

University of Stuttgart  
Germany



M.Sc. WASTE

# Welcome Generation 2020! M.Sc. WASTE

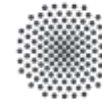
30.10.2020

Dr.-Ing.  
Carolina Acuña  
M.Sc.  
Grecia Solis



# M.Sc. WASTE Office

M.Sc. WASTE Office Team



University of Stuttgart  
Germany

Dean of Studies



Prof. Andreas  
Kronenburg

Course Director



Dr. -Ing. Carolina  
Acuña Caro

Course Manager



Grecia Solís  
Castillo, M.Sc.



M.Sc. WASTE



Hector Cañas



Javier Carrillo



Tijen Karimani



Tianju Zhang



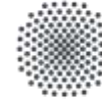
Pawan Bhojar



Gariela Laperche

# M.Sc. WASTE Office

M.Sc. WASTE Office Team



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Germany



## M.Sc. WASTE Office (room o.02)

- Announcements via E-mail
- Organization of events

E-mail: [info@waste.uni-stuttgart.de](mailto:info@waste.uni-stuttgart.de)

## M.Sc. WASTE Course Director (room o.03)

Dr. -Ing. Carolina Acuña Caro

Office hours: cancelled / Phone: +49 (0) 711 685 68947

E-mail: [cd-waste@ifk.uni-stuttgart.de](mailto:cd-waste@ifk.uni-stuttgart.de)

## M.Sc. WASTE Course Management (room o.04)

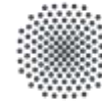
Grecia Solís Castillo, M.Sc.

Office hours: cancelled / Phone: +49 (0) 711 685 68936

E-mail: [cd-waste@ifk.uni-stuttgart.de](mailto:cd-waste@ifk.uni-stuttgart.de)

# M.Sc. WASTE Committees

M.Sc. WASTE Team



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Examination Committee (Prüfungsausschuss)

*Chairman: Prof. Dr.-Ing. Eckart Laurien*

Admissions Committee (Zulassungsausschuss)

*Chairman: Prof. Dr.-Ing. Eckart Laurien*



Study Committee (Studienkommission)

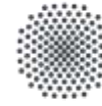
*Chairman: Prof. Dr.-Ing. Andreas Kronenburg*



M.Sc. WASTE

# M.Sc. WASTE Office and partners

International Center (IZ)



University of Stuttgart  
Germany

## Social Affairs

They provide you:

- ✓ Assistance with legal and social procedures
- ✓ Accommodation
- ✓ Scholarships

<https://www.uni-stuttgart.de/en/university/international/service/>



**Ms. Svenja Wübker**

**International Master Students  
+ Double Degree Students**

Online consultation hours: Mo + Wed 1.30 p.m. to 4 p.m. & Tue + Thurs 10 a.m. to 12 p.m.

wuebker@ia.uni-stuttgart.de



**Ms. Katja Jenkner**

**International Master Students  
+ DAAD Scholars**

Online consultation hours: Mo + Wed 1.30 p.m. to 4 p.m. & Tue + Thurs 10 a.m. to 12 p.m.

incoming.daad@ia.uni-stuttgart.de

# Studying during pandemic

Homepage University of Stuttgart → Current regulations

<https://www.uni-stuttgart.de/universitaet/aktuelles/meldungen/corona/>



October 28, 2020

## Newsticker: Information on the coronavirus

The university management informs employees, students and applicants/prospective students continuously about current developments regarding the coronavirus. Information on examinations, studies, digital teaching, enrolment, work organisation and childcare.

Stuttgart informs you about local regulations on their homepage <https://coronavirus.stuttgart.de/>

## Informationen zum Coronavirus

Wir informieren Sie über die wichtigsten Fragen und  
Antworten.

Weitere Sprachen /  
Further Languages

Baden-Württemberg | Unser Land | Regierung | BW gesteuert | Service

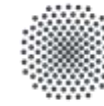
COVID-19

### Aktuelle Änderungen der Corona-Verordnungen

Official regulations for Baden-Württemberg on the federal state homepage  
<https://www.baden-wuerttemberg.de/de/startseite/>

# The M.Sc. WASTE: An Overview

## Introduction



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### Background:

- Chemical
- Civil
- Process
- Mechanical

**Theoretical background** to engineer creative solutions for environmental challenges

**State-of-the-art** environmental and process technologies

**Individual profile** in the environmental sector

**Practical experience** excursions to companies and industrial and/or municipal facilities



## Landfill in Bangladesh



## Surfing Wave in Java, Indonesia



## Smog in Beijing







Reuters



populationspeakout.org

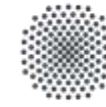


populationspeakout.org



greenatom.net

# The M.Sc. WASTE: Our Alumni



University of Stuttgart  
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## German industry



# The M.Sc. WASTE: Our Alumni

## German small and medium sized companies



Wasser- und Abwassertechnik



**EISENMANN**

LEADING IN PRODUCTION EFFICIENCY



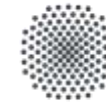
Die Experten für abwasserfreie Produktion



## Universities and Research Institutes



# The M.Sc. WASTE: Our Alumni



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Germany



## Companies at their home countries



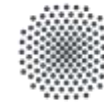
LEADING IN PRODUCTION EFFICIENCY



energy people



# The M.Sc. WASTE: Historical highlights



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INTERDISCIPLINAR

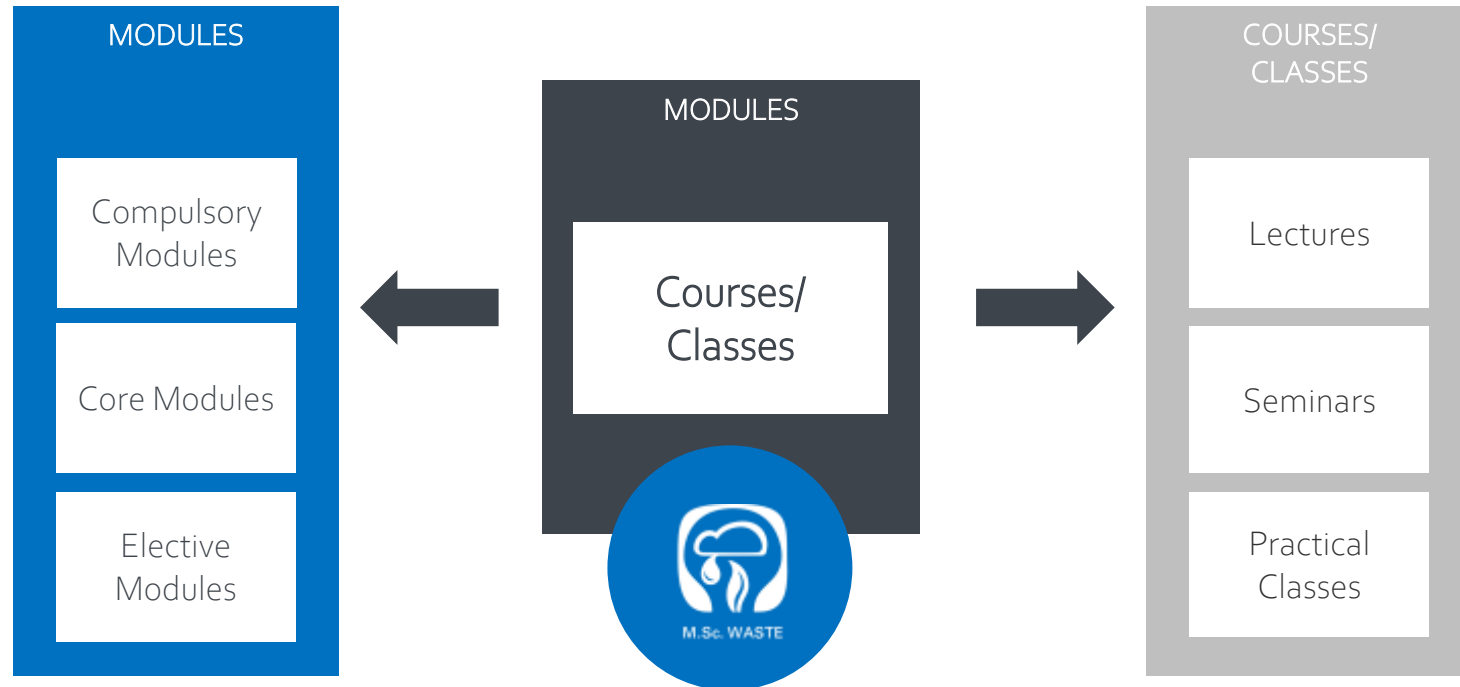
INDIVIDUAL

INTERCULTURAL

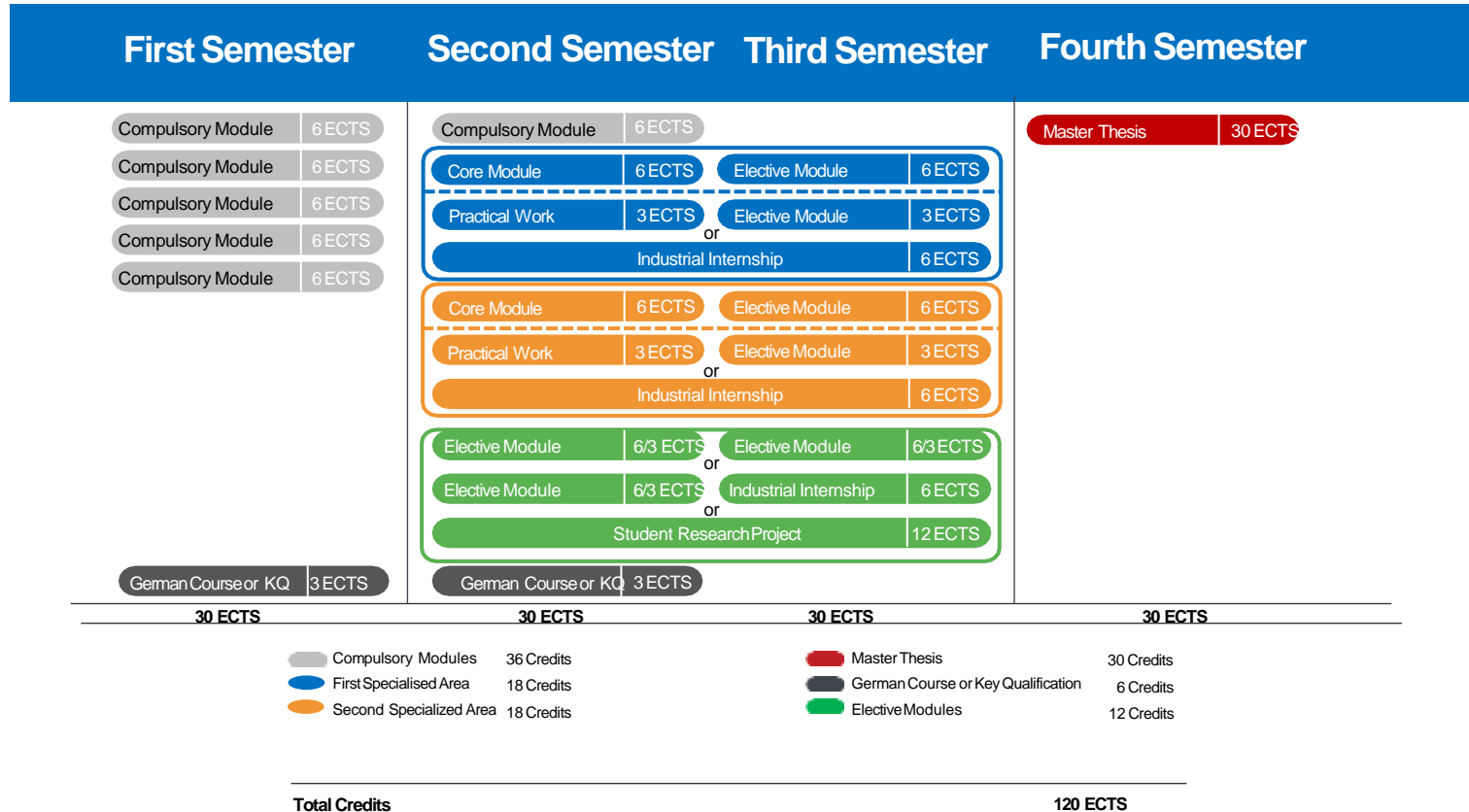
- Established in 2002 as a 3 semester program
- Changed in 2008 to 4 semesters
- Start in September – incl. German course
- Start in October – excl. German course
- Bologna Process: M.Sc. WASTE based on a modular system
- **Degree: Master of Science**



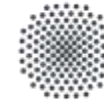
# The M.Sc. WASTE: Modules definition



# The M.Sc. WASTE: Macrostructure



# The M.Sc. WASTE: Macrostructure



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M.Sc. WASTE

## Advanced modules (36 credits)

- Consolidation via 6 compulsory modules

## 2 Specialized Areas (each 18 credits)

- Air Quality Control
- Solid Waste
- Waste Water Process Engineering

## Elective Modules (12 credits)

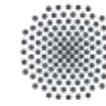
- Modules in English and German
- Student Research Project
- Industrial Internship

## German Course and/or Key Qualifications (6 credits)

## Master Thesis (30 credits)





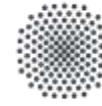


## Compulsory Modules of the 1<sup>st</sup> and 2<sup>nd</sup> semester

- Thermo- and Fluid Dynamics (Kronenburg/Laurien)
- Pollutant Formation and Air Quality Control (Kronenburg/Vogt)
- Chemistry and Biology for Environmental Engineers (Engesser/Schönberger/Schwederski)
- Sanitary Engineering (Fischer/Schönberger)
- Process Engineering (Eiden/Trautmann)
- Technology Assessment and Presentation Techniques (Hufendiek)



# The M.Sc. WASTE: Specialized Areas



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## Air Quality Control (18 Credits)

### Mandatory Core Module (6 Credits)

- Firing Systems and Flue Gas Cleaning (Scheffknecht)

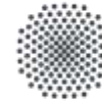
### Elective Modules (9 credits)

### Practical Work (3 Credits)

- Practical Class Air Quality Control



# The M.Sc. WASTE: Specialized Areas



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## Solid Waste (18 Credits)

### Mandatory Core Module (6 Credits)

- Mechanical, Biological and Thermal Waste Treatment (Fischer/Gehrmann)

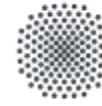
### Elective Modules (9 credits)

### Practical Work (3 Credits)

- Sanitary Engineering Part I: Solid



# The M.Sc. WASTE: Specialized Areas



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## Waste Water (18 Credits)

### Mandatory Core Module (6 Credits)

- Urban Drainage and Design of Wastewater Treatment Plants (Schönberger/Dittmer)

### Elective Modules (9 credits)

### Practical Work (3 Credits)

- Sanitary Engineering Part II: Water







Welcome to the M.Sc. WASTE – Dr. Ing. Carolina Acuña Caro – Grecia Solís Castillo, M.Sc.







# The M.Sc. WASTE: Basic Rules



- Each semester around 30 Credits (+/- 10%)
- Total: 120 Credits in 4 semesters
- Industrial internship optional, minimum duration 6 weeks
- Further questions? Please refer to our FAQs:

[http://www.waste.uni-stuttgart.de/archive/downloads/MSc\\_WASTE\\_FAQs\\_While-Studying\\_2017.pdf](http://www.waste.uni-stuttgart.de/archive/downloads/MSc_WASTE_FAQs_While-Studying_2017.pdf)



# The M.Sc. WASTE: German language courses



## Language Center University of Stuttgart

[http://www.sz.uni-stuttgart.de/deutsch/daf\\_info.en.html](http://www.sz.uni-stuttgart.de/deutsch/daf_info.en.html)

## Private Language Schools

Institut für Auslandsbeziehungen (ifa)

