

Under the patronage of H.E. Dr. Adnan Abu Al-Ragheb,  
Chairman of Jordan Chamber of Industry



الجامعة الألمانية الأردنية  
German Jordanian University

## **University Industry Collaboration Workshop**

– Cooperation Opportunities and Challenges –

## **Workshop Findings and Conclusion Report**

**1 June 2016**

German Jordanian University Main Campus

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## 1 EXECUTIVE SUMMARY

The Germany Jordanian University (GJU) aims to further strengthen its collaboration with the industry. Making increased cooperation with Jordanian companies a top priority, GJU has developed a strategic plan and invited several companies to participate in its first University Industry Collaboration Workshop, which took place on June 1<sup>st</sup>, 2016 at the main campus of the University in Mushaqqar.

The initiative to increase GJU's collaboration with the industry was welcomed very much by the University's industrial partners, and the workshop was thus attended by representatives of numerous companies.

To strengthen the ties between industry and GJU, in the second part of the workshop participants gathered in ten parallel workgroups, eight of them organized by GJU's different Schools and two by the Office for Industrial Links (OIL) and its unit for Entrepreneurship and Innovation. In these thematic workgroups, representatives from industry and academia as well as invited guests discussed various topics with the aim to come up with proposals and ideas on how to enhance a cooperation for mutual benefit.

The workshops produced valuable results and agreed on a number of activities to be carried out during the coming months. On the level of the Schools, action plans have been set up to strengthen cooperation with partner companies. GJU's recently established Industrial Relations Committee (IRC) will monitor the follow-up. Representatives of Academia and Industry agreed that it is very worthwhile to conduct similar events at least once a year.

## 2 BACKGROUND

The workshop was held under the patronage of H.E. Mr. Adnan Abu Al-Ragheb, Chairman of Jordan Chamber of Industry, and took place on Wednesday, June 1<sup>st</sup>, 2016, on GJU's main Campus in Mushaqqar.

The workshop is part of a broad strategy at GJU to intensify cooperation between Jordanian companies and the university, which is considered one of the most important goals that the university seeks to achieve in the near future. In this way, GJU aims to strengthen its profile as an innovative University of Applied Sciences, which fosters knowledge transfer between academia and industry and whose graduates are characterized by outstanding employability. Moreover, GJU is convinced that intensified cooperation will better link the outputs of the university with the needs of the labor market, the economy and the community.

### 3 WORKSHOP OBJECTIVES AND METHODOLOGY

The workshop aimed to bring representatives from industry, academics from GJU and other stakeholders into closer contact, to discuss possible forms of cooperation, in order to demonstrate benefits and potential gains, but also possible challenges. The goals of the workshop were threefold:

- present various examples of already well-functioning cooperation,
- get to know each other's needs and priorities better,
- discover new fields for joint activities and cooperation.

By means of a Welcoming Note delivered by GJU's President and a Keynote Speech by the Chairman of the Board of the Jordanian Chamber of Industry, participants were initially informed about the background and general context of the workshop and then given the opportunity to acquaint themselves with four best practice examples through plenary presentations. Afterwards, attendees were invited to visit the exhibition "Made @ GJU", which displayed a variety of projects conducted by the different Schools, illustrating their achievements and their industrial links. A coffee break provided opportunity to discuss and to network.

The second part of the workshop was geared towards active participation of the attendees, who were invited to participate in different thematic workgroups, held in parallel. Eight of these workgroups were organized by GJU's Schools; the remaining two were organized by the OIL (Office for Industrial Links) and its PIE (Program Innovation and Entrepreneurship) unit respectively.

Subsequently, the results of the groups were presented to the audience in a wrap-up session chaired by Prof. Natheer Abu Obeid, President of GJU. In the session, the Chair of each workgroup summarized the results of the discussion and presented the action points on which the participants had agreed. Finally, all participants were invited to a lunch reception, which again provided opportunities to network, to continue discussions and to deepen contacts in a more informal setting.

The process can thus be described as guiding the participants, who came from diverse backgrounds, through a series of information-oriented activities towards active involvement in workgroups matching their fields of interest. This chain of activities, "from the general to the specific", generated outcomes and commitment from all involved sides. The commitment of the various stakeholders demonstrated in the workgroup meetings was to be reinforced by the public presentation of the jointly worked out results. The Industry Relations Committee (IRC) at GJU will follow up with the implementation of the outcomes and commitments to guarantee a sustainable cooperation.

## 4 WORKSHOP AGENDA

Wednesday, June 1 <sup>st</sup> 2016	
9:00 am	<b>Registration / Coffee</b> Venue: Building H, Auditorium
10:00 am	<b>Welcoming Note: “GJU’s strategic goals to enhance the collaboration with the Industry”</b> <i>Prof. Natheer Abu Obeid, President, German Jordanian University</i>
10:10 am	<b>Keynote: “The industry’s role to promote cooperation with Universities”</b> <i>HE Mr. Adnan Abu Al-Ragheb, Chairman of the Board, Jordan Chamber of Industry</i>
10:20 am	<b>Best practice from Jordan: “The Solar Cooling Project”</b> <i>Mr. Leon Brendel, GIZ Representative, Jordan</i> <i>Eng. Hisham Mikhi, Millennium Energy Industries, Jordan</i>
10:40 am	<b>Best practice from Germany : “SAP Dual Study Training”</b> <i>Dr. Shadi Al-Khamayseh, SAP MENA</i>
10:50 am	<b>Best practice from the region: “Dual Studies at Al-Quds University”</b> <i>Dr. Tarek Abu Leil, Founding Dean of the Dual Studies, Al-Quds University, Palestine</i> <i>Dr. Bärbel Stark, Academic International Relations Office, Al-Quds University</i>
11:00 am	<b>Best practice GJU Alumni: “Arabia Weather – A Startup Success Story”</b> <i>Eng. Yousef Wadi, Co-Founder, ArabiaWeather Inc., Jordan</i>
11:15 am	<b>Opening Exhibition “Made @ GJU”</b> Venue: Building H, Ground Floor Coffee Break & Networking

