

**Prof. Dr. Stefan Kaskel**

Dean of Faculty: Chemistry and Food Chemistry

# Chemistry @TUD

## The new English Master Program

IntroMaster<sup>Web</sup>, 4/13/2022



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Information Flyer



# TU Dresden at a glance

## German University of Excellence since 2012

- Students (WS 2021/22): 30.588
  - International Students: 4.916 from ca. 125 Nations
  - Beginners: 6.241
- Courses: 124
- Numerous international cooperation programs
- Employees (2020): ca. 8.750
- Total budget 2020: 782 Mio. Euro
  - External funds : 322,8 Mio. Euro

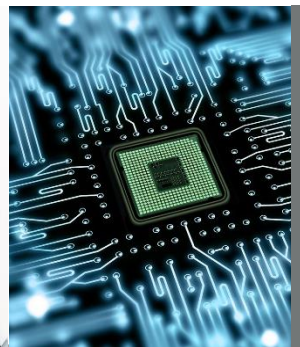




# Why Chemistry?

Chemistry provides Solutions for major Societal Challenges

- **Energy | Mobility | Environment**
- **Sustainability | Resources**
- **Health and Food**
- **Information Technology | Microelectronics**



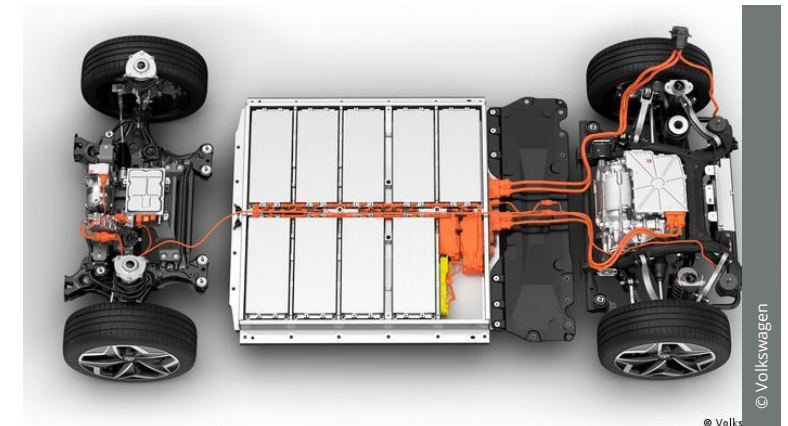
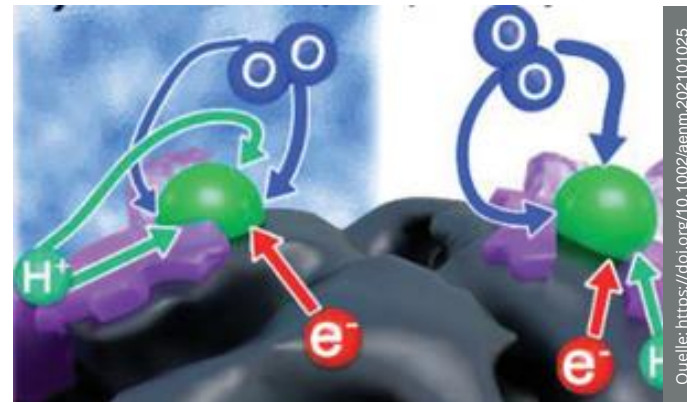




# Energy

## Storage and Conversion

- **Energy Economy Transformation**
- **Electromobility**
- **Lithium Ion Batteries**
- **Hydrogen Technology**
- **Catalysis**

