Master Information for International Students

Regulations and study organization in the
Master's course of studies „Chemistry" (FSPO Version 2023)

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PART 1

STUDY ORDER AND EXAMINATION REGULATIONS

Study order and examination regulations (Version 2023) („FSPO“)

https://www.uni-ulm.de/index.php?id=8756

Homepage Uni Ulm / Study / Organisation / Legal Information / Examination regulations

When we talk about the study order, we always use the termin **„FSPO“.**

Please download your study order from the website mentioned above. For the M.Sc. Chemistry, please make sure to download **the version of 2023**. Please ignore former versions (like 2017).

Study contents as outlined in § 5 of the FSPO 2023

Nr.	Bereich/Modul	LP
A	**Compulsory area**[1]	**45**
A1	**Thesis**[2]	**45**
1	Preparatory seminar for the Master's Thesis	15
2	Master's Thesis	30
2a	*Master's thesis*	*29*
2b	*Presentation*	*1*
B	**Compulsory elective area**[3]	**mind. 66**
B1	**Subject-related electives**	**mind. 54**
B1.1	Inorganic Chemistry	mind. 18
B1.2	Organic Chemistry	mind. 18
B1.3	Physical Chemistry	mind. 18
B1.4	Analytical Chemistry	mind. 18
B1.5	Macromolecular Chemistry	mind. 18
B1.6	Theoretical Chemistry	mind. 18
B1.7	Energy Technology	mind. 18
B2	**Topic-related electives**	**mind. 12**
C	**Complementary area**[4]	**mind. 3**
C1	**Transferable skills and language skills**	mind. 3

This is what you have to study to get your degree.

See further slides for details what to choose in areas B and C.

[1] Entspricht im Deutschen dem Pflichtbereich
[2] Entspricht im Deutschen der Abschlussarbeit
[3] Entspricht im Deutschen dem Wahlpflichtbereich
[4] Entspricht im Deutschen dem Ergänzungsbereich

PART 2

STUDY PLAN AND CHOICES OF SUBJECTS

The Study Plan

Study Plan M.Sc. Chemistry
FSPO 2023

as of: October 2023

Structure			CP in semester				Exam
Areas / Modules	CP	SWS	1	2	3	4	Number of exams
Examination area A: Compulsory modules ("Pflichtmodule")	**45**						
A - Master's Thesis	**45**						
Preparatory Seminar for the Master's Thesis	15	3 Months			15		LN
Master's Thesis	30	6 Months				30	MA
Examination area B: Compulsory elective modules ("Wahlpflichtmodule")	**66-72**						
B1 - Subject-related electives in Chemistry	**min. 54**						
Inorganic Chemistry	min. 18	i.e. 6S + 12P		18			3+LN
Organic Chemistry	min. 18	i.e. 6S + 12P		18			3+LN
Physical Chemistry	min. 18	i.e. 6S + 12P		18			3+LN
Analytical Chemistry	min. 18	i.e. 6S + 12P		18			3+LN
Macromolecular Chemistry	min. 18	i.e. 6S + 12P		18			3+LN
Theoretical Chemistry	min. 18	i.e. 6S + 12P		18			3+LN
Energy Technology	min. 18	i.e. 6S + 12P		18			3+LN
B2 - Topic-related electives in Chemistry	**min. 12**						
Electives in all subjects of Chemistry and chemistry-related subjects	min. 12	i.e. 12S		18			4-6
Examination area C: Complementary modules ("Ergänzungsmodule")	**3-9**						
C - Transferable Skills, Language Skills, other subjects	**min. 3**						
Transferable/Language skills ("ASQ")	3	i.e. 2V or 2S					1
Other subjects	-	depends on choice					1-2
	120		**30**	**30**	**30**	**30**	

Legend

SWS = weekly attendance hours ("Semesterwochenstunden"), LN = Study achievement ("Leistungsnachweis")
V = lecture ("Vorlesung"), S = Seminar, P = lab course and/or project ("Praktikum"), Ü = Übung (exercise)
CP = credit points ("Leistungspunkte")

