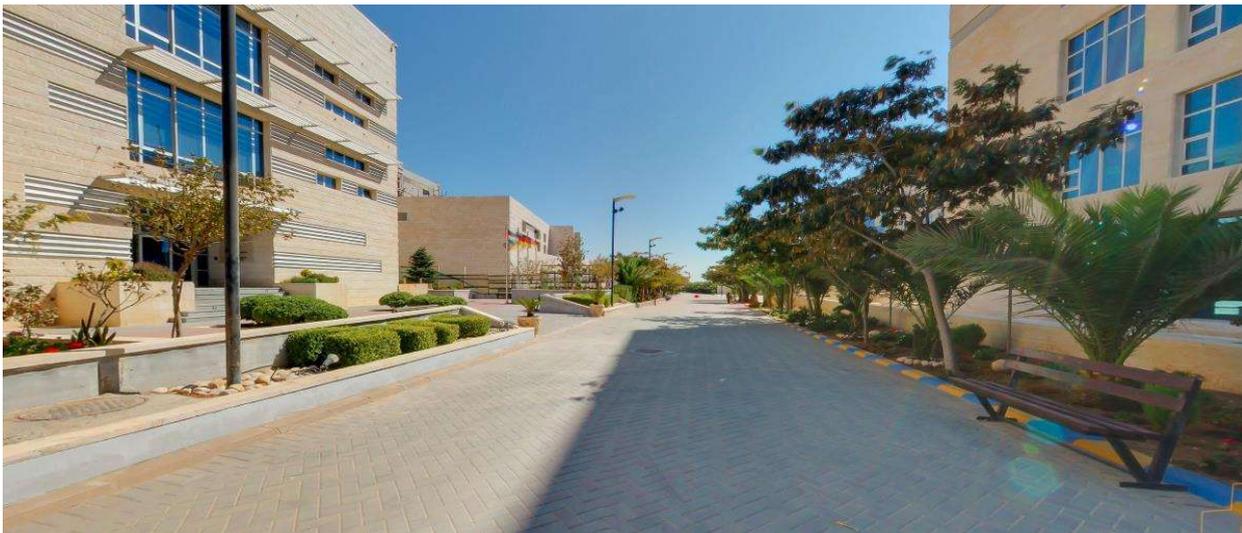


# SNREM Civil & Environmental Engineering Program

Eng. Fatimeh Al Hadidi  
Exchange Coordinator  
Second On-Line Network 2021



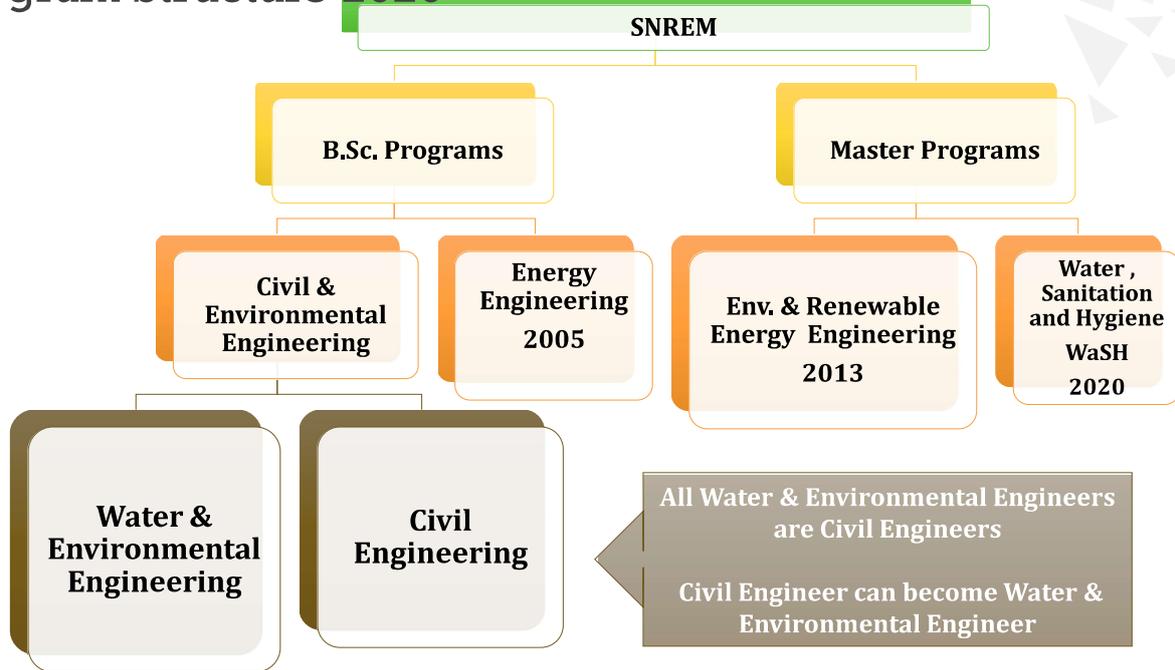
## School Tour



[German Jordanian University | Virtual tour generated by Panotour \(360magics.com\)](https://www.panotour.com/)



## Program Structure 2020



## Civil and Environmental Engineering Academic Staff



**Dr. Arwa  
Abdelhay**

SNREM Dean  
Associate Professor  
Water & Waste Water  
Treatment, Air  
pollution and SWM



**Dr. Raed  
AlSaleh**

Department Chair  
Assistant Professor  
Structural Engineering



## Civil and Environmental Engineering Academic Staff



**Prof. Nizar Abu Jaber**

Professor

Marine/ Earth and Atmospheric Sciences (Geochemistry)



