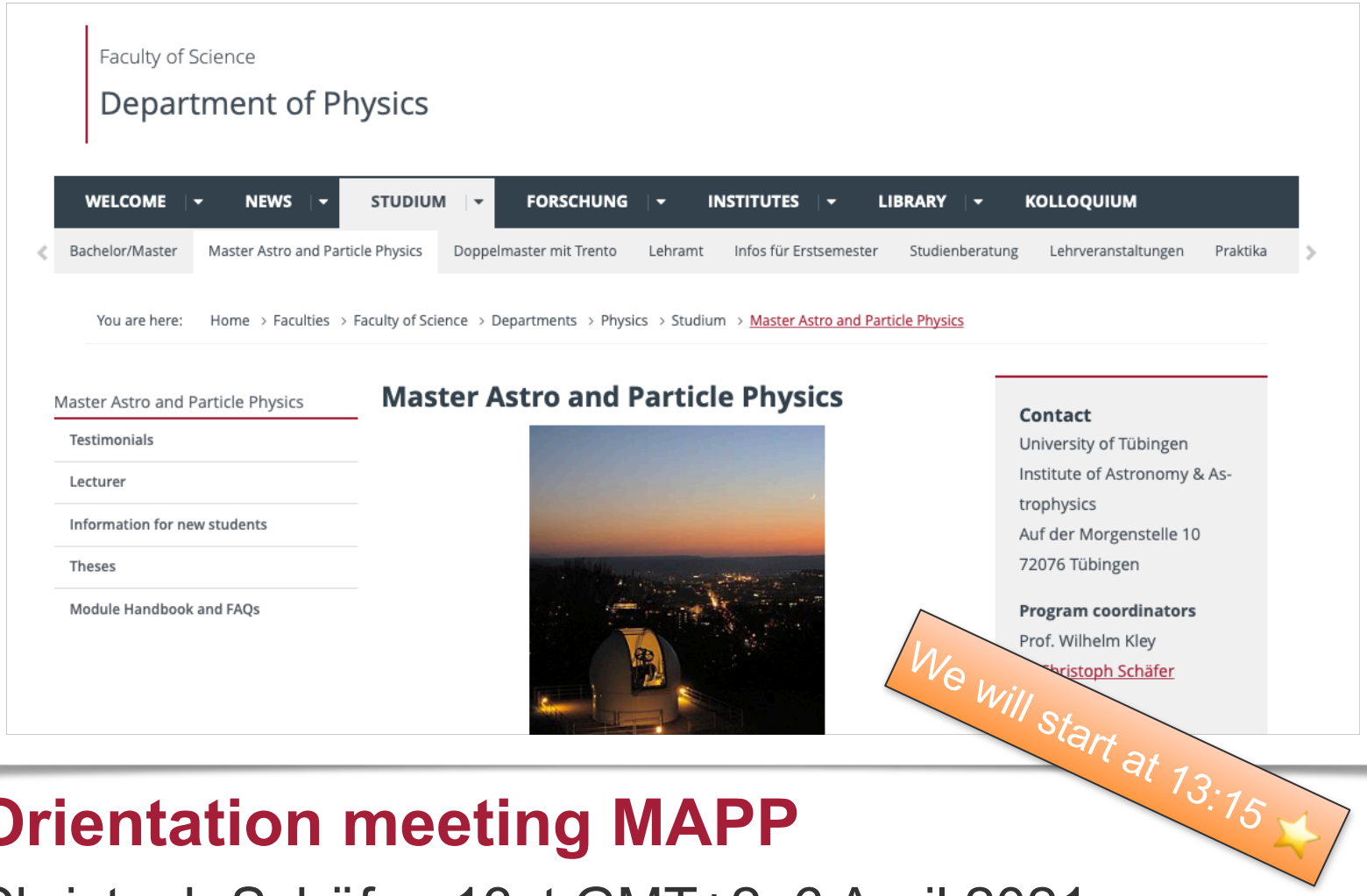
EBERHARD KARLS
UNIVERSITÄT
TÜBINGEN

FACULTY OF
SCIENCE



Orientation meeting MAPP

Christoph Schäfer, 13ct GMT+2, 6 April 2021

Agenda

- Actual information about the University during the Corona pandemic.
- Information about the lectures during the summer term.
- Welcome to our new students!
  Landing page for all new international students
  https://uni-tuebingen.de/en/international/study-in-tuebingen/getting-started-and-orientation-for-international-students/
- General information about the Master Course.
- Q&C section