<http://www.ifa.de/en.html>

Deutschkolleg im Ökumenischen Zentrum

<http://www.deutschkolleg-stuttgart.de/de/deutschkurs-programm.php>

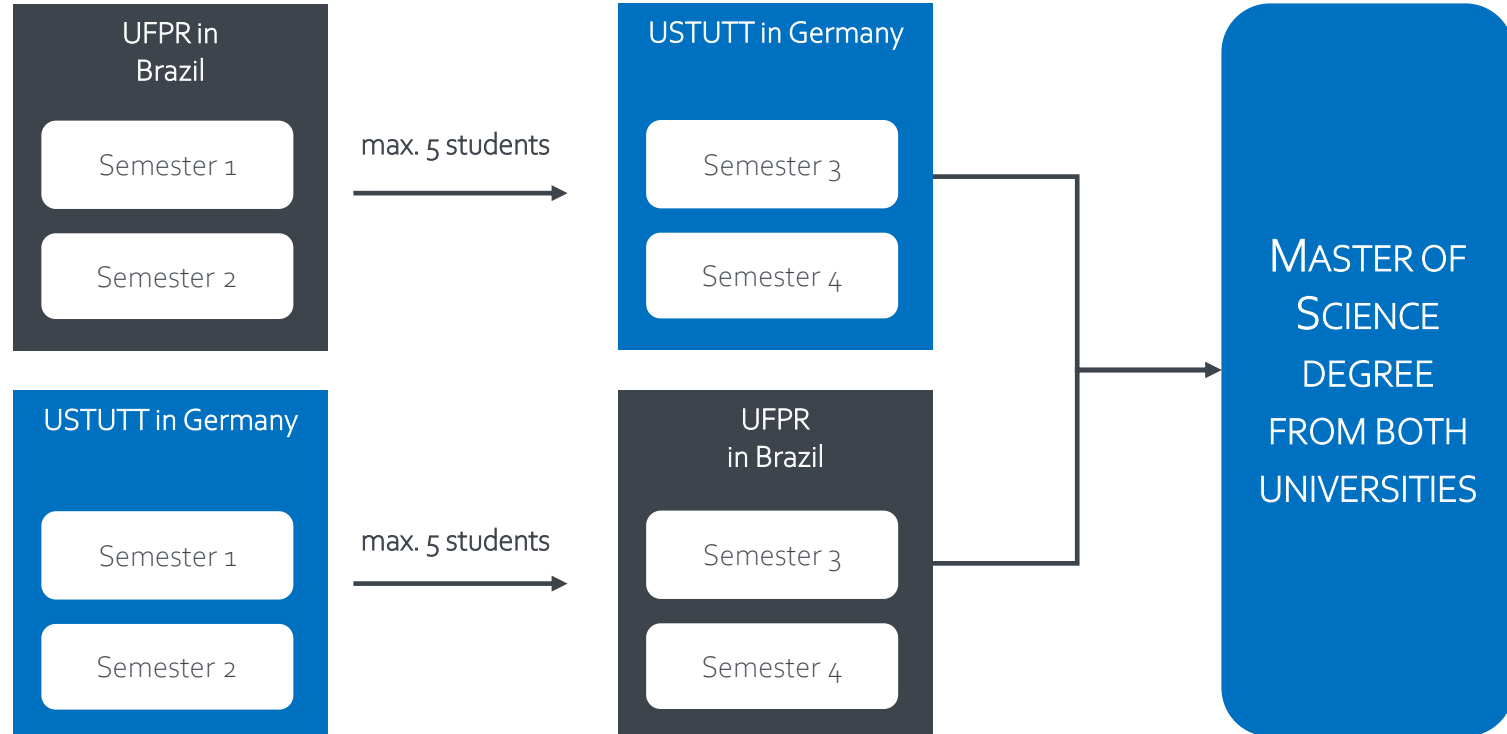
VHS Stuttgart

<http://www.vhs-stuttgart.de/>

Henke Schulungen

<http://www.henke-schulungen.de/de/uebersicht.html>

# The M.Sc. WASTE: Double Degree



# The M.Sc. WASTE: Examination Regulations



## ***Examinations Office - University of Stuttgart***

Haus der Studierenden

Pfaffenwaldring 5c // 3<sup>rd</sup> floor

Campus Vaihingen

### **Office hours:**

Monday	1.30 p.m. – 03.30 p.m.
Tuesday	9.00 a.m. – 12.00 p.m.
Wednesday	1.30 p.m. – 03.30 p.m.
Thursday	9.00 a.m. – 12.00 p.m.
Friday	9.00 a.m. – 12.00 p.m.



Welcome to the M.Sc. WASTE

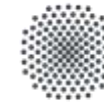
## Air Quality Control, Solid Waste and Waste Water Process Engineering

We offer an extensive and unique range of graduate courses educating students to respond to the increasing environmental challenges in the fields of Air Quality Control, Solid Waste, and Waste Water Process Engineering.

[Photo: Jeramiah Backman Photography]

# Organizing my studies

## C@MPUS Platform



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The screenshot shows the C@MPUS platform homepage. The header includes the University of Stuttgart logo and name, the C@MPUS logo, and language options (DE, EN). A search icon is also present. The main content area features a large background image of a university building and trees. The text on the page includes a welcome message, a description of the platform, and sections for Students and Employees, Applicants, Without registering, and Further information. On the right side, there is a blue sidebar with a 'Log in' section containing input fields for 'User name' and 'Password', and buttons for 'Log in' and 'Continue without login'.

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**C@MPUS**

DE EN

Log in

**Welcome to C@MPUS,**  
**the Campus Management Portal of the University of Stuttgart**

which provides continuous IT Support to the administrative processes involved in academic affairs and teaching.

**Students and Employees**

log in using your University of Stuttgart user account (ex. ac123456, st987654).

**Applicants**

that do not already study or work at the University of Stuttgart will first need to register.  
Former students who wish to reapply but no longer have an active user account should re-register and then follow the instructions provided in the confirmation email.

