How to find courses for your exchange stay at TUM Informatics

Content:

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

You have been **nominated for TUM 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 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*)
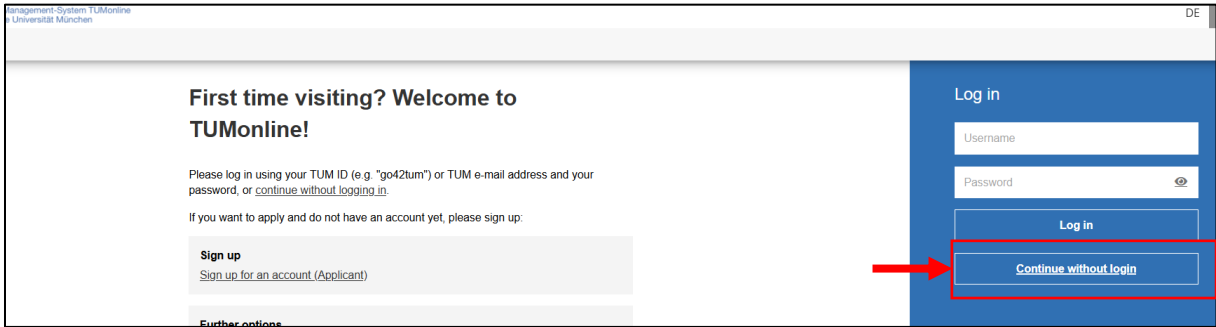

Figure 1: Home page of TUMonline

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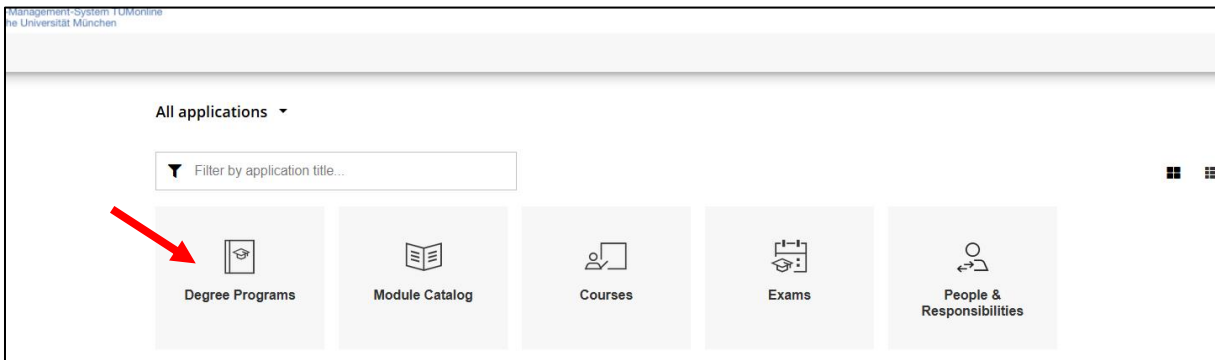

Figure 2: Applications in TUMonline

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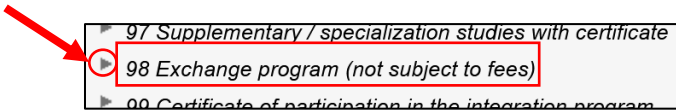

Figure 3: Select "98 Exchange Progam (not subject to fees)" by clicking on the arrow on the left

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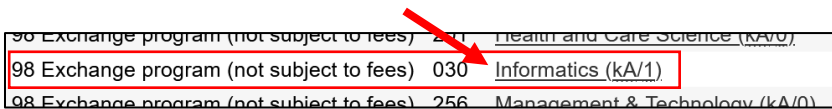- Select the Exchange program for "**030 Informatics**" (Figure 4).

Figure 4: Exchange Program Informatics 030

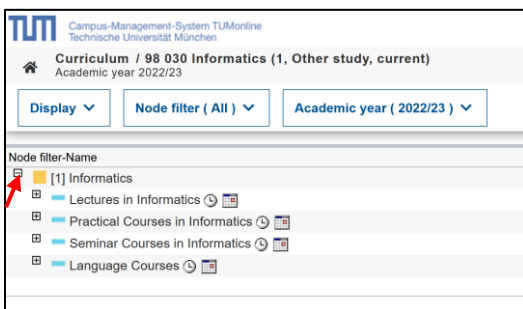- Open the course program by clicking on the **+ sign** (Figure 5).