Compulsory elective Area ("Wahlpflichtmodule")

Please choose three subjects in area B1. Two out of those three subjects must be Inorganic, Organic or Physical Chemistry. There is a free choice of the third subject. In each subject, a project work has to be carried out as a study achievement and several graded modules have to be taken to achieve at least 18 CP in every chosen subject.
Further, choose modules as you wish from the offered selection of all chemical subjects as well as chemistry-related subjects in area B2. Here, you must achieve at least 12 CP. **Together with area C you must achieve a total of at least 75 CP.**

Complementary Area ("Ergänzungsmodule")

In addition to the soft skills and the non-chemical minor subject, modules from the entire range of courses at Ulm University can be taken or modules as part of a mobility. **Together with area B you must achieve a total of at least 75 CP.**

Subject-related or topic-related Profiles

Depending on your choice of electives it is possible to be awarded a certificate of up to two selected chemical profiles together with your final degree. Please check the website of the Department of Chemistry for further information.

Basically all relevant information is given below the table. Please read through this. Additionally, we will take a closer look at these regulations on the following slides.

What to choose in areas B and C (1)

1. Area A is mandatory for all students. There is no choice.

2. You have to choose **3** fields of chemistry **(„core subjects“)** in **area B1**.
   Option 1: You choose these **3** subjects: Inorganic, Organic and Physical Chemistry
   Option 2: You choose 2 out of those three subjects (IC, OC, PC) plus 1 of the following subjects: Macromolecular, Theoretical, Analytical Chemistry or Energy Technology.

3. In **every** core subject chosen in B1 you have to take **several modules** (lectures/seminars) and you have to carry out **one project work** which consists of research-oriented lab work in one of the institutes and working groups of the department of chemistry. With your chosen compulsory elective modules you have to achieve at least 9 CP per core subject. Every project work is also awarded with 9 CP and lasts 4-5 weeks (full-time). **This sums up to at least 18 CP per core subject chosen in B1.**

4. In **B2** you can choose from the whole available selection of courses from all fields of chemistry and some selected further courses which are also offered by our department. **You can choose mix whatever you want. At least 12 CP have to be chosen in B2.**

What to choose in areas B and C(2)

4. Transferable skills („ASQ“ – Additive Schlüsselqualifikationen) are offered by the Language department and the Humboldt Study Center. There is a wide selection of courses and you have to choose **one course** (3 CP) **in area C**. **Registration for ASQ courses is possible during the first week of the reading period here:** https://www.uni-ulm.de/index.php?id=4577

5. Together the single minima of CP that have to be achieved in B1, B2 and C sum up to 69 CP. However, the FSPO requires every student to achieve a total minimum amount of 75 CP in B+C. Therefore, you need to choose up to further 6 CP if you have not achieved this total amount of 75 CP with your personal choice of courses. You can choose for free whatever you want and you can do so in B1, B2 or C. In B1 and B2 you choice is among chemistry courses, in C you could also attend a course for example in biology, business sciences, computer sciences etc. Basically we recommend to choose chemistry courses and to book them in B2, because here you can choose from the whole selection.

Compulsory courses: Area A and Project works in B1 (1)

6. The fourth semester is meant to be the semester when you do your master thesis. The thesis will last 6 months and is worth 30 CP. **Before the thesis you have to do the „preparatory seminar for the master thesis“.** This seminar is worth 15 CP and lasts 3 months full-time. The typical szenario will be that you spend 9 months in one institute where you will firstly carry out the preparatory seminar and afterwards the master thesis. **Both the seminar and the thesis need to be organized by yourself.**

7. The start of the seminar, the end of the seminar and the content of the seminar depends on your personal agreement with your supervisor (a member of the teaching staff of the respective institute). Typically it consists of literature research, getting familar with the research you will do in the thesis, testing some of the methods you will use etc. The supervisor of the seminar is typically the first supervisor of the thesis, too. For the thesis you need a second supervisor.

8. To organize the preparatory seminar, just contact the teaching staff of your desired institute and make an appointment to talk about an arrangement that fits both your and the institute‘s interests. It is the same with the master thesis. For the thesis itself, registration needs to be done by providing a form to the Studiensekretariat not later than 1 month after the beginning. We recommend to provide it earlier, best would be before the start of the thesis.

Compulsory courses: Area A and Project works in B1 (2)

9. To finish the preparatory seminar, you must both fulfill the contents that were agreed on with your supervisor, and in addition to that, you need attend at least 10 talks of the GDCh colloquium. A form for proof of attendance is available on the homepage of the examination board. Please collect signatures from the host when attending a talk. Information on given talks can be found here: https://www.uni-ulm.de/index.php?id=56109

10. Project works are individual research projects in an institute. You have to do one project in every chosen core subject from area B1. Just like the preparatory seminar, the time and topic of every projects needs to be organized individually by yourself by contacting the teaching staff of the institutes. The run for project places is typically higher in the reading-free period and lower in the reading period. On the other hand, the reading-free period is often used for vacation. Basically it‘s a first come first served system when it comes to get a place for a project in the reading-free period.

Summary so far

Have you understand everything so far? Let‘s summarize:

- Courses in A are mandatory. It‘s the preparatory seminar for the master‘s thesis and the thesis itself. Those courses are typically the last ones you take during your studies.

- Three subjects have to be chosen in B1. See your two options what to choose on slide No. 7
- In each of these three subjects, at least 18 CP have to be achieved.
- 9 CP come from modules which contain lectures, seminars etc.
- 9 CP come from a project work in an institute.
- Sum of credits in B1 = at least 54 CP.

- In B2 you can choose from the whole selection of courses and you have to achieve at least 12 CP.

- In C you have to take one ASQ course with 3 or more CP. We recommend a German ASQ.

- B+C together is completed with 75 CP. The minimum credits only sum up to 69 CP. Please take more courses to get more CP in either B1, B2 or C. We recommend to take them in B2.

Please transfer the generic study plan into your personal study plan (1)

1. **Choose your subjects** according to the rules of the study order (see the slides before this one).

2. Read through the **module handbook (how to use it is explained later)** which modules are currently on offer in your chosen subjects. Especially mind the cycle of the respective module to decide in which semester you are going to take this subject. Please mind also that when starting your studies in the winter semester, you have 2 winter semesters for courses but only one summer semester since the second summer semester will be your fourth semesters when you will be doing your thesis. It is the other way round when starting in the summer semester.

3. Choose enough modules for the needed CP in areas B and C.

4. **Take a look at the cycle of your selected modules and then assign them to the respective semesters 1 to 3 when you want to take them.** Keep in mind what was outlined under point 2.

Please transfer the generic study plan into your personal study plan (2)

7. **Decide when you want to do the project works.** Please contact your favorite institute early to organize the period and the topic when you will be working on the project. Each project means 5 weeks of full-time work, so **they have to be done either in the reading free periods** or you could do **all of them within one semester in which you are taking only very few or (better) no lectures** to have enough time for the lab work.

8. In the end it is completely up to you how you want to organize your master and when you take which course. **Nevertheless, especially two study organization szenarios have been realized several times** (with a lot more „in between“) **and can be recommended:**

Option 1: The first one consists of as much lectures as possible during the reading period in the first and second semester. The goal would be to finish all lectures within those two semesters. Then the reading free period after the second semester as well as the first half of the third semester is used to to all three project works, one after the other. In the second half of the third semester, the preparatory seminar is done and the thesis in the fourth.

Option 2: The second one would be to select lectures for about 20 CP during each reading period and adding one project in the reading free period afterwards. This szenario probably requires to extend the study time for a part of a fifth semester, because the preparatory seminar can‘t be carried out parallel to several courses and one of the projects.

Please transfer the generic study plan into your personal study plan (3)

- **BEFORE** you meet your study coordinator for questions regarding your study organization, please choose your courses as explained before and create a personal study plan. This can be the basis of your discussion with your coordinator to clarify doubts and possible problems. It is important to ensure that you meet all regulations of the FSPO. Please send your draft **BEFORE** your appointment to christian.vogl@uni-ulm.de.

