

Network Industrial Engineering

Participants

Mohammad Abu-Shams	GJU Exchange Coordinator	Julia Kölbl	PO Magdeburg Stendal
Safwan Alterazi	GJU Dean	Rainer Eber	HS Aalen
Rula Allaf	GJU Head of Department	Tobias Pfeifroth	HS Jena
Eng. Ruqqaya Natsheh	GJU, professor, dual studies committee	Wolfgang Eibner	HS Jena
Iris Wildfeuer	GJU, IO network coordinator	Volker Siegismund	DHBW Mosbach
		Uli Holzbauer	HS Aalen
		Ansgar Eckert	FH Würzburg-Schweinfurt
		Ulrich Bauer	HS Kempten

Agenda

TOPIC 1	Updates from GJU: faculty and staff exchange, statistics and research interests, new directions in Curricula development <i>Dr. Mohammad AbuShams (Exchange Coordinator)</i> (15 min)
TOPIC 2	SATS Dual Studies track <i>Eng. Ruqqaya Natsheh</i> (10 min)
TOPIC 3	-New Master program / current Engineering Management -Joint Master Entrepreneurship and Innovation Management with HS Magdeburg <i>Dr. Safwan Altarazi (Dean SATS)</i> (15 min)
TOPIC 4	Project presentation HVAC (SGM project) <i>Dr. Mohammad AbuShams</i> (10 min)

TOPIC 5	Alumni student presentation, <i>Haneen Abdelqader Saleem Ghannam, Rand Zreiqat</i> (15 min)
TOPIC 6	Open discussion on joint future projects - Expanding seats in Industrial Engineering - Nomination of new network head

Exchange Coordinator Mohammad Abu Shams welcomed the participants and introduced himself as well as the dean of the school and the head of department.

First point on the agenda was the vote for a new German network head. Uli Holzbaue, from HS Aalen was nominated for one year after which a new solution will be found. The vote was carried out through direct messages to the network coordinator and the result was unanimous.

Dr. Holzbauer gave a little speech explaining that he is only at the university for one more year. He introduced Rainer Eber as his successor. He looked back on the many years of collaboration and the support of GJU and decided to take the role for one year.

Dr. Mohammad Abu Shams continued with the first part of the presentation and outlined the agenda, then he situated the department in the context of SATS school. Industrial engineering is the biggest of the three departments. They have BA degrees and an MA degrees and have a joint master with Magdeburg which is expected to start in 2023. The number of students makes this the biggest department in the whole university.

The BA program is a high quality program, composed of 10 semesters two of which are spent in Germany, acquiring soft skills and hard skills. Graduates are highly appreciated by the companies looking to hire. The study plan, updated in 2020 as well, concentrates specifically on market needs. Dr. Abu Shams continued to explain the changes made to the study plan with a general idea of moving towards more flexibility for the students, some new courses were included with a focus on 4.0 and other emerging fields and topics of the industry. The plan also aims at developing soft skills such as communication skills, teamwork, risk evaluation, problem solving and ethical responsibility.

The German accreditation, mentioned by the GJU VP in the joint session, has also of course affected the study plan since everything was changed to ECTS system. It is similar to the modules that German partners offer and the accreditation will help with student exchange and the study plan will be easier for the partners to understand. Dr. Volker Siegismund (DHBW Mosbach) asked at this point if the ECTS system had already been fully implemented and how many ECTS will correspond to one module? Dr. Mohammad replied that the standard would be 5 ECTS, however courses with work in the labs received 6 ECTS.

After also introducing the labs that the department has at GJU he briefly presented the faculty members and their corresponding research areas.

Of the over 1000 students inscribed at SATS more than half study industrial engineering. 27 students are currently doing the master, with numbers for both Bachelors and Master still increasing. This

means that expansion of resources, partners and faculty will be necessary. This also tied in with expanding the network in general.

The exchange coordinator moved on to give an overview of the German year, the main partners in this as well as the requirements for students to start their German year.

He also introduced which professors participated in Flying Faculty in the year 2021 and who is scheduled for FF in 2022.

SATS Dual Studies track

Eng. Ruqqaya Natsheh

Eng. Roqaya Alnatsheh moved the network agenda along with a presentation of the Dual Studies updates. She herself is a member of the dual studies committee at GJU. She started with an overview of the dual study program. It is an educational concept that combines academics and industry. As a result will create higher employability and graduates with skills tailored towards industry needs. The first dual studies track was launched in 2018. Now dual studies are running in 4 BA mayors and the aim is to increase this more.