**Prof. Mohammad Hamed**

Professor

Transportation Engineering



**Dr. Munjed AlSharif**

GS Dean

Associate Professor  
Water Resources and Environmental Engineering



**Dr. Muna Hindya**

Associate Professor

Biology and Environmental Engineering



**Dr. Qasem Abd Al**

Assistant Professor

Civil and Environmental Engineering



## Civil and Environmental Engineering Academic Staff



**Dr. Imhedi Gharaibeh**

Associate Professor

Transportation Engineering



**Dr. Dima Husein**

Assistant Professor

Geotechnical Engineering



**Dr. Omar Alqudah**

Assistant Professor

Transportation and Pavement Materials Engineering



**Dr. Adel Assaf**

Assistant Professor

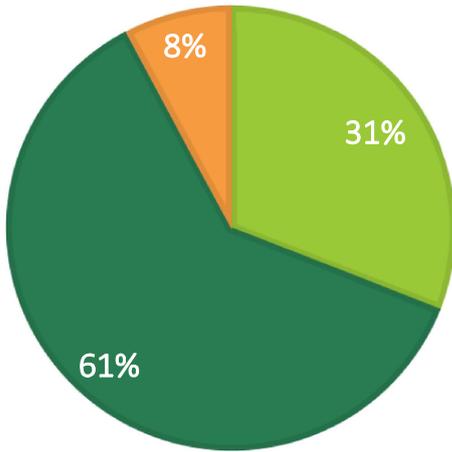
Structural Engineering



## SNREM Students 2020-2021

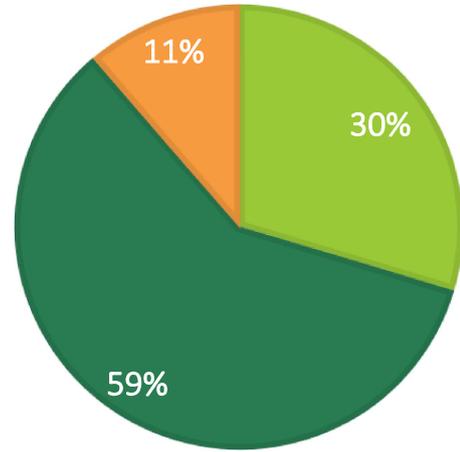
2020 SNREM ENROLLED STUDENT %

Civil & Environmental Engineering Energy Engineering Master



2021 SNREM ENROLLED STUDENT %

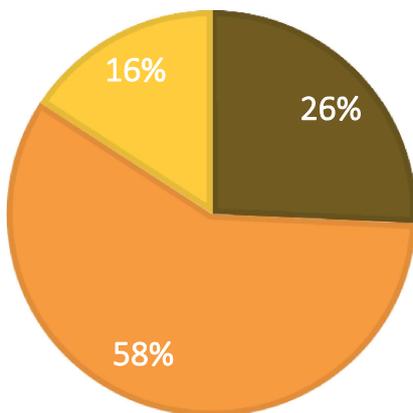
Civil & Environmental Engineering Energy Engineering Master