- Time slots for the courses can be found in the course index of the **study portal („LSF“)** and in the **timetables** published on the website of the department of chemistry.
  - Study Portal: Go to https://campusonline.uni-ulm.de/qislsf/rds?state=user&type=0
  - Switch to English if neccessary (flag in the upper right corner)
  - Click on „courses“ (see tabs below the blue line)
  - Menu on the left: Click on „search for courses“ and use the search mask to find the requested data (select the correct semester if neccessary)
  - Timetables on the department website: https://www.uni-ulm.de/en/nawi/school-of-chemistry/studies/timetables-and-exam/timetables/

- For almost every lecture/seminar/etc. a Moodle course is available where specific course information, materials etc. are provided. Please register for the courses you want to attend on **Moodle**. Please mind that some of the courses are avaiable quite early, some others may be available just at the beginning of the reading period.
  - Moodle Login: https://moodle.uni-ulm.de/login/index.php

- For any login (LSF, Moodle, …) you need your **kiz Account** which is generated and provided after a successful enrollment.

Summary so far

Have you understand everything so far? Let‘s summarize:

- Please mind the first summary (slide No. 11)

- Think about when you want to do the project works. We recommend one of the two scenarios on slide No. 13.

- The project works have to be organized individually. You have to contact the institute where you want to do it in advance. Recommendation would be around 2 months before the desired start.

- **VERY VERY VERY IMPORTANT!**
  Please create a personal study plan, i.e. decide which modules you want to take in areas B1, B2, C and assign them to your semesters. A good and purposeful advisory with your coordinator is only possible if this was done until an appointment. There is not enough time to explain every single student how to create a master’s study plan. An advisory appointment is made as soon as you have sent a personal study plan. On the following slides an example how it could look like is given. Please also mind all explanations so far.

PART 3

THE MODULE HANDBOOK – SOURCE FOR SELECTABLE COURSES

The module handbook – source for all needed information regarding available modules for the chosen fields of chemistry (1)

- **We have sent you a recently updated version of the module handbook of the Master of Science in Chemistry together with these information slides as an e-mail attachment.**

- Until you are enrolled and you have your kiz account, please use this version to inform yourself about selectable courses.

- **As soon as you have your kiz account**, you can always get the most up to date version of the module handbook. Until you have this account, the beforehand mentioned way is the only one how to get insight. If the kiz account exists, please login to the campus portal, than select „Study“, then select **„Browse module descriptions“** in the left menu. This always provides the highly current version of the handbook. Then click through the structure.

- We always recommend to do it like this as soon as you have the kiz account because only then you have the highly current selection of courses. Using only the attached PDF carries the risk that the course offerings may have changed in the meantime.

The module handbook – source for all needed information regarding available modules for the chosen fields of chemistry (2)

- **Check the index of the handbook.** The study structure is outlined there. Here you will find all the areas A, B and C and which modules are assigned to them. They can be chosen.

- Area C can be extended! As a default, not every single module of the whole university is listed there. But as explained before, you are allowed to take courses from other study programs if there are no restrictions on them from the offering department. If you do so, please inform christian.vogl@uni-ulm.de that the neccessary steps can be taken to add the respective module to area C.

- However, we recommend to only take one ASQ in the C section and achieve all other CP in areas B1 and B2, because they refer best to Chemistry.

- **Check the cycle** of the modules and assign it to one of your semesters. The cycle as well as further specific information is shown in the respective single module description. **The most important information is the learning outcomes and the syllabus.** With this information you can choose which modules match with your interests and what you want to study.

PART 4

ONE COMPLETE EXAMPLE OF HOW A PERSONAL STUDY PLAN CAN BE CREATED AND HOW IT COULD LOOK LIKE

Example how a personal study plan could look like (1)

Important: Please note that there are a lot of other options. This example only shows you how to proceed.

