Faculty of Science and Engineering

STUDY GUIDE
2017-2018

MASTER’S PROGRAMME IN CHEMICAL ENGINEERING
This guidebook has been compiled for students that study at Åbo Akademi University in the Master's Degree Programme in Chemical Engineering. Its purpose is to provide information about the Faculty, general information on studies as Åbo Akademi, available services, the study programme and the structure of the studies as well as information on exams and courses.

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1 The Faculty of Science and Engineering

The education on undergraduate and graduate levels is organized into five Study Programmes in which several subjects work together.

The Study programmes at the Faculty of Science and Engineering are:

* Biosciences (Cell Biology, Biochemistry, Environmental and Marine Biology)
* Chemical Engineering
* Information Technology (Computer Science, Computer Engineering)
* Natural Sciences (Mathematics, Physics, Chemistry, Geology)
* Pharmacy

Chemical Engineering operates in two different buildings: Gadolinia (Porthansgatan 3, 20500 Åbo) and Axelia (Biskopsgatan 8, 20500 Åbo). Axelia has two sections: Axelia I and Axelia II, the two sections are connected to each other. Gadolinia is building A18 and Axelia is biding A21 in the campus map:

1.1 The Faculty and decision making

The governing body of the faculty is the Faculty Council. The Dean, Professor Tapio Salmi, chairs the council which has 12 members representing the professors, other employees and students of the faculty in equal numbers.

Each subject is led by a Head of Subject. The Heads of Subjects are appointed by the Dean and have both scientific and administrative responsibilities.

1.2 The Faculty office

The Faculty office (fakultetskansliet) is located on the third floor in the Axelia-building, Biskopsgatan 8, 20500 Åbo. The office is open Monday-Thursday at 10.00-15.00, Friday closed.

**Academic Affairs Coordinator** Heidi Karlsson is available at the Faculty office by mutual agreement. Telephone (02) 215 3540
e-mail: fnt-utbildningskoordinator@abo.fi

**The Study Advisors** are available at the Faculty office by mutual agreement: Jessica Lindroos, Telephone (02) 215 4517, e-mail: fnt-studieradgivare@abo.fi
Kerstin Fagerström, Telephone (02) 215 3321, e-mail: fnt-studieradgivare@abo.fi
Simon Berg, Telephone (02) 215 4600, e-mail: fnt-studieradgivare@abo.fi
Contact information for the rest of the Faculty Office personnel is found here: http://www.abo.fi/fakultet/en/fnt_administration.

It is recommended that you book an appointment with the Academic Affairs coordinator or the Study Advisor in advance by e-mail or telephone.

1.3 Chemical Engineering

Chemical Engineering is a part of the Faculty of Science and Technology together with Biosciences, Information Technology and Natural Sciences. Chemical Engineering has been taught at Åbo Akademi since 1920 when the Faculty of Chemical Engineering (Kemisk-tekniska fakulteten) was founded. The Master’s Degree Programme in Chemical engineering was introduced in 2002 in order to attract students from abroad.

The subjects that are included in the programme are:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal and Flow Engineering (VST)</td>
<td>Axelia I, 3rd floor</td>
</tr>
<tr>
<td>Industrial Chemistry (TK)</td>
<td>Axelia I, 2nd floor</td>
</tr>
<tr>
<td>Industrial Management (IEK)</td>
<td>Axelia I, 3rd floor</td>
</tr>
<tr>
<td>Inorganic Chemistry (OOK)</td>
<td>Axelia II, 4th floor</td>
</tr>
<tr>
<td>Organic Chemistry (OK)</td>
<td>Axelia II, 4th floor</td>
</tr>
<tr>
<td>Paper Coating and Converting (PaF)</td>
<td>Gadolinia, 4th floor</td>
</tr>
<tr>
<td>Physical Chemistry (FyKe)</td>
<td>Gadolinia, 3rd floor</td>
</tr>
<tr>
<td>Polymer Technology (TPK)</td>
<td>Axelia II, 4th floor</td>
</tr>
<tr>
<td>Process Control (RT)</td>
<td>Axelia II, 3rd floor</td>
</tr>
<tr>
<td>Process Design &amp; Systems Engineering (AST)</td>
<td>Axelia II, 3rd floor</td>
</tr>
<tr>
<td>Fibre and Cellulose Technology (FCT)</td>
<td>Gadolinia, 1st floor</td>
</tr>
<tr>
<td>Wood and Paper Chemistry (3PK)</td>
<td>Gadolinia, 5th floor</td>
</tr>
</tbody>
</table>