## CEE Students 2020-2021

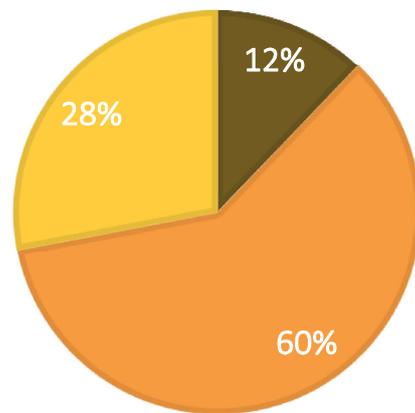
2020 CEE B.S.C. STUDENTS %

WEE  
CVE  
CEE

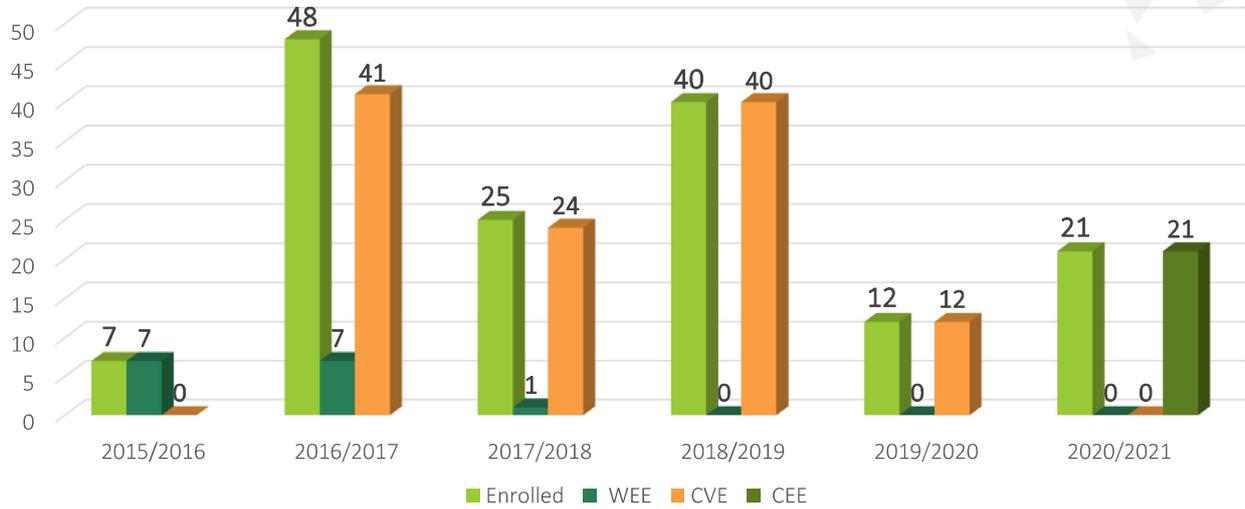


2021 CEE B.S.C. STUDENTS %

WEE  
CVE  
CEE



## Enrollments Statistics 2015-2020



9

## Civil & Environmental Engineering Study Plan 2019/2020

Classification	Credit Hours	Notes	Water and Environmental Engineering	Civil Engineering
<b>University Requirements</b>	27		Same courses	
<b>School requirements</b>	43		Same courses	
<b>Department Compulsory requirements</b>	86	Including Graduation Project (4 Cr. Hr)	65 Common Cr.Hr 70%	
<b>Department Elective requirements (4<sup>th</sup> year Level)</b>	12	Study Semester in Germany (1 <sup>st</sup> Semester)	7 courses common and can be increases	
	12	Internship Semester in Germany (2 <sup>nd</sup> Semester)		
<b>Total</b>	180			

10

## Civil & Environmental Engineering Study Plan 2019/2020



### Water & Environmental Engineering track (110 Cr.)

- General Chemistry II
- Statics
- Fluid Mechanics
- Mechanics of Materials
- Dynamics and Vibration
- Engineering geology
- Engineering Geology lab
- Hydraulics
- Hydraulics Lab
- Hydrology
- Structural analysis (1)
- Surveying
- Surveying lab
- Highway engineering
- Geotechnical engineering
- Geotechnical engineering lab
- Building materials
- German V
- German VI
- Reinforced concrete (1)
- Water Chemistry
- Water Chemistry lab
- Environmental Impact Assessment
- Steel structures
- Foundation engineering
- Water and wastewater Treatment Engineering
- Water and Waste water Treatment Engineering Lab
- Water resources engineering
- Solid Waste Management
- Air Pollution Control
- Air Pollution Control lab
- Pavement design
- Contracts, Specifications and Quantity Surveying
- Engineering Projects & Construction Management



## Civil & Environmental Engineering Study Plan 2019/2020



### Water & Environmental Engineering track (12 Cr.)

- Irrigation Engineering
- Introduction to Biotechnology
- Environmental and Water Microbiology
- Disposal logistics
- Pollution Control of the Aquatic Environment
- Water Supply and Wastewater collection
- International Environmental Law
- Process Engineering
- Process Operation
- Advanced Wastewater treatment
- Drinking water abstraction and distribution
- Groundwater Modeling and dynamics
- Environmental and Water Law and Policy
- Heat and Mass transfer
- Water Supply and Wastewater Collection
- Environmental unit process and operation
- Hydraulic structure
- Water and Wastewater Reuse
- Advanced topics in Water and Environmental engineering
- Reinforced concrete 2
- Geographic Information systems
- Geographic Information systems lab
- Independent Studies
- Special topics A
- Special topics B
- Special topics C



## Civil & Environmental Engineering Study Plan 2019/2020



### Civil Engineering Track (110 CR.)

- General Chemistry II
- Statics
- Fluid Mechanics
- Mechanics of Materials
- Dynamics and Vibration
- Engineering geology Engineering Geology lab
- Hydrology
- Hydraulics
- Hydraulics Lab
- Structural analysis (1)
- Structural analysis (2)
- Surveying
- Surveying lab
- Highway and traffic engineering
- Geotechnical engineering
- Geotechnical engineering lab
- Building materials
- Building materials lab
- German V
- German VI
- Reinforced concrete (1)
- Reinforced concrete (2)
- Steel structures
- Foundation engineering
- Water and wastewater Treatment Engineering
- Water and Waste water Treatment Engineering Lab
- Environmental engineering
- Transportation engineering
- Pavement design
- Highway Lab
- Contracts, Specifications and Quantity Surveying
- Engineering Projects & Construction Management



## Civil & Environmental Engineering Study Plan 2019/2020



### Civil Engineering Track (12 CR.)

- Solid Waste Management
- Water resources Engineering
- Advanced topics in environmental engineering
- Advanced Reinforced concrete
- Pre-stressed concrete
- Bridge engineering
- Earthquake Engineering
- Timber structures
- Advanced steel structures
- Structural systems
- Rehabilitation of structures
- Advanced topics in Structural engineering
- Traffic safety and Management
- Infrastructure Maintenance and Management
- Urban Mobility & Public Transportation
- Railway engineering
- Airport engineering
- Advanced topics in Transportation engineering
- Dam Engineering
- Geographic Information systems
- Geographic Information systems lab
- Advanced topics in geotechnical engineering
- Building Construction
- Construction machines
- Building physics
- Building Information modeling
- Sustainable building
- Computer application in Civil Eng.
- Advanced topics in Project Management
- Special topics A
- Special topics B
- Special topics C





# German Year Requirements (Civil /Water & Environmental. Engineering)



## Credit Hours

Completed 90 credit hours (excluding: German language courses & summer credits for September outgoings)



## GPA

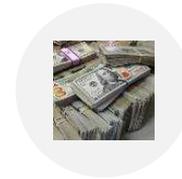
A GPA above 61% at application time and at least 60% upon departure to Germany



## German Language

Passed German 6  
Passed at least two parts of German test B1.