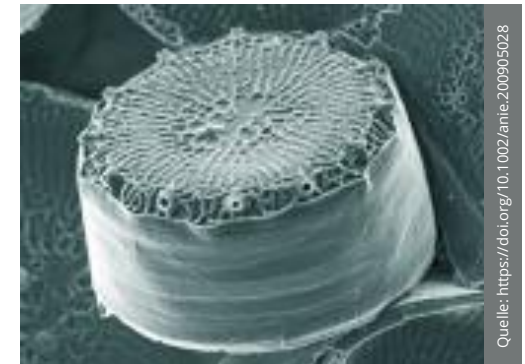
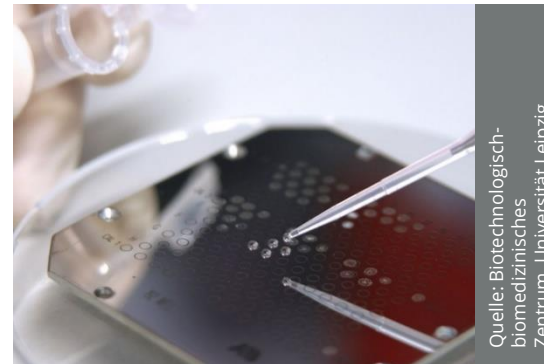
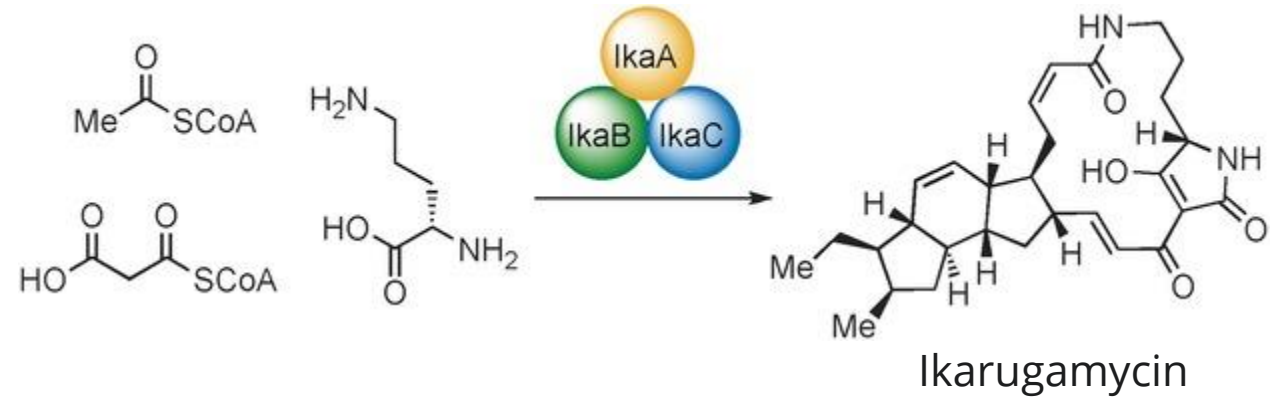


# Health

## Medicine, Hygiene



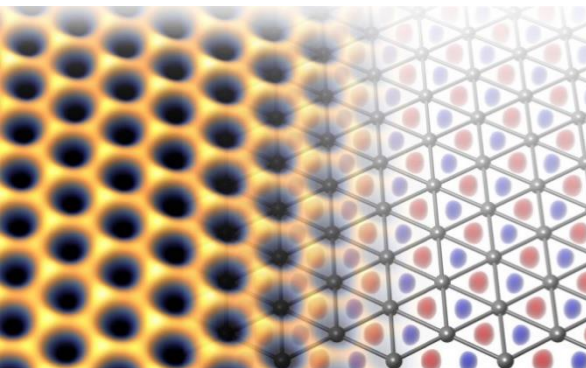
- Pharmacological Molecules
- Biochemistry/Biocatalysis
- Medicinal Chemistry
- Biomaterials



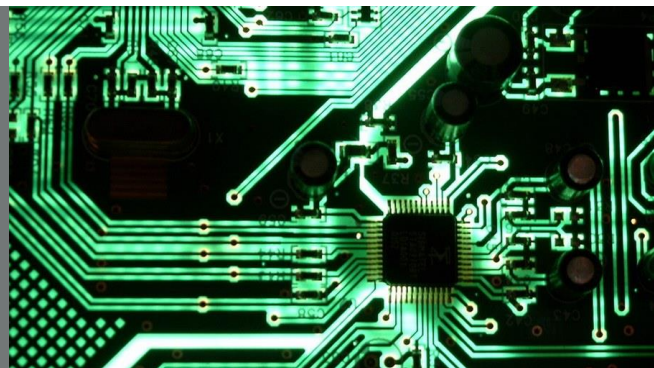
# Information Technology

## Chemistry plays key role for Chip Industry

- **Dresden:**  
*The European Semicon Center with numerous Jobs*
- **Silicon Saxony**
- **New Materials for Computers,**
- **Quantum computing**