(The abbreviations above are taken from the Swedish names of the laboratories)

Programme information can be found online at: http://www.abo.fi/fakultet/en/kt_master or through e-mail: chemeng@abo.fi.
2 Studies

2.1 Academic year

The academic year is divided into four periods, two during the autumn and two during the spring. These are the dates for the periods for the academic year 2017-2018:

<table>
<thead>
<tr>
<th>Period</th>
<th>Weeks</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>36-43</td>
<td>4.9.2017-27.10.2017</td>
</tr>
<tr>
<td>II</td>
<td>44-51</td>
<td>30.10.2017-22.12.2017</td>
</tr>
<tr>
<td>III</td>
<td>2-11</td>
<td>8.1.2018-16.3.2018</td>
</tr>
<tr>
<td>IV</td>
<td>12-21</td>
<td>19.3.2018-25.5.2018</td>
</tr>
</tbody>
</table>

Week 35, 28.8-1.9.2017, is reserved for orientation for new students.

2.2 Registration for the academic year

New students register for their first academic year according to these instructions (please read the instructions carefully!):

You must pay the Student Union fee in order to be registered as present. By registering as present, you have the right to study, receive credits, have your study results registered, and receive student benefits. The Student Union fee for the academic year 2017-2018 is 116 €. After you have registered, you should order your student card at www.frank.fi/en. You can also use the free student card app, Frank, which is available for Android and iOS.

2.3 MinPlan


2.4 Course registration

Course registration at Åbo Akademi University

You should register for the course before it starts. In most cases registration is done in MinPlan. Always check well in advance if registration is required and how it is done.

Course registration at the University of Turku

Course registration might be required. In these cases registration is done in a Virtual Study Register called Nettiopsis: https://nettiopsis.utu.fi. More information about
Nettiopsu can be found here: https://intranet.utu.fi/en/unit/student-services/systems/Students/Pages/Course-Registration-in-Nettiopsu.aspx

Accessing these pages requires that the student has a valid user ID issued by the University of Turku Computing Centre. In order to get the student ID at the University of Turku the student should first apply for a study right through http://www.joopas.fi.

2.5 Examinations

Examinations at Åbo Akademi University
At the end of the course there is usually a course exam (kurstentamen). The course exams usually do not require registration in MinPlan. Always check if registration is needed in advance.

In addition to the course exams, there are general examination opportunities which take place on Fridays. This allows the student to retake course exams. Students should register for the general examination opportunity at least eight days in advance. The registration is done in MinPlan. Instructions concerning registration for examinations are found in the MinPlan manual.

Please Note! The registration procedure can vary at different Departments, subjects and courses - you can always check with the teacher or the department secretary.

There are three opportunities to take an exam in the same course, after that the course lecturer should be contacted and the matter discussed. Registering for an exam counts as one of these three times even if the student does not show up at the actual exam occasion.

Students are usually not allowed to bring the course material with them to the exams, so always check with the course lecturer what material is allowed in each exam. Coats, bags, mobile phones etc. should be left outside the exam room or at the back of the room. If requested by the exam supervisor, students should be prepared to show proof of identification, e.g. a student card.

The results of the ÅAU courses are registered in Åbo Akademi’s study register (TURE). If several weeks have passed since the course finished but the result is still not in the register, contact the lecturer of the course.

Students have to pass the exam in a course during the academic year for a course they have attended in the autumn and during the calendar year for a course they have attended in the spring.
The exams are usually held in three lecture rooms: Axel and Stina, situated in Axelia I, and auditorium A, situated in Gadolinia. On the day of the exam, a list is posted outside each of these auditoriums notifying in which auditorium each student should be.

For more information about examination procedures, see chapter 4.3.

Please acquaint yourself with the rules and regulations for examination at Åbo Akademi University. The Åbo Akademi University Examination and Assessment Instructions are found here: http://www.abo.fi/student/en/regler.

Examinations at the University of Turku
The first course exam is arranged at the end of the course. The course exams do not necessarily require registration. In addition to the course exams there should be 3 general exams arranged for each course every academic year. For general exams, the student should register for the exam.