**2018/2019 Students Must pass Four parts**



## Financial Support

In order to get a German student visa, you need to deposit around **10245 €** for 12 months in a Bank blocked account



## Courses

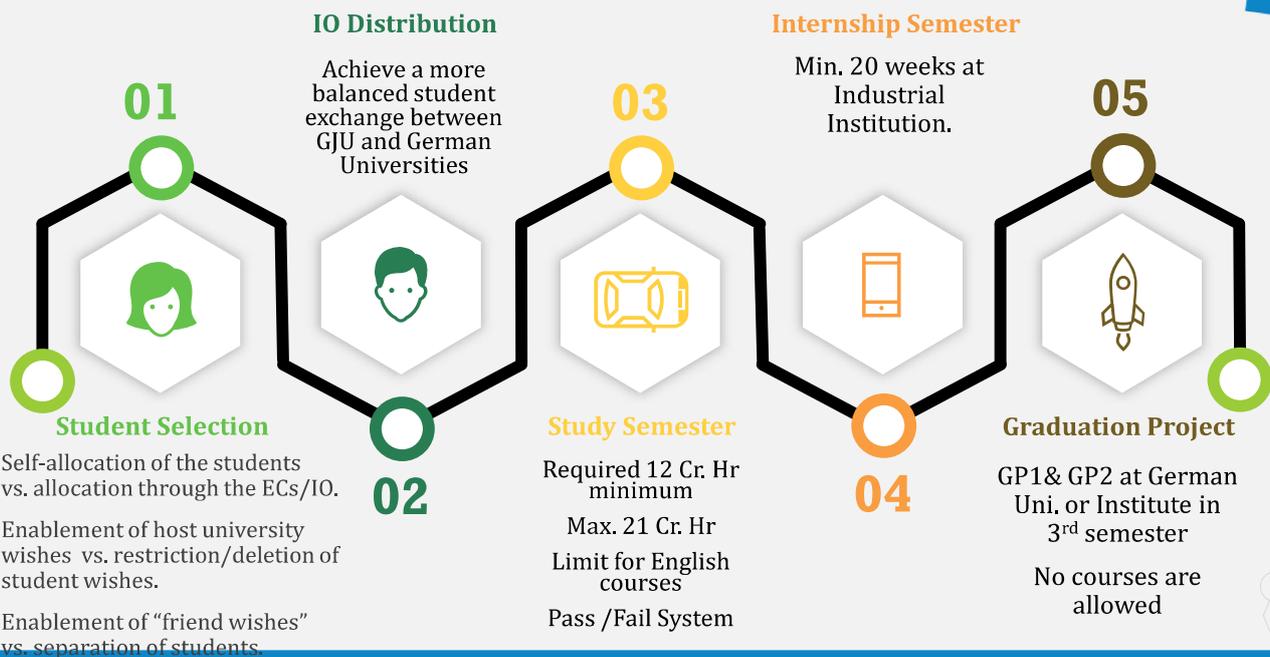
*Intro to Env. Engineering  
Hydraulics & Hydrology*