12:00 pm	<b>Parallel Workshops with the Schools</b>		
	Workshop 1	<b>“Energy and Environment”</b>	Building C Room 412 SNREM
	Workshop 2	<b>“Health”</b>	Building C Room 310 SAMS
	Workshop 3	<b>“Industry Driving the Technology”</b>	Building C Room 237 SEEIT
	Workshop 4	<b>“Construction &amp; Design”</b>	Building H Room 101 SABE
	Workshop 5	<b>“From Engineering to Industry”</b>	Building C Room 130 SATS
	Workshop 6	<b>“Logistics, Accounting, Management”</b>	Building B Room 405 SMLS
	Workshop 7	<b>“Translation and Communication: Experiences and Perspectives”</b>	Building H Room 202 SAHL
	Workshop 8	<b>“Marketing and Operations”</b>	Building B Room 205 TAGSB
	Workshop 9	<b>“Dual Study Programs at GJU”</b>	Building H Room 103 OIL
	Workshop 10	<b>“Innovation &amp; Entrepreneurship”</b>	Building H Room 106 PIE
2:00 pm	<b>Wrap-up Session: Presentation of Workshop Results</b> <b>Chaired by Prof. Natheer Abu Obeid, President of GJU</b> Venue: Building H, Auditorium		
3:00 pm	<b>Lunch Reception</b> Venue: Building H, Basement		
4:00 pm	<b>End of Workshop</b>		

#### **4.1 WELCOMING NOTE: “GJU’S STRATEGIC GOALS TO ENHANCE THE COLLABORATION WITH THE INDUSTRY”**

##### **Prof. Natheer Abu Obeid, President German Jordanian University**

GJU President Professor Natheer Abu Obeid pointed to the gap between higher education and labor market requirements, sharing a vision of making GJU a model for an innovative University of Applied Sciences at the local and regional level. He underlined that GJU strongly benefits from the cooperation with its numerous German partner institutions and their experience in applied education. He added that it is possible to create educational formats, which take the economic and cultural differences between Jordan and Germany into account. He also stressed that applied education develops skills and innovation, and that GJU can already pride itself of having realized important achievements, e.g. through the establishment of the unique GJU Program Innovation & Entrepreneurship (PIE) and a dedicated Office for Industrial Links (OIL). Nevertheless, he stressed that GJU has to continuously develop its ties with industry to fulfill its mission.



#### **4.2 KEYNOTE: “THE INDUSTRY’S ROLE TO PROMOTE COOPERATION WITH UNIVERSITIES”**

##### **HE Mr. Adnan Abu Al-Ragheb, Chairman of the Board, Jordan Chamber of Industry**



The Chairman of the Board of the Jordan Chamber of Industry, HE Mr. Adnan Abu Al-Ragheb, outlined the importance of the industrial sector in Jordan in terms of its contribution to the gross domestic product, to the creation of new jobs and for the country’s export sector. He also stressed the importance of the academic sector’s role in supporting the development of the economy at large and mentioned that the Chamber of Industry has sponsored several programs and initiatives to promote this role, e.g. the “Faculty for Factory” program or the award for graduation projects implemented in the industry.

### 4.3 BEST PRACTICE FROM JORDAN: “THE SOLAR COOLING PROJECT”

**Mr. Leon Brendel, GIZ Representative, Jordan, and  
Eng. Hisham Mikhi, Millennium Energy Industries, Jordan**

Mr. Brendel described the GIZ Solar Cooling project as an example for the important role of field tests in the process of connecting basic research and the private sector. The Technical University of Berlin (TU Berlin) managed to increase the efficiency and practicality of absorption cooling technology to a point where this technology can save money to a high degree. Nevertheless, the private sector does not yet consider this technology as reliable enough to produce sufficient profits. This is why GIZ, as a public entity, installed a Solar Cooling Systems on the roof of GJU’s Building C (and at three other locations in Jordan) as a field test, to provide proof of the reliability and profitability of this new technology. The government, outlined Mr. Brendel, can bridge the gap between academia and the private sector, if it assumes the role of an enabler for the development of the private sector, e.g. by field tests and incentives for new technologies. Companies, on their side, should always aim to maintain closest ties to the sources of innovation, i.e. universities and research centers. Simultaneously, universities can largely profit from the feedback from companies to focus their activities in research and education.



Eng. Hisham Mikhi from Millennium Energy Industries (MEI; established in 2002 and actively involved in the development of solar cooling devices) then explained the set up of the solar cooling project and its main objectives, namely: establish sustainable air conditioning in Jordan, customize solar chillers to initiate their manufacturing and servicing in Jordan, facilitate knowledge transfer to key stakeholders in business. Project Consultant HEAT International from

Germany and local partner MEI, in charge of project engineering, procurement, construction and maintenance, evaluated various sites in Jordan for feasibility. Consequently, they set up a combined solar heating and cooling system, with the solar driven absorption chiller developed by TU Berlin, at GJU. The system is expected to save app. 490 MWhth of energy annually, summing up to savings of app. 375.000 JD over a life time of 25 years.

#### 4.4 BEST PRACTICE FROM GERMANY: “SAP DUAL STUDY TRAINING”

**Dr. Shadi Al-Khamayseh, SAP MENA**

The SAP dual study scheme is an initiative of the SAP Training and Development Institute in cooperation with a number of selected universities, among them GJU. More than 40 GJU students have already been enrolled in the program; 22 of them are in Germany at present, and the first batch has just graduated. The current batch comprises 22 students.

The aim of the program is to prepare students to become entrepreneurs, instead of mere job seekers. For this end, the program tries to bridge the gap between academia and industry and has produced very valuable results so far. In the program, students obtain an SAP qualification in addition to their Bachelor degree.



#### 4.5 BEST PRACTICE FROM THE REGION: “DUAL STUDIES AT AL-QUDS UNIVERSITY”

**Dr. Tarek Abu Leil, Founding Dean of the Dual Studies College, Al-Quds University, Palestine, and Dr. Bärbel Stark, Academic International Relations Office, Al-Quds University, Palestine.**



Dr. Tarek Abu Leil described the establishment of dual study programs at Al-Quds University (AQU) as an opportunity to create more jobs for Palestinian youth and to support the innovativeness and productivity of the Palestinian economy. He presented a needs analysis of the private sector in Palestine conducted by the university, which stated that companies are in great demand of employees with excellent academic background, strong practical experience and social competencies. Further, he described the approach chosen by AQU to better respond to this demand: Students in dual programs spend two years at University and two years in industry, alternating every three months between the University and a company.