**Without registering**

you can access detailed information about the courses offered at the University of Stuttgart.

**Further information**

can be found in the documentation.

Log in

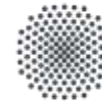
User name

Password

Log in

Continue without login

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## STEP 1: Lecture Registration (C@MPUS)

- Access to lecture material
  - Calendar
  - Guarantee your spot (Practical works - Lab)
- Lectures Start: 02.11.2020**

## STEP 2: Exam Registration (C@MPUS)

- **MUST DO!**
  - Allow you to take an exam
  - Allocate it in the right place of your curriculum
- 11.11. - 17.12.2020**

# Schedule first semester WS 2020/21

Students attending online from their home countries

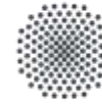
Time	Mon	Tue	Wed	Thu	Fri
08:00	<b>Chemistry and Biology for Environmental Engineers</b> Dr. Schwederski /Dr. Kuch /Prof. Engesser V38.04 Organisationskennung: 021230 Modul-Kennung: 19100 Modulkürzel: 021230502				<b>Chemistry and Physics of Combustion (V)</b> Prof. Kronenburg V31.01 Organisationskennung: 042510 Modul-Kennung: 19080 Modulkürzel: 04250027
09:45	<b>Waste Water Technology</b> Dr. Schönberger V38.04 Organisationskennung: 021220 Modul-Kennung: 19120 Modulkürzel: 021220012	<b>Thermodynamics of Mixtures (V)</b> Prof. Kronenburg V 31.01 Organisationskennung: 041611 Modul-Kennung: 19200 Modulkürzel: 041600203			<b>Basics of Air Quality Control</b> Dr. Vogt V31.01 Organisationskennung: 042510 Modul-Kennung: 19080 Modulkürzel: 04250027
11:30	<b>Chemistry and Biology for Environmental Engineers</b> Dr. Schwederski /Dr. Kuch /Prof. Engesser V38.04 Organisationskennung: 021230 Modul-Kennung: 19100 Modulkürzel: 021230502	<b>Thermodynamics of Mixtures (Ü)</b> Prof. Kronenburg V31.01 Organisationskennung: 041611 Modul-Kennung: 19200 Modulkürzel: 041600203			<b>Chemistry and Physics of Combustion (Ü)</b> Tutorials Prof. Kronenburg V31.01 Organisationskennung: 042510 Modul-Kennung: 19080 Modulkürzel: 04250027
14:00				<b>Academic communication skills</b> Group 1 Hr. Nixon Live Online-Webex	<b>Chemistry and Biology for Environmental Engineers</b> Dr. Schwederski /Dr. Kuch /Prof. Engesser V56-02 /V38.04? Organisationskennung: 021230 Modul-Kennung: 19100 Modulkürzel: 021230502
15:45				<b>Academic communication skills</b> Group 1 Hr. Nixon Live Online-Webex	<b>Chemistry and Biology for Environmental Engineers</b> Dr. Schwederski /Dr. Kuch /Prof. Engesser V56-02/V38.04? (dito s. oben)
17:30					

- Do I have to register only the online classes if I am not in Stuttgart?
- Are there different times for lectures? (time zone)
- Registration in [C@MPUS](#), lectures on [ILIAS?](#)



# Extracurricular Activities

## Rooms at the IFK



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### *M.Sc. WASTE Computer Pool (room o.78)*

- Please do not eat and drink in the computer pool.
- Please always close the window in case you are the last one to leave.

### *M.Sc. WASTE Student Room (room o.51)*

- Keep it neat and clean!

### *IFK kitchen*

- *Keep it neat and clean!*

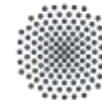


OUR HOUSE-ELVES  
ARE CURRENTLY  
ON STRIKE.

YOU WILL HAVE TO  
CLEAN UP YOUR  
OWN MESS UNTIL  
FURTHER NOTICE.