Fluid Mechanics ,  
Geotechnical Eng &  
Reinforced Concrete I

Successful completion of the 160 hours of field training in Jordan



# German year Procedure

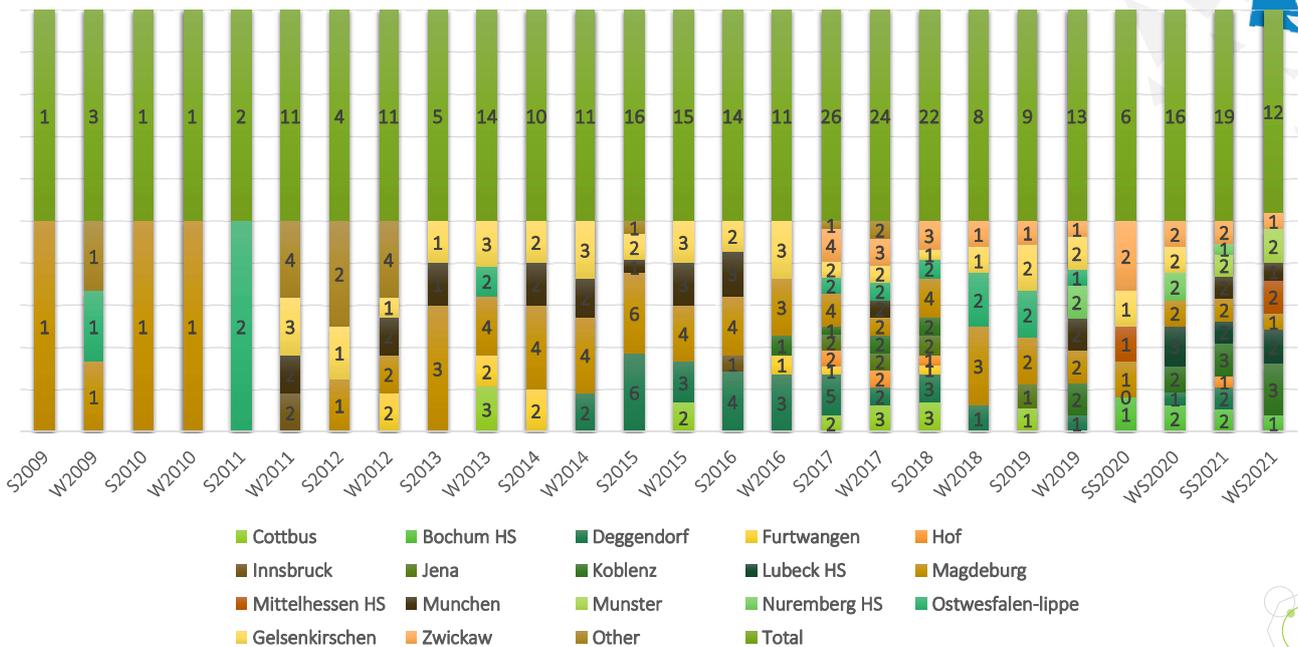


# Current German Partners

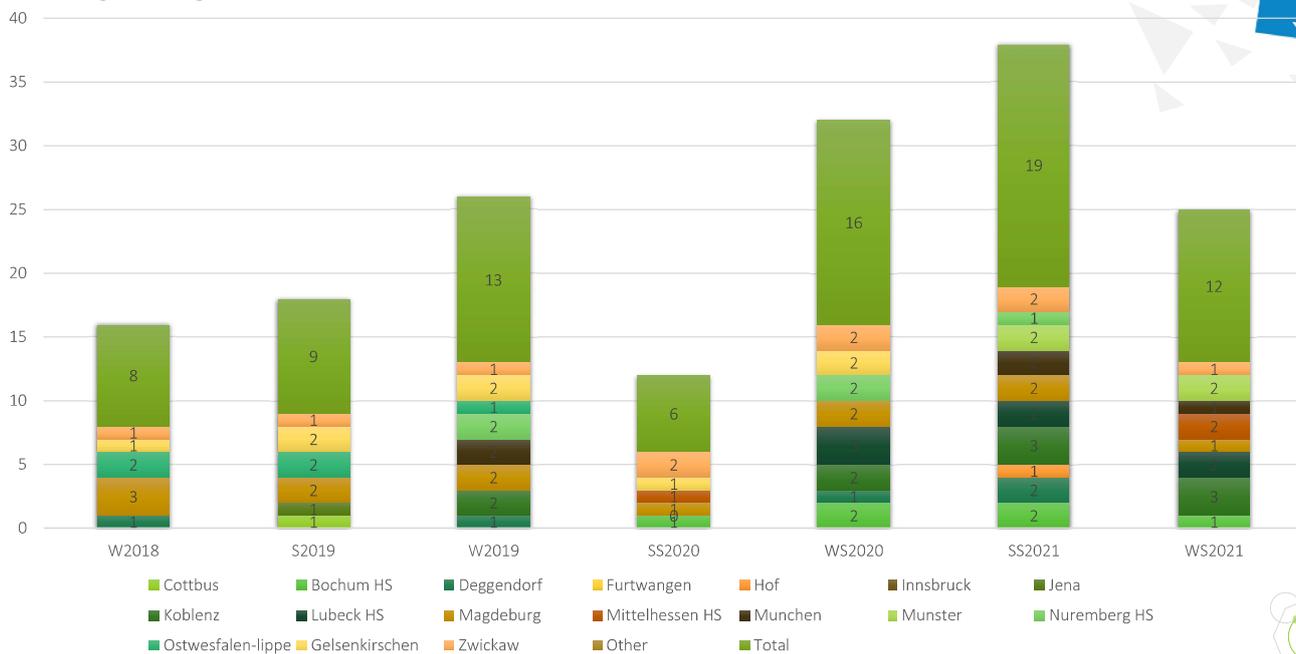


Host university	Water & Env. Eng	Civil Engineering
Bochum HS		✓
Cottbus BTU	✓	
Deggendorf HS	✓	
Hof HS	✓	
Jena EAH	✓	
Lubeck HS		✓
Koblenz HS	✓	✓
Kaiserslautern TU		✓
Magdeburg-Stendal HS	✓	
Mittelhessen HS		✓
München TUM		✓
Münster HS	✓	✓
Nurnberg HS		✓
Ostwestfalen-Lippe HS	✓	
Westfälische HS	✓	
Zwickau HS	✓	✓