The set-up team at the university proceeded as follows: Kick-Off-Meeting, workshops with and without company representatives, signing of cooperation agreements between companies and university, opening ceremony. To participate in the program, students first have to apply at Al-

Quds University, which preselects qualified candidates and sends their files to the companies. Only if a participating company accepts a student, he or she can be enrolled in the program. Then, a work contract between student and company is signed, guaranteeing the student a salary of at least 200 US\$ per month. Concerning the companies, Dr. Tarek Abu Leil mentioned that it has been proven successful to start with small sized enterprises and family run businesses. Regarding content, the Dual Studies College at AQU started with dual programs in Information Technology and Electrical Engineering and is currently establishing a dual program in Business Administration. For each program, a coordinator was nominated. More than 30 partner companies already participate in the dual studies programs, and the university is optimistic to persuade more than 60 other companies to join in the near future.

#### **4.6 BEST PRACTICE GJU ALUMNI: “ARABIAWEATHER – A STARTUP SUCCESS STORY”**

**Eng. Yousef Wadi, Co-Founder, ArabiaWeather Inc., Jordan**

ArabiaWeather is a successful startup; Mr. Yousef Wadi, a GJU alumnus, is a co-founder and key member of the company’s management team. In his very inspiring speech, he informed about the challenges the founders met when trying to set up their business and about how they managed to finally build up a sustainable and successful company.

He stressed the fact that startups rarely develop straightforward but go through a process of ups and downs. He underlined that in order to establish innovative companies and/or to be fit to work in them, students need “to learn how to learn”, as most of the knowledge delivered at the start of their studies is likely to be outdated at the time of graduation. This capacity, Mr. Wadi added, is not sufficiently addressed in most academic curricula nowadays.



## 5 OPENING EXHIBITION “MADE @ GJU”

After the mentioned presentations, the attendees visited the exhibition "Made @ GJU", which included posters and exhibits offering illustrative examples of research and projects conducted by GJU staff in collaboration with the industry, as well as some products made at GJU. The exhibition was very well received and provided a good opportunity for company representatives to learn more about the variety of research and capabilities offered by GJU.



Below, you can find the list of poster titles and exhibits. All the poster can be viewed under the following link:

[https://drive.google.com/folderview?id=0B\\_fUFSXoEbcEUXdnU2o0MzVvSFk&usp=sharing](https://drive.google.com/folderview?id=0B_fUFSXoEbcEUXdnU2o0MzVvSFk&usp=sharing)

School of Management and Logistics Sciences (SMLS)	
Warehouse Technology	Logistics
KHB-BPA-Feedback	Logistics
BDC Green entrepreneurship	Logistics
Applied Course: Financial Statement Analysis	Accounting
CMA success story	Accounting
Angels Wedding Center	Management
My Trade Stand	Management
Table exhibit: Inventory control	Management

Talal Abu-Ghazaleh Graduate School of Business (TAG-SB)
We build your business model with a high level of customization
We match our core competencies with your organizational needs
We provide state-of-the-art of consultancies, training, case studies and problem solving
We provide sustainable solutions based on market needs

### School of Natural Resources Engineering and Management (SNREM)

Mapping the Concentrations of Water Quality Parameters in Wadi Al Mujib Dam, Using Remote Satellite Sensing Landsat & data

Energy plus Prefabricated Buildings

PV-Cool: Investigation of the techno-commercial potential for cooling of Photovoltaic modules using phase change materials (PCM)

BioREEED project: Biogas Production in Local Communities in Jordan

Groundwater Recharge From Flowing Wadis

Development and Utilization of Solar Driven Water Dumping and Desalination Units for Application in Remote Areas of Jordan (2009-2013)

Table exhibit: Energy Electronics

### School of Applied Humanities and Languages (SAHL)

Poster and short films about “Heimat” (الوطن) produced by MA DAF students in cooperation with SABE students



### School of Applied Technical Sciences (SATS)

Business process reengineering at Tahboub kitchens	Industrial Engineering
Efficient Pulsed Green Laser Welding on Copper Components Using Design of Experiment	Industrial Engineering
A Taguchi-Continuous Simulation Approach to the Injection Molding Blowing Process Quality Improvement	Industrial Engineering
Optimization of HVAC system	Mechanical and Maintenance Engineering

Range rationalization and Inventory based shelf space allocation	Industrial Engineering
Effect of Heat treatment on Tungsten Inert Gas (TIG) welding of Inconel 625	Industrial Engineering
Jo-Car, An Intelligent Ground Vehicle	Mechatronics Engineering
WRATH: Walking Robot All Terrain Hexapod	Mechatronics Engineering
Prototype: Liquids separation machine, Artificial robotics arm, Exoskeleton, Artificial Nose	Mechatronics Engineering
Prototype: 3D printer /prototype	Industrial Engineering
Computer Simulation: Two dimensional analysis of low pressure flows in the annulus region between two concentric cylinders / Simulation Model	Mechanical and Maintenance Engineering
Computer Simulation: Reducing waiting time(Queue) in emergency room / Simulation Model	Industrial Engineering

School of Architecture and Built Environment (SABE)	
MADE @ GJU Design and Visual Communication	Design and Visual Communication
MADE @ GJU Interior Architecture	Architecture and Interior Architecture
MADE @ GJU Architecture	Architecture and Interior Architecture

School of Applied Medical Science (SAMS)	
Preparation and Characterization of Lignin Based Macroporous Membranes	Pharmaceutical and Chemical Engineering
Experimental & economic evaluation of a designed machine for converting WCO into Biodiesel	Pharmaceutical and Chemical Engineering
Process Selection and Economic Evaluation for a Wastewater Treatment Process in ARAL Plant	Pharmaceutical and Chemical Engineering
Improving and developing the user safety of the wheel-chair lifting systems and Exploring new uses of the plastic injection machine through using the polymers and gypsum wastes	Biomedical Engineering
Test Setup for Transtibial Prostheses	Biomedical Engineering
Carriage of streptococcus pneumoniae in the pediatric population of Madaba and Amman, Jordan	Biomedical Engineering
Table exhibits Made@ GJU Products: Gel, Creams, Capsules, Tablets, Prototype figures, Bioreactor	(both study departments)

School of Electrical Engineering and Information Technology (SEEIT)
Autonomous Ground Vehicle Navigator
Robotic demo



## 6 PARALLEL WORKGROUPS WITH THE SCHOOLS AND OTHER GJU ENTITIES

After the exhibition “Made @ GJU” and the opportunity to network in a relaxed and inspiring atmosphere, the participants broke up into different thematic workgroups to discuss university-industry cooperation in detail with the Schools and other GJU entities.

