Course Description:
The aim of this course is to acquaint students with the different programming languages in addition to providing them with a comparative study between these languages so that the students can recognize the philosophical characteristics, the design, and the structural anatomy of each language. It also emphasizes on the new ideas that are not found in traditional programming languages.

Course Outline:
1. Comparative study between different programming languages in terms of the philosophical characteristics, the design, and the structural anatomy of each language and data types used and the methods of linking between them.
2. The influence of the above items on implementation and efficiency.
3. This course also covers the fundamentals of Parsing (it requires understanding the programming rules provided in the course (CPCS 123)).
4. The structural anatomy of the programming languages, and the traditional methods of programming.
5. Using BNF (Backus-Normal Form) to describe the code structures, and to extract the construction of compilers.

Course Outcomes:
1. To understand the structural anatomy of different programming languages and data types used in each.
2. To understand the basics of parsing.
3. To be able to compare between the different programming languages and the appropriate platforms for each type.
4. To be able to describe the structural construction of the programming languages using BNF.

Textbook:

Extra Reference: