**UNDERGRADUATE PROGRAM IN COMPUTER SCIENCE**
**DEPARTMENT OF COMPUTER ENGINEERING**
**FACULTY OF INTELLIGENT ELECTRICAL AND INFORMATICS TECHNOLOGY**

| | | |
|---|---|---|
| Module name | **Computational Intelligence for Game** | |
| Module level | Undergraduate | |
| Code | EC184902 | |
| Courses (if applicable) | Computational Intelligence for Game | |
| Semester | Elective | |
| Contact person | Dr. Supeno Mardi Susiki Nugroho, S.T, M.T. | |
| Lecturer | Dr. Supeno Mardi Susiki Nugroho, S.T, M.T. | |
| Language | Indonesia | |
| Relation to curriculum | Undergraduate degree program, elective semester. | |
| Type of teaching, contact hours | Lecture, < 60 students, 170 minutes * SKS | |
| Workload | 1. Lectures: 3 x 50 = 150 minutes (2.5 hours) per week.<br>2. Exercises and Assignments: 3 x 60 = 180 minutes (3 hours) per week.<br>3. Private study: 3 x 60 = 180 minutes (3 hours) per week. | |
| Credit points | 3 credit points (sks). | |
| Requirements according to the examination regulations | A student must have attended at least 75% of the lectures to sit in the exams. | |
| Mandatory prerequisites | | |
| Learning outcomes and their corresponding PLOs | CLO-1 Students are able to explain every game type: FPS, RTS | PLO-3<br>PLO-4 |
| | CLO-2 Students are able to explain how AI used by opponent ini game: sensing, processing, acting | PLO-3<br>PLO-4 |
| | CLO-3 Students are able to explain the various AI used in every aspect of game | PLO-3<br>PLO-4 |
| | CLO-4 Students are able to explain engineering techniques that can be applied to path finding and crowd | PLO-5<br>PLO-6 |
| Content | In this course, we will learn about Computational Intelligence and Application for games. Topics that will be learn are Models of computational for games, motion actor techniques in games, PathFinding, and various decision making for computer games. | |

| | |
|---|---|
| Study and examination requirements and forms of examination | • In-class exercises<br>• Quiz 1 and 2<br>• Assignment 1, 2, 3<br>• Mid-term examination<br>• Final examination |
| Media employed | LCD, whiteboard, websites (myITS Classroom). |
| Assessments and Evaluation | CO-1: Question no 1 in midterm exam (15%)<br>CO-2: Question no 2 in midterm exam (15%)<br>CO-3: Assignment 1 (5%), question no 4 in midterm exam (20%), Quiz 2 (5%)<br>CO-4: Question no 1 in final exam (20%), question no 2 in final exam (20%) |
| Reading List | Ian Millington and John Funge, Artificial Intelligence For Games 2nd ed, Elsevier 2009 |