The advantages of these tracks are the enhanced experience and good understanding on theory the students will gain as well as being able to apply this to real world problems, while gaining practical experience and acquiring multiple soft skills that will distinguish him from other graduates

These tracks also include advantages for the involved companies as well. Many students are hired by the same company after graduation which makes their recruitment process is easier since the student is already familiar with the company and processes, students will bring fresh ideas with them, the company will gain a reputation as an innovative and creative company.

How is the dual study program being implemented at GJU? First year students are targeted, they are approached by email and join information sessions to introduce the concept to them and tell them how to apply, after the sessions students who show interest need to fill out applications. Training sessions are then conducted to write CVs and motivation letters, interview training is held as well. The Dual Study team arrange a company day where parents and students can meet to see which matches are mutually desired. Of course all companies that are chosen are related to the mayors the students are studying.

Regarding Dual Studies at industrial engineering department, a study track for the BA was implemented in 2019/2020 and in 2020 the students completed the first practical phase during covid circumstances. For now 4 partner companies, Umniah, RAMZ, Dar El Hai and Etihad bank have agreed to take students. Of course the goal is to attract and contract more industry partners since the numbers of students are increasing.

Dr. Siegismund added that maybe the german network parterns who offer Dual Studies tracks at their universities could maybe support in the establishment of these programs at GJU as well. Mohammad Abu Shams confirmed that in fact the OIL also has a network of industry partners in Germany as well so that Dual Studies students even during their German Year can continue their program.

Dr. Safwan Altarazi, the dean of SARS, informed the network that the department has already acquired 8 more partners and has 3 more pending. It is expected that this will increase to 10 partners compared to last year's 4 partners. This shows that industrial partners are accepting the concept.

Mr. Bauer (HS Kempten) mentioned that he would like to use the opportunity to come forward with a request. He wished to draw everyone's attention to the PHD thesis about linguistic and cultural requirements for GJU students. The survey for this thesis was circulated a few days prior to the meeting. He himself is tutoring a thesis that is very similar, the premise being what can be done to prepare GJU students better for their German Year. His idea is to make 25 short films with 150 students producing them. If anyone has important points for what should be included in the films it would be highly appreciated. He also proposed that some of the partner universities could also produce some video clips like this themselves.

-New Master program / current Engineering Management

-Joint Master Entrepreneurship and Innovation Management with HS Magdeburg

Dr. Safwan Altarazi (Dean SATS)

The preparation for the master Engineering Management started 2 years before. This idea behind it was to bridge the gap between engineers with good technological knowledge and the lack of managerial skills. In Jordan there are many good engineers but they lack management skills or they have learnt it through trial and error. The target group was these engineers with good technical knowledge. The graduates of this master will fill positions like quality managers, project manager, operation manager etc.

The key body of knowledge of this program focuses on management skills in different fields. The program is structured as 34 credit hours/ 90 ECTS. The master can be thesis track or comprehensive exam track.

There is an entry exam for the master. In the last 3 years there were an average of 10 students a year which sustained, a couple dropped out, 10 is the average of the ones who stayed. The aim was always 10 to 15. The maximum is 15 as is limited by the accreditation agency- some of these students will now graduate next year.

The Innovation and entrepreneurship master in collaboration with HS Magdeburg was an idea that existed previously but some factors had prevented it from moving in that direction previously, lack of expertise and accreditation regulations for example. Then a few months ago a brainstorming concept started for turning it into a joint program with Magdeburg. HS Magdeburg initiated the communications and it showed that they had an idea which met the previous interest of SATS. No other university in Jordan provides a program like this. This program is meant to be very practical and project oriented, with the skills acquired after graduation allowing the students to start a start-up company. The vision is still being outlined but one idea is even that the startup could form part of the master, or be created as an innovative idea in the company where the student is working. The details are being worked out, currently committees of responsible representing both universities are being appointed. Concept and modules, outcomes and teaching methodology are being worked on now. Furthermore, funding still needs to be secured, most probably with the DAAD.

The dean of SATS then added that GJU is always look for extending and enhancing cooperation with partners. There are other opportunities for collaboration such as the mentioned Flying Faculty, but also the option of thesis supervision. Student mobility is another option in general Any other opportunities for collaboration are welcome, such as the previously mentioned short film production by Dr. Bauer.

Of course the successful German accreditation will also enhance collaboration and exchange further.

