



# *Programming and Software Development*

## Autumn 2026

**The courses Development of Web Applications, Data Visualisation, Development of Mobile Applications, and System Testing, all have in common that they are preparing students for complex and sought-after skills in the IT industry.**

The courses will help you to acquaint yourself with theories, methods, and techniques for the testing, design and development of professional software with machine learning capabilities, resulting in interactive, intelligent and stable applications running on emergent platforms.

The prerequisites for being admitted to the courses consists of at least 22,5 credits in C# programming, database techniques and data structures, combined with general knowledge about the system development lifecycle.

### **COURSE PACKAGE – 30 ECTS**

- Development of Web Applications (7.5 credits)
- Data Visualisation (7.5 credits)
- Development of Mobile Applications (7.5 credits)
- System Testing (7.5 credits)



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# Course Content

## DEVELOPMENT OF WEB

### APPLICATIONS (7.5 CREDITS)

The first course focuses on understanding distributed systems over the internet, equipping students with the skills to develop both user interface-oriented and server-oriented web applications. The languages Java script, CSS, and HTML are used for the user interface, and C# with .NET for server-side processing, applying the Model-View-Controller (MVC) design pattern.

## DATA VISUALISATION

### (7.5 CREDITS)

In this course you gain a foundational understanding of interactive data visualization, with a focus on data analysis and interpretation. Python is used along with computer graphics tools to explore techniques for visualizing spatial, temporal, multivariate, and network data. You also learn principles of graphic design and human perception, as well as the CRISP-DM process commonly used in industry for data analysis.

## DEVELOPMENT OF MOBILE

### APPLICATIONS (7.5 CREDITS)

In this course you get introduced to distributed systems and provides practical experience in developing mobile applications for Android and iOS. Using C# and .NET, the students effectively integrate the applications with databases and apply the Model-View-ViewModel (MVVM) design pattern for code separation.

## SYSTEM TESTING (7.5 CREDITS)

Finally, in the fourth course System Testing, students learn to plan, execute, and document tests for IT systems. With a focus on quality assurance and the system development process, the students undertake a fundamental testing project, gaining insights into the complexity of testing and debugging IT systems.

## SEMESTER DATES

31 August 2026 – 17 January 2027

## ORIENTATION DAYS

are held for all international students 27–28 August 2026.

## NOMINATION AND APPLICATION

Nomination deadline: 15 April

Application deadline: 1 May

Partners nominate their students in our application system TransIT [transit.hb.se/](https://transit.hb.se/)

## REQUIRED DOCUMENTS

Transcripts of Records in English

Certificate of English Language Proficiency (minimum B2-level)

## MORE INFORMATION

Info for incoming exchange students: [hb.se/exchangecourses](https://hb.se/exchangecourses)

In case of any questions, contact us at [olivia.ek@hb.se](mailto:olivia.ek@hb.se) or [internationalstudent@hb.se](mailto:internationalstudent@hb.se)

