# *C++ Software Engineering*

***for engineers of other disciplines***

## Introduction:

## *"Course Description"*

ALTEN

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*Gothenburg, Sweden*

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# Course Description



- 8 weeks, 11 Modules, 30 Lectures, a mini-project and a project!

| C++ Modules |
|---|
| C++ Syntax |
| C++ OOP |
| C++ Templates |
| C++ Embedded |
| C++ Build |
| C++ Network Programming |
| C++ Parallelism |

| Quality Assurance Modules |
|---|
| Software Quality Assurance |
| Code Quality Assurance |

| Software Engineering Modules |
|---|
| Software Development Essentials (SDE) |
| Software Engineering |

| Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 |
|---|---|---|---|---|---|---|---|---|
| Crash Course On Essentials | | | | Höstlov | Project Practicing The Lectures (LAB) | | | |
| Daily Schedule:<br>• 3hrs Lecture<br>• 3hrs Assignments – optional attendance<br>• Or Mini-project and Recaps | | | | Vacation | Daily Schedule:<br>• 1hrs Lecture<br>• 4hrs Group Activities<br>• 1hrs Discussion (review of the day) | | | |

# Course Schedule



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| Software Quality Assurance |
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| Software Engineering Modules |
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| Software Development Essentials (SDE) |
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| Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Basic Syntax I | Recap | Recap | Recap | | Architecture | Parallelism | Unit testing | Preprocessing |
| Basic Syntax II | Mini-project | Mini-project | Mini-project | | Requirement | Threads I | Debugging | Value Cat. |
| Mini-project | SDE Basics | Basic Templates | C++ Build | | Design I | Threads II | Dynamic A. | Adv. Cons. |
| C++ OOP I | SDLC | Mini-project | Mini-project | | Design II | IPC I | Static A. | Delegation |
| C++ OOP II | Test | C++ Embedded | Recap | | socketCAN | IPC II | Exceptions | Modern C++ |

# Let’s Begin!



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- Who are you?
  - Education?
  - Programming experiences?
    - Professional
    - Hobby projects
  - GNU/Linux experience?
- Why are you here?