### 6.1 WORKGROUP 1 – “ENERGY AND ENVIRONMENT” (SNREM)

**Session Chair:** Dr. Zakariya Dalalah – GJU

**1- Companies and organizations attended the meeting:**

- a. Eng. Hanna Zaghloul, Kawar Energy, CEO
- b. Eng. Hisham Al-Mikhi, Millennium Energy Industries, General Manager
- c. Eng. Qais Bggili, Maani Solar

**2- GJU faculty members attended the meeting:**

- a. Dr. Munjed Alsharif, Dean
- b. Dr. Ammar Al Khalidi
- c. Dr. Qasem Abdelal
- d. Dr. Zakariya Dalalah



**3- Approved actions by the participants:**

Challenges discussed:

- a. The faculty members are not engaged with the industry. Main causes are the bylaws of the civil service in Jordan and Jordan Engineers Association regulations. More insight into this problem is needed.
- b. Industrial professors appointed at the university are no longer part of the industrial community which defeats the whole purpose of having industrial professor in the academic institute. Continuing relations and connections to the industrial partners is needed.
- c. Soft skills of the engineering students need to be enhanced. Lack of leadership and initiative-taking roles is a problem in most graduates.
- d. Internship period is too short for the students to grasp a comprehensive experience.
- e. Curriculum deficiency: A specific problem to energy engineering students is that there are a few qualifications missing when compared to graduates from University of Jordan and JUST (Kawar group commented)

### Recommendations and proposed ideas

- f. Strengthen the engagement of faculty members with industrial facilities through updating university regulations and pushing JEA towards allowing the university professors to be more involved in the industrial sector.
- g. Encouraging industrial professors to stay in contact with their industrial partners and involving other faculty members to be exposed to the market as well.
- h. Stretching the internship lifetime span over one year (or longer period than just 8 weeks) while preserving the total working days as required by the regulations of the university. In this case the students can be exposed to the whole project work from inception till commissioning, thus gaining inclusive experience. (Special arrangements and regulations update for the internships are needed)
- i. Proposing an industrial course to be part of the curriculum of the academic departments. The course can be one credit or three credit hours. The target groups are to be the senior level students (last semester before graduation). The course should cover industrial field terms and concepts (focusing on Jordan market). In addition, teaching real life projects to students, from concept until delivery where the student will be exposed to the whole cycle of project implementation as an engineer. Options to achieve this: Professionals from the industry participate in all stages of the course development and delivery and/or industrial professors and faculty members to be engaged with the industrial outfits to develop and deliver the course that reflects their areas of expertise.

### **4- Next steps – timeline with proposed success indicators**

<b>Action</b>	<b>Starting date</b>	<b>Duration</b>	<b>Success indicator(s)</b>
Industrial course development	1 <sup>st</sup> semester 2016/17	Max. one year	Course outline, material and delivery options
Soft skills improvement (leadership, initiative, etc.)	1 <sup>st</sup> semester 2016/17	Max. one year	Integrating soft skills management in the students' training and graduation project work
Curriculum update	1 <sup>st</sup> semester 2016/17	Max. one year	

Internship regulations update	1 <sup>st</sup> semester 2016/17	Max. one year	
Meeting with JEA for regulations updates and revisions regarding faculty members involvement in the industrial field	During first semester 2016/2017		

## 6.2 WORKGROUP 2 – “HEALTH” (SAMS)

**Session Chair:** Dr. Ziad Abuelrub – GJU

### 1- Companies and organizations attended the meeting:

- a. Dr. Yara Aloti, Agon Academy, Associate Partner and Projects Director
- b. Dr. Rania Jamani, Delass / JPM, QA Manager
- c. Eng. Ruba Qudah, Jordan Hearing Aids, Sales Manager

### 2- GJU faculty members attended the meeting:

- a. Dr. Malyuba Abu-Daibes, Dean
- b. Dr. Esra’a Albarahmieh, Head of Pharmaceutical and Chemical Engineering Department
- c. Dr. Balsam Mohammad
- d. Dr. Adnan Al-Lahham
- e. Dr. Nafisah Al-Rifai
- f. Dr. Walid Al-Zyoud
- g. Dr. Abdussalam Qaroush, Part-time Ass. Prof.



**3- Approved actions by the participants:**Agon Academy:

- a. *Consultation*: Developing a qualification program for real pharmaceutical industry
- b. *Consultation*: Develop key performance indicators (KPIs) for practical training
- c. *Consultation*: Exploring the idea of 10-weeks intensive training program for the pharma industry after BSc graduation
- d. *Training*: Part-time teaching of some pharma courses

Delass/JM:

- e. *Training*: Training program that covers all manufacturing steps in the pharmaceutical plant
- f. *Training*: Statistical analysis and SPSS
- g. *Training*: Risk management and validation
- h. *Graduation projects*: For research and problems solving

Jordan Hearing Aids:

- i. *Agreement*: Connecting GJU with the mother company
- j. *Training*: On maintenance and sales
- k. *Job offers*: For Biomedical Engineering graduates

**4- Next steps – timeline with proposed success indicators**

<b>Action</b>	<b>Starting date</b>	<b>Duration</b>	<b>Success indicator(s)</b>
Agon Academy			
a.	1 <sup>st</sup> semester 2016/17	Max. one year	Full proposal
b.	1 <sup>st</sup> semester 2016/17	Max one year	Full proposal
c.	1 <sup>st</sup> semester 2016/17	One semester	Evaluation report
d.	1 <sup>st</sup> semester 2016/17	Open	≥ 2 lectures per semester
Delass / JPM			
e.	1 <sup>st</sup> semester 2016/17	Open	≥ 1 student per year
f.	1 <sup>st</sup> semester 2016/17	Open	≥ 1 lectures per semester
g.	1 <sup>st</sup> semester 2016/17	Open	≥ 1 lectures per semester
h.	1 <sup>st</sup> semester 2016/17	Open	≥ 1 student per year
Jordan Hearing Aids			
i.	1 <sup>st</sup> semester 2016/17	3 months	Report
j.	1 <sup>st</sup> semester 2016/17	Open	≥ 1 student per year
k.	1 <sup>st</sup> semester 2016/17	Open	≥ 1 student per year