- slides are online on our central webpage

Actual status of the University in the Corona-crisis

- According to a decision of the Baden-Württemberg Ministry of Science, lectures will not begin this summer semester until 19 April 2021, one week later than originally planned.
- Students shall not experience any disadvantages in their studies, even if the summer semester 2021 can only take place in a reduced online form.
- Orientation week and orientation events are scheduled in the period 12 to 23 April. The university provides an overview on https://uni-tuebingen.de/en/study/organizing-your-studies/orientation/. There will be online events and in person events.
- On the following page you will find the most recent information about how this crisis affects your studies, sorted by topic. It is indicated separately for each issue when the corresponding information was last updated: https://uni-tuebingen.de/en/university/information-on-the-corona-virus/corona-virus-information-for-students/.

Actual status in the Faculty of Science

- Part of the staff works from home if possible
  ☞ contact via email not phone.
- Lecturers prepare to give their lectures and exercises
  - online via video meetings (using Zoom).
  - using recorded screencasts of lectures.
  - as block courses later in the term or term break (like the labwork).
  - some courses might be classroom teachings.
- Labwork will be in September after lecture term.

Actual status of the lectures

- Information about the lectures is constantly updated on ALMA.
- You will need for most lectures
  - valid email address (@student.uni-tuebingen.de preferred)
  - internet connection via laptop, smartphone, tablet, etcpp.
  - ILIAS account
    For new students without an official ZDV account, we will create guest accounts for you, please contact me!
- Exercise classes will have interactive components via video conferencing: students can share screen or present calculations.

How to enroll in a lecture/seminar/exercise class

- First look on ALMA.
- Lecturers will post information about ILIAS access
  - join in ILIAS via “course password” or “request membership”.
- Times of the (live) online lectures/exercises will be as scheduled on ILIAS/ALMA.
- Additional material (e.g., exercise sheets, literature) will be put on ILIAS.
- Recorded screencasts and lectures can be watched whenever you want (and more than once).
- University library offers also some ebooks.
  - Important literature is uploaded to ILIAS.

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List of lectures (1 Apr), tentative

