definition, various types of sustainability, World population. |
| 2 |  26 January | Science related to sustainability | Ozone depletion, Climate change and global connectivity. Water scarcity.  |
| 3 |  2 February | Personal consumption: Measurement and its environmental effect | Material life cycle (Story of stuff clip), Ecological footprint and carbon footprint. |
| 4 |  9 February | Environmental protection engagement  | Zero-waste life (Green consumerism), Public campaign, Change and inspiration, Fishing game |
| 5 |  16 February | Project Module 1: Presentation | Thai footprint & inspiration project and module reflection. |
| *Module 2: Built Environment and Sustainability* |
| 6 |  23 February | Built Environment and its Effect | Concept and global context |
| 7 |  2 March | Built Environment: Personal Level | City scale  |
| - | Midterm | No class or midterm |  |
| 8 |  16 March | Built Environment: Landscape & City | Neighbor & community scale |
| 9 |  23 March | Built Environment toward Sustainability | Building scale |
| 10 |  30 March | Project Module 2: Presentation | Eco-Design competition: rapid prototype, 3-D prototype |
| *Module 3: Economics and Environment for Sustainability*  |
| 11 |  6 April – Classes cancelled for Chakri Memorial Day. Makeup class date TBA. | Global economic development and sustainability | Overview, class activity |
| - | 13 April | Songkran – No class |  |
| 12 |  20 April | Thai economic development and sustainability | Overview, class activity |
| 13 |  27 April | Sustainable Solutions | Polluter pay principle, payment for ecosystem service, tax policy, green society |
| 14 |  4 May | Key Success Factor toward Life-long Sustainability | Case study and discussion |
| 15 |  11 May | Project Module 3: Presentation | Policy competition |
| Final | 25 May | Final Exam 11:00-12:00 |  |