Quelle: Exzellenzcluster ct.qmat



© Matthias Rietsche/Reuters



© Infineon Dresden



# Faculty: Chemistry and Food Chemistry

## Research Arena



23 Professors:

16(I) + 5(J) + 2(H)

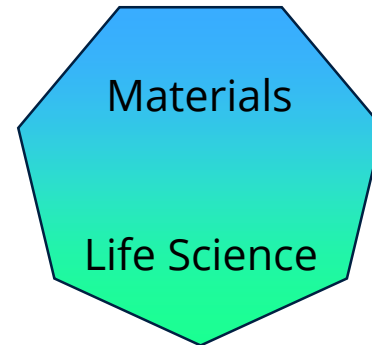


Physical Chemistry

Inorganic Chemistry



Analytical Chemistry



Macromolecular Chemistry



Biochemistry

Organic Chemistry



Food Chemistry



LANDESUNTERSUCHUNGS-  
ANSTALT FÜR DAS GESUNDHEITS-  
UND VETERINÄRWESSEN



# Chemistry at TU Dresden

- **University of Excellence** since 2012
- **Modern Infrastructure and Buildings**
- **Practical Training in Presence**
- **TUD Brewery**

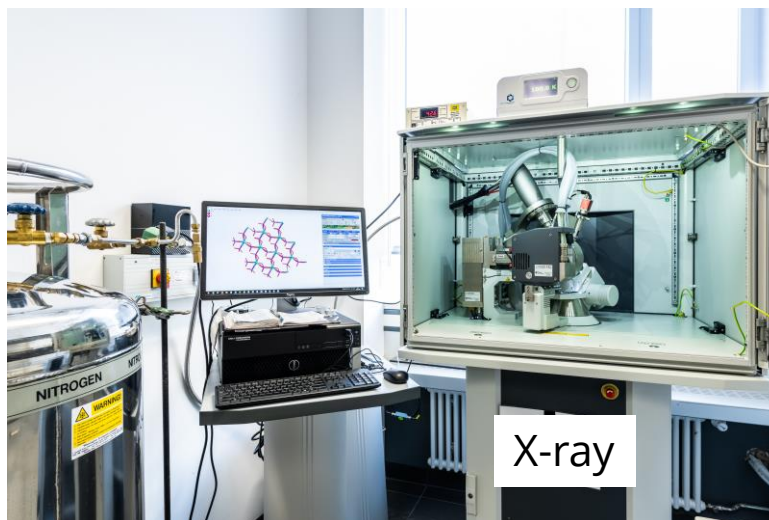
Lab visits  
Each month, Friday afternoon

Link :  
<https://tu-dresden.de/mn/chemie>





# Equipment Impressions



All fotos: © M. Kretschmar (D7 TUD)



# The Campus

Chemistry Building





Prof. Dr. Jan J. Weigand

# Master Program Chemistry



© panthermedia.net / Geribody



# Chemistry

Who?

**Motivated students** interested in

- modern chemical research
- chemical challenges of the 21<sup>st</sup> century (sustainability, development of new materials and drugs)



© Crispin-Iven Mokry



© Crispin-Iven Mokry

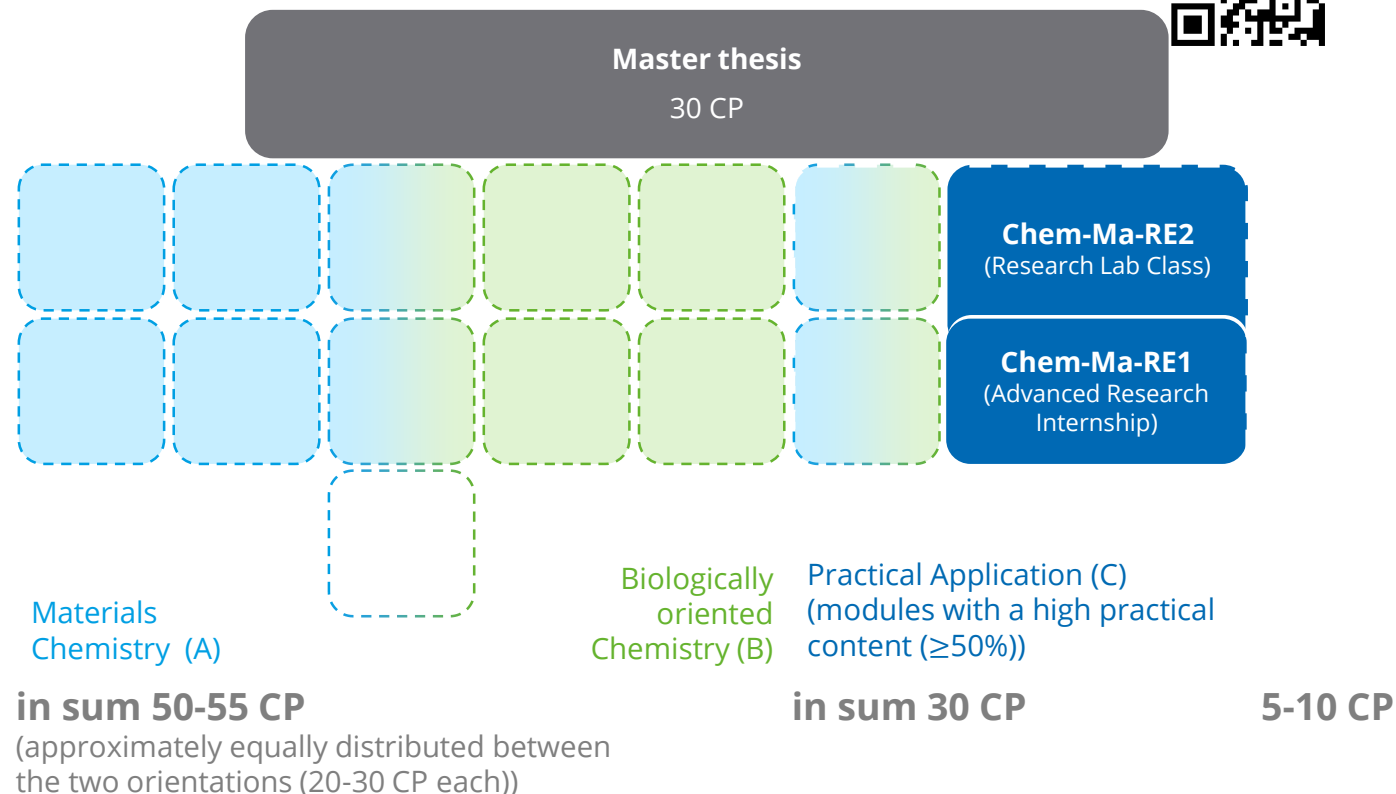
## Prerequisites for application:

- a first university degree in Chemistry (or comparable field)
- proven proficiency in English at an advanced B2 level (e.g. TOEFL: 75 points (at least 18 points each subsection) or IELTS: 6.0)
- Selection commission procedures apply
- **No tuition fees!**
- Some administration fees apply each semester (including benefits)

# Chemistry

## How?

- **Four semesters**  
enrollment in both summer and winter semesters
- **Full-time study**  
(Part-time study possible)
- **Modular Structure**
  - modules in the amount of 5 or 10 CP
  - 120 CP in total required (of which 30 CP for master thesis)
  - only two obligatory modules (Chem-Ma-RE1; Chem-Ma-RE2)
  - remaining modules selectable
- **subdivision into two pillars** (to be taken in approx. equal proportions)
  - Materials Chemistry
  - e.g. Modern Aspects in Industrial Chemistry; Polymer Materials; Crystal Structure Determination; Colloids and Interfaces; Advanced Theoretical Chemistry; etc.
  - Biologically Oriented Chemistry
  - e.g. Natural Product Synthesis – Strategies and Synthesis Planning; Principles of Medicinal Chemistry; (Bio-)Chemistry of Natural Product      Biosynthesis; etc.



