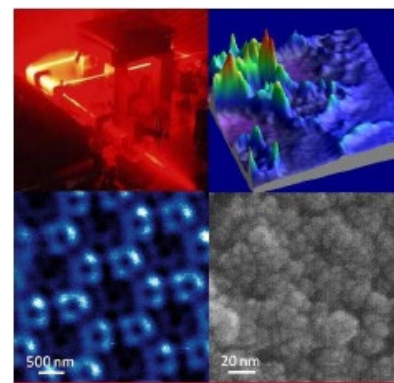
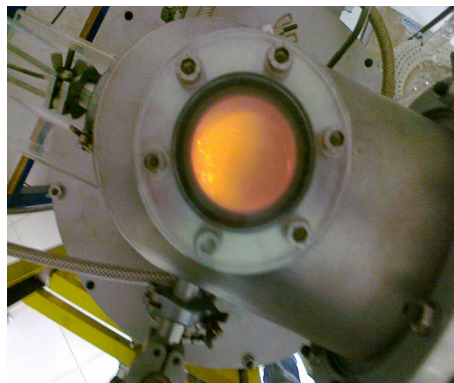
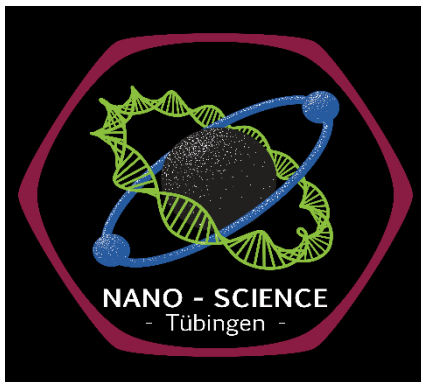
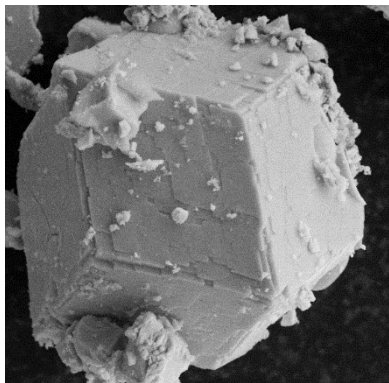




Nano-Science Master Program – Winter 2025/2026

Dr. Claudio Schrenk

13/10/2025



Outline

- Basic information
- Studies program
- Information for the 1st semester



Important notes

- New enrolled students are now studying the 2025 version of the Master program Nano-Science
- Please use the 2025 version of examination regulations and module handbook you can find on the webpage:

www.uni-tuebingen.de/nano-science

- There are ***no significant changes*** since the last version, only „technical“ issues and improvements



Master studies in general

- Duration: 4 semester
- ECTS: 120 (30 per semester)
- modules:
 - **obligatory:** Basic Modules (chemistry, biology, physics)
 - **optional:** Focus Modules (3x 9 ECTS)
 - Nano-Science IV
 - Independent Studies
 - master seminar
 - master thesis



4.2 Module overview by course of study

Start in winter semester

Semester	CP					
1.	29	Basic Module Biology (M1)	Basic Module Chemistry (M2)	Focus Module 1 (M4)	Nano-Science IV (M7)	
2.	31	Basic Module Physics (M3)	Focus Module 2 (M5)	Focus Module 3 (M6)		
3.	30	Independent Studies (M8)				Master Seminar (M9)
4.	30	Master Thesis (M10)				

Field of study	Nr.	Module title	Semester				Σ
			1	2	3	4	CP
Biology	M1	Basic Module Biology	9				9
Chemistry	M2	Basic Module Chemistry	9				9
Physics	M3	Basic Module Physics		9			9
Elective modules	M4	Focus Module 1	9				9
	M5	Focus Module 2		9			9
	M6	Focus Module 3		9			9
Interdisciplinary modules	M7	Nano-Science IV	2	4			6
	M8	Independent Studies				27	27
	M9	Master Seminar			3	3	6
Final thesis	M10	Master Thesis				27	27
			29	31	30	30	120



Exams and grades

- For every exam 3 trials are maximum permissible
- Module could be passed...
 - ... in one graded exam (written or oral),
 - ... or graded by weighted average of lecture exams
- Master grade:
 - 60% modules
 - 40% master thesis



Responsibilities

committees, examination board, examination office are the same as in the bachelor program (see also the webpage)

General aspects:

Dr. Claudio Schrenk

Building A level 9, room 9A07

claudio.schrenk@uni-tuebingen.de

Tel: 29-76217



Responsibilities

- Independent Studies:

Prof. Dr. Hans Joachim Schöpe

room PN2 N52

hans-joachim.schoepe@uni-tuebingen.de

Tel.: 29-74987

- All important information on the webpage:

www.uni-tuebingen.de/nano-science



Curriculum



1st year

- Basic modules and Focus modules
- Nano-Science IV

1.	29	Basic Module Biology (M1)	Basic Module Chemistry (M2)	Focus Module 1 (M4)	Nano-Science IV (M7)
2.	31	Basic Module Physics (M3)	Focus Module 2 (M5)	Focus Module 3 (M6)	



Basic modules

- one basic module per department
- winter: chemistry, biology
- summer: physics

Before starting the module „Independent Studies“ all basic modules have to be passed!



Focus modules

- 3 modules have to be passed
- at least from 2 out of 3 departments
- At least half of the ECTS must be graded (4.5 out of 9 ECTS)
- Overall grade as best possible weighted average of graded lectures
- Before starting the Independent Studies at least 2 Focus modules must be completed and passed!
- Lab course possible

No lab course in the working group of bachelor thesis!



Focus modules

- See module handbook for details
- Further inquiries: Head of the module
 - biology: Kolukisaoglu, Schäffer
 - chemistry: Schrenk
 - physics: Oettel, Schöpe, Schreiber
- Chemistry:

Please check the list of suitable lectures on the webpage



www.uni-tuebingen.de/nano-science

Entries only by Head of Module!

Chemistry:

All entries in the sheet will be done by Dr. Schrenk

Biology (FM Biology A/B):

After consultation with Dr. Kolukisaoglu



Confirmation Focus Modules

You have to complete 3 focus modules with 9 ECTS credits each in at least two of the departments chemistry, biology or physics. The subunit lectures of container modules are confirmed on this form by a module responsible person.

Name:

Matriculation number:

<i>Focus Module 1:</i>	Biology	Chemistry	Physics	
Lecture:	ECTS	Date	Grade	Sign of responsible person
Overall grade				



Nano-Science IV

- obligatory
- winter: chemistry (Adv. Topics in Nanochemistry)

Latecomer: Please sign in to ILIAS – a.s.a.p.

- summer: biology, physics
- 6 ECTS



2nd year

- Independent Studies
- master thesis, master seminar

3.	30	Independent Studies (M8)	Master Semi- nar (M9)
4.	30	Master Thesis (M10)	



Independent studies

- special introduction after this event!



master thesis

- duration: 6 months
- requirements:
 - all basic modules passed
 - all focus modules passed
 - Nano-Science IV passed
 - Independent studies passed (confirmation of supervisor)
- possible in all working groups with nano-science topics



master thesis – guideline for registration

EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN



Mathematisch-
Naturwissenschaftliche
Fakultät

Anmeldung und Bescheinigungen zur Masterarbeit/Masterseminar

Studiengang Nano-Science (M.Sc.)

Name: _____ Matr.-Nr.: _____

Koordination:
Dr. Claudio Schrenk
apl. Prof. Dr. Hans Joachim Schöpe

Leitfaden zur Masterarbeit und zum Masterseminar:

Dieser Leitfaden dient zur Übersicht der Regelungen, die zum Anmelden einer Masterarbeit gelten (§§15-16 PO i. V. m. §8 PO bes. Teil). Unvollständige Anmeldungen werden zurückgewiesen. Im Zweifelsfall entscheidet der Prüfungsausschuss.

Abschnitt I: vom Kandidaten/von der Kandidatin zu bearbeiten

Reichen Sie Ihre Bescheinigung „Fokusmodule“ und Bescheinigung „Independent Studies“ beim Prüfungsamt ein. Lassen Sie sich die Zulassungsvoraussetzungen für die Masterarbeit von **Dr. Schrenk** (A-Bau, Raum 9A07) auf dieser Bescheinigung bestätigen. Legen Sie dazu ein aktuelles Transcript vor. Bitte beachten Sie: Die Anmeldung zur Masterarbeit kann erst dann erfolgen, wenn das Vorliegen der Zulassungsvoraussetzungen bestätigt wurde (siehe Datumseintrag unten). Eine rückwirkende Anmeldung vor diesem Datum ist nicht möglich.