# Extracurricular Activities

## Rooms at the IFK

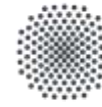


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# Extracurricular Activities

## WASTE Intercultural Meetings & Summer Party

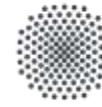


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# Extracurricular Activities

## WASTE Intercultural Meetings & Summer Party

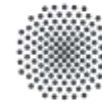


University of Stuttgart  
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# Extracurricular Activities

## WASTE Intercultural Meetings & Summer Party

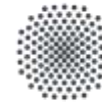


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# Extracurricular Activities

## M.Sc. WASTE Soccer Team

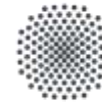


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# Extracurricular Activities

## M.Sc. WASTE Fundraising activities

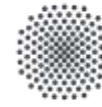


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# Extracurricular Activities

## Graduation Ceremony



University of Stuttgart  
Germany

December 5<sup>th</sup> 2020





# Extracurricular Activities

## M.Sc. WASTE Newsletter



University of Stuttgart  
Germany



M.Sc. Air Quality Control,  
Solid Waste and Waste Water  
Process Engineering  
(WASTE)

SUMMER SEMESTER 2020 - ISSUE 24

# NEWSLETTER

**CORONAVIRUS PANDEMIC: A RETROSPECTIVE OF THE DIGITAL SUMMER 2020**

University of Stuttgart



**Newletter: Information on the coronavirus**

In the beginning of this year we received, through the news, some vague views about what was happening in China during December 2019. On January 27, 2020 the first case in Germany was confirmed near Munich, Bavaria. Currently the ongoing worldwide pandemic has spread to at least 117 countries killing more than 610,000 and confined more than 14 million in a number of months (source: New York Times Aug 6, 2020).

Within this new context and after a confusing period trying to organize the last examinations of winter term (2019/20) as well as the coming summer term, the middle of March saw our university decided to implement home office for its employees and to ban the entrance of the students to the campuses. The main focus was directed at avoiding the further spread of the SARS-CoV-2. To stay at home was the main message of the German government during the following days, which, in the end, became months. Therefore, the university announced a fully online summer 2020 term starting with this measure a new challenge presented itself for the University of Stuttgart: digital teaching. Although our university already utilized some platforms to share important material for the lecturers and to assist the communication between lecturers and students, e.g. EAS, this situation brought a new challenge for both sides. On one hand the lecturers had to put in practice their creativity to offer attractive online lectures, while, on the other, students had to organize their daily activities and attend the lectures from their dormitories. Unfortunately, the management of the summer term under the given conditions was not that "easy" for everybody. Some of our international students got stuck in their home countries being unable to come back to Germany even for the period of on-site examinations. Many master thesis and student research projects were delayed until further notice.

Accordingly, corona-guidelines for study programs of the University of Stuttgart and the corona ordinance from the Federal State Government of Baden-Wuerttemberg were released and must be considered for each of the cases. Moreover, a very dynamic, informative situation assumed when the university started to publish updated information almost daily through their "Newsticker: Information on the coronavirus" page ([https://www.uni-stuttgart.de/en/university/news/coronavir/](https://www.uni-stuttgart.de/en/university/news/coronavir)). Up to date this link is still very important to follow the latest news regarding the hygiene concept, examination rules, enrollment, travel warnings, and framework of conditions for teaching in the coming winter semester 2020/21, among others.

Since the pandemic is still an ongoing issue worldwide, we must continue taking care of ourselves but also of our neighbor. Hopefully, during this time after the confinement we realized just how important social contacts, to meet friends, to breathe fresh air, to attend a lecture, to interact with professors and colleagues, and consequently try to appreciate every moment together. Let's hope for better times!

### CONTENTS

- TITLE STORY
- CORONAVIRUS PANDEMIC
- ONLINE LECTURES DURING COVID-19: Experiences of Students and Professors
- STUDYING M.Sc. WASTE
- EXTRACURRICULAR

## WASTE DURING COVID - 19: ONLINE LECTURES

### TITLE STORY

**M.Sc. WASTE NEWS**

**NEWS**

- WASTE NEW WEBSITE
- FAREWELL
- SUSTAINABILITY WEEK
- WELCOME THE NEW GENERATION
- SYMPOSIUM 2020

With the spread of the novel coronavirus in early 2020 and the resulting need to maintain social distancing, holding online lectures on virtual platforms have become essential. With the spread of the novel coronavirus in early 2020 and the resulting need to maintain social distancing, holding online lectures on virtual platforms have become essential. With the spread of the novel coronavirus in early 2020 and the resulting need to maintain social distancing, holding online lectures on virtual platforms have become essential. With the spread of the novel coronavirus in early 2020 and the resulting need to maintain social distancing, holding online lectures on virtual platforms have become essential.

Nevertheless, he reflected that the virtual lectures really require well-discipline. He said it is easy to be distracted when you have a meeting virtually and that it also requires more time management skills. After the beginning of the quarantine, he agreed that the virtual course can still be a good supplement, even if we are allowed to have normal lectures.

