# SYLLABUS

1. **Course name:** THESIS
2. **Course code:** FIPR4102546
3. **Credits:** 4 (4/0/8)

   Duration: 15 weeks (4 theories + 0 laboratories + 8 self-studying/week)
4. **Instructors:**
   1- Assoc. Prof. PhD. Truong Dinh Nhon
   2- Assoc. Prof. PhD. Nguyen Minh Tam
   3- Assoc. Prof. PhD. Le Chi Kien
   4- M.Eng. Nguyen Tan Doi
   5- M.Eng. Ta Van Phuong
5. **Course conditions**

   Prerequisites: All courses

   Corequisites: All courses
6. **Course description**

This course requires students to conduct a researching project in automatic control fields by applying the previous knowledge in all courses taught in the education programs. Furthermore, this course helps students train their abilities to research documents, write reports, and make a presentation in front of the grading boards. It also provides students abilities to work in group and do scientific research which can help them develop in higher levels.

7. **Course Goals**

| Goals | ***Goal description*** *(This course provides students:)* | ELOs |
|---|---|---|
| **G1** | An ability to apply the knowledge in circuit analysis, programming tools, and professional software in order to design, operate, test, and maintain automation and control systems. | 1.1,1.2, 2.2,4.3, 4.4,2.5, 3.2, 1.3 |
| **G2** | An ability to read professional documents in English. | 2.1, 3.2 |
| **G3** | An ability to write reports and make presentations clearly and coherently. | 3.2, 3.3, 4.4 |

8. **Course Learning Outcomes (CLOs)**

| CLOs | | ***Description*** *(After completing this course, students can have:)* | ELOs |
|---|---|---|---|
| **G1** | G1.1 | An ability to use the theories in automatic control field in order to calculate and choose the appropriate components in designing automatic control systems. | 1.1, 1.2, 2.2 |
| | G1.2 | An ability to use some popular programming languages to program automatic control systems. | 1.1, 1.2, 4.3, 4.4 |

| | | | |
|---|---|---|---|
| | G1.3 | An ability to draw and simulate electric and electronic circuits by applying some computer aided software | 1.3, 3.2 |
| | G1.4 | An ability to implement a designing prototypes according to the requirements. | 1.3, 3.2 |
| | G1.5 | An ability to collaborate in teams, brainstorm, and reach decisions effectively. | 2.5 |
| **G2** | G2.1 | An ability to read the datasheets of available equipment in English. | 2.1, 3.2 |
| | G2.2 | An ability to read online training documents in English. | 2.1, 3.2 |
| **G3** | G3.1 | An ability to read and compile the requirements about contents, formats, and methods of presenting the reports. | 3.2 |
| | G3.2 | An ability to form and arrange ideas in reports. | 3.3 |
| | G3.3 | An ability to design slides clearly and coherently in order to present the reports. | 3.3, 4.4 |

**9. Study materials**

**- Textbooks:** *The lectueres provide the documents of this course, as the subjects are diverse.*

**- References:** *The lectueres provide the documents of this course, as the subjects are diverse.*

**10. Student Assessments**

- Grading points: 10

- Planning for students assessment is followed:

| Type | Contents | Linetime | Assessment techniques | CLOs | Rates (%) |
|---|---|---|---|---|---|
| **Assessment of reviewers** | | | | | **20** |
| Test 1 | Before defensing the undergraduate thesis, students are assessed by reviewers about results, contents, and formats of their reports. | Week 14 | Rubrics | G3.1<br>G3.2<br>G3.3 | 20 |
| **Final reports** | | | | **50** | **80** |
| Test 1 | The contents of the reports have to cover all requirements approved for each student. | Week 15 | Reports and Presentations | G1.1<br>G1.2<br>G1.3<br>G1.4 | 80 |

**11. Course details:**

| Weeks | Contents | CLOs |
|---|---|---|
| 1 | ***Content 1:* <CHOOSING OF SUBJECT TITLES>** *(4/0/8)* | |
| | ***A/* Contents and teaching methods***: (4)*<br>**Contents:**<br>1.1 Introduction<br>1.2 Requirements<br>1.3 Steps<br>1.4 The schedule<br>1.5 Choosing the project title and groups | G3.1 |

| | | |
|---|---|---|
| | **Teaching methods**:<br>+ Presentation | |
| | ***B/* Self-study contents**: (8)<br>1.6 Choosing the subject title on the pre-chosen lists or on the Internet. | G2.1<br>G2.2 |
| 2 | ***Content 2:* <APPROVING THE SUBJECT TITLES>** *(4/0/8)* | |
| | ***A/* Contents and teaching methods***: (4)*<br>**Contents:**<br>2.1 Listing the students who chose the subject titles<br>2.2 Approving the subject title according to the priorities<br>2.3 The requirements of the thesis<br>2.4 The purposes of the thesis<br>2.5 The limitation of the thesis<br>2.6 Method of writing the project proposals<br>**Teaching methods**:<br>+ Discussion | G1.4 |
| | ***B/* Self-study contents**: (8)<br>2.6 Surveying all available documents to write the project proposal | G2.1<br>G2.2 |
| 3-14 | ***Content 3:* <CONDUCTING THE PROJECT – WORKING DIRECTLY WITH SUPERVISORS>** *(48/0/96)* | |
| | ***A/* Contents and teaching methods***: (48)*<br>**Contents:**<br>3.1 Students working directly with their supervisors<br>**Teaching methods**:<br>+ Presentation<br>+ Discussion | G1.1<br>G1.2<br>G1.3<br>G1.4 |
| | ***B/* Self- study contents**: (4)<br>3.5 Researching all documents to write the chapter 1 of the report | G2.1<br>G2.2 |
| 15 | ***Content 4:* < REPORT ASSESSMENTS >** *(4/0/8)* | |
| | ***A/* Contents and teaching methods***: (4)*<br>**Contents:**<br>4.1 Assigning the defensers<br>4.2 Instruction of designing the presentation slides<br>4.3 Instruction of presentation skills<br>**Teaching methods**:<br>+ Presentation<br>+ Discussion | G3.2 |
| | ***B/* Self- study contents**: (8)<br>4.4 Preparing the presentation | G3.3 |

**12. Learning ethics:**

All pictures, diagrams, flow charts, and tables in the report must not be copied from other official documents without clearly referenced. The results of each student project have to be conducted by his own. If there are any violation detected from the project, this project will be evaluated zero mark for the final result.

**13. First approved date:**

**14. Approval level:**

| Dean | Department | Instructor |
|---|---|---|
| **Assoc. Prof. PhD. Nguyen Minh Tam** | **Assoc. Prof. PhD. Truong Dinh Nhon** | **Assoc. Prof. PhD. Truong Dinh Nhon** |

**15. Syllabus updated process**

| | |
|---|---|
| **1st time:** Updated content dated | Instructors |
| **2st time:** Updated content dated | Head of department |