SYLLABUS

1. **Course name:** Project 1
2. **Course code:** ELPR310863
3. **Credits:** 1 (1/0/2)

   Duration: 15 weeks (1 theories + 0 laboratories + 2 self-studying/week)
4. **Instructors:**

   1- Nguyen Dinh Phu, MEng

   2- Nguyen Thanh Binh, MEng

   3-Ha a Thoi, Eng

   4-Pham Ty Phu, MEng

   5-Nguyen Truong Duy, MEng

   6-Nguyen Duy Thao, MEng
5. **Course conditions**

   Prerequisites: Digital Systems, Electronic Circuits, Microprocessor

   Corequisites: Digital Systems
6. **Course description**

   This course requires students to conduct an application circuits by applying the previous knowledge in the subjects such as Electronic circuits, Digital systems, Microprocessor. Furthermore, this course helps students train their abilities to research documents, write reports, and make a presentation in front of the grading councils.
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 application circuits.	01-03 (H) 10-11(H)
G2	An ability to read professional documents in English.	05 (M)
G3	An ability to write reports and make presentations clearly and coherently.	04 (H)
G4	An ability to work effectively as a member in teams	06 (H)
G5	An ability to engage in life-long learning	07 (H)
G6	An ability to understand the tenants of professional codes of ethics and to to understand the impact of engineering solutions in a global, economic, environmental, and societal context	08(H)-09(M)

* Note: High: H; Medium: M; Low: L

8. Course Learning Outcomes (CLOs)

CLOs		Description (After completing this course, students can have:)	Outcome
G1	G1.1	the ability to use the theories in digital and analog circuits in order to calculate and choose the appropriate components in designing application circuits.	02, 11
	G1.2	the ability to use some popular programming languages, such as C++, Java, and Python, to program application circuits.	01
	G1.3	the ability to draw and simulate electric and electronic circuits by applying some computer aided software, such as Protues, Orcad, and ISE Design Suite.	03
	G1.4	the ability to implement an appropriate designing prototypes	11
	G1.5	the ability to verify and validate the design according to the requirements.	10
G2	G2.1	the ability to read the datasheets of available electric and electronic components in English.	05
	G2.2	the ability to read online training documents in English.	05
G3	G3.1	the ability to read and compile the requirements about contents, formats, and methods of presenting the reports.	04
	G3.2	the ability to form and arrange ideas in reports.	04
	G3.3	the ability to design slides clearly and coherently in order to present the reports.	04
G4	G4.1	The ability to collaborate in teams, brainstorm, and reach decisions	06
G5	G5.1	The ability to analyze new engineering case studies and learn how to access new information	07
G6	G6.1	The ability to analyze ethical aspect as applied to case studies and their own project	08
	G6.2	analyze important engineering design case studies	09 (M)

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 (%)
Weekly assessments					**50**
Test 1-14	50	Week 1-14	Rubrics	**G1-G6**	50
Final reports				**50**	**50**

Test 1	50	Week 15	Reports and representations	G1-G6	50

11. Course details:

Weeks	Contents	CLOs
1, 2	*Content 1:* **<CHOOSING OF SUBJECT TITLES>** *(2/0/4)*	
	A/ **Contents and teaching methods***: (2)* **Contents:** 1.1 Introduction to the course 1.2 Requirements of the project 1 1.3 Steps to follow 1.4 The schedule of this course 1.5 Choosing the subject titles **Teaching methods**: + Presentation	G1, G2, G4, G5, G6
	B/ **Self-study contents**: (4) 1.6 Choosing the subject title on the pre-chosen lists or on the Internet.	
3, 4	*Content 2:* **<APPROVING THE SUBJECT TITLES>** *(2/0/4)*	
	A/ **Contents and teaching methods***: (2)* **Contents:** 2.1 Listing the students who chose the subject titles 2.2 Approving the subject title according to the priorities 2.3 The requirements of the project 1 2.4 The purposes of the project 2.5 The limitation of the project 2.6 Method of writing the project proposals **Teaching methods**: + Discussion	G1, G2, G4, G5, G6
	B/ **Self-study contents**: (4) 2.6 Surveying all available documents to write the project proposal	
5, 6	*Content 3:* **<WRITING THE CHAPTER 1 OF THE REPORT: INTRODUCTION>** *(2/0/4)*	
	A/ **Contents and teaching methods***: (2)* **Contents:** 3.1 Conducting to the subject title 3.2 The reasons for choosing the subject 3.3 The functions of the proposed circuits 3.4 Parameters and limitations of the proposed circuits **Teaching methods**: + Presentation + Discussion	G1-G6
	B/ **Self- study contents**: (4) 3.5 Researching all documents to write the chapter 1 of the report	

7, 8	**Content 4:** < **WRITING THE CHAPTER 2 OF THE REPORT: CIRCUIT DESIGNS** > *(2/0/4)*		

	A/ Contents and teaching methods: *(2)*
	 Contents:
	     4.1 Introducing the subject requirements
	     4.2 Designing the blocking diagram
	     4.3 Designing the sub blocking diagram
	 Teaching methods:
	   + Presentation
	   + Discussion
		G1-G6	

	B/ Self- study contents: (4) 4.4 Research all documents to write the chapter 2 of the report		
9, 10	**Content 5:** < **WRITING THE CHAPTER 3 OF THE REPORT: CONDUCTING THE CIRCUIT** > *(2/0/4)*		

	A/ Contents and teaching methods: *(2)*
	 Contents:
	     5.1 The requirements of circuit conduction
	     5.2 Steps to construct the circuit
	     5.3 Steps to test the circuit
	     5.4 Steps to program the circuit
	     5.5 Steps to operate the circuit
	     5.6 Evaluate the circuit's outputs
	     5.7 Debuging and maintaining the circuit
	 Teaching methods:
	   + Presentation
	   + Discussion
		G1-G6	

	B/ Self- study contents: (4) 5.8 Research all related documents to write the chapter 3 of the report		
11, 12	**Content 6:** < **WRITING THE CHAPTER 4 OF THE REPORT: CONCLUSION AND DEVELOPMENT** > *(2/0/4)*		

	A/ Contents and teaching methods: *(12)*
	 Contents:
	     6.1 Conclusion of the report
	     6.2 The completed tasks of the report
	     6.3 The uncompleted tasks of the report
	     6.4 Development directions of the subject
	     6.4 Writing the references and operation guiding
	 Teaching methods:
	   + Presentation
	   + Questioning
	   + Discussion
		G1-G6	

	B/ Self- study contents: (24) 6.5 Writing the contents of the chapter 4 based on the acquired results	
13, 14	**Content 7**: <PREPARING THE PRESENTATION SLIDES> *(2/0/4)*	
	A/ Contents and teaching methods: *(2)* **Contents:** 7.1 Designing the presentation slides 7.2 Requirements of the presentation slides 7.3 Sequences of the contents in slides **Teaching methods**: + Presentation + Discussion	G3
	B/ Self- study contents: (4) 7.6 Writing the presentation slides based on the acquired results	
15	**Content 8**: < REPORT ASSESSMENTS> *(1/0/2)*	
	A/ Contents and teaching methods: *(1)* **Contents:** 8.1 Content assessments (30%) 8.2 Result assessments (20%) 8.3 Interview assessments (50%) **Teaching methods**: + Presentation + Questioning + Discussion	G1-G6
	B/ Self- study contents: *(12)* 8.6 Preparing to make presentations	

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** |

15. Syllabus updated process

1st time: Updated content dated	Instructors Nguyen Dinh Phu

2st time: Updated content dated	Head of department