### 6.3 WORKGROUP 3 – “INDUSTRY DRIVING THE TECHNOLOGY” (SEEIT)

**Session Chair:** Dr. Ismail Hababeh – GJU

**1- Companies and organizations attended the meeting:**

- a. Dr. Yahia Makableh, KADDB
- b. Eng. Yousef Wadi, ArabiaWeather
- c. Eng. Mohamed Jinini, Cisco

**2- GJU faculty members attended the meeting:**

- a. Dr. Ismail Hababeh
- b. Dr. Sahel Alawneh
- c. Dr. Dr. Ala Khalefeh
- d. Dr. Rami AlAzraei
- e. SEEIT Teaching Assistants and students



**3- Approved actions by the participants:**

- a. Involve our staff members and students in projects coordinated and funded by KADDB. This will expand the participants’ experience and allow solving manufacturing and testing problems. On the other hand, it will be considered as graduation projects.
- b. KADDB agree on accepting students for local internship.
- c. ArabiaWeather introduces software and hardware high-tech challenges that can be solved in cooperation with GJU staff. The technical problems can be formulated as research and graduation projects.
- d. ArabiaWeather welcomes our students for local internship where a variety of hardware/software systems are offered for this purpose.
- e. Cisco has a wide range of courses that offers for both faculty members and students the opportunity to improve their abilities in computer networking. They are willing to support GJU labs with hardware, software, and manuals that help a lot in getting our staff and students certified in computer engineering, communication, and computer science courses. In turn, GJU can take the benefit and apply the local “Train the Trainer” Program.

#### 4- Next steps – timeline with proposed success indicators

<i><b>Action</b></i>	<i><b>Starting date</b></i>	<i><b>Duration</b></i>	<i><b>Success indicator(s)</b></i>
KADDB			
a.	October 2016	Open	Max 5 instructors per year
b.	October 2016	Open	Max 10 students per semester
ArabiaWeather			
c.	October 2016	Open	Max 3 instructors per year
d.	October 2016	Open	Max 5 students per semester
Cisco			
e.	October 2016	Open	Report

### 6.4 WORKGROUP 4 – “CONSTRUCTION & DESIGN” (SABE)

**Session Chair:** Arch. Rejan Ashour – SABE, GJU

#### 1- Companies and organizations attended the meeting:

- Mr. Mohammad Shegem, Petra Aluminum Company, General Manager
- Mr. Osama, Petra Aluminum Company, Technical Engineer
- Eng. Maher Maymoun, Izzat Marji Group, Energy Efficiency Consultant
- Eng. Raed Abu Laban, Maani Ventures, Marketing Manager
- Mr. Omar Al-Azzeh, Grapheast, Business Development Manager
- Mr. Muhammad Nusairat, Grapheast, Certified Instructor

#### 2- GJU faculty members attended the meeting:

- Prof. Mohammad Ali Yaghan
- Dr. Omaimah Al-Arja
- Dr. Janset Shawash
- Arch. kamal Jalouqah
- Arch. Leen Fakhoury
- Des. Nada Jaffal
- Arch. Stefanie Luniak



### **3- Approved actions by the participants:**

- a. We discussed with Petra Aluminum Company the possibilities of cooperation along the following lines:
  - i. Series of lectures and presentations by their representatives to update the students and staff about new materials, products, and systems.
  - ii. Explore opportunities to connect students with new German business partners of Jordanian companies for the benefits of the students towards the German Semester Internship.
  - iii. Vocational training for the students as a part of students' local internship
  - iv. Design Consultation provided by the faculty members.
- b. Izzat Marji Group offered the collaboration with the architects and the designers regarding some issues, such as:
  - i. Thermal Imaging Services which demands design consultation involving the faculty members and problem solving involving both instructors and students.
  - ii. Students' local internship.
  - iii. Series of lectures and presentations by their Sales Department to introduce the students to the new technologies regarding both utility, energy, and building systems.
- c. With Maani Ventures, School of Architecture and Built Environment started last semester a joint venture project, which was the designing of a Smart Green House. This project was minted to be implemented with multiple groups of GJU students (Architecture Department). The goal was to design a smart green house with an area of 70 to 140 square meters. Consequently, the best five designs will be selected; the owner of the winning design will be awarded by Maani Ventures CEO. The results of the first batch of students done last semester are ready and waiting for evaluation. We agreed to go further with this project as a model for the collaboration with the industry.
- d. Grapheast Jordan started by presenting some of their products, namely Maxon's Cinema 4D software and its benefits for both architecture and design students. We agreed upon the cooperation along the following lines:
  - i. Grapheast will have a booth upcoming semester at the school, offering Maxon Cinema 4D for students as a free software.
  - ii. They offered to cooperate with the staff members on building e-learning databases, where the staff would supply the content and both parties would work on the database.
  - iii. They offered to install our computer labs with updated release of Maxon Cinema 4D.

**4- Next steps – timeline with proposed success indicators**

<b>Action</b>	<b>Starting date</b>	<b>Duration</b>	<b>Success indicator(s)</b>
<b>a) Petra Aluminum</b>			
Lectures	1 <sup>st</sup> semester 2016/2017		At least two lectures per semester
Vocational training	1 <sup>st</sup> semester 2016/2017		One or two students a year
<b>b) Izzat Marji Group</b>			
Design consultation	Summer semester 2015/2016		Implementation of such consultations
Students' local internship	1 <sup>st</sup> semester 2016/2017		One or two students a year
Lectures and presentations	1 <sup>st</sup> semester 2016/2017		At least two lectures per semester
<b>c) Maani Group</b>			
Evaluation session	Summer semester 2015/2016		
A new implementation for the project	1 <sup>st</sup> semester 2016/2017		Implementable results
<b>d) Grapheast Jordan</b>			
Booth for Maxon Cinema 4D	Summer semester 2015/2016	3 Days	A booth for three days every semester for next year
Lab furnishing	Before 1 <sup>st</sup> semester 2016/2017	1 week	

## 6.5 WORKGROUP 5 – “FROM ENGINEERING TO INDUSTRY” (SATS)

**Session Chair:** Dr. Safwan Altarazi – GJU

### 1- Companies and organizations attended the meeting:

- a. Eng. Mohammad Ali Ajlouni, KADDB Investment Group
- b. Eng. Ali Tahboub, Tahboub Woodworks Co., General Manager
- c. Dr. Laith abu Hilal, Safeway, General Manager
- d. Eng. Mohammad K. Barakat, Fine Hygienic Holding
- e. Eng. Hamzeh Miqdadi, Safeway, Project Manager

### 2- GJU faculty members attended the meeting:

- a. Dr. Safwan Altarazi
- b. Dr. Murad Al-Samhour
- c. Dr. Ma'en Sari
- d. Dr. Ismail Al-Hinti
- e. Dr. Wael Al-Kouz
- f. Dr. Alaadeen Al-Halhouli
- g. Dr. Mahmoud Al-Bana
- h. Dr. Iyas Khader
- i. Dr. Hisham Al-Moaqat
- j. Dr. Lamya Alchalabi
- k. Dr. Rulla Allaf
- l. Dr. Ahamad Al-Mohtadi
- m. Eng. Ahmad Hammad
- n. Eng. Mohsen Diraneyyah
- o. Eng. Mohammad Ayyash
- p. Eng. Maysa Al-Amouri



### 3- Approved actions by the participants:

- i. Study Plan comments: To include a CAD/CAM course in the study plans.
- ii. Students' evaluation: in appropriate courses, to replace the second mid-term by an industry-based project.
- iii. Enhance communication between industries and academics by: periodic workshops, field visits, have some courses/lectures given by industrial representatives, etc.
- iv. Conduct graduation projects with industries; however, these projects should be seen as a start point for agreed-upon projects.
- v. Conduct some consulting projects, such as in robotics, PLC, and scheduling fields; but with considering its economics feasibility.

**4- Next steps – timeline with proposed success indicators**

<b>Action</b>	<b>Starting date</b>	<b>Duration</b>	<b>Success indicator(s)</b>
a.	August 2016	Every other month seminar with industry	<ul style="list-style-type: none"> <li>- Engs. Mohammad Ajloni and Rami Arafat (from Hikma who was supposed to attend the workshop but couldn't after date was changed to June 1<sup>st</sup>) have already conducted such activities with SATS</li> <li>- Dr. Laith Abu Hilal can present the seminar in August 2016.</li> </ul>
b.	October 2016	Open	<ul style="list-style-type: none"> <li>- Small projects cooperation between industries and GJU.</li> <li>- SATS staff will visit Safeway, Fine, Tahboob, etc. to discuss such projects.</li> </ul>
c.	October 2016	Open	<ul style="list-style-type: none"> <li>- Student's evaluation by doing small courses industry-related projects.</li> <li>- SATS staff will visit Safeway, Fine, Tahboob, etc. to discuss such projects.</li> </ul>
d.	November 2016	Open	<ul style="list-style-type: none"> <li>- Small workshops with faculty members and students, and link them more to KADDB work and funded projects.</li> <li>- This was discussed with Dr. Yahia Makableh, Research Scientist from KADBB, during GJU workshop and was then confirmed through emails.</li> </ul>

## 6.6 WORKGROUP 6 – “LOGISTICS, ACCOUNTING, MANAGEMENT” (SMLS)

**Session Chair:** Dr. Aziz Madi – GJU

### 1- Companies and organizations attended the meeting:

- a. Dr. Laith Abu Hilal, Safeway, Chief Commercial Officer
- b. Mr. Sami Masannat, EY, Director
- c. Mrs. Ibtiham Alayoubi, BDO, Managing Partner
- d. Capt. Wahid Abu Ajamieh, CMA-CGM, General Manager
- e. Mr. Mohammad Barakat, Fine Holding, Business Excellence Manager
- f. Mr. Aref Samawi, Jordan Industrial Ports Company, General Manager
- g. Mr. Khaldoun Hamarneh, BDC
- h. Mr. Ibrahim Hamoudeh, Thonton
- i. Mr. Amjad Sh, Backaldrin
- j. Mr. Emran Tellawi, Arab Auditors, General Manager

### 2- GJU faculty members attended the meeting:

- a. Dr. Louay Salhie
- b. Dr. Ghazi Samawi
- c. Dr. Ali Attari
- d. Dr. Ismail Abu Sheikha
- e. Dr. Metri Mdanat
- f. Dr. Omar Shubilat
- g. Dr. Malek Sharaireh
- h. Dr. Mohannad Atmeh
- i. Dr. Raed Khasawneh
- j. Dr. Mohammad Shboul
- k. Dr. Bassam Maali
- l. Dr. Serena Sandri
- m. Dr. Mohammad Al Omari
- n. Dr. Emad Hatamleh
- o. Mr. Ahmad Abadleh
- p. Mr. Luay Abu Rajab



### 3- Approved actions by the participants:

- a. Actions by SMLS:
  - i. Add case studies and case methods to curriculum
  - ii. Focus on a certain industry on the department level
  - iii. Focus more on enhancing student's soft skills (strategic thinking, presentation, soft skills and critical thinking, extra readings)
  - iv. Invite guest speakers
- b. Actions by partners:
  - i. More cooperation and openness
  - ii. Support academics and their research and also in classes
  - iii. Support innovative students' ideas
  - iv. Open the space for employees workshops given by academics
- c. Actions by both:
  - i. Form interest groups to cooperate more
  - ii. Workshops for employees
  - iii. Guest lecturing in GJU

### 4- Next steps – timeline with proposed success indicators

<b>Action</b>	<b>Starting date</b>	<b>Duration</b>	<b>Success indicator(s)</b>
a. Meeting groups at department level to	1st semester 2016/2017	Open	<ul style="list-style-type: none"> <li>- Come out with specific case studies</li> <li>- Ideas to enhance curriculum</li> <li>- Specify most important practical definitions and skills required</li> <li>- Agree on specific opportunities of cooperation in the future</li> </ul>
b. Staff Exchange	1st semester 2016/2017	Open	<ul style="list-style-type: none"> <li>- Number of staff exchanged</li> <li>- Reports of staff exchange</li> </ul>
c. Industrial course	1st semester 2016/2017	Open	<ul style="list-style-type: none"> <li>- Implementing the industrial course</li> </ul>

## 6.7 WORKGROUP 7 – “TRANSLATION AND COMMUNICATION: EXPERIENCES AND PERSPECTIVES” (SAHL)

**Session Chair:** Dr. Jochen Pleines – GJU

### 1- Companies and organizations attended the meeting:

- a. Mr. Nadeem Alsalem, Gibran Translation
- b. Mr. Emanuel Stavrakakis, Holiday Inn
- c. Mr. Ahmad, Holiday Inn
- d. Mr. Laith Al-Sous, Quality First Translation

### 2- GJU faculty members attended the meeting:

- a. Dr. Jochen Pleines
- b. Mr. Oliver Ritter
- c. Ms. Judith Labs



### 3- Approved actions by the participants:

- a. Providing orientation sessions for students (already at the beginning and not in the final phase of the course of their studies) either by inviting representatives of the companies to SAHL or by visiting the companies at different stages of the course of their studies with the prospect of offering (project-based) internships.
- b. Establishing a platform at SAHL to better connect the students with the market (internships, projects etc.).
- c. Employing “real world” projects in the translation courses in cooperation with the companies (students benefit from practical relevance of their work and see the outcome on the market; companies will delegate projects of “lesser” urgency and with a relatively open time frame and use them, for example, for promotion purposes).
- d. Conducting standardized tests with the (translation) companies in order to evaluate how the students’ achievements at the GJU match with the market demands.
- e. Conducting graduation projects in cooperation with the companies (field studies etc.).
- f. Organizing workshops with target companies and institutions to allow academic staff and students to develop a realistic understanding of relevant sectors.
- g. Reinforcing understanding of the demand and usefulness of Arabic in the national and regional labour market.

#### 4- Next steps – timeline with proposed success indicators

<b>Action</b>	<b>Starting date</b>	<b>Duration</b>	<b>Success indicator(s)</b>
a.	1 <sup>st</sup> term 2016/2017	Open	More internships, projects etc. for students; faster employment after graduation
b.	1 <sup>st</sup> term 2016/2017	Open	Better communication between the companies and SAHL; more internships, projects etc. for students
c.	1 <sup>st</sup> term 2016/2017	Open	“Real world” projects in class
d.	1 <sup>st</sup> term 2016/2017	Open	Adjust quality of the exams to actual market demands
e.	2 <sup>nd</sup> term 2016/2017	Open	Graduation projects that are beneficial for the students, SAHL as well as companies students may later work in
f.	1 <sup>st</sup> term 2016/17	Open	Workshop with representatives in the field of tourism and gastronomy etc.
g.	1 <sup>st</sup> term 2016/17	Open	Still to be elaborated

## 6.8 WORKGROUP 8 – “MARKETING AND OPERATIONS” (TAG-SB)

**Session Chair:** Dr. Abdallah Abdallah – Talal Abu Ghazaleh Graduate School of Business

### 1- Companies and organizations attended the meeting:

- a. Waseen Nuqul, Nuqul Group (Fine)
- b. Muhammad Al Smadi, Al Emlaq
- c. Firas Jaber, Al Emlaq
- d. Samah Al Natour, Hikma
- e. Muneer Al Assi, KADDB
- f. Tareq Hammad, Talal Abu Ghazaleh Group
- g. Zeyad Al Majali, Talal Abu Ghazaleh Group
- h. Rami Tabbakha, Talal Abu Ghazaleh Group

### 2- GJU faculty members attended the meeting:

- a. Prof. Ma'moun Akroush
- b. Dr. Abdallah Abdallah
- c. Dr. Khawla Obaidat
- d. Dr. Loay Salhieh



### 3- Approved actions by the participants:

- a. Implementing three case studies between TAG-SB and Hikma in the areas of:
  - i. Strategic planning, led by Prof. Ma'moun Akroush
  - ii. Marketing, led by Prof. Ma'moun Akroush
  - iii. Operational excellence, led by Dr. Abdallah AbdallahThese three cases started prior to this event.
- b. Starting a meeting in the next month to enhance the innovation element. The result of such meeting may push for establishing an Innovation Academy, an innovation diploma or a track in innovation management at TAG-SB. The industry will help teaching these programs.
- c. Establishing the "Business Clinic": Every semester an expert from TAG-SB visits a company from the group listed above with a selected group of students and a selected consultant from TAG-Group to study marketing and operations performance and create a gap analysis with solutions plans. These studies will create specific solutions tailored to that company's needs.

The Business Clinic will result in:

- i. Assigning businesses to TAG-SB students for semester projects based on specific business needs.
- ii. Customizing consulting solutions for specific problems.
- iii. On-site training programs.
- iv. Developing business case studies.
- d. Developing a sales professional certificate in cooperation with industry, including the attendees.
- e. TAG-SB will assign a single contact point to organize all future activities.

#### 4- Next steps – timeline with proposed success indicators

<i>Action</i>	<i>Starting date</i>	<i>Duration</i>	<i>Success indicator(s)</i>
a) Implementing case studies between TAG-SB and Hikma	May, 1 <sup>st</sup> , 2016	6 months	Publishing case studies
b) Innovation meeting	July, 10 <sup>th</sup> , 2016	1 month	Proposing an innovation program with the industry
c) "Business Clinic"	September 1 <sup>st</sup> , 2016	ongoing	Business proposals submitted to each business
d) Sales certificate	September 1 <sup>st</sup> , 2016	1 month	Proposing an innovation program with the industry
e) Contact point	September 1 <sup>st</sup> , 2016	1 week	Hiring or assigning a contact person

## 6.9 WORKGROUP 9 – “DUAL STUDY PROGRAMS AT GJU” (OIL)

**Session Chair:** Randolph Galla – GJU, Office for Industrial Links (OIL)

### 1- Companies and organizations attended the meeting:

- a. Eng. Omar Maani, Maani Ventures, CEO
- b. Adham B. Shiqem, Petra Aluminium / Petra Training & Development, General Manager
- c. Tariq Bassouni, DHL Express, IT and Marketing Manager
- d. Ms. Saja M. Saleh, Freudenberg Vileda Jordan Ltd, HR Officer
- e. Ms. Waad Al Akhras, Allesco Company, Palestine, System Analyst
- f. Dr. Shadi Al-khamayseh, SAP, Regional Program Lead, MENA
- g. Eng. Razan Alkhaza'leh, Amman Chamber of Industry, Technology Transfer Coordinator
- h. Dr. Tarek Abu Leil, Al Quds University (AQU), Palestine, Dean of Dual Studies
- i. Dr. Baerbel Stark, Al Quds University, Palestine, Academic International Relations Officer



### 2- GJU faculty members attended the meeting:

- a. Prof. Natheer Abu-Obeid, President
- b. Prof. Anton Mangstl, Vice President
- c. Dr. Laila Yaghi, Assistant to the President for Admission and Registration and for Quality Assurance and Accreditation
- d. Britta Kaehler, Director Office for Industrial Links (OIL)
- e. Randolph Galla, Dual Studies Advisor at OIL
- f. Linda Berger, Internship & Career Advisor at OIL

### 3- Approved actions by the participants:

Participants unanimously welcomed the idea to set up Dual Study Programs at GJU; all company representatives voiced their readiness to support the project. Al-Quds University provides valuable experience and is willing to assist.