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8:00 AM	**PHY-EVVFKOS Extravorlesung zur Kosmologie**, Event, 1. PG Montag *8:00 AM 10:00 AM* weekly 4/19/21 - 7/19/21 Responsible Lecturers: Prof. Dr.				**PHY-VFEPWA Einführung in das Programmieren für wissenschaftliche Anwendungen**, Event, 1. PG Freitag *8:00 AM 10:00 AM* weekly	
9:00 AM						
10:00 AM	**PHY-VFOXA Observational X-ray Astronomy**, seminar, 1. PG Montag *10:00 AM 12:00 PM* weekly 4/19/21 - 7/31/21 Performing lecturers: Dr. rer. nat.	**PHY-BMEPAAP-V Astronomy and Astrophysics (Vorlesung)**, Event, 1. PG Dienstag *10:00 AM 12:00 PM* weekly 4/13/21 - 7/24/21	1) **PHY-VFKOS-Ü-APP Kosmologie (Übung)** 2) **PHY-VFSE-APP Star formation**	1) **PHY-BMEPAAP-V Astronomy and Astrophysics (Vorlesung)** 2) **PHY-VFQFTTP2-Ü Übungen Fortgeschr Quantenfe und** 3) **PHY-VFQFTTP2-Ü Übungen Fortgeschr Quantenfe und**	1) **PHY-VFCAP-Ü-APP Excer Computati Astrophys (Übung)** 2) **PHY-VFBES-V-APP Stella Structure and Evolution** 3) **PHY-AGS97 Do "Heiße und**	
11:00 AM						
12:00 PM	**PHY-V-APP Planet Formation (Vorlesung)**, Event, 1. PG Montag *12:00 PM 2:00 PM* weekly 4/19/21 - 7/31/21 Performing lecturers: Prof. Dr.		**PHY-VFCAP-V-APP Computational Astrophysics (Vorlesung)**, Event, 1. PG Mittwoch *12:00 PM 2:00 PM* weekly	4) **PHY-VFEAAP-V-APP Extragalac Astronomy and Astrophysics (Vorlesung)** 5) **PHY-VFEATP-V Experimentell Astroteilchenph**	**PHY-VFKOS-Ü-APP Kosmologie (Übung)**, Exercise, 1. PG Freitag *12:00 PM 2:00 PM* weekly 4/16/21 - 7/23/21	
1:00 PM						
2:00 PM	1) **PHY-VFEPWA Einfüh in das Programmieren für wissenschaftlic** 2) **PHY-VFET-Ü-APP Particle Physics (Übung)**	1) **PHY-VFRAP-V-APP Rel Astroph Relativi** 2) **PHY-VFKOS-V Kosm (Observ Cosmol Vorlesu** 3) **PHY-VFQFTT V Fortge Quanter und Teilcher** 4) **PHY-AGS22 zu speziell Themen der**	3) **PHY-VFBHP-V-APP Black Hole Astrophysics** 4) **PHY-VFET-V-APP Particle Physics (Vorlesung)**	6) **PHY-VFQFTTP2-V Fortgeschritte Quantenfeldther und Teilchenphysik** 7) **PHY-VFRAP-Ü-APP Relativistis Astrophysik/ Relativistic Astrophysics and**	4) **PHY-VFKOS-Ü-APP Kosm (Übung)** 5) **PHY-VFOXA-V Observa X-ray Astronom** 6) **PHY-VFET-V-APP Partic Physics**	
3:00 PM						
4:00 PM			**PHY-VFEATP-V Übungen zur Experimentelle Astroteilchenphysik**, Event, 2. PG Mittwoch	**PHY-S-APP Modern Topics in Astronomy and Astrophysics (Seminar)**, seminar, 1. PG Donnerstag *4:00 PM 6:00 PM* weekly 4/15/21 - 7/22/21	**PHY-BMEPAAP-V Astronomy and Astrophysics (Vorlesung)**, Event, 1. PG Freitag *4:00 PM 8:00 PM* Single date 7/30/21 Responsible Lecturers: Prof. Dr. Werner, Klaus; Prof. Dr. Kley, Wilhelm	
5:00 PM						
6:00 PM						
7:00 PM						
8:00 PM						

Single date weekly Block date, Block date + sat, Block date + sat + sun Fortnightly, Even weeks, Odd weeks Three weeks turn, Four weeks turn, Every 1st weekday of the month, Every 2nd weekday of the month, Every 3rd weekday of the month, Every 4th weekday of the month, by appointment, t.b.a. course

Created on Thursday, April 1, 2021 at 11:39 AM

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Welcome to our new students!

- Master programme since 2017, currently about 50 students
- 2 years, international (teaching language is English)
- organised by the Kepler Center in the department of physics
- 12 professors in the KCT
  - broad spectrum of research interest
  - international (Santangelo, Kokkotas)
- Kepler-Kolleg: structured PhD programme with title:
  Particles, Fields and Messengers of the Universe

Central web page with more information: Module handbook, examination regulations

https://uni-tuebingen.de/index.php?id=86970

Requirements

- Bachelor degree in Physics
- in other cases: additional courses may have to be taken
- English: lectures will be taught in English (level B2)
- ECTS: in total 120 CP (30 CP per term)
- structure:
  - 1st year: classes, seminars and labwork
  - 2nd year: preparation for thesis, specialisation, and thesis