He added that online teaching is something that is unprecedented for both the students and professors, but was still an advantage if as a consequence of the pandemic. While in person teaching will eventually return to campus, the crisis provides an opportunity to bring more technology to the classroom. The use of digital tools and maintaining the way courses are conducted can potentially allow students to choose how they learn best. Universities across the globe quickly evolved to create digital platforms to ensure uninterrupted learning for their enrolled students. At the University of Stuttgart, students use an online platform called Moodle to attend on-line meetings and lectures. An interview was conducted to understand the students' and the professor's feedback with regards to the online lectures and their pros and cons.

Dr.-Ing. Klaus Fischer is a visiting lecturer for the M.Sc. WASTE program and, up until three years ago, was a member of DWA (Division for Sanitary Engineering, Water Quality and Solid Waste Management) and a former division manager (D). He has been conducting lectures for the WASTE program since it began and has been teaching sanitary engineering and mechanical and biological treatment of waste. He was the perfect candidate for the interview as he has been a lifelong contributor to the WASTE program.

When asked about his experience with the change to virtual platforms, he said that it was relatively easy for him as he is constantly involved in consulting and doing online meetings. Setting up online lectures was also simplified as he had his own camera and could make videos easily in addition, he had to make some changes to his curriculum to be able to add them chapter by chapter to the students.

One major change he made was giving a bit of overview after each chapter. His objective for doing this, he said, is that the students not only read the curriculum but also think about the content and read further literature about it. However, he does not feel these meetings to be advantageous as they are more time consuming for the professors to prepare additional lectures and grade more exercises now compared to the past. He commented that he has been waiting desperately for the restriction to arrive so that "he could go back to normal".

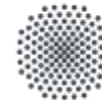
What Professor Fischer really misses is the personal interactions with the students. The questions they ask and the reactions that he gets when he is giving a lecture. Due to the online meetings, he does not have much contact with the students and he misses interacting with them. While he doing a Moodle meeting he said "you can only see a small picture and each person has a very small space" and he can't see the students smiling - "laughing or being loud". He remarked that even in the online format of lectures is helpful, it is still very distant from the actual classroom environment. He values the personal contact with people and finds that to be beneficial for forming a strong relationship. On the student side, however, some interesting feedback was received. One of the students from Generation 2019, Dorian Tu, said he prefers the online lectures more compared to the physical ones. He likes this kind of teaching methodology as he found it easy to adapt to. For example, he said that he could record the videos during the lectures and replay the video at many times, as he wants if he has difficulty in understanding something. He observed that studying online saves him a lot of time because he does not need to go to the classrooms, which are quite far away from his dorm.

Welcome to the M.Sc. WASTE – Dr.-Ing. Carolina Acuña Caro – Grecia Solis Castillo, M.Sc.

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# Extracurricular Activities

## International Symposium



University of Stuttgart  
Germany

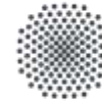
November  
26<sup>th</sup> - 27<sup>th</sup>, 2020  
via ZOOM

Online Registration:  
[www.wasteclub.net](http://www.wasteclub.net)



# Extracurricular Activities

WASTE Club Stuttgart e.V.



University of Stuttgart  
Germany



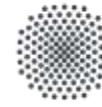
The WASTE Club is a Professional Network that supports the activities of the International MSc. “Air Quality Control, Solid Waste and Waste Water Process Engineering” (WASTE)

- Support the M.Sc. WASTE during events and excursions.
- Consolidate a Professional Network with Alumni, Students, Lecturers, and Staff from the MSc. WASTE.
- Foster public relations among members.
- Promote Science, Research and Innovation.

## Join us!

# WASTE Club Stuttgart e.V.

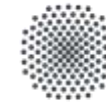
Our Alumni Network



University of Stuttgart  
Germany



# Extracurricular Activities Taskforce



University of Stuttgart  
Germany

*We need your commitment:*

- Class Speaker
- Task force member
- Newsletter coordinator
- WIM coordinator
- Symposium Committee 2021

*Ongoing project: Graduation Ceremony 2021*

\*\*Helpers do not pay entrance fee!

**Fill in the corresponding list!**



Juan Camilo  
Lancheros Mayorga



Chidiebere Oguchukwu  
Okekeozor

Class speakers  
Generation 2018





University of Stuttgart  
Germany

# Thank you!



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