

How to find courses for your exchange stay at TUM CIT Informatics

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1. General overview of the course offer for incoming exchange students

You have been **nominated for TUM CIT Informatics** (Computer Science, ISCED 061). Depending on your home university, you might have to fulfil certain criteria in choosing the courses for your exchange stay. At TUM CIT Informatics additionally, we expect all exchange students to take **at least 20 ECTS per semester** (30 ECTS is a full workload of our degree students) with a **clear focus on Informatics**. This means that **at least 60 % of your courses and ECTS workload have to be from the Informatics' course offer**.

This tutorial explains how to get a general overview of the course offer for exchange students, before you are enrolled at TUM and it is written under the premise that you do not currently have a valid TUM account.

How to find courses?

- Go to www.campus.tum.de (TUMonline)
- In the Log In section, click **“Continue without login”** (Fig. 1)

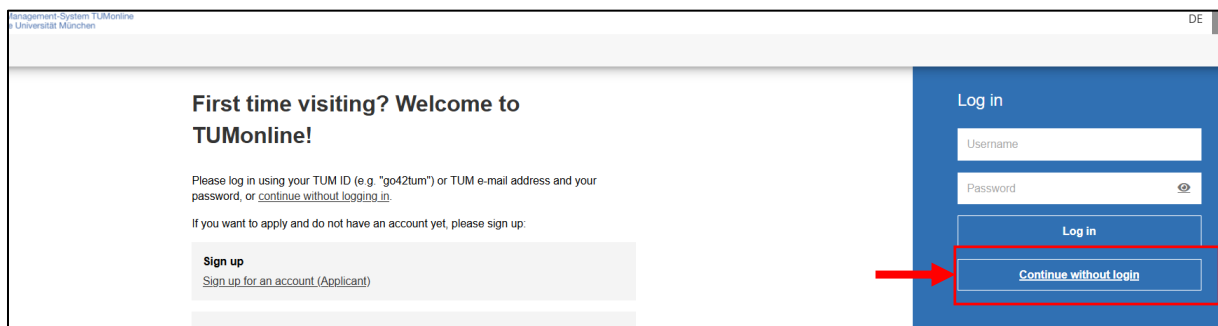


Figure 1: Home page of TUMonline

- Select the application „Degree Programs“ (Fig. 2)

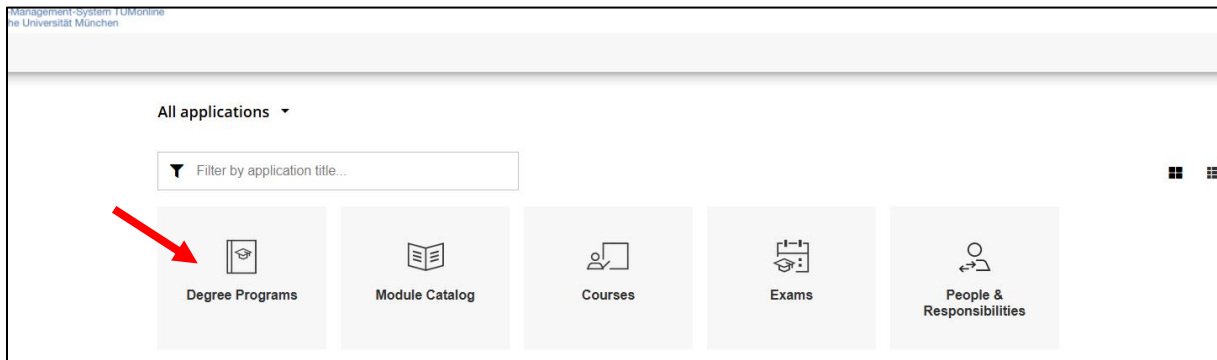


Figure 2: Applications in TUMonline

- Select the section “98 Exchange program (not subject to fees)” by clicking on the small grey arrow in front (Figure 3)

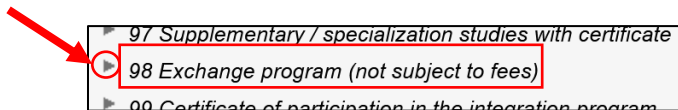


Figure 3: Select "98 Exchange Program (not subject to fees)" by clicking on the arrow on the left

- You will get a very long list of all the Exchange programs at TUM across many subject areas
- Select the Exchange program for “030 Informatics” (Figure 4).

