

# TNDo12: Course Information

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This course information is valid from HT1/2018 until HT1/2019.

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## Aim of the course

The aim of this course is to introduce the basics of programming, using C++ language. The course goals are described in the LiU [studieinfo](#). The course requires no previous knowledge in programming.

## Course responsible

[Aida Nordman](#).

## Course website

All relevant course information (such as deadlines, duggor and exam dates, plan for the lectures, labs, old exams) is posted on the [course website](#).

The course website is updated during the course. Moreover, access to parts of this site requires a password. All registered students receive the password by e-mail when the course starts. If you registered late in the course or fail to attend the first lecture then you can request the password by e-mail.

## How to contact us

E-mail addresses and office numbers for the course staff are available from the course website. All communication with the staff (e.g. questions related to the course) must be done via email or by talking to the staff during lectures, labs, and lessons. There are no other alternative channels of communication.

For each study programme, MT, ED, and KTS, there is a contact person. In order to be able to help you in a more effective way, you must direct any course related questions to the contact person of your study programme (either by e-mail or by meeting in person).

- [Aida Nordman](#) is the contact person for MT.
- [Martin Falk](#) is the contact person for ED and KTS.

To guarantee that all student e-mails are answered, the following rules must be followed when sending an e-mail about the course. E-mails not following these rules are simply ignored.

- Use your LiU e-mail address when contacting the course staff by e-mail.
- **MT** students must send course related e-mails only to [Aida Nordman](#) and “**TND012/MT: ...**“ must be used in the e-mail’s subject.

- **ED** students must send course related e-mails only to [Martin Falk](#) and “TND012/ED: ...” must be used in the e-mail’s subject.
- **KTS** students must send course related e-mails only to [Martin Falk](#) and “TND012/KTS: ...” must be used in the e-mail’s subject.

The course staff may need to send information about the course to all registered students. To this end, the course e-mail list with the registered students is used. Thus, if you are not registered then you will not receive these information e-mails and if you have registered late then you may have missed some information e-mails.

## How is Lisam used in the course

Lisam platform is only used for the *duggor* in the course.

It is not part of the work duties assigned to the course’s staff to provide any support for Lisam or answer any questions related to Lisam. All emails related to Lisam are ignored by the staff. Those questions should be sent to the IT-support, instead (see also section about [IT-support for students](#))

Only students registered in the course can have access to the course room in Lisam. If you re-register (“*omregistrering*”) in the course until the 7 of September then you will get access to the course room during week 37 (and before the first dugga).

## Course points and workload

This course awards 6 ECTS credits. According to university regulations, one credit corresponds to 27 hours of work (i.e. 3 days of 9h/day). Thus, the course implies 162 hours of work, of which (about) 66 hours are scheduled to be with the course’s staff and (at least) 94 hours are self-study (i.e. about 2.5 weeks).

## Organization

The course consists of

- 2 information sessions, one at the beginning of the course and another at the end of the course. The latter gives information about the final computer examination procedure. Each information session is (at most) 2h.
- 12 lectures. Each lecture is 2h.
- 6 lessons. Each lesson is 2h.
- 3 tutorial sessions. Each tutorial is 2h.
- 8 lab sessions. Each lab session is 4h.

Lectures are given in English. Swedish and English may be used in the lessons, tutorials, and labs.

The [course schedule](#) is available from the [course website](#).

## Literature

The course book - in Swedish - is given below.

[C++ direkt](#)

Jan Skansholm. Studentlitteratur. 2011. ISBN: 9789144076034

## Examination

To get the 6 credits, you need to complete successfully laboratory work and a final examination performed at the computer (“*datortenta*”). You have three chances to take the exam during the academic year.

- You get 3 ECTS points, if you complete all lab exercises and demonstrate them successfully before any set deadlines expire.
- You get 3 ECTS points, if you pass an individual computer exam or if you pass all three home duggor offered during the course.
- Approval in all three duggor awards automatically grade 3. You can get higher grade by then doing **Part II** and/or **Part III** of the final computer exam (see also the sections about [Duggor](#) and [Final course grade](#)).
- The final computer exam has three parts. **Part I** has three exercises.

	Points	Difficulty Level
<b>Part I</b>	10 p	Basic
<i>Exercise 1</i>	2 p	
<i>Exercise 2</i>	4 p	
<i>Exercise 3</i>	4 p	
<b>Part II</b>	10 p	Medium
<b>Part III</b>	10 p	High

- **Note: Part III** only awards points if the programs run and produce sensible output.

The final computer exam is **individual**.

## Which aid material can be used during the final computer exam

- A C++ book. The following rules apply.

- Comments and notes in the margin of the book, directly relating to the text and examples on the relevant pages are allowed / *kommentarer och noteringar som direkt rör text och exempel på sidan i fråga får finnas i sidmarginalen.*
- Corrections to errors (errata) for the book on separate page(s) are allowed / *rättelser till felaktigheter får finnas.*
- Bookmarks in order to easily find certain pages in the different chapters are allowed / *egna sidflikar för att enkelt kunna hitta t.ex. de olika kapitlen är tillåtna.*
- Empty pages, such as the blank pages in the book, may not contain comments and especially not programming code / *tomma sidor, in- och utsidorna av pärmarna, försättsblad, etc., får inte innehålla kommentarer, speciellt inte programkod.*
- No extra pages or notes aside from those covered in the above points are allowed / *inga extra ark eller lappar, lösa eller fastsatta, får finnas utom det som täcks av ovanstående punkter.*
- [cplusplus.com Reference](http://cplusplus.com/Reference) can be read through a web browser. Note that
  - cplusplus.com Information,
  - cplusplus.com Tutorials, and
  - cplusplus.com Articles**cannot** be used during the exam.
- Lecture slides used in the course will be available through a web browser.
- Pencil and white paper.

No other help material is allowed during the exam.

## Duggor

The course has 3 **non-mandatory individual home** duggor. Each dugga should be seen as an opportunity for self-assessment and for getting feedback about whether you are attaining the course goals. Additionally, the duggor also provide an opportunity for students to develop their programming skills.

- Each dugga is graded as either passed (**G**) or failed (**U**).
- If you fail a dugga then you'll get a feedback report with the motivation for failure.
- If you pass dugga 1/dugga 2/dugga 3 then you can skip the corresponding exercise 1/exercise 2/exercise 3 of **Part I** of the final computer exam, respectively.
- Only students registered in the course can do the duggor.

- Your duggor points can only be used during the academic year.
- Duggor exercises are posted through LISAM and student answers (i.e. files with code) must also be submitted through LISAM.

Duggor dates and deadlines for submitting your answers are made available from the [course website](#).

## Duggor and re-registrations (“omregistrering”) in the course

All students who wish to do the duggor need to be registered in the course no later than **7 of September**. Unfortunately, re-registrations need to be added manually to LISAM and, consequently, the staff needs time to collect the re-registrations and add them to the system.

- If you register in the course after 7 of September then you cannot do dugga 1.
- If you register in the course after 21 of September then you cannot do dugga 2.
- If you register in the course after 5 of October then you cannot do dugga 3.
- Moreover, if you register after 7 of September then you need to explicitly inform by e-mail the course administrator by sending an email to [Mirella Jormelin](#). Please, use the course code in the email’s subject.

## Vid misstanke om försök till fusk

Both the duggor and the final computer exam must be solved **individually**. For instance, you are neither allowed to use email during the exam nor post any information about the duggor/exam in any website<sup>1</sup> until the deadline expires (in case of exams, until all exam sessions have ended). If you copy any code from a web page then you must explicitly indicate that fact and write the web page address in a comment line preceding the copied code.

*De lösningar som du skickar in i samtliga former av examination (duggor, datortenta, och labb) ska vara ett resultat av ditt eget arbete. Det är inte tillåtet att lämna in lösningar som har kopierats från andra studenter, även om modifieringar har gjorts. Vi ser mycket allvarligt på alla tendenser till fusk. Det är dock inte lärarnas uppgift att avgöra om fusk förekommer. Vid misstanke lämnas ärendet till universitetets disciplinnämnd som, om de anser att fusk föreligger, kan besluta om avstängning upp till sex månader. För mer information, se LiU website ”[Disciplinära åtgärder](#)”*

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<sup>1</sup> e.g. Pastebin.

## Final course grade

The final grade in this course can be either **3**, or **4**, or **5**. You can find below how it is decided your course grade.

Final Grade	Requirements
<b>3</b>	Approved in all three duggor. <u>Or</u> for <b>Part I</b> , you must have at least <ul style="list-style-type: none"><li>• 2p in Exercise 1, if you have not been approved in dugga 1</li><li>• 3p in Exercise 2, if you have not been approved in dugga 2</li><li>• 3p in exercise 3, if you have not been approved in dugga 3</li></ul>
	Fulfill the requirements for grade 3 <u>and</u> you must have at least
<b>4</b>	<ul style="list-style-type: none"><li>• 6 points in <b>Part II</b> <u>or</u></li><li>• 5 points in <b>Part III</b>.</li></ul>
<b>5</b>	Fulfill the requirements for grade 3 <u>and</u> you must have at least 8 points in <b>Part III</b> .

### Improving your course grade (“*plussa*”)

If you have already been approved in the course but want to improve your grade then you need to do the exercises in **Part II** and/or **Part III** of the final computer exam. Since you have already been approved in the course, you are in the same situation as someone who has completed successfully all three duggor. Please, see the table above for grade 4 and 5, considering that you already fulfill the requirements for grade 3.

Note that you cannot do the duggor to improve your grade.

## Lectures

You can find a preliminary [plan for the lectures](#) in the course website. The corresponding course book sections, for each lecture, are also indicated.