Zulassungsvoraussetzungen zur Masterarbeit		
Wurden die Studienleistungen • „Basic Modules I-III“ (M1-M3), • "Focus Modules I-III" (M4-M6), • "Nano-Science IV" (M7), • "Independent Studies" (M8) erfolgreich absolviert?	Ja / Nein Ja / Nein Ja / Nein Ja / Nein	Hiermit bestätige ich, dass der Kandidat/die Kandidatin die Masterarbeit beginnen darf. Unterschrift Dr. Schrenk
Datum des Nachweises:		

[www.uni-tuebingen.de/
nano-science](http://www.uni-tuebingen.de/nano-science)

- actual transcript
- confirmation of all passed modules (signature required)
- Supervisor completes part II
- Copy to Dr. Schrenk



master thesis – guideline for registration

Masterarbeit			
Start		Abgabe	
Fachbereich/ Einrichtung			
Arbeitsgruppe/Labor (Stempel)			
Titel der Arbeit			
Name Erstgutachter/in:		Name Zweitgutachter/in:	
Unterschrift		Unterschrift	

[www.uni-tuebingen.de/
nano-science](http://www.uni-tuebingen.de/nano-science)

- actual transcript
- confirmation of all
passed modules
(signature required)
- Supervisor completes
part II
- Copy to Dr. Schrenk



master thesis – guideline for registration

Abschnitt III: Masterseminar

Es gelten die „Hinweise zum Masterseminar“ in ihrer aktuellen Fassung, die im Master-Downloadbereich auf der Homepage des Studiengangs Nano-Science (www.uni-tuebingen.de/nano-science) einsehbar sind.

Masterseminar	
Erster Vortrag (gruppenintern)	Zweiter Vortrag (Seminar)
Unterschrift Betreuer/in/Erstgutachter/in	Unterschrift Moderator
Anzahl Teilnahmen als Hörer/in: _____	Bewertung (Siegel)

[www.uni-tuebingen.de/
nano-science](http://www.uni-tuebingen.de/nano-science)

- actual transcript
- confirmation of all
passed modules
(signature required)
- Supervisor completes
part II
- Copy to Dr. Schrenk



master thesis

- Guideline: the same as in bachelor thesis
see webpage -> bachelor -> download
- You need 3 copies of your master thesis at your deadline day



Master seminar

Events:

- Data analysis with statistics
 - must be passed before starting master thesis
 - block lecture,
 - 2 weeks before start of lecture time in winter or summer
- Master seminar



Master seminar

parallel to master thesis

1st talk: at the beginning

- in the working group seminar
- topic and actual research
- project
- after consultation with the supervisor



Master seminar

parallel to master thesis

2nd talk: after finishing

- public presentation of the results
- followed by discussion
- duration: 20 min + 10 min discussion

see www.uni-tuebingen/de/nano-science for further information



Master seminar

2nd talk:

- Dates: one per month, 3 presentations per date (Tuesday)
- participation obligatory
- registration: automatically with registration of the master thesis
- see www.uni-tuebingen.de/nano-science for further information



Master

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Masterseminar Nano-Science

am Dienstag, den 14.10.2025, Hörsaal N3

16:15 Uhr

Patrick Kelp

"Nanofabrication and characterization of 2D MoS2 photo-field-effect-transistors with and without plasmonic gold nanostructures"

Betreuerin: Prof. M. Fleischer (FB Physik)

16:15 Uhr

Alex Obholz

"Optimization of a kinesin stepping assay for mass photometry"

Betreuer: Prof. E. Schäffer (FB Biologie)

thesis

ation



Master seminar

Participation sheet (see uni-tuebingen.de/nano-science)

Please bring the participation sheet to every Master seminar

Signature of Nano-Science responsible persons confirm participation

At least 14 signatures (or more) should be collected during master studies.



Master seminar

- studies will end with presentation in master seminar

= date of last examination
- The fixed dates of the master seminar could not be relocated
- date assignment: „*First come, first serve.*“



1st semester

Obligatory lectures:

- Theoretische Grundlagen moderner molekularbiologischer, biochemischer und analytischer Methoden (several lecturers - BM biology)
Mo 2 p.m. - 4 p.m., Th 2 p.m. – 4 p.m.
- ACM12 Sol-Gel-Prozesse (Schrenk – BM chemistry)
Tu 2 p.m. - 4 p.m., only 14/10/2025 – 02/12/2025
- OCM6 Neue Kohlenstoffmaterialien (Bettinger – BM chemistry)
Mo 12 p.m.- 2 p.m., only 24/11/2025 – 02/02/2026



1st semester

- MWM1 Phänomenologische Materialeigenschaften (Scheele – BM chemistry)
Th 10 a.m. -12 p.m.
- Nanochemie (Anwander/Lauth/Schnepf – BM chemistry)
Th 12 p.m. – 2 p.m.
- Advanced Topics in Nanochemistry (Schrenk/Schnepf - Nano-Science IV)
Fr 12 p.m. – 2 p.m.

Please check ALMA, ILIAS or our webpage for detailed information



Thank you.

contact:

Dr. Claudio Schrenk

Auf der Morgenstelle 18, 72076 Tübingen

Room: 9A07

Phone: +49 7071 29-76217

Consultation hours : on appointment

claudio.schrenk@uni-tuebingen.de