Imagine the following situation:

- you are starting your studies in the winter semester
- your basic strategy is to spend the first two semesters for mainly lectures and seminars
- All three project works are supposed to be done after the reading period of the second semester and during the third semester.

Our following example refers to this given situation.

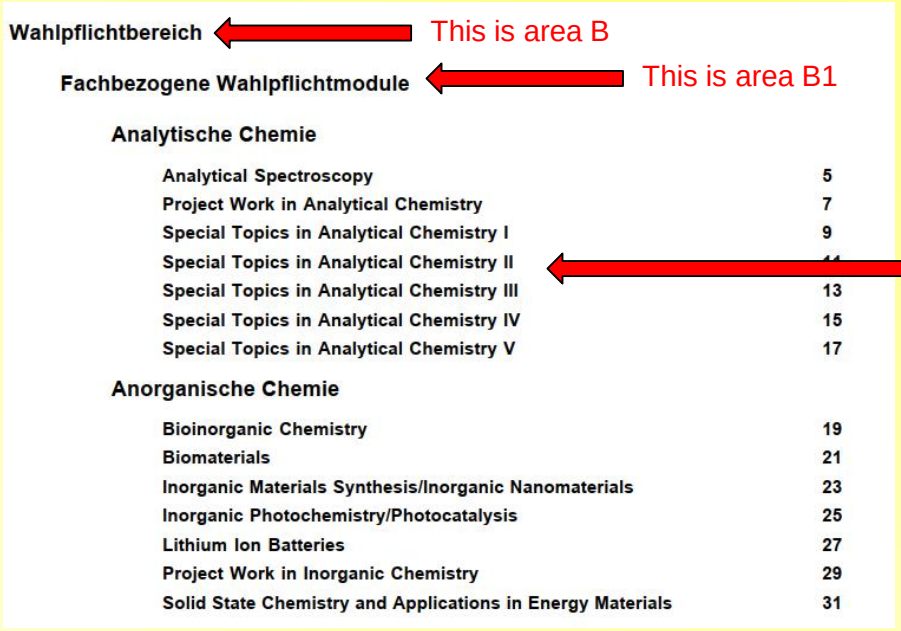
Let‘s start…

Example how a personal study plan could look like (2)

Step 1: Choice of the three core subjects: We take Inorganic Chemistry, Organic Chemistry and Analytical Chemistry in B1.

Step 2: We take a look into the course index of the module handbook what is on offer in area B1 in those subjects and select courses for at least 9 CP out of lectures/seminars and the project work:

Screenshot: small excerpt from the module handbook



These modules are selectable in B1 in **Analytical Chemistry**. The specific module description can be found on the given page. Here we see how many credits are awarded for the module and its cycle, i.e. if it is offered in the winter or summer semester.

It‘s the same here on the left with Inorganic Chemistry and also the same with Organic Chemistry (and all other subjects)

Example how a personal study plan could look like (3)

Step 3: We have selected our courses after reading through the module descriptions and we have decided what suits our interests best with regard to the given learning outcomes and the syllabus. By looking at the cycle, we know when they are on offer and we have assigned them to our semesters 1 and 2 with 1 being the winter and 2 the summer.

Subject/Semester	1	2	3	4
Inorganic Chemistry B1 (9+9 = 18 CP)	- Li Ion Batteries (3 CP) - Inorganic Photochemistry (3 CP)	- Inorganic Nanomaterials (3 CP) - Project work (in reading-free period) (9 CP)		
Organic Chemistry B1 (10+9 = 19 CP)	- Supramolecular Chemistry (3 CP) - Chemistry of Aromatics (4 CP)	- Modern Physical Organic Chemistry (3 CP) - Project work (in reading free period) (9 CP)		
Analytical Chemistry B1 (9+9 = 18 CP)	- Analytical Spectroscopy (3 CP) - Special Topics I (3 CP) - Special Topics II (3 CP)		- Project work (around beginning of reading period) (9 CP)	
Sum of Credits (so far)	22	24	9	