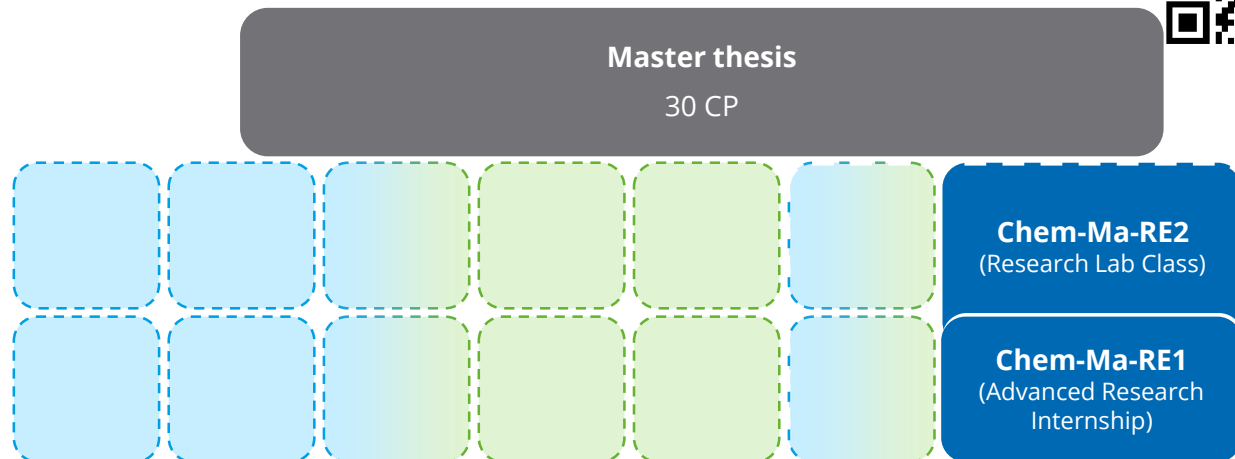
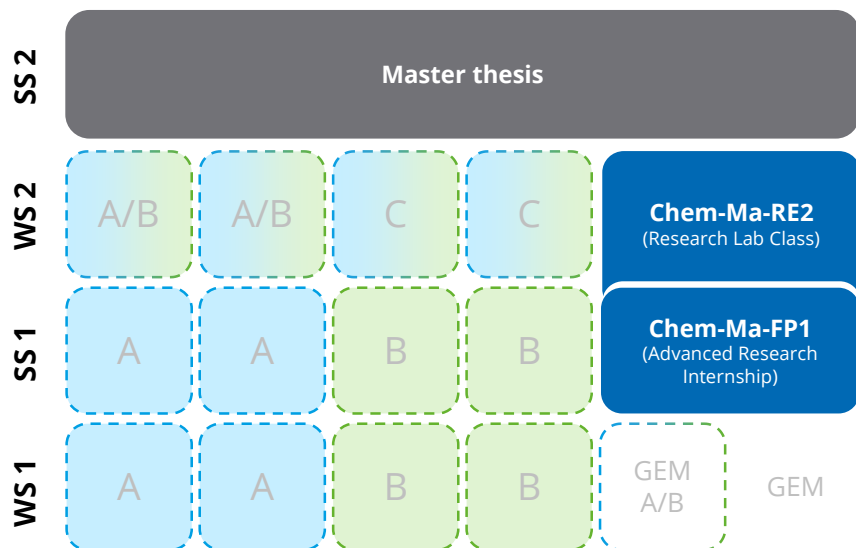
# Chemistry

## How?



ideally 30 CP per semester

### Possible distribution with semester sequence



Materials Chemistry (A)

Biologically oriented Chemistry (B)

Practical Application (C)  
(modules with a high practical content (≥50%))

**in sum 50-55 CP**

(approximately equally distributed between the two orientations (20-30 CP each))