# Out going Students Statistics

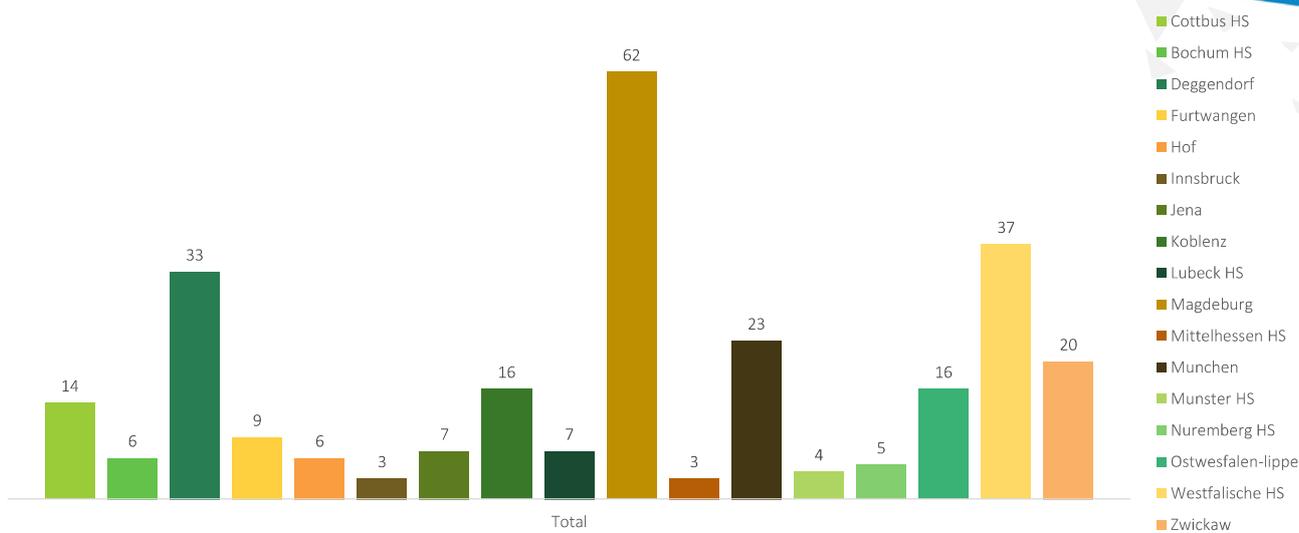


## Out going Students Statistics



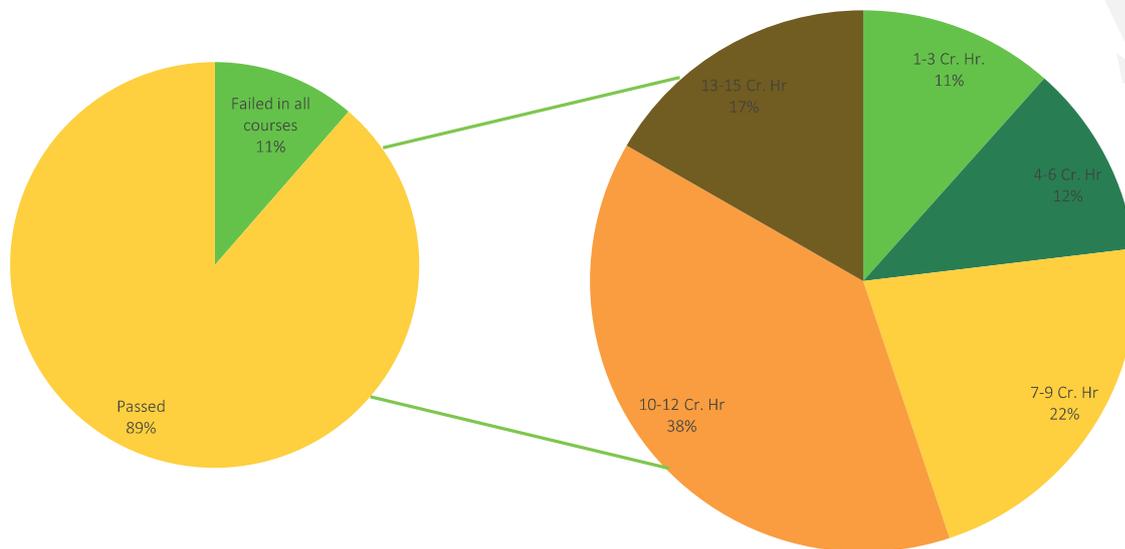
19

## 271 Out going Students Statistics



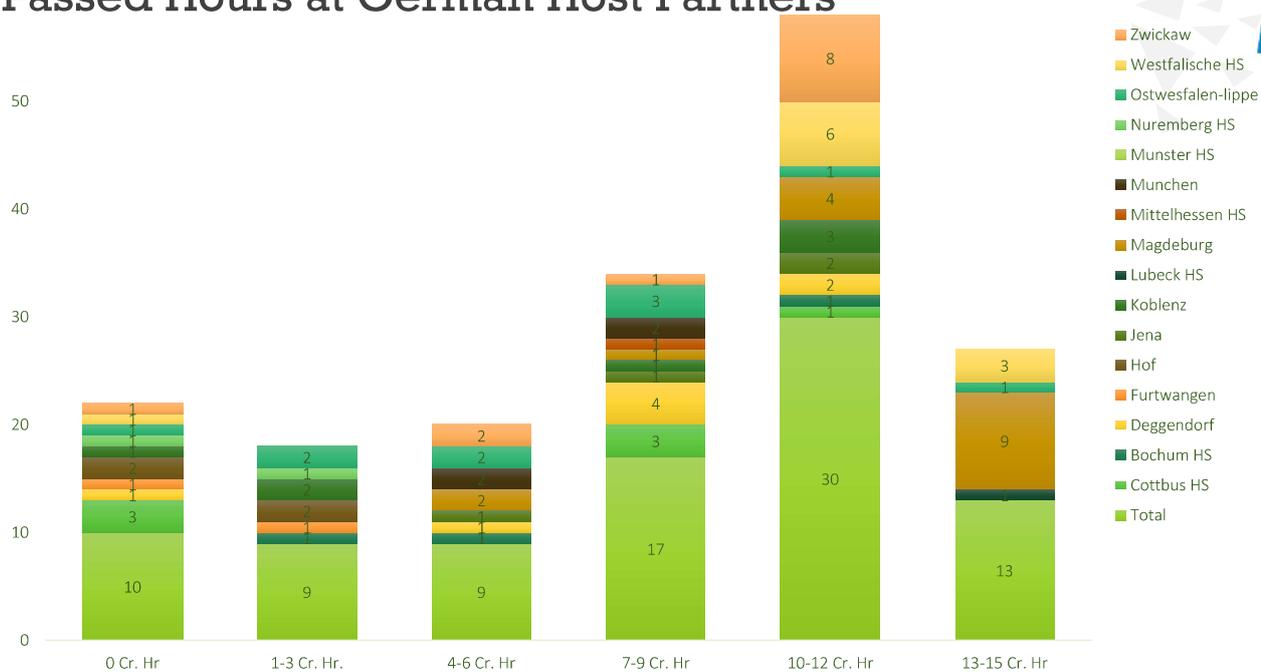
20

## Passed Hours at German Year



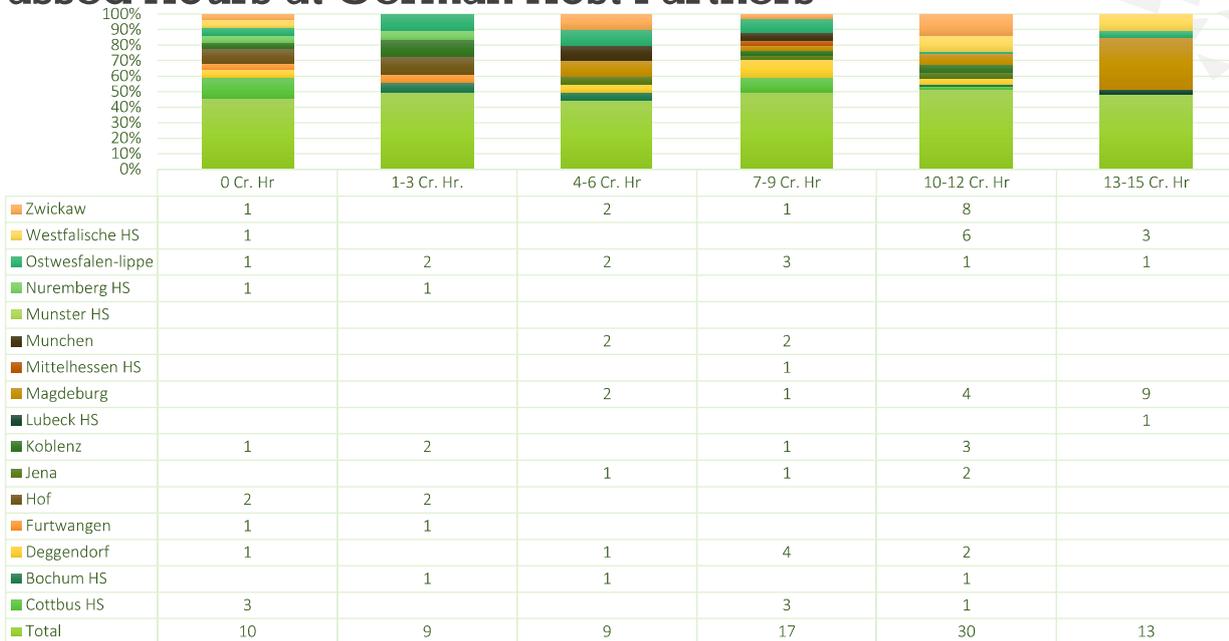
21

## Passed Hours at German Host Partners



22

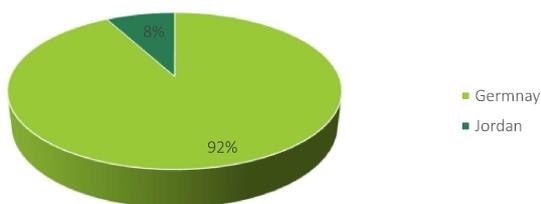
## Passed Hours at German Host Partners



23

## German Internship

20 Weeks Internship



### Challenges:

1. Contact companies in study semester (Study Sem. Affected)
2. Internships out of Germany will be paid by students.
3. Time frame of internship overlap with GJU semesters.
4. Paid internship is preferred by students.



24



## Humanitarian WaSH Master Program

- Initially planned for October 2020 and delayed due to the COVID-19 pandemic, the MSc program in Humanitarian Water, Sanitation, and Hygiene (WASH) finally started in February 2021.
- The WaSH Master's Degree in the Middle East Region was created in order to provide experienced and capable managers who are ready to enable working in the sector upon graduation.
- The master's degree program uses a multidisciplinary approach, examining the project-cycle management, donor requirements, theory of change, humanitarian-development nexus, and many other transversal topics.
- It is the first-of-a-kind master's program in the Middle East, a region where conflict often exacerbates the already existing challenges in access to water and sanitation.

- Partners: GJU, Action Against Hunger (ACF), Bioforce Institute, Global Wash Cluster (GWC)
- Funding Agencies: OFDA/USAID, UNICEF
- Contact : Dr. Munjed AlSharif & Dr. Arwa AbdelHay



27

## Restoration of ancient Nabatian flood control system at Petra, Jordan

- The project includes:
  - Documentation of the archaeological terraces.
  - Modelling the hydrology of the drainage basin.
  - Developing and installing a hydrological modelling system. Including weather and surface runoff devices.
