



## COURSE SYLLABUS

# Internet and Cloud Services, 6 credits

*Internet- och molntjänster, 6 högskolepoäng*

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<b>Course Code:</b> TMTN15	<b>Education Cycle:</b> First-cycle level
<b>Confirmed by:</b> Dean Feb 9, 2015	<b>Disciplinary domain:</b> Technology (95%) and social sciences (5%)
<b>Revised by:</b> Director of Education Jun 23, 2016	<b>Subject group:</b> DT1
<b>Valid From:</b> Aug 1, 2016	<b>Specialised in:</b> G2F
<b>Version:</b> 2	<b>Main field of study:</b> Computer Engineering
<b>Reg number:</b> JTH 2016/2534-313	

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### Intended Learning Outcomes (ILO)

On completion of the course, the student should be able to:

Knowledge and understanding

- Display an understanding of the business advantages and disadvantages of outsourcing IT to cloud providers
- Display an understanding of the legal and regulatory aspects of outsourcing IT to cloud hosting providers
- Display an understanding of the architectural challenges posed by constructing applications for deployment via distributed platforms
- Display familiarity with established technologies and methods for developing and deploying web applications on distributed platforms.

Skills and abilities

- Display the ability to perform cost-benefit analysis of self-hosted versus outsourced deployment of IT infrastructure.
- Display the ability to estimate and compare the environmental footprints of self-hosted versus outsourced deployment of IT infrastructure.
- Display the ability to develop cloud-hosted applications for deployment at a chosen PaaS (Platform-as-a-service) provider

### Contents

The objective of the course is to provide students with an understanding of concepts and methods for developing cloud-hosted applications, with a focus on both technical aspects and business needs.

The course includes the following topics:

- The business case for cloud computing
- Legal and regulatory aspects
- Web Service standards (SOAP-WS, REST, RSS, etc)
- Architectural issues

- Developing for:  
Amazon Web Services  
Google App Engine  
Windows Azure

### **Type of instruction**

The course will consist of lectures, lab work and project work.

The teaching is conducted in English.

### **Prerequisites**

General entry requirements and completed courses 60 credits in first cycle including completed courses Network Programming 6 credits, Server-side Web Development 9 credits (or the equivalent) (or the equivalent).

### **Examination and grades**

The course is graded 5,4,3 or Fail.

The final grade (for the course) will only be issued after satisfactory completion of all assessments. The final grade for the course is based upon a balanced set of assessments.

Registration of examination:

Name of the Test	Value	Grading
Written examination	3 credits	5/4/3/U
Project	3 credits	5/4/3/U

### **Course literature**

To be announced one month prior to course start.

Arshdeep Bahga, Vijay Madisetti. Cloud Computing: A Hands-On Approach, CreateSpace, 2014.  
ISBN10: 1494435144, ISBN13: 9781494435141.