



# Syllabus

**1. Course name:** C programming language

**2. Course code:** CPRL130064

**3. Credits:** 3 credits (3:0:8) (3 lecture periods, 0 lab period, 6 self-study periods per week)

**4. Instructors**

- a. Chief lecturer: Assoc. Prof. Phan Văn Ca
- b. Co-lecturers: MEng. Nguyễn Văn Phúc
- c. Co-lecturers: MEng. Lê Minh
- d. Co-lecturers: MEng. Trương Quang Phúc

**5. Course Requirements:**

Prerequisite course(s): None

Previous course(s): None

**6. Course Description**

The course covers the fundamental concepts of programming language: definition, classification, and purpose of different languages. The course specifically focuses on C programming language, demonstrates data structures and control structures in the C language. The course help students to get knowledge and ability of designing and writing C language applications.

**7. Learning Outcomes (CLOs)**

CLOs	Descriptions	ELO(s) /PI(s)	Compe- tency
CLO1	To describe the advantages of a high level language like C/C++, the programming process, and the compilation process	ELO-1/ PI1.2	R
CLO2	To describe and use software tools in the programming process	ELO-2/ PI2.2	R
CLO3	To apply good programming principles to the design and implementation of C programs	ELO-1/ PI1.1	R
CLO4	To design, implement, debug and test programs using the fundamental elements of C	ELO-1/ PI1.3	R
CLO5	To demonstrate an understanding of primitive data types, values, operators and expressions in C	ELO-4 /PI4.3	R

**8. Content outline**

- In troduction to the computers and problem solving;
- Structure of a C program and C building blocks
- Decisions: if, if ... else ..., switch ... case....;
- Pretest and posttest loops: do ... while, while, for, and break, continue statements;
- Array and string processing;
- Introduction to pointers;
- Functions with arguments and using functions to build larger programs ;
- User data types: Struct, Union, Enum.

**9. Teaching Methods**

- *Powerpoint presentation)*

- Teamwork

## 10. Assessment(s)

- Grading scale: 10
- Assessment plan:

No.	Content	CLOs	Competency	Assessment methods	Assessment tools	Weighting %
<b>Formative assessment</b>						<b>50</b>
1	Basic Programming Concepts and computers	CLO1	2	Midterm Test	Score sheet	15
2	Design and implement C Programs using basis programming principles	CLO3	2	Midterm Test	Score sheet	10
3	Design and implement C Programs to solve solve realistic problems	CLO2 CLO4	3	Homework	Score sheet	10
4	Cundamentals and advanced principles of c programming	CLO5	2	Midterm Test	Score sheet	15
<b>Final Exam</b>						<b>50</b>
F	Design, implement, debug and test programs using the fundamental elements of C	CLO5	2	Final Exam	Score sheet	50

## 11. Learning Materials

### a. Textbook:

1. Paul Deitel and Harvey Deitel, C How to program, 6th Edition, Pearson, 2010.

### b. References:

2. GS Phạm Văn Át, Kỹ thuật lập trình C cơ sở và nâng cao, NXB GTVT Hà Nội, 2006.

## 12. General Information

### Academic Integrity

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## 13. Approval Date: <dd/mm/yyyy>

## 14. Endorsement:

Dean	Head of Department	Chief Lecturer
Assoc. Prof. Dr. Nguyen Minh Tam	Assoc. Prof. Dr. Phan Văn Ca	<Full Name>

## 15. Revision History:

1 <sup>st</sup> Revision: <dd/mm/yyyy>	Lecturer:
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	Head of Department: <b>Assoc. Prof. Phan Văn Ca</b>
<b>2<sup>nd</sup> Revision:</b> <dd/mm/yyyy>	Lecturer:  Head of Department: