**COURSE SYLLABUS**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Code** |  | **Course Title** |  | | | | |
| **Credit** | … (…-…-…) | **Semester** | …./……… | **Group** |  | **Class Schedule** |  |
| **Responsible Person** |  | | | | | | |
| **Instructor(s)** |  | | | | | | |
| **Teaching Assistants (if any)** |  | | | | | | |
| **Consultation Channels and Time** |  | | | | | **Language of Instruction** | Thai  English  Other …………………………………… |
| **Website/Online Platform** |  | | | | | | |
| **Course Learning Outcomes** | | | | | | | |
| By the end of this course, the student will be able to  CLO-1.  CLO-2.  CLO-3.  CLO-4.  CLO-5.  … | | | | | | | |

**Teaching Plan**

| **Week** | **Topic/Sub-topic** | **Learning Activity** | **Duration (minutes)** | | | **CLO** | **Instructor** | **Note** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Onsite** | **Video Clip** | **Online** |
| 1 | Topic 1 | Lecture: Course introduction |  |  | 30 | CLO-1 |  |  |
| Topic 2 | [Active Learning] Group discussion (6-7 students/group)  “Why other engineering creations don’t fail as often as software?” |  |  | 150 |  |  |
| 2 | Topic 3 | Lecture: Online, Live |  |  | 60 | CLO-1 |  |  |
| Topic 4 | Lecture: Pre-recorded video clip |  | 30 |  | CLO-2, CLO-5 |  |  |
|  | Laboratory exercises | 90 |  |  |  |  |
| 3 | Topic 5 | [Problem-Based Learning] In class group work (6-7 students/group) Problem: How a computer with 1 GByte of RAM can sort a list of 1 trillion sequences of nucleotides? At the end of the class, each group to present their solution. | 180 |  |  | CLO-4 |  |  |
| 4 |  |  |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  |  |  |
| 6 |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |
| 8 |  |  |  |  |  |  |  |  |
| 9 | Midterm Exam |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |  |
| 17 |  |  |  |  |  |  |  |  |
| 18 | Final Exam |  |  |  |  |  |  |  |
| Total minutes | | |  |  |  |  |  |  |
| Total hours | | |  | | |  |  |  |

**Assessment Plan**

| **Assessment Activity** | **%** | **Schedule** | **CLO** | **Note** |
| --- | --- | --- | --- | --- |
| (Examples) |  |  |  |  |
| Participation | 10% | Every week |  |  |
| Quiz 1 | 5% | Week 3 | CLO-1, CLO-2 |  |
| Quiz 2 (Online) | 5% | Week 9 | CLO-3 | Online quiz |
| Active Learning Activity 1 | 5% | Week 1 | CLO-1 | Presentation and peer evaluation |
| PBL Activity 1 | 5% | Week 3 | CLO-4 | Presentation and delivered work |
| Assignment 1 |  |  |  |  |
| Assignment 2 |  |  |  |  |
| Project |  |  |  |  |
| Portfolio/Learning journal |  |  |  |  |
| Midterm exam (Online) |  |  |  | Oral one-one exam via video call |
| Final exam |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Primary Textbooks/ Materials** | 1. Handout  2. James Stewart, “Calculus (8th Edition)”, Cengage Learning | | |
| **Supplementary Materials/Resources (if any)** | https://www.wolframalpha.com/ | | |
| **Class Policy** | Lateness more than 15 minutes is considered absence. | | |
| **Grading Policy** | Grading Scheme  A 91-100, B+ 86-90, B 76-85, C+ 61-75, C 51-60, D+ 46-50, D 41-45, F 0-40 | | |
| **Last Revised By** |  | **Date** |  |