Credit points and final grading

- ECTS:
  30 CP obligatory modules, 24 CP elective modules, 6 CP neighboring field, 30 CP specialisation and method, 30 CP thesis

- Final grading
  Master thesis: 2/3 of final grade
  APP101 & APP102 (18 CP), and two elective modules (12 CP): 1/3 of final grade

please read the information provided in our module handbook:

https://uni-tuebingen.de/en/faculties/faculty-of-science/departments/physics/studies/msc-astro-and-particle-physics/module-handbook-and-faqs/

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Module Overview

Module Code	Obligatory / Elective	Module Title	Recommended Semester	Credit Points
APP101	O	Astronomy & Astrophysics	1	9
APP103	O	Laboratory Work	1-2	6
APP104	O	Modern Topics in Astro and Particle Physics	1+2	6
APP102	O	Particle Physics	2	9
APP201	E	Theoretical Astrophysics	1	6
APP202	E	Computational Methods in Physics/Astrophysics	1-2	6
APP203	E	Stellar Physics	1-2	6
APP204	E	General Relativity	1	6
APP205	E	Relativistic Astrophysics	2	6
APP206	E	Star and Planet Formation, Exoplanets	1-2	6
APP211	E	Neutrino Physics	1	6
APP212	E	High Energy Astrophysics	1	6
APP213	E	Cosmology	2	6
APP214	E	Extragalactic Astrophysics and Structure Formation	2	6
APP215	E	Space Physics and Astrophysics	2	6
APP221	E	Quantum Field Theory	1	6
APP301	O	Module of neighboring Field	2	6
APP401	O	Scientific Specialisation in Thesis Topic	3	15
APP402	O	Methods and Project Planning	3	15
APP403	O	Master-Thesis	4	30

Neighboring field:
other classes from

- physics
- maths
- computer science
- others (if in doubt, ask for help)

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APP102	O	Particle Physics	2	9
APP201	E	Theoretical Astrophysics	1	6
APP202	E	Computational Methods in Physics/Astrophysics	1-2	6
APP203	E	Stellar Physics	1-2	6
APP204	E	General Relativity	1	6
APP205	E	Relativistic Astrophysics	2	6
APP206	E	Star and Planet Formation, Exoplanets	1-2	6
APP211	E	Neutrino Physics	1	6
APP212	E	High Energy Astrophysics	1	6
APP213	E	Cosmology	2	6
APP214	E	Extragalactic Astrophysics and Structure Formation	2	6
APP215	E	Space Physics and Astrophysics	2	6
APP221	E	Quantum Field Theory	1	6
APP301	O	Module of neighboring Field	2	6
APP401	O	Scientific Specialisation in Thesis Topic	3	15
APP402	O	Methods and Project Planning	3	15
APP403	O	Master-Thesis	4	30

Part of Master Thesis, active in working group

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Sample Module - APP101

Module Code:	**Module Title:**		**Type of Module:**
APP101	Astronomy and Astrophysics.		obligatory
CP: (ECTS Credits)	9		
Workload: - **Time in Class** - **Self-Study**	Total workload: 270 h	Time in Class: 90 h / 6 SWS	Self-Study: 180 h
Duration:	1 Semester		
Frequency:	Winter semester		
Language of Instruction:	English.		
Forms of Teaching and Learning:	Lecture with Exercises.		
Content:	The module deals with the fundamentals of astronomy and astrophysics to be known by all students. This includes: observational techniques, radiative transport, the Solar System, stars and planets, the Milkyway, galaxies, large scale structure, cosmology.		
Objectives:	The students will obtain knowledge of the basic principles of astronomy and astrophysics. They are able to transfer and apply physical processes from other fields to astrophysical phenomena. Through solving a series of exercises and apply the methods presented in the lecture they acquire necessary skills for independent problem solving and deepen their understanding.		