Alumni reports- (due to lack of time moved ahead on the agenda)

Alumni student presentation, Haneen Abdelqader Saleem Ghannam, Rand Zreiqat

1.) Saleem Ghannam

He graduated about 10 months ago and works now at Aramex. He entered GJU in 2015 with and went to Köln, Germany in 2018/2019 funded through a DAAD. He made many friends and for him the study buddy program was very helpful. He later got an internship in a car manufacturing company near Ingolstadt as a production intern with focus on quality control of production lines. He come back to Jordan in 2019 to complete his studies. After graduation the was offered a contract by an HR consulting company which came up because of him being a GJU student a professor`s referral. Worked there for 3 months until he realized that he was not fit for being a consultant but was more of an engineer. Due to his experience in Germany he was able to get the position that he has now. After graduation GJU students are privileged to be alumni if this institution in his opinion, a lot of companies look for GJU graduates since they know the students will have a high education standard and the experience of the one year in Germany. For him the one year abroad was one of the best of his life because the matured and started to be independent, handled things by himself and most importantly he is grateful that he got to realize his self- worth. Where he was for his internship he was completely isolated from any other Arab speaker or anyone he knew, and this taught him a lot.

2.) Rand Zreiqat

Currently she is working as a manager at a robotics company. During her year in Germany she did an internship at Mercedes Benz and started to work in project management. She realized then that she, as a GJU student, was are very capable at carrying out the tasks and she proved herself with knowledge and language skills that GJU prepared her with. Upon returning she did a workshop in digitalization and realized she was interested in the field and did her graduation project about this. Currently she works at one of the leading technology companies in Jordan. She asserted that many GJU students work in high positions even as fresh graduates such as herself.

3.) Haneen Abdelqader

She graduated 1 year ago in the middle of the pandemic and is currently working with Rand in the same company with some other GJU alumni. She also stressed that GJU graduates are spread all over the world and are excelling in their mayors it makes, which makes her so proud of being an alumni. Throughout the time as students GJU prepared them for the real world, especially working in two countries two cultures, helped gain different knowledge and experience and this meat a smooth transition from university to working life.

Graduating in the middle of the pandemic was a worry but really it turned out to not be a problem, since many companies were specifically looking for GJU graduated because of their positive reputation. Her internship during her German Year was at BSH and even offered a position that she was unable to take due to Covid. It still made her happy that she was offered the position, its showed

that she did excel and prove herself. She became fluent in German as well during her time in Germany. She thanked GJU once more for the valuable preparation for working life.

Safwan thanked the alumni for the positive energy. If they would go back to GJU now what would like GJU to do better?

Rand replied that maybe more internships could be useful since practical experience is so important. Saleem added maybe it would be good to further intensifying the German language classes. In His opinion relying on the language you are taught at university it would not have been enough to get prepared for the year in Germany. He himself put in a lot of extra effort into learning German outside of GJU.

Haneen also proposed to extend the German year, making it longer it would be an even better experience.

Project presentation HVAC (SGM project)

Dr. Mohammad AbuShams

Next on the agenda was the presentation of this DAAD funded mobility program, a collaboration between German and Jordanian students. Dr. Siegismund and Dr. Mohammad Abu Shams applied for this together. The idea of the SGM is that 10 Jordanian and 10 German students will work together on a project, any project in the industry, in the interest of the two countries.

This specific project focused on heating, ventilation and air conditioning and was carried out with collaboration of companies, for example the company PETRA in Jordan. The project gave the students the opportunity to travel to Jordan or Germany to visit the companies, after which they would then outline tasks and challenges for the sector.

The company itself will provide a presentation and visits and insight in other projects. The main idea is was to give the students' knowledge and insights into the industry. At the same time it aids in cultural exchange and collaboration.

Dr. Siegismund thanks Mohammad and expanded further on the project. This frame is a good opportunity for students to meet and work together and get to know each other's point of view. Two industrial partners are in this project, PETRA (Jordan) and PAPST (Germany), both companies will give students the insight on their ventilation systems. This study group will be coming to Jordan in the first week of September that same year.

Open discussion

Closing of the network meeting for industrial engineering was an open discussion lead by Dr. Mohammad Abu Shams, the exchange coordinator. He stresses again that the department is expanding so more seats with the partners will be required in the near future. DR. Sigismund inquired how the expansion process will be initiated and was informed that GJU will reach out. T

The date for next network meeting was set, planned for 30th or 1st of July, hopefully once again in person.

Dr. Safwan said it would be good to have it a few days before because the summer semester would have already started at that point.

Dean Safwan mentioned again the importance of the German year, as we heard by the alumni, it's the academics side for one, but it is also the personal growth the students will undergo during it. GJU tries to prepare for students for this year as much as possible and thanks the partners for their support. Further preparation is always being discussed and GJU assures that continued improvement will be made. More collaboration is also always being discussed in order to enhance the German dimension at GJU

Dr. Rula Allaf, vica dean of the department, also thanked everyone for joining the meeting. Dr. Mohammad added he is open for questions and emphasized the statement from the dean that GJU is always working on increasing collaboration