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| Intitulé du cours | Advanced Web Development | | |
| Durée du cours | 30 h | Crédits ECTS | 3 |
| Objectifs du cours (Compétences visées) | In this course, students will manipulate javascript in combination with HTML and CSS to produce the beginnings of a full-stack application. Programming and javascript program structure become central. | | |

Contenu détaillé du cours et méthodes et/ou moyens pédagogiques (Grands chapitres)

- Session 1 :
 - Introduction To The Browser (Anatomy, Dom)
 - Introduction To Html, Css (Online Resource To Help Understand Flexbox)
 - Tictactoe Game Skeleton (Introduction To Grids)
- Session 2 :
 - Making The Tictactoe Game Functional
 - Introduction To Reactjs, Hooks, Rendering Cycle, Props
- Session 3 :
 - Setting Up The Development Environment
 - Importance Of Ui Design In Frontend Development
 - Introduction To Design Principles
- Session 4 :
 - Introduction To Usestate And Useeffect Hooks
 - Working With Side Effects And Async Operations
 - Designing Relevant App Page With Ui-Building Tool With Goal Of Translating The Design Concepts Into React Components
- Session 5 :
 - Introduction To Redux For Centralized State Management
 - Connecting React Components To Redux
 - Implementing React Context For Managing Authentication
- Session 6 :
 - Understanding The Role Of Apis In Frontend Development
 - Introduction To Axios For Making Requests
 - Handling Api Responses And Errors
 - Integrating Api Calls Into The Web Application
- Session 7 :
 - Introduction To React Router Dom For Client-Side Routing
 - Setting Up Routes And Navigation
 - Managing Route Parameters And Query Strings
 - Enhancing The Web Application With Navigation Capabilities
- Session 8 :
 - Introduction To Localstorage, Cookies, And Sessions
 - Storing And Retrieving Data Using Localstorage
 - Managing Client-Side Sessions With Cookies
 - Integrating Data Storage Solutions Into The Web Application
- Session 9 :
 - Deep Dive In The Node Event Loop, Blocking And Non-Blocking Operations
 - Understanding Node'S Asynchronous Behavior
 - Learning About The Different Frameworks And At What Scale Should They Be Used
- Session 10 :
 - Setting Up Node Server
 - Understating The Usage Of A Middleware, Cors & Body Parsers
 - Creating Crud Operations For A Todo App
- Session 11 :
 - Setting Up A Connection To MongoDB
 - Handling Sessions Upon Authentication + Password Encryption
 - Querying With Mongoose
- Session 12 :
 - Setting Up Tests In The Project
 - Setting Up Environment Variables To Hide Sensitive Data
- Session 13 :
 - Setting Up A Connection To A Postgresql Database
 - Setting Up Authentication With Jwts
 - Creation Of A Custom Logger And Streaming Different Log Levels To Files And The Console

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| Modalités d'évaluation | Grades are not added for the course |
| Nom de l'enseignant | Martin.Pedraza |