  - Rebuilding of the flood control system and monitoring of the effectiveness of the system.
- The benefits of this project include the following:
  - Preventing the recurring flooding events in Petra.
  - Better understanding of the hydrology of the area, especially rain-runoff relationships in uninstrumented wadis.
  - In-house development of new hydrological monitoring systems.
  - Teaching local communities how to best restore and build hydrological management systems.
  - Creating new opportunities for better dryland farming.

- Funding Agency :The US Embassodor Funds & German Technical Cooperation (GTZ)
- Winner : ICCROM
- Contact : Dr. Nizar Abu Jaber & Dr. Qasem AbedAl



<https://youtu.be/c6aHwVNXmJQ>

28

## Water Security: Data to Decision (D2D)

The D2D is a consortium of higher education institutions promoting "evidence based knowledge" as an effective tool for decision making towards a water secure Jordan.

- The project aims
  - To promote the concept of "evidence based knowledge" as an effective tool for decision making towards a water secure Jordan, focusing on research questions triggered by the needs of the decision makers and stakeholders in responding to current and potential societal challenges.
  - To create spaces for cooperation between scientists, policy makers and stakeholders from various sectors to discuss the diverse facets of water security and to harmonize current and future research between academia and practice. As well as to form innovation ecosystems channeling research results to social innovation processes and products with market

- **Partners:** GJU, TH Koln, Technical University of Munich, Inter-Islamic Network on Water Resources Development and Management (INWRDAM), Freie Universität Berlin, Jordan University, Water, Energy and Environment Center
- **Funding Agencies:** German Federal Ministry of Education and Research.
- **Contact :** Dr. Munjed AlSharif & Dr. Arwa AbdelHay



29

## Waste To Positive Energy

The project to strengthen the education in waste management at the Jordanian universities and other countries in the MENA region.