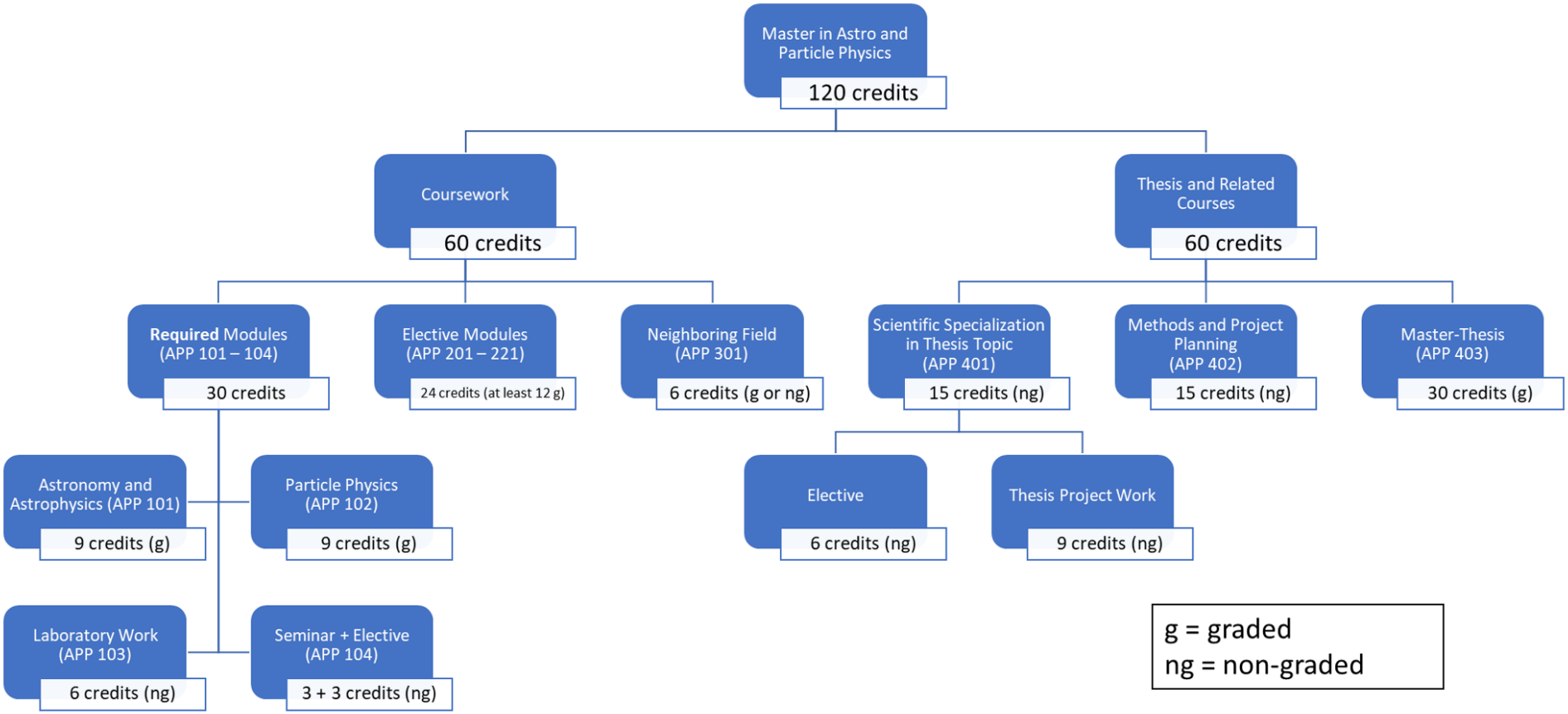
Requirements for Obtaining Credit, Grading, weight if appl.:

	Type of course	Status	CH	CP	Type of Exam	Length of Exam	Evaluation Type	Weight for Grade
Lecture	L	o	4	6	W	180	g	1.0
Exercises	E	o	2	3				

Transfer:	BSc in Physics, MSc Astro and Particle Physics.
Prerequisites:	The module requires a basic physical and mathematical knowledge.

see the Module Handbook on our central webpage

Programme structure



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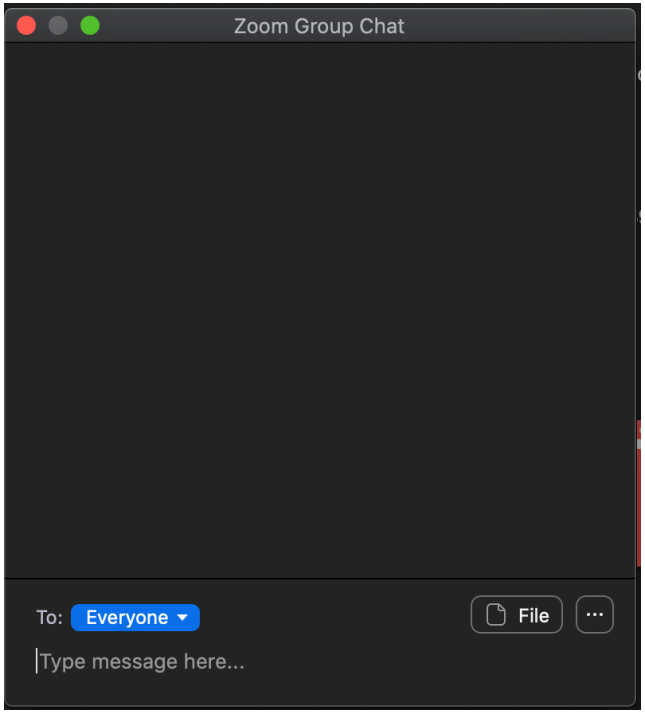
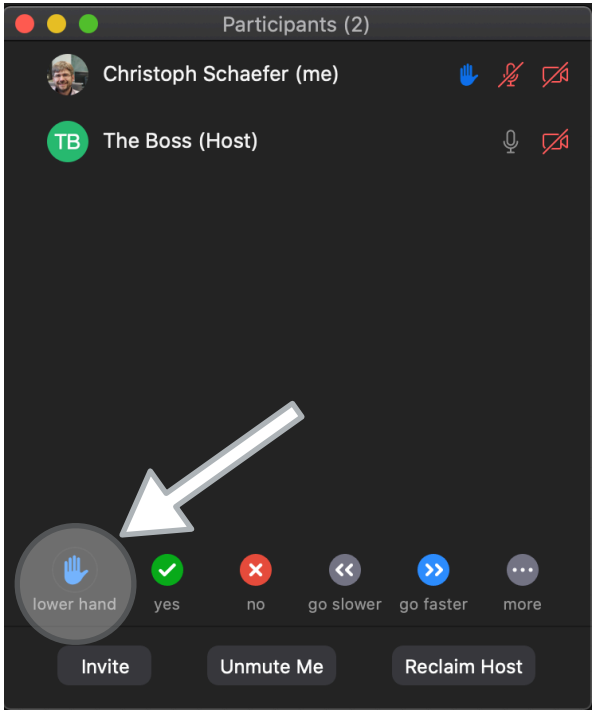
Sample study plan

Semester	Modules				
1	APP101 Astronomy & Astrophysics 9 CP	APP103 Laboratory Work 6 CP	APP104 Modern Topics in Astro and Particle Physics 6 CP	APP203 Stellar Physics 6 CP	APP204 General Relativity 6 CP
2	APP102 Particle Physics 9 CP	APP202 Computational Methods 6 CP	APP213 Cosmology 6 CP	APP301 Neighboring Field 6 CP	
3	APP401 Scientific Specialisation in Thesis Topic 15 CP		APP402 Method and Project Planning 15 CP		
4	APP403 Master-Thesis 30 CP				

Questions and comments?

Please use the chat function in Zoom or raise a hand and unmute your microphone (press space) when you are called.





More questions or problems?

Please contact Christoph Schaefer via ch.schaefer@uni-tuebingen.de