Please find the examination dates either through NettiOpsu or from the responsible course teacher. NettiOpsu: https://nettiopsu.utu.fi/

Manuals on exam registration can be found at: https://intranet.utu.fi/en/unit/student-services/systems/Students/Pages/Exam-Registration-in-Nettiopsu.aspx

2.6 Flexible study right: studies at the University of Turku
Åbo Akademi University has an agreement of flexible study right with the University of Turku. According to this agreement students from Åbo Akademi University can take courses that are offered by the University of Turku.

The student sends in an electronic application for flexible study right which has to be approved by Åbo Akademi University as well as by the University of Turku. The application is found at http://www.joopas.fi (→ Joopas Application System). Without this application the student does not have the right to study at the University of Turku and will not get the credits registered. With an approved application you will obtain a University of Turku (TY student number and user name.

Credits (study points) from the University of Turku are not transferred automatically to Åbo Akademi University. The student must get a study transcript from the University of Turku and bring it to the Faculty Office in Axelia, who will transfer
the credits into the study record at Åbo Akademi University. Please transfer your studies from UTU to ÅAU before January 31 every year.

2.7 Certificates and study transcripts

Certificates and copies regarding study achievements and other study related issues can be obtained from the Faculty office in the Axelius-building, 3rd floor (Biskopsgatan 8) or from the Student office of Åbo Akademi University in the Gripen-building, ground floor (Tavastsgatan 13). An unofficial transcript can be ordered online at the following address:

Study achievements from other Universities (e.g. the University of Turku) are not transferred automatically to Åbo Akademi University. The student must get a study transcript from the other university and bring it to the Study Advisor, who will see to it that the study achievements are transferred into the study record at Åbo Akademi University. Please transfer your studies each year in January before January 31.

2.8 The thesis, graduation and diploma


All examination theses should go through a check for plagiarism, form more information about this please see chapter 4.3.

You can find more info about plagiarism here:

3 Services

3.1 Computers, printers and copying machines

The computers in the computer classes located in the University buildings are available for all the students studying at Åbo Akademi University.

A username, password and a license to use the computers are needed. These can be obtained from the Help Desk at ICT Services, Fänriksgatan 3, 20500 Åbo. With the password it is possible to log on to all of the public computers located in any of the University’s computer classes. The following page lists all available computer classes: http://www.abo.fi/stodenhett/en/klasser. Always remember to log off after use, so that no one else can use your computer domain.
Students can print about 400 black-and-white pages for free in a six-month period. If this amount is exceeded the student will pay for the pages printed. Top-up codes for more quota may be bought via Åbo Akademi’s webshop: https://shop.abo.fi/c/13-ict-servicens avgifter/en/, you will have to log on using your ÅA-username). Copying machines are available in the university buildings. More information about printing and copying can be found at: http://www.abo.fi/stodenhet/en/utskrifter.

3.2 Libraries

To be able to borrow from the libraries students need to have a library card which they will receive at the library. Student cards (studiekort) that were issued before the autumn semester 2013 can also be used as library cards. The loan time for books is usually 2–4 weeks. More information is found at http://www.abo.fi/bibliotek/en

The main library of Åbo Akademi is located at Domkyrkogatan 2-4, 20500 Åbo, telephone: (02) 215 4180, e-mail: biblioteket@abo.fi. The main library offers reading facilities and a reference library. Certain books can also be borrowed, but have to be reserved in advance.

The student library is located in the ASA-building, Fänriksgatan 3 A, 20500 Åbo, telephone: (02) 215 4192. This library offers course books, which can be borrowed on site, and reading facilities.

The faculty has its own library on the ground floor in Axelia I. It offers everything from scientific journals to dictionaries. All subjects also have their own small libraries, which offer more specialised literature.

3.3 Career Services

The Career Services at Åbo Akademi University (Arbetsforum) are located in Åhuset, Gezeliusgatan 2A, 20500 Åbo. They provide information for both graduates and students. Their main task is to help students enter the labour market and to give advice on issues dealing with job-hunting. The Career Services offer employers direct access to highly skilled students and graduates. They work in close co-operation with the Career Services at the University of Turku and the Turku Employment Office. More information can be found at the following address: http://www.abo.fi/stodenhet/en/arbetsforum.
3.4 Student tutor and teacher tutor

All first-year students are assigned a student tutor and a teacher tutor. The student tutor is an older student who helps the new students adapt to student life in Åbo whereas the teacher tutor gives advice on study-related matters.