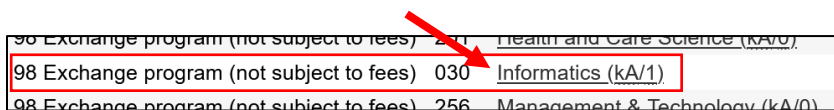


Figure 4: Exchange Program Informatics 030

- Open the course program by clicking on the + sign (Figure 5).

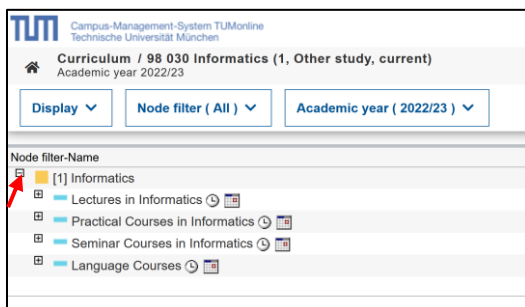


Figure 5: Overview of the courses offered for exchange in TUM Informatics

2. Different Types of courses at TUM CIT Informatics

You will find the courses sorted by course type (Figure 5).

- **Lecture:** course taught by a lecturer, often with many students in a large lecture hall, sometimes accompanied by exercises and homework, graded by a written exam after the lecture period during the exam period ([TUM CIT Informatics academic calendar](#)). The amount of given ECTS credits varies between 3-8 ECTS, most lectures have no limit of capacities! (TUM CIT Informatics [lectures with capacity limit](#))
- **Practical course:** Usually a software project in a specific subject area (e.g. data bases, security), group work and presentations are used to grade the whole course in place of a final (written) examination. 10 ECTS
- **Seminar course:** Each participant gets a paper on a specific aspect assigned and pursues a literature research, writes about the constituent aspects in an essay and gives a talk in front of the group. Usually graded according to your essay, your talk, and regular, active attendance during the seminar. 5 ECTS
- **Language course:** The TUM Language Center offers a wide range of language courses, including German as a foreign language from A1 to C2 level and lots of higher level English courses. These courses do not count towards the expected 60% of courses and workload in Informatics.

TIP: choosing different types of courses helps to **spread the workload** across the whole semester and to cope with the potentially quite different style of teaching in the German university system.

- **Practical courses** are very popular and usually students get good grades. These courses are a good opportunity to apply your computer science knowledge to an interesting topic. **Seminars** are great to focus on interesting topics and to discuss them with your fellow students. Both practical courses and seminars are limited in capacity. Spots are therefore allocated via our Matching platform. For more information please check our [website](#).
- Courses are **published** in late January for summer semester and late July for winter semester. Please refer to the previous academic year and the respective summer or winter semester in order to get an overview of the course offer before February/July. Most courses are very likely to be offered in the same **cycle**, but there is no guarantee.
- Therefore, prepare a preliminary study plan as part of your application to TUM with our form course wish list. Include also **substitutes**.
- **60 % of your courses** and workload at TUM have to be in the subject area of Informatics (excl. language courses).

3. Lectures in Informatics

- Lectures are sorted by **topic areas** (e.g. Algorithms, Computer Graphics and Vision, etc.)
- Look for a course offered with a **red triangle in front!!** Only if it is labeled with the specific semester, it will be offered!
- In the line of the green sphere ● you will find the **ECTS credits** that you receive for the specific course (Figure 6).

Node filter-Name

[1] Informatics

Lectures in Informatics

Algorithms

[IN2239] Algorithmic Game Theory

[IN2211] Auction Theory and Market Design

[IN3410] Selected Topics in Algorithms

[IN2229] Computational Social Choice

Computational Social Choice

Computational Social Choice

rec. sem.

Credits

WF

ECTS

1

1

1

5

5

5

6

6

1

1

1

1

1

1

Course(s) in academic year

2022/23

Part

Lecturer (Assistant)

Place (1st session)

Time (1st session)

0000000321 22W 3SWS VO Computational Social Choice (IN2229)

Brandt F, Lederer P

00.04.011, MI Hörsaal 2 (5604.EG.011)

08.11.22 16:15 - 18:45

5

1

Tutorübungen zu Computational Social Choice (IN2229)

</

Figure 6: Example on course details in TUMonline with ECTS indicated on the right side.

- Under the red triangle ▲ you will find the respective **course information** (Figure 6).
- To find out, when the course is offered, choose the **academic year** 2022/23 you are interested in (choose the current academic year or a previous cycle, considering the late publication dates of courses, see Section 2)
- In Figure 7, the first column indicates in which term the course is offered: **xxW** is winter semester, **xxS** is summer semester.
- Click on the **underlined course title**. It will redirect to the **course description** with content description of the course, workload, language of instruction, required prior knowledge and link to the course organisers (Figures 9 and 10).
- Click on the given location for a redirect to a **map of the building**. TUM has several campuses spread over Munich ([Campus locations](#)), TUM CIT Informatics is mainly located in Research Center Garching:

Course(s) in academic year	Part	Lecturer (Assistant)	Place (1st session)	Time (1st session)
0000000673 22W 4SWS VI Introduction to Deep Learning (IN2346)	⊗	Dai A [L], Chen Y, Dahnert M, Dai A, Huang J	00.02.001, MI HS 1, Friedrich L. Bauer Hörsaal (5602.EG.001)	18.10.22 14:00 - 16:00
0000002767 23S 4SWS VI Introduction to Deep Learning (IN2346)	⊖	Nießner M [L], Chen Y, Dahnert M, Franzmann A, Gafni G, ...	00.02.001, MI HS 1, Friedrich L. Bauer Hörsaal (5602.EG.001)	17.04.23 14:00 - 16:00

orange plus-sign = course title.
green sphere = exam for the course.
red triangle = course itself.

Figure 7: Example for a lecture that is offered in both summer and winter semester of the academic year 2022/23

Overview	
Description	
Dates and Groups	
Status within Curriculum	
Equivalent courses	
View course registration details	
Registration expired Please note the participation criteria and registration information	
	<p>Content</p> <p>Social choice theory deals with the aggregation of individual preferences into a collective choice. This course focusses on the analysis and comparison of aggregation functions that are based on majority rule. Particular attention will be paid to computational aspects. List of topics: Preferences, voting rules, choice theory (rationalizability, consistency), May's theorem, Arrow's impossibility theorem, scoring rules, Fishburn's classification of Condorcet rules, McGarvey's theorem, top cycle, uncovered set, Slater set, Banks set, minimal covering set, tournament equilibrium set, Kemeny-Young-rule, computational complexity of voting rules.</p> <p>Previous knowledge expected</p> <p>Module IN0015: Discrete Structures It is expected that participants are experienced in formally proving statements and are familiar with standard theorem proving techniques. Additionally, basic knowledge of complexity theory is useful (e.g., Module IN0011).</p> <p>Objective</p> <p>Module IN0015: Discrete Structures It is expected that participants are experienced in formally proving mathematical statements and are familiar with standard proof techniques. Additionally, basic knowledge of complexity theory is useful (e.g., Module IN0011).</p>

Figure 10: [continuation of Figure 9] The description of the course gives information on the course content, required previous knowledge and objectives.

4. Practical courses in Informatics

- We recommend to spread the workload by choosing different types of courses (see Section 2).
- Places are allocated via our **matching platform**. You can be allocated to max. one practical course. Please check our [website](#) for more detailed information.
- Practical courses are divided into courses at Bachelor's level and Master's level (Figure 11). Bachelor students in their third or fourth year are welcome to attend practical courses at Master's level if meeting the prerequisites.
 - **IN0012**: Bachelor practical course
 - **IN2106**: Master (advanced) practical course

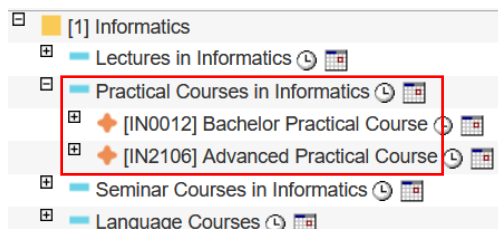


Figure 11: Practical courses in Informatics are sorted by study level in Bachelor practical courses (IN0012) and Master practical courses (IN2106).

- When you open the sections for either IN0012 or IN2106, the list of all practical courses at the respective study level will open. As this list is very long, it takes some time to load. Please be patient 😊
- Scroll down to the **red triangles**.
- In Figure 12, you see three examples for course dates of practical courses. In the academic year 2022/23, example (1) was only offered in winter semester, example (2) was offered in both winter and summer semester, and example (3) was not offered in the academic year 2022/23.

- Most likely the same or a similar practical course will be offered in the same cycle/semester in the future.

Thus prepare several practical courses from thematic areas of your interest for the first version of your study program. Some exchange students chose to indicate the module code as a place holder first, and then adapt their study program at a later point of time, once courses are published or – even better - places got allocated via the matching.

(1)	Bachelor Practical Course: Evaluation of User Interfaces (IN0012, IN4338) ⓘ			
	Course(s) in academic year ⓘ 2022/23 ⓘ	Part	Lecturer (Assistant)	Place (1st session) Time (1st session)
(2)	0000002309 22W 6SWS PR Bachelor Practical Course: Evaluation of User Interfaces (IN0012, IN4338) ⓘ Wörndl W			
	Bachelor-Praktikum - Introduction to Process Mining with Implementation of a Webservice (IN0012, IN4315) ⓘ			
(2)	Course(s) in academic year ⓘ 2022/23 ⓘ	Part	Lecturer (Assistant)	Place (1st session) Time (1st session)
	0000001571 22W 6SWS PR Bachelor-/Master-Praktikum - Introduction to Process Mining with Implementation of a Webservice (IN0012, IN4315) ⓘ	⊗	Rinderle-Ma S [L], Sai C	01.13.007, Seminarraum (5613.01.007) 21.07.22 14:00 - 15:00
(3)	0000001571 23S 6SWS PR Bachelor-Praktikum - Introduction to Process Mining with Implementation of a Webservice (IN0012, IN4315) ⓘ	⊗	Rinderle-Ma S [L], Sai C	Online: Videokonferenz / Zoom etc. 30.01.23 08:30 - 09:00
	Practical Course - Designing IT-based Learning (IN0012, IN4138) ⓘ			
(3)	Practical Course - Scientific Computing: 3D Game Physics (IN0012, IN4085) ⓘ			
	Bachelor Practical Course: IoT Sensor Nodes (IN0012, IN4224) ⓘ			
(3)	Bachelor-Praktikum Semantic Web (IN0012, IN4167) ⓘ			
	Course(s) in academic year ⓘ 2022/23 ⓘ	Part	Lecturer (Assistant)	Place (1st session) Time (1st session)
(3)	No entries.			
	Bachelor's Practical course - Kotlin (IN0012, IN4305) ⓘ			
(3)	Bachelor's Practical course - Visualization of Virtual Machines (IN0012, IN4323) ⓘ			

orange plus-sign = course title.
green sphere = exam for the course.
red triangle = course itself.

Figure 12: Examples of course dates for practical courses. Example (1) is offered in winter semester 2022/23, example (2) is offered in winter 2022 and summer semester 2023, example (3) is not offered in the academic year 2022/23.

5. Seminars in Informatics

- We recommend to spread the workload by choosing different types of courses, see Section 2).
- Places in seminars are allocated via our **Matching platform**. You can be allocated to max. one seminar. Please check our [website](#) for more detailed information.
- Seminars are divided into courses at Bachelor's level and Master's level (Figure 13Figure 11). Bachelor students in their third or fourth year are welcome to attend seminar courses at Master's level.
 - **IN0014:** Bachelor seminar course
 - **IN2107:** Master seminar course

[1] Informatics
Lectures in Informatics ⓘ
Practical Courses in Informatics ⓘ
Seminar Courses in Informatics ⓘ
◆ [IN0014] Advanced Seminar Course ⓘ
◆ [IN2107] Advanced Seminar Course ⓘ
Language Courses ⓘ

Figure 13: Seminar courses in Informatics are sorted by study level in Bachelor seminar courses (IN0014) and Master seminar courses (IN2107).

- When you open the sections for either IN0014 or IN2107, the list of all seminars at the respective study level will open. As this list is very long, it takes some time to load. Please be patient 😊
- Scroll down to the **red triangles**.
- In Figure 14 you see three examples for course dates of seminars. In the academic year 2022/23, example (1) was not offered, example (2) was offered in both winter and summer semester, and example (3) was offered only in winter semester 2022/23.
- Most likely the same or a similar seminar will be offered in the same cycle/semester in the future.
- Thus prepare several seminars from thematic areas of your interest for the first version of your study program/learning agreement. Some exchange students chose to indicate the module code as a place holder first, and then adapt their study program at a later point of time, once courses are published or – even better - places got allocated via the matching.

☐	▲ Master Seminar: Knowledge Reuse: From Threat to Causal Models and Back! (IN2107, IN4912) ⓘ	orange plus-sign = course title. green sphere = exam for the course. red triangle = course itself.			
(1)	Course(s) in academic year ⓘ 2022/23 ⓘ Part Lecturer (Assistant) Place (1st session) Time (1st session) No entries.				
☐	▲ Master Seminar: 3D Machine Learning (IN2107, IN4429) ⓘ				
	Course(s) in academic year ⓘ 2022/23 ⓘ Part Lecturer (Assistant) Place (1st session) Time (1st session)				
(2)	0000006111 22W 2SWS SE Master Seminar: 3D Machine Learning (IN2107, IN4429) ⓘ	Dai A [L], Dai A, Franzmann A, Weitz S	02.13.010, Seminarraum (5613.02.010)		18.10.22 10:00 - 12:00
	0000002335 23S 2SWS SE Master Seminar: 3D Machine Learning (IN2107, IN4429) ⓘ	Dai A [L], Artemov A, Bokhovkin A, Dai A, Franzmann A, ...	02.13.010, Seminarraum (5613.02.010)		18.04.23 10:00 - 12:00
☐	▲ Master Seminar 3D Vision (IN2107, IN4911) ⓘ				
☐	▲ Master-Seminar - 3D Shape Generation and Analysis (IN2107, IN4482) ⓘ				
(3)	Course(s) in academic year ⓘ 2022/23 ⓘ Part Lecturer (Assistant) Place (1st session) Time (1st session)				
	0000000992 22W 2SWS SE Master-Seminar - 3D Shape Generation and Analysis (IN2107, IN4482) ⓘ	Cremers D [L], Köstler L (Gao M, Yenamandra T)	Online: Videokonferenz / Zoom etc.		21.07.22 10:00 - 11:30

Figure 14: Examples of course dates for seminar courses. Example (1) is not offered in the academic year 2022/23, example (2) offered in both winter semester 2022/23 and summer semester 2023, and example (3) is only offered in winter semester 2022.

6. Summary

What to do now?

- Make a **first choice of courses**
- Use our form “course wish list” to make a draft of a first study plan and **prepare substitutes**, in case courses you are interested in are not available in your exchange semester. You find the form at www.cit.tum.de/cit/studium/internationales/informatics-incoming/courses/ (section “Application to TUM: Course Wish List”)
- You find detailed information on exchange studies at TUM CIT Informatics on our **website** www.cit.tum.de/cit/informatics-incoming
- Don’t worry! We will have a **webinar on courses before** your exchange stay with us, in July or February respectively
- We expect students who have been nominated to TUM CIT Informatics to study with a strong focus in Informatics. Thus at least 60 % of your courses and ECTS workload have to be from TUM CIT Informatics.
- If you are also interested in courses from other subject areas at TUM, you can find courses via the [general courses search](#) in TUMonline.

Status as of August 2024