**in sum 30 CP**

**5-10 CP**

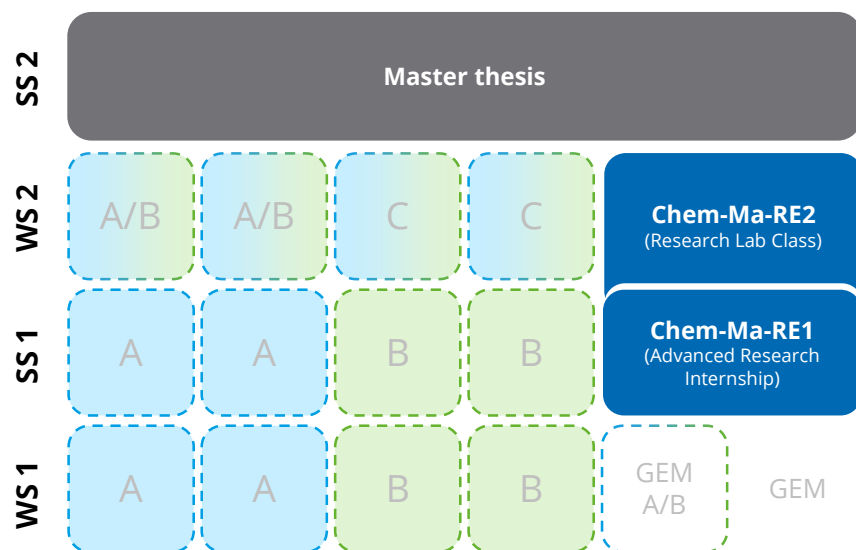


# Chemistry

## How?

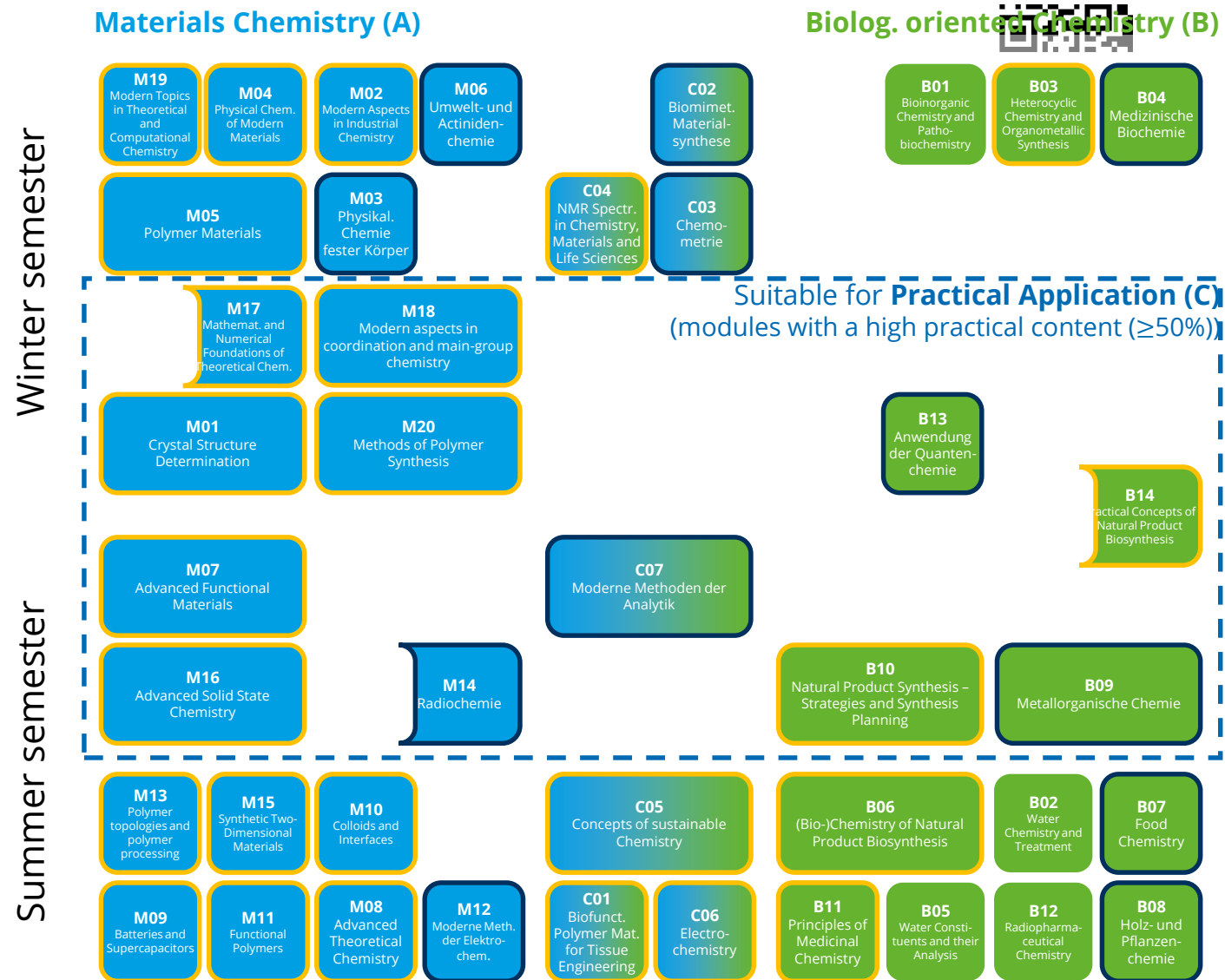
- Very flexible choice of individual course composition

### Possible distribution with semester sequence



## Elective Modules

(framecolour: **Englisch**; **German**)





# Application Deadlines

- German and International Students: **July 31<sup>st</sup>**
- In the case of bachelor degrees awarded abroad, applicants must present the certificate **before 31 May**



# Further Information

## Information Flyer



**TECHNISCHE UNIVERSITÄT DRESDEN**

### TU Dresden

TU Dresden is the biggest university in Saxony and one of 11 universities of excellence in Germany. 30,500 students, including 17% international students, study in more than 120 degree programs on four different campuses. Our focus is on providing a world-class interdisciplinary education and we support our international students with a wide-ranging system of counseling and support programs.

### Dresden

Dresden is the capital of the Free State of Saxony and stands majestically on the river Elbe. The fourth-largest city by area in Germany, Dresden is home not just to riverside palaces, Baroque churches and world-class museums but also to a proud history of science and technology. This finds continuity into the present with the DRESDEN-concept, an alliance of 33 research institutes in and around Dresden, of which TU Dresden is a part.

### Contact

**Hotline ServiceCenterStudies**  
☎ 0049 351 463-42000  
✉ [servicecenter.studium@tu-dresden.de](mailto:servicecenter.studium@tu-dresden.de)  
🌐 [tu-dresden.de/scs](http://tu-dresden.de/scs)

**Faculty of Chemistry and Food Chemistry**  
☎ 0049 351 463-34045  
✉ [studienfachberatung@chemie.tu-dresden.de](mailto:studienfachberatung@chemie.tu-dresden.de)  
🌐 [tu-dresden.de/chemie](http://tu-dresden.de/chemie)

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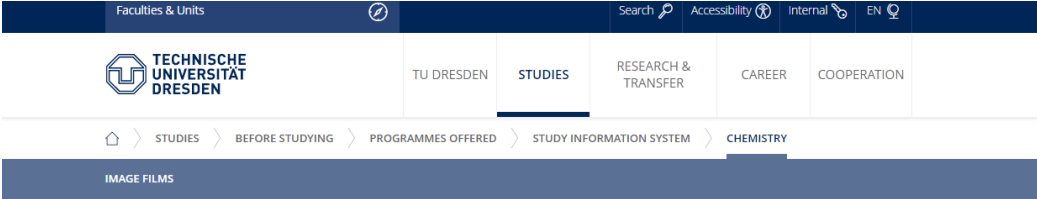


Information about the degree program  
[tu-dresden.de/sins/ma-chem](http://tu-dresden.de/sins/ma-chem)



International Master's Program  
**Chemistry**

## Web Page



Faculties & Units | Search | Accessibility | Internal | EN

TECHNISCHE UNIVERSITÄT DRESDEN

TU DRESDEN | **STUDIES** | RESEARCH & TRANSFER | CAREER | COOPERATION

STUDIES > BEFORE STUDYING > PROGRAMMES OFFERED > STUDY INFORMATION SYSTEM > **CHEMISTRY**

IMAGE FILMS

### DEGREE PROGRAMME CHEMISTRY (MASTER) accredited

Displayed information is valid until May 2022 and can be subject to change without prior notice.

Degree	<b>Master of Science</b>
Standard period of study for full-time studies	<b>4 semesters</b>
Language of instruction	<b>English</b>
Tuition fees per semester	<b>-&gt; semester contribution and -&gt;se study or long term study fees if applicable</b>
Mode of study	<b>direct studies</b>
Type of study	<b>postgraduate</b>

**Application procedure for German applicants and educational residents**

**Application procedure for international applicants**





# Erasmus / Erasmus+ worldwide:



Erasmus+

## International Credit Mobility (ICM)



*European community action scheme for the mobility of university students*

- Training in another Country
- Foreign Language Experience
- Complementary Expertise
- Student Exchange



<https://tu-dresden.de/mn/internationales>

**Dr. Philipp Schlender**

Administrator, Faculty Chemistry and Food Chemistry



# Student Information and Advisory Service

Specific Advice, always open for a question:

## **Chemie (Bachelor, Master):**

Dr. Philipp Schlender

Walther-Hempel-Bau Zi. 205,

Telefon: 463-34045, Fax: -37107

E-Mail: [studienfachberatung@chemie.tu-dresden.de](mailto:studienfachberatung@chemie.tu-dresden.de)