The project is headed by the University of Rostock.

Measures are:

- Continuous scientific monitoring of the project
- Determining existing teaching and research activities at Jordanian partner universities

- **Partners:** GJU, Rostock University, TU Hamburg, TU Dresden, Muta'a University, University of Jordan, Jordan University of Science and Technology.
- **Funding Agencies:** Federal Ministry for Economic co-operation and Development (BMZ) through grant contract GIZ
- **Contact :** Dr. Munjed AlSharif & Dr. Arwa AbdelHay



30

## Integrated Water Resources Management Exchange program

- Current global trends such as population and economic growth as well as climate change exert increasing pressure on water resources worldwide, which are the basis for food production, urban and industrial water supplies and hydropower.
- Experts are needed who understand that multiple problems of water resources management can only be addressed through a holistic approach considering both technical and socioeconomic problems of resources use.
- The MSc “IWRM (120 ECTS)” has the objective to form such experts and to promote the concept of IWRM in the context of German-Arab cooperation.
- DAAD fund a batch of international students from the MENA region and Germany that come to GJU to spend one Full semester in order to take courses related to water management in Jordan and the Middle east. Example of Courses offered to these students are, water and Agriculture, Water scarcity and Drought management in the ME, Sanitation and public health, Sustainability, etc.

- Partners: GJU, Koln Applied Science University, Germany
- Funding Agencies: DAAD
- Contact : Dr. Munjed AlSharif & Dr. Arwa AbdelHay



31

## Climate Resilient Cities (CLIC) 2020-2022

The Project addressed the challenges that climate change presents for future cities of Jordan and Germany.

- The project will support several aspects that contribute to improving teaching in Jordan and Germany.
- After the project, the following material will be available to all three universities:
  - Lectures and presentations on the topics of CLIC
  - Background material and literature
  - Films and photos on the topics, including the description of case studies
  - A virtual learning platform including the material
  - The documentation in the form of a virtual conference.

- Partners: Koblenz University/Prof Dorte Ziegler , GJU Architecture Department/Energy Department, Balqa University Prof Mohamad Matouq
- Funding Agencies: DAAD
- Contact : Dr. Muna Hindeye



32

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- Funding Agencies: Federal Ministry for Economic co-operation and Development (BMZ) through grant contract GIZ
- Contact : Dr. Munjed AlSharif & Dr. Arwa AbdelHay



33

## Traffic Safety Master Program

- MENA-SAFE Project, Co-funded by the Erasmus+ Program of the European Union (EU).
- MENA-SAFE project aims to design, develop, adapt and implement a new master curriculum in the field of Road Traffic Safety with joint efforts between EU, Egypt, Jordan and Lebanon partner universities according to Bologna requirements and EU safety standards and practices.
- The development of new and existing courses, capacity knowledge building in traffic safety at the partner universities in Jordan, Lebanon and Egypt.

- Funding Agencies: Erasmus +
- Contact : Dr. Munjed AlSharif

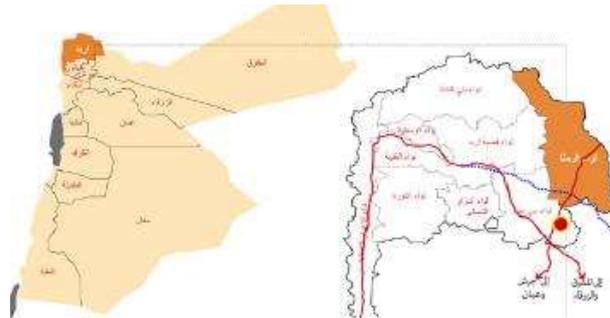


34

## 1. EA of Irbid vegetables and fruit wholesale market project

## 2. EA Environmental assessment of GIM slaughterhouse project

- Greater Irbid Municipality will establish a new central market for vegetables and fruits as well as a central Slaughterhouse in a response to the needs of the citizens.
- The Environmental Assessment aimed at providing a baseline information for the selected site of the project.
  - The environmental condition at the site for the air quality
  - Water quality
  - Metrological conditions
  - The affected biodiversity
  - The health
  - Social and economic conditions .
  - This EA aim to minimize the negative impacts for the Irbid Market Project.
- Partners: Balqa University
- Funding Agencies: World bank
- Contact : Dr. Munjed AlSharif



35

## Other Projects

- Dr. Muna Hindeye: Study Group Mobility Project “Cool down, green and air cleaning though plants in Amman” 2021 funded by German Academic Exchange Service (DAAD) via Hochschule Magdeburg-Stendal DAAD, cooperated with Hochschule Darmstadt University of Applied Sciences.
- Dr. Dima Malkawi: Stability Analysis of the above Ground Slopes for the Stacking of Phosphogypsum in Aqaba.
- Dr. Dima Malkawi: Stability Analysis of the New section in Raising the Existing Composite Wala Dam .
- Dr. Munjed Al Sharif and Dr. Arwa Abdelhay “Installation and implementation of a pilot plant for the treatment of olive mill wastewater in Jordan cost efficient and environmentally sustainable project funded by TIA company
- Dr. Arwa Abdelhay : Destruction of Persistent Organic Pollutants (POPs) in wastewater using ultrasonic irradiation, Funding Agencies: Scientific Research of Jordan & German Jordanian University

36