Slides and code used in the lectures will be made available soon **after** each lecture. The lectures' slides are not a replacement for the course book.

You must prepare in advance for each lecture by reading the indicated course book sections. Lectures have a high tempo and, consequently, you may experience difficulties in following the lectures, if you do not read about the lecture's topics before the lecture. The lectures complement the book and vice-versa.

## Lessons

The main aim of the lessons is to discuss and present possible solutions for practical exercises, illustrating in this way applications of the concepts introduced in the lectures.

During the lessons, we present basic exercises as well as more advanced exercises. Live coding is used during the lessons.

Lessons are also an opportunity for students to put forward questions. However, during lessons we **cannot** give individual feedback to students about their code (that's reserved for lab sessions) nor make repetitions of the lectures.

## Tutorials

Tutorials are prepared for the beginners who need more practice on applying basic programming concepts. Thus, these sessions only use basic programming exercises.

## Labs

During the lab sessions you will have to solve six exercises. You must prepare in advance for each lab session. To this end, you must read the lab instructions and do any requested exercises as preparation for the lab session.

Note that

- you work in groups of two persons;
- you need to register for the lab sessions (see [How to register for the labs](#));
- the use of private laptops is not allowed during the lab sessions of this course because small laptops screens can be disturbing when working for several hours and our lab assistants have the right to a healthy working environment.

During the lab sessions, you can use the IDE [Code::Blocks](#), version 17.12 (with the GNU's compiler for C++, named GCC), which is installed in the computers of the lab rooms.

In the end of the course, you will receive an e-mail when the lab points are ready to register in Ladok. You then have until **23 of November** to report to the course responsible that you have not received your points. Any complaints about non-registered lab points received after 23 of November will be dealt when the course responsible has the time.

## Presenting your solutions to lab exercises

You must present orally your solutions to the lab exercises during your lab sessions (10 minutes are usually enough). The pdf file describing the lab exercises for each session indicates also the deadline for presenting your solutions. Moreover,



- programs that do not compile or fail to execute correctly are not accepted;
- we do not accept copied code that you neither understand nor are able to explain;
- your code must be readable and well-indented;
- programs with global variables are not accepted, although global constants can be used;
- code for the lab exercises cannot be sent for final approval by e-mail; and
- at most 2 lab exercises can be presented during a lab session;
- a late lab can be presented during a lab session provided there is time during the session;
- no labs can be presented after 24 of October.

If you fail to present all labs of the course until 24 of October then you can present late labs during the re-exams (*om-tenta*) period week 2, 2019. To this end, you must email the course responsible not later than the end of week 50, so that we have the time to prepare the staff and allocate the time. There are no other occasions to present late labs until the course starts again (HT1/2019).

You should **keep a proof of which labs you have presented** and been approved. To this end, you can download from the course website the [labs protocol](#) form and request for the lab assistant to sign it, for every approved lab. You should keep this document until your lab points are reported in Ladok. If needed, you can be requested to present this document for the course responsible before your lab points can be awarded.

## How to register for the labs

- Form a group of **two persons**.
- You must register for the labs until **3 of September, at 15:00**.
- Choose one of the lab classes below. Then, add the name and LiU id of your group members to the [registration file](#).

Lab classes **ED1.1** and **ED1.2** are for ED1 students.

Lab classes **MT1a.1** and **MT1a.2** are for MT1a students.

Lab classes **MT1b.1** and **MT1b.2** are for MT1b students.

Lab class **MT1a+MT1b** are for MT1a or MT1b students.

Lab classes **KTS1.1** and **KTS1.2** are for KTS1 students.

- Each lab session can have **at most 16 students**.

## In which lab room is my session this week

You can find the lab room booked for each of your lab sessions in this [file](#), also available from the [course website](#).

## Important dates and deadlines

Important dates related to the course activities and deadlines are summarized on the table below and posted also on the [course website](#).

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Event	Deadline
Course start	Week 36
Register lab group	3 of September, 15:00
Course re-registrations (“omregistrering”)	7 of September
Dugga 1	14/09 – 17/09 (12:00)
Dugga 2	28/09 – 01/10 (12:00)
Dugga 3	12/10 – 15/10 (12:00)
Presenting labs	24 of October
Final computer exam	30 of October
Claim lab points	23 of November
Presenting late labs after course ending	Week 2, 2019 email the course responsible not later than the end of week 50, 2018

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## IT-support for students

If you experience problems with your LiU account, equipment or software in the lab rooms then you should contact the [LiU IT-services and support](#). Note that as user of the lab rooms, it is your duty to report to the LiU IT-services any problems you detect with the equipment or software installed in these rooms. You can also call [013-285898](tel:013-285898) or email the [help desk](#).

If you need help with the Lisam system then see this [web page](#) or call the helpdesk service.

There is no point to contact the staff of the course about Lisam or other IT-related problems because we cannot help you with this type of issues. Thus, these emails are simply ignored.