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

2. Different Types of courses at TUM 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 <u>exam</u> after the lecture period during the exam period ([TUM Informatics academic calendar](#)). The amount of given ECTS credits varies between 3-8 ECTS, most lectures have no limit of capacities! (TUM Informatics [lectures with capacity limit](#))
- **Practical course**: Usually a <u>software project</u> in a specific subject area (e.g. data bases, security), <u>group work and presentations</u> 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 <u>essay</u> and gives a <u>talk</u> in front of the group. Usually graded according to your essay, your talk, and regular, active attendance during the seminar. 5 ECTS
- **Language course**: 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.

TIPP: 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. **Seminar courses** are great to focus on intesting topics and discuss with your fellow students. Both practical courses and seminar courses are limited in capacity. Spots are therefore alloted 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. Before that point of time, please refer to the previous academic year and the respective summer or winter semester. Most courses will be offered in the same **cycle**, but no guarantee.
- Therefore, prepare a preliminary study plan as part of your application to TUM with our form [course wish list](#), and also include **substitutes**.
- **60 % of your courses** and workload at TUM have to be in the subject area of Informatics (not including 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!

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 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 of the course, workload, language, required prior knowledge and link to the course organisers (Figures 9 and 10).
- Click on the given place for a redirect to a **map of the building.** TUM has several campuses spread over Munich (Campus locations), TUM Informatics is mainly located in Research Center Garching)

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

- Some lectures have accompanying **exercises**, which are listed with a separate red triangle (Figure 8).
- Exercises are not optional. If a lecture has an exercise session, it is mandatory to take part.

Figure 8: Example of a lecture that is offered in winter semester 2022 and has an accompanying exercise.

Figure 9: Example of a course description. If you klick on the underlined title of a course under the red triangle (Figure 7), you will be redirected to the course description. The overview gives information on the lecturers, workload, course language and a link to the organizing chair.

Overview	Content	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.
Description		
Dates and Groups	Previous knowledge expected	Module IN0015: Discrete Structures It is expected that participants are experienced in formally proving statements and are familiar with standard theorem proving techniques. Addtionally, basic knowledge of complexity theory is useful (e.g., Module IN0011).
Status within Curriculum		
Equivalent courses		
View course registration details	Objective	Module IN0015: Discrete Structures It is expected that participants are experienced in formally proving mathematical statements and are familiar with standard proof techniques. Addtionally, basic knowledge of complexity theory is useful (e.g., Module IN0011).
Registration expired		
ⓘ Please note the participation criteria and registration information		

Figure 10: [continuation of Figure 9] The description of the course gives information of the course content, previous knowledge that is expected from the students 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 level and Master level (Figure 11). Bachelor students in their third or fourth year are welcome to attend practical courses at Master level if meeting the prerequisites.
  - **IN0012**: Bachelor practical course
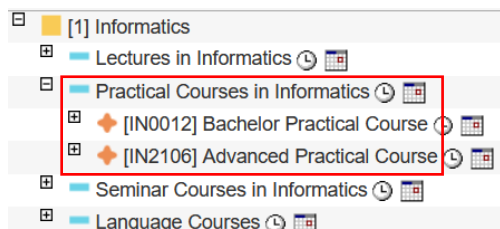 - **IN2106:** Master (advanced) practical course

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 12Figure 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 similar practical courses will be offered in the same cycle/semester in the future.

Thus prepare several practical courses from thematic areas of your interest for your first version of a 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.

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. Seminar courses in Informatics

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

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 seminar 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 14 you see three examples for course dates of seminar courses. 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 similar seminar courses will be offered in the same cycle/semester in the future.
- Thus prepare several seminar courses from thematic areas of your interest for your first version of a 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.

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 is 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 detailed information on exchange studies at TUM Informatics on our **website** https://www.cit.tum.de/cit/studium/internationales/informatics-incoming/
- Don't worry! We will have a **Webinar before** your exchange stay with us, in July or February respectively
- We expect students who have been nominated to TUM Informatics to study with a strong focus in Informatics. Thus at least 60 % of your courses and ECTS workload have to be from TUM 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.

<u>Status as of March 2023</u>