Student tutors (academic year 2017-2018) for students admitted to the programme are Jeffery Omorodion (jeffery.omorodion@abo.fi) and Yiran Chen (yiran.chen@abo.fi).

Teacher tutor for students admitted to the programme is university teacher Frej Bjondahl (frej.bjondahl@abo.fi).

3.5 Student activities

All students at Åbo Akademi University are required to be members of the Student Union (Åbo Akademis Studentkår), [http://www.studentkaren.fi/en](http://www.studentkaren.fi/en), which takes care of its members’ interests in several ways. The membership fee of the Student Union for the Academic year 2017-2018 is 116€. By being a member, you receive a student card that you can use to obtain student discounts for trains, buses, hostels, students' restaurants, theatres etc. As a member, you are also entitled to use the services of the Student Health Care Centre (Studenthälsan) at Kyrkovägen 13, 20540 Åbo. [http://www.yths.fi/en/contact_details/units/turku](http://www.yths.fi/en/contact_details/units/turku).

Kemistklubben

The student activities for chemical-engineering and chemistry students, Kemistklubben vid Åbo Akademi r.f. organizes both serious and non-serious events, varying from company and industry excursions to parties. The organisation has its office beside Axelia’s computer classes on the first floor in Axelia I, Telephone: 02-231 4362, e-mail: kk@abo.fi. The organisation sells some of the course handouts (kompendium). They can be purchased from Monday to Thursday from 12.00-13.00.
4 Study programme

The studies at Åbo Akademi are measured in credits (shortened cr, studiepoäng/sp in Swedish). These are comparable to ECTS in accordance with the common European system.

The programme has a large variety of courses. Each student has to make an individual study plan within May for the next study year with the computer program MinPlan, located at http://www.abo.fi/minplan/.

The Master’s Programme in Chemical Engineering has three major subjects:

- Natural Materials Technology (Wood and Paper Chemistry, Paper Coating and Converting, Fibre and Cellulose Technology)

The programme has a total duration of two academic years and accounts for 120 cr (sp), of which 30 cr (sp) is for the Master’s Thesis.

4.1 The structure of the studies

<table>
<thead>
<tr>
<th>Compulsory module 20 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced studies in major subject 20 cr</td>
</tr>
<tr>
<td>Master’s thesis 30 cr</td>
</tr>
</tbody>
</table>
The programme starts with compulsory studies consisting of a **compulsory module** (20 cr). The compulsory module represents the three specialization areas in the programme and contains the following courses:

- 424307.0  Principles of process engineering (5 cr)
- 421100.0  Principles of chemical reaction engineering (5 cr)
- 423102.0  Wood and paper chemistry (5 cr)
- 923800.0  Academic writing skills in English for masters students (3 cr)
  Special assignment (2 cr)

Information about the language courses is available on the website of the Centre for Language and Communication at [http://www.abo.fi/stodenhett/en/cskenenglish](http://www.abo.fi/stodenhett/en/cskenenglish)

After the compulsory studies the students select **advanced or intermediate study courses** from the Master’s Degree Programme in Chemical Engineering (see the list of courses with schedule at the end of this guide) according to their own interest. A minimum of 20 credits of advanced or intermediate studies is required.

A minimum of 20 credits of **advanced studies** (also from the MPCE-courses, see the list in the end of this guide) is required within the subjects that belongs to the major. At least 5 credits have to be taken from the laboratory for which the Master’s Thesis is undertaken.

The **Master’s Thesis** work accounts for 30 credits and is started in the second or third period of the second academic year. The Master’s Thesis work is done for one of the participating laboratories. Contact a professor at the laboratory to discuss the Master’s Thesis. In connection with the Master’s thesis, the student must complete the following courses:

- Coursecode later Master’s thesis seminars (5 cr)
- Coursecode later Experimental research methods (5 cr)

When the Thesis is written and approved by the professor it also has to go through a compulsory language check by the Centre for Language and Communication and a compulsory plagiarism check. After this the Thesis is handed in to the Faculty Office, by the student, in two hardback copies. Before that the Thesis will not be finally approved by the Faculty and not registered.
Additionally, there is a module of **optional studies** consisting of 20 credits. These studies can be any courses at Åbo Akademi, for example courses in languages, economics, and intercultural communication or additional courses within the Master’s Programme.

For more information on available courses, please see chapter 5.

### 4.2 Graduation and diploma

In order to graduate, all study credits including the thesis have to be noted in the study register.

The students are advised to find a topic and start working on their master theses at least 6 months before the planned submission date. The following steps are recommended:

- Identify a topic by contacting a teacher (lecturer or professor).
- Work on the thesis and have regular meetings with your supervisor to check progress,
- When the thesis is ready:
  - Agree with your supervisor how long before the language check the thesis should be submitted for grading (usually more than 2 weeks).
  - The thesis must include an abstract that has a length of about 2500 characters.
  - Submit the thesis for grading (via the Urkund system for plagiarism detection, indicating the supervising teacher). All theses should go through a check for plagiarism. More information can be found here: [https://www.abo.fi/student/en/etik_plagiat](https://www.abo.fi/student/en/etik_plagiat).
  - The supervisor will submit your thesis, abstract and thesis evaluation to language check.

The Centre for Language and Communication offers **text consultation in English** (free of charge). It is highly recommended that the students take advantage of the courses and advice on academic writing provided by the Centre in order to shorten the time needed for writing the thesis and potentially securing a higher grade. More information can be found here: [http://www.abo.fi/stodenhett/stodiehr/en/csktextconsultation](http://www.abo.fi/stodenhett/stodiehr/en/csktextconsultation).
When all your courses are completed, and your thesis is sent to the Centre for Language and Communication for language check, you can apply for your Master’s degree certificate. Fill in the application for certificate form found here: http://www.abo.fi/fakultet/en/fnt_slutskedet and bring/send it to the Study Advisor at the Faculty office in Axelia, 3rd floor.

When the language check for the thesis is approved, the student brings two hardback copies of the thesis to the Faculty Office in Axelia. The thesis will then be officially approved by the Dean. After this approval, the thesis will be registered in the study register.

Certificates are issued approximately once a month during the period September-June.

More information about graduating and getting the diploma is found here: http://www.abo.fi/fakultet/en/fnt_slutskedet.

4.3 Examination procedures

The Faculty office manages most written examinations at the Department of Chemical Engineering. Certain procedures have been created to ease the management of the examinations. The following section explains these procedures and gives instructions about what you should do when you intend to take part in a written examination.

Preparations
The key to good grades is learning and preparation. Take part in lectures, read the material assigned for the course, do the exercises, ask questions and try to understand not only the details but also the general picture. Your preparations will naturally be different depending on the type of exam and on what you are allowed to bring to the exam.

Some of the exercises are compulsory and must be approved before the student takes the exam.

Registering for exams
You have to register for the exam in MinPlan. The registration opens one month before the exam and closes 8 days before the exam.

Registration for examinations in MinPlan
- Log on to MinPlan (http://www.abo.fi/minplan)
- Go to **My Registrations** (Mina anmälningar) which is the second tab to the right. Then choose **Exam registrations** (tentamensanmälningar), which is the tab in the middle
- Go to **Find new exams** (Hämta nya tentamina) in the left-hand menu
- Look for the course you would like to take the exam in. Look e.g. on the course name or code and press **Search** (sök)
- When you find the course you are searching for, choose the course by ticking the box beneath the **Choose** (Välj) column and then press **Add** (Lägg till)
- Make sure that the column **Date of examination** (Tentamensdatum) on the left shows the date for when you want to take the exam. Press **Register/Enroll** (Anmäl) for the course on the right date
- The following text will appear up to the right:
  [message] (meddelande): [Registration complete] (Tentamensanmälan utfördes)

Some exams are not found in MinPlan. The enrollment list will then be placed on the notice board of the laboratory that arranges the course. You have to write your name and student number on the appropriate enrollment list no later than **8 days before** the exam.

If you intend to take part in two exams at the same day you must write an e-mail to the Faculty office secretary Mary-Ann Hamberg-Ahola at mahamber@abo.fi. The email must contain information about which two exams you would like to take part in. You must also enroll for both exams in MinPlan.

**When and where**
The centrally managed exams are always arranged on Fridays. They start at 12:30 and end 4 hours later. They are usually arranged in auditorium Stina and Axel in Axelia and in auditorium A in Gadolinia. Find out where these places are!

You can find out which auditorium you will be in from lists posted on notice boards at the entrance to each of the auditoriums mentioned above.