This led to the following proposals for actions:

- a. Organizing a meeting with a bigger number of representatives of Jordanian companies at GJU. In order to facilitate this meeting, OIL intends to

- 1) visit or approach Deans / Study Program Coordinators, to inquire their interest for Dual Study Programs and to collect information on what we need to sort out,
  - 2) identify relevant companies, prepare information material on potential Dual Study Programs, visit them to present the general idea and to raise interest in cooperation,
  - 3) select to-be-invited companies; approach the CEO of Maani Ventures and the Boards of the Chambers of Industry and Commerce to support the invitation and the event.
- b. Visiting the Dual Studies College at al-Quds University (AQU), to
- 1) gather information from AQU staff on organizational set up and curricular changes (in comparison to “normal” study programs in the same field; could be followed up by a second visit of GJU Program Coordinators to discuss set up matters with their AQU counterparts),
  - 2) collect information from Palestinian companies in dual study programs on the organizational set up and their involvement in curriculum design, decision-making bodies; inquire about their reasons to participate and impressions of the enrolled students.
- c. Identifying 3 possible GJU pilot programs for Dual Study Programs.

#### 4- Next steps – timeline with proposed success indicators

<b>Action</b>	<b>Starting date</b>	<b>Duration</b>	<b>Success indicator(s)</b>
a) Continuation of preparation within GJU, liaising with stakeholders			
a 1)	26 June	1 month	Meetings with each Dean, confirmed interest of at least 3-5 Deans / Study Program Coordinators in the set up of Dual Study Programs
a 2-1)	15 June	2 weeks	Maani Ventures approached for support to organize meeting with more companies, support secured
a 2-2)	3 July	1 month	Information material designed, potential topics for dual study programs identified from GJU's side

a 2-3)	15 July	1 month	Visits of small GJU teams (School and OIL) to 5 - 10 potential companies conducted
a 3-1)	Mid of July (tentative)	1 day to 2 weeks	Chambers of Industry and Commerce approached, support secured
a 3-2)	End of July (tentative)	1/2 day	Meetings with a relevant number of company representatives accomplished, press release
b) Visit al-Quds University			
b 1)	Mid of July (tbc AQU)	2 days	Relevant information collected from AQU colleagues
b 2)	same (tbc)	same	3 Palestinian companies visited, information gathered
c) Conclusion of follow up			
c 1)	End of August	1 day	3 topics (matching the interests of companies) for Dual Study Programs and Program Coordinators identified, interest of companies confirmed

## 6.10 WORKGROUP 10 – “INNOVATION & ENTREPRENEURSHIP” (PIE)

**Session Chair:** Jamil Alkhatib – Program Innovation & Entrepreneurship (PIE), GJU

### 1- Companies and organizations attended the meeting:

- a. Ameera Hiari, Liwwa
- b. Sierene Duwairi, iPark
- c. Josiane Smith, Enpact
- d. Lulwa Saffarini, EDAMA
- e. Albra’Abu Shaqra, IBTECAR

### 2- GJU faculty members attended the meeting:

- a. Jamil Alkhatib, Manager of PIE
- b. Lama Seryanie, Administrative Assistant at OIL
- c. Ali Al-Ghussein, Coordinator of PIE



### 3- Approved actions by the participants:

- a. Develop an internship program for students in startup companies in order to enable them to learn and gain knowledge about entrepreneurial environment. This is to be discussed with iPark & Enpact.
- b. Follow up with EDAMA & Liwwa to identify graduation projects within the industry.
- c. Develop and implement a Green Sustainability Hackathon with partners with the following support:
  - i. Mentorship and advices by Enpact and iPark
  - ii. Identify sponsored challenges from the industry in collaboration with EDAMA & IBTECAR
  - iii. Prototyping and testing in collaboration with iPark & IBTECAR
- d. Encourage interdisciplinary projects, especially linking business and management students with the engineering ones, which will lead to establishing startups.

### 4- Next steps – timeline with proposed success indicators

Action	Starting date	Duration	Success indicator(s)
a.	October 1 <sup>st</sup> , 2016	6 months	Developed Internship Program
b.	August 1 <sup>st</sup> , 2016	2 months	Defined graduation projects with industry
c.	June 15 <sup>th</sup> , 2016	4 months	Implemented Green Hackathon

## 7 "WRAP-UP SESSION" – PRESENTATION OF WORKSHOP RESULTS

**Chaired by Prof. Natheer Abu Obeid, President of GJU**



GJU President Prof. Natheer Abu Obeid welcomed the participants of the workshop back in the plenary session and asked the Chairs of the ten parallel workshops to present the conclusions of the workgroups. The Chairs informed the audience about the outcomes of the discussion and the agreed actions and activities, the most important ones being highlighted hereafter. *Please refer to Chapter 6 for more details on the workgroups' composition and results.*

### **Workgroup 1 "Energy and Environment" (SNREM)**

- Stronger involvement of GJU professors in industry
- Longer duration of internships in order to allow students to participate in industrial projects from the beginning to the end
- Integration of an Industrial Course in the curriculum for students (last semester before graduation)

### **Workgroup 2 "Health" (SAMS)**

- Intensifying cooperation to increase consultation services for partner companies
- Discussion of possible graduation projects carried out in companies
- Establishment of a number of new training courses
- Better promotion of employment opportunities in partner companies

### **Workgroup 3 "Industry Driving the Technology" (SEEIT)**

- More collaboration between GJU and Arabia Weather
- More training for students in companies
- Intensive research centers offered 10-15 different projects, where GJU students can be included
- Students to receive training and certification in the lab which Cisco plans to open at GJU (students could also be trained as trainers)

#### **Workgroup 4 “Construction & Design” (SABE)**

- Focus on design- and graduation projects in cooperation with companies
- Training sessions or short training courses for some companies
- Approaching companies which are closely related to Germany for additional internship opportunities
- More collaboration on design-related problem solving and in graduation projects
- Companies’ support for upgrade of GJU’s lab software
- Acquisition of more internships in German companies and training possibilities for staff

#### **Workgroup 5 “From Engineering to Industry” (SATS)**

- Monthly visits or workