



# Course Plan

## Internet Applications, ID1354

Internet Applications, ID1354, is a 7.5 hp mandatory/elective course offered by the Unit of Software and Computer Systems (SCS), School of Information and Communication Technology (ICT), KTH. This course covers fundamental concepts and methodologies of internet applications, and also gives hands-on experience in building such applications. After the course, students shall be able to build a well designed Internet application using appropriate languages, tools and methods

### 1 Course Main Content

The course covers markup and scripting languages like HTML, CSS, JavaScript and PHP. Also event-driven programming and databases are introduced and practiced. In addition to technologies, the course covers two- and three-tier architectures, theories of user interface design, and common software tools for Internet application development. Also, non-functional requirements like security, response time and throughput are introduced.

### 2 Prerequisites

- Object-oriented programming skills corresponding to one 7.5 hp course.
- Understanding basic concepts of software design, such as cohesion, coupling, and layered architectures.

### 3 Website

All course material can be found at the course website, <https://www.kth.se/social/course/ID1354/>

### 4 Learning Outcomes

*After the course you shall be able to build a well designed Internet application using appropriate languages, tools and methods.* Thus, after completing the course you shall be able to:



1. Build and evaluate web pages using HTML and CSS.
2. Build and evaluate web applications using PHP, JavaScript and AJAX.
3. Explain and interpret XML and XML standards such as DTD, Schema and processors.
4. Implement and evaluate multi-tier architectures such as MVC, MVVM and event-driven architectures.
5. Explain and implement a few non-functional requirements, for example authentication and response time.
6. Explain and implement fundamental user interface design guidelines.
7. Explain all parts of a web application in a written report.

## 5 Literature

**Text book** *This book is not compulsory reading*, but can provide good help in the languages (HTML, CSS, JavaScript, PHP) included in the course. The book content is probably available in online guides and tutorials, but to find everything obviously requires some effort.

Nixon, Robin: *Learning PHP, MySQL, JavaScript, CSS & HTML5*, 4th ed. (O'Reilly 2014) ISBN: 978-1491918661

**Lecture notes** Detailed lecture notes are available on the course website.

**Online resources** The course's home page has a list of important online resources, which provide much help with course content.

## 6 Sub Courses and Grading

There are two sub courses, LAB1 and TEN1, which are explained below.

### 6.1 LAB1 Sub Course (5 hp)

The LAB1 sub course consists of five seminars. Each of the first four seminars have one mandatory task and two optional higher grade tasks. To pass, you must solve the mandatory tasks for each seminar and also pass all seminars. The optional tasks serve to improve your final course grade. Three accepted optional tasks improve the TEN1 grade one level, six accepted optional tasks improve the TEN1 grade two levels.

The fifth seminar is an opportunity to re-submit seminars you did not pass or to improve your score for one or more seminars.



## 6.2 TEN1 Sub Course (2.5 hp)

The TEN1 sub course is a written exam graded A-F. The maximum score is 100, grade limits are as follows.

Score	Grade
80	C
65	D
50	E

If the exam is passed (at least 50 points), the exam grade will be improved by LAB1 higher grade tasks, as mentioned in section 6.1.

## 6.3 Final Grade

The final grade is the exam grade.

## 7 Teachers

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