CAMPUS **PARIS EIFFEL**

SUMMER **CERTIFICATE PROGRAM**

ECE PARIS
ÉCOLE D'INGÉNIEURS

WEB APPLICATION DEVELOPMENT

Certificate awarded by: ECE Paris
Welcome event: July 2nd, 2018 (morning) **Start date of courses:** July 2nd, 2018 (afternoon)
End date: July 26th, 2018 **Certificate Ceremony:** July 26th, 2018
Total ECTS: 8 **Total contact hours:** 72
Program requirement: a minimum 18 years of age
Program location: ECE Paris - 37 quai de Grenelle, 75015 Paris, France
Language of instruction: English

PROGRAM FEE: 1,850€

PROGRAM OVERVIEW/OBJECTIVE:

The purpose of this intermediate-level computing course is for students to understand aspects of and necessary techniques for developing client/server applications at the web level. Requires previous knowledge of operating systems and basic network concepts. The learning outcome of this course is for students to understand the most relevant technologies for development of web applications. Students implement simple web applications that use technologies applicable to industry. They select the best technological option for solving problems that require interaction with a web server.

Upon completion of this course, students will be able to evaluate, design and develop web applications using the industry's current protocols, models and architectures.

KEY WORDS:

HTML5, PHP, CSS, CSS3, JAVASCRIPT, JQUERY, MYSQL, dynamic web site, commercial web site, web applications

COURSES

Course Title	ECTS (credits)	Contact hours	Level (undergraduate or graduate)
Learn HTML-CSS	1	6	Beginner, undergraduate or graduate students and researchers
Learn PHP	6	60	Beginner, undergraduate or graduate students and researchers
Learn JavaScript	1	6	Beginner, undergraduate or graduate students and researchers

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PROGRAM COURSE **DESCRIPTIONS**

COURSE 1

Course Title	Learn HTML-CSS
Learning outcomes	Upon successful completion of this course, the student will be able to: - Edit, modify, or transform existing HTML documents and CSS style sheets to produce specified outputs. - Correct syntax errors in HTML documents and CSS style sheets. - Simplify unnecessarily complex HTML or CSS code. - Write syntactically and stylistically correct HTML documents and CSS style sheets. - Recognize and identify Server Side Includes, JavaScript, and PHP in existing HTML documents. - Correctly define and use fundamental terms and concepts related to web development.
Pre-requisites	Students should have basic knowledge of computer and database
Recommended readings	Robin Nixon Learning PHP, MySQL, JavaScript, CSS & HTML5 3rd Edition By (O'Reilly 2014, ISBN 978-1491949467)

COURSE OUTLINE:

- Introduction of HTML versions;
- Different components of an HTML document: Title, sections, links, tables, forms …, comments, and document model (DOM).
- HTTP protocol, HTML interpretation by the navigation tool; Navigation tool versus HTML technologies;
- HTML5 Introduction; New HTML tags;
- When to use HTML5? Different components: tags, forms, audio, video, API, etc,
- HTML5 development tools, CSS3 selectors, box-sizing, transformations

COURSE 2

Course Title	Learn PHP
Learning outcomes	- Compose an html page that demonstrates the embedding of PHP program code. - Demonstrate the use a loop building strategy to properly code and apply iteration. - Demonstrate the use of appropriate selection statements - Use step-wise refinement to manage and solve programming problems. - Construct proper PHP code to connect, access, and update a MySQL database.
Pre-requisites	Learn HTML-CSS course or equivalent skills in computer and database
Recommended readings	Robin Nixon Learning PHP, MySQL, JavaScript, CSS & HTML5 3rd Edition By (O'Reilly 2014, ISBN 978-1491949467)

COURSE OUTLINE:

- PHP Introduction
- Variables
- Operators
- Control structures
- Loops
- Functions
- Libraries
- Forms : POST
- URL variables : GET, tests, controls, redirection
- Cookies
- Sessions
- Database
- MySQL database query in PHP : SELECT
- MySQL database query in PHP: Insert, Update, Delete
- Model–view–controller (MVC) patterns

COURSE 3

Course Title	Learn JAVASCRIPT
Learning outcomes	The student masters basic HTML, CSS and Javascript programming. The student is able to design and implement web pages that have consistent functionalities, and validate. The student is able to apply JQuery libraries and different media on web pages. The student writes fluent Javascript code. The student is able to design and build client-side cross-platform applications using latest HTML and other open technologies that support multimedia content. The student can write clean and well-commented code, and is able to include APIs for device resources. The student is able to create a site that has a consistent outlook.
Pre-requisites	Learn HTML-CSS course and Learn PHP course or equivalent skills in computer and database
Recommended readings	Robin Nixon Learning PHP, MySQL, JavaScript, CSS & HTML5 3rd Edition By (O'Reilly 2014, ISBN 978-1491949467)

COURSE OUTLINE:

- Learning basic Javascript concept
- Events handling
- Javascript events handling : keyboard handling, mouse, form-based events, Rollover
- Dynamics menu
- URL management (HTTP redirection)
- HTML-based forms handling
- Form validation functions
- Cascading Style Sheets