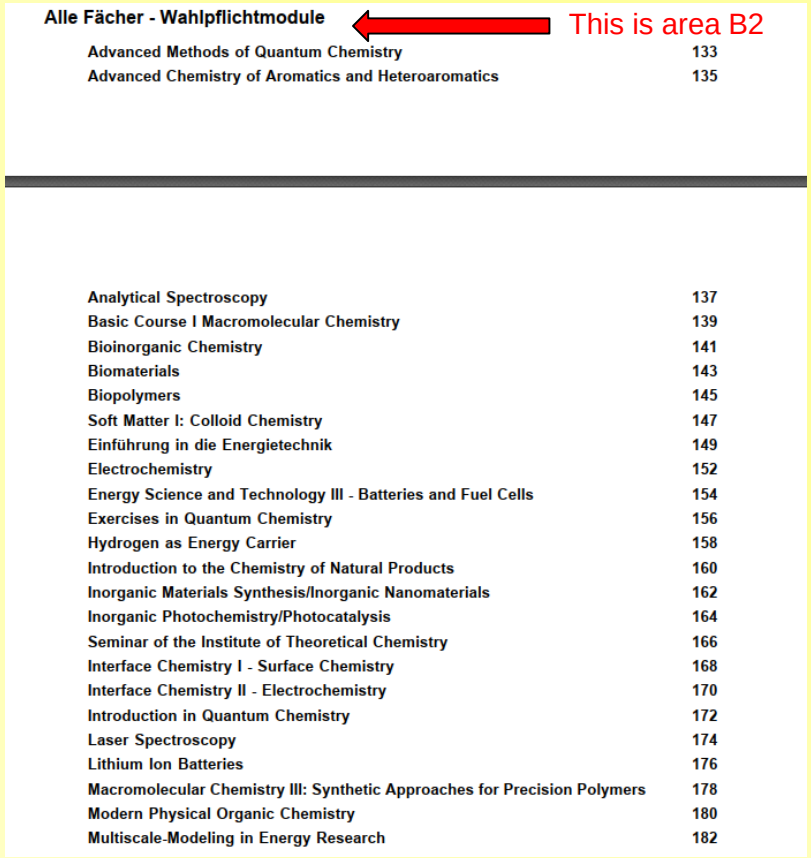
Example how a personal study plan could look like (4)

Step 3: We now know that we have 55 CP in area B1 (54 would be the minimum). In B2 we need at least 12 CP. And in B+C together it must be 75 CP. We decide to only take one ASQ (e.g. a German language course) in C that brings us 3 CP and no further other subjects (like a course in biology or something else). So we know that in B2 we need more than the minimum of 12 CP to reach 75 CP. We have 55 in B1 plus 3 in C, so we need at least 17 CP in B2.
(If we would have decided instead to take 6 CP in C out of other subjects, we would have to take 12 CP in B2. By calculation, 11 would be enough for 75, but the minimum ist 12.)

Courses in B2 are also selected from the module handbook. In B2 we can select from the whole offer, so we can take more courses in our three subjects we have chosen in B1 but we do not have to. In B2 all chemistry courses are mixed together. We need to take courses for at least 17 CP.

Example how a personal study plan could look like (5)

Still Step 3: This is how the index of the module handbook looks like:



Alle Fächer - Wahlpflichtmodule ← This is area B2

Screenshot: small excerpt from the module handbook

Example how a personal study plan could look like (6)

Still Step 3: A look at the index of the module handbook shows us what‘s on offer. We decide to take the remaining three „special topics“ courses from Analytical Chemistry to specialize in this field and further courses which would be assigned to Physical and Theoretical Chemistry (if we would have decided to take them in B1). By looking again at the cycle, we can assign them to our semesters. Our study plan evolves like this by including the German ASQ in the 2nd semester:

Subject/Semester	1	2	3	4
Inorganic Chemistry B1 (9+9 = 18 CP)	- Li Ion Batteries (3 CP) - Inorganic Photochemistry (3 CP)	- Inorganic Nanomaterials (3 CP) - Project work (in reading-free period) (9 CP)		
Organic Chemistry B1 (10+9 = 19 CP)	- Supramolecular Chemistry (3 CP) - Chemistry of Aromatics (4 CP)	- Modern Physical Organic Chemistry (3 CP) - Project work (in reading free period) (9 CP)		
Analytical Chemistry B1 (9+9 = 18 CP)	- Analytical Spectroscopy (3 CP) - Special Topics I (3 CP) - Special Topics II (3 CP)		- Project work (around beginning of reading period) (9 CP)	
All subjects (B2, 9+7+3 = 19 CP	- Introduction to Quantum Chemistry (3 CP)	- Special Topics III (3 CP) - Special Topics IV (3 CP) - Special Topics V (3 CP)	Interface Chemistry I (4 CP)	
ASQ C (3 CP)		- German course (3 CP)		
Sum of Credits	25 („easy start“ with less than the average of 30 CP)	36 (but only 18 are in the reading period, the other 18 are in the reading free period, so decent distribution of the workload)	13	

Example how a personal study plan could look like (7)

Interim conclusion: We have managed it to take around 60 CP in the first two semesters, especially by using the reading-free period after the second semester which distributes our workload over the complete 6 months of the summer semester. In the first semester we took an „easy start“ with only 25 CP and we had a completely free reading-free period which allowed us to take a break and for example fly back home for some vacation. After the second semester we did not go on vacation but used the time to do 2 project works instead.

Step 4: Now we are in the third semester and we only have to take two more lectures/seminars which allows us to do both the last project work in the reading period and to start with our preparatory seminar for the master‘s thesis. After the preparatory seminar, we directly start with the master‘s thesis. In between they might be some time for another vacation break. In total, the seminar plus thesis last 9 months. Our arrangement with the supervisors was to start in February and then we reach the goal line by the end of October.

Example how a personal study plan could look like (8)

Still step 4: Our complete study plan looks like this:

Subject/Semester	1	2	3	4
Preparatory Seminar and Master‘s Thesis A (15+30 CP)			Preparatory seminar (start in February) (15 CP)	Master‘s Thesis (start in May, end in October)
Inorganic Chemistry B1 (9+9 = 18 CP)	- Li Ion Batteries (3 CP) - Inorganic Photochemistry (3 CP)	- Inorganic Nanomaterials (3 CP) - Project work (in reading-free period) (9 CP)		
Organic Chemistry B1 (10+9 = 19 CP)	- Supramolecular Chemistry (3 CP) - Chemistry of Aromatics (4 CP)	- Modern Physical Organic Chemistry (3 CP) - Project work (in reading free period) (9 CP)		
Analytical Chemistry B1 (9+9 = 18 CP)	- Analytical Spectroscopy (3 CP) - Special Topics I (3 CP) - Special Topics II (3 CP)		- Project work (around beginning of reading period) (9 CP)	
All subjects (B2, 19 CP) (17 would be enough)	- Introduction to Quantum Chemistry (3 CP)	- Special Topics III (3 CP) - Special Topics IV (3 CP) - Special Topics V (3 CP)	- Interface Chemistry I (4 CP)	- Solar Energy Conversion (3 CP)
ASQ C (3 CP)		- German course (3 CP)		
Sum of Credits 122 (120 would be enough)	25 („easy start“ with less than the average of 30 CP)	36 (but only 18 are in the reading period, the other 18 are in the reading free period, so decent distribution of the workload)	28	33

PART 5

FURTHER STUFF

Some more important/helpful links (recommendation: set a bookmark)

School of Chemistry:
https://www.uni-ulm.de/en/nawi/school-of-chemistry/

Useful tips and information regarding student self-administration:
https://www.uni-ulm.de/en/nawi/fachbereich-chemie/studium-und-lehre/studienanfaenger/informationen-zur-studierendenselbstverwaltung/

Examination Board:
https://www.uni-ulm.de/en/nawi/school-of-chemistry/board/examination-board/

Hochschulportal / Campus Online System (Study Portal, „LSF“)
https://campusonline.uni-ulm.de/qislsf/rds?state=user&type=0
(use the flag icon in the upper right corner to switch between German and English)