**Tasks for the students**
- The student must be registered for the exam; the ones who are not registered may take the exam only with the permission of the teacher. The student must sit at the assigned seat at the beginning of the examination.
  - The questions are handed out at 12:30, the students should preferably be present in the examination room early.
  - Students that come more than 15 minutes late are not accepted.
- All mobile phones, laptops, electronic translators and other electrical devices with connection to the internet are switched off and placed in the bag.
- All personal effects such as bags, excessive clothing, etc. are placed in the aisle out of reach of the student.
- Only answer paper provided by Chemical Engineering can be used.
- The student must sit at the designated seat.
- The student card/other ID must be visible on the desk in front of the student.

• If you need to use the bathroom:
  - Ask the supervisor for permission to visit to the toilet.
  - Only one student at a time.
  - You go to and come from the toilet empty handed.
  - Ask for permission to use the toilet (not before 13:30).

• When handing in the answers:
  - Show your student card or other ID.
  - Sign the “MinPlan-list”.
  - Report the number of answer papers handed in.
  - Hand in all papers used and also the questions if the teacher requires it. Even if you have not answered any questions, you must hand in at least one answer paper and sign the “MinPlan-list”.
  - If you take two exams, you must hand in answers and sign for both exams.
  - You will have 4 hours to write your exam. The students are not allowed to hand in their answers and leave the examination room until 45 minutes after the examination has started.

• The following is considered cheating:
  - Active/ringing mobile phones.
  - The mobile phone is used during examination.
  - The student searches his or her bag without permission.
  - Forbidden aid material is used (spot checks are made during examination).
  - Any form of communication between students (all communication should go via the supervisor).
  - Copying/reading other students’ answers.

• Each student is responsible for informing the supervisor or the teacher if he/she notices cheating.

• If you are suspected of cheating:
  - You must immediately hand in your answers and leave the examination room.
  - A written report on the incident is sent to the department.
- The exam will be failed, and besides that the student can get a warning. Exchange students receives a written warning, and a note is also sent to the home university.

- If the exam is interrupt because of fire alarm and everyone have to leave the auditorium a new exam has to be arranged within two weeks.

**Checking the results**
The teacher has two or three weeks time after the exam to go through and grade your exam papers. The time period depends on the size of the group taking the exam. Results will then be posted on the notice board of the laboratory that arranged the course. The lists usually contain your student number as identification and your grade as a number. The grade is either not approved or a number between 1 (lowest) and 5 (highest). Some courses are graded only as approved or not approved.

You can also check your results by ordering an unofficial transcript of studies. For information on how to do this, please see chapter 2.7.

**4.4 General information about studies**


**5 Course descriptions**

The courses run in four periods as described in the earlier chapter. In the following chapters, the contents of the courses are explained in detail, as well as other relevant information concerning the courses. Please note that the courses might change due to changes in staff or based on demand. Information about new courses can be found on the notice boards of the laboratories. Please, see the database MinPlan for the course descriptions.
6 Åbo Akademi University Examination and Assessment Instructions

Please acquaint yourself with the rules and regulations for examination at Åbo Akademi University. The Åbo Akademi University Examination and Assessment Instructions are found here: http://www.abo.fi/student/en/regler.

7 Exam dates 2017-2018

The following schedule contains exam dates for the majority of the master’s programme courses 2017-2018. If you do not find the course you want to take an exam in, please see MinPlan at http://www.abo.fi/minplan or the notice board of the laboratory that arranges the course in question.

Notice that the newest version and changes made to the examination schedule is always published online at:

You have to enroll for the exam in MinPlan. For further instructions, please see Examination procedures.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Autumn 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>424520</td>
<td>Advanced process thermodynamics</td>
<td></td>
</tr>
<tr>
<td>410304</td>
<td>Applied electrochemistry</td>
<td>x</td>
</tr>
<tr>
<td>411116</td>
<td>Basics in process design</td>
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### Summer examination Friday 15.6.2018 at 12.30. (you can enroll between 30.5 and 7.6)

### 8 Courses 2017-2018

The courses available for the master's programme scheduled are published at: [http://web.abo.fi/up/FNT/Chemical_Engineering.pdf](http://web.abo.fi/up/FNT/Chemical_Engineering.pdf)

Notice that the newest version and changes made to the course program is published online at: [http://www.abo.fi/fakultet/en/fnt_undervisningsprogram](http://www.abo.fi/fakultet/en/fnt_undervisningsprogram).