



### Programme of Course "Sviluppo Web Avanzato"

- Code: DT0209
- Type of course unit: Elective (Bachelor Degree in Computer Science curriculum General), Elective (Master Degree in Computer Science curriculum NEDAS), Elective (Master Degree in Computer Science curriculum SEAS), Elective (Master Degree in Computer Science curriculum UBIDIS)
- Level of course unit: Undergraduate Degrees, Postgraduate Degrees
- Semester: 2

Number of ects credits: (Master Degree in Computer Science) 3 (workload 75 hours), (Bachelor Degree in Computer Science) 3 (workload 75 hours)

Teachers: Giuseppe Della Penna (Giuseppe.DellaPenna@univaq.it)

1	<b>Course objectives</b>	The course aims to provide advanced knowledge of some relevant arguments in the development of web applications.
2	<b>Course content and learning outcomes (dublin descriptors)</b>	<p>Topics of the module include:</p> <ul style="list-style-type: none"> <li>• From web applications to web services: RESTful web services. Definition of a RESTful web service. Introduction of a RESTful web service into an existing web application. RESTful web services on the Java Platform: tools and technologies.</li> <li>• Developing true Web 2.0 applications: rich client-side programming with JQuery.</li> <li>• Managing data in advanced Java web applications: introduction to the Java Persistence API.</li> </ul> <p>On successful completion of this module, the student should :</p> <ul style="list-style-type: none"> <li>• <i>understand</i> some relevant advanced web development technologies,</li> <li>• <i>apply</i> all the latest technologies to the development of web applications,</li> <li>• <i>develop</i> RESTful web services in Java,</li> <li>• <i>develop</i> complex client side scripts in web pages,</li> <li>• <i>continue learning</i> all the evolving technologies related to the development of web applications.</li> <li>• be able to function <i>effectively on teams</i> to accomplish a common goal.</li> </ul>
3	<b>Course prerequisites</b>	Good knowledge of all the basic web development languages and technologies, in particular Javascript, CSS and HTML5. Good knowledge of Java programming.
4	<b>Teaching methods and language</b>	Lectures, Exercises. <b>Language:</b> Italian
5	<b>Assessment methods</b>	Formative assessment: the students are encouraged to actively participate to the lectures by making questions and discussing the solutions adopted in the developed examples. Summative assessment: project development and presentation (in team) and oral exam (individual) (80:20). The project to be developed consists of a web application that exploits one or more of the advanced technologies shown in the course. The project evaluation aims to verify its level of completion and documentation (10% of total mark), the proper use of the advanced web development technologies (70%), as well as the ability to discover, learn and exploit new technologies related to web development (20%), The oral exam starts from the discussion of the project, and aims to verify the achieved level of teamwork (20% of total mark) as well as the individual contribution to the project, with strong emphasis on the knowledge of the technologies presented in the course (40%), the ability to apply them where and as appropriate (20%), as well as the ability to design, implement and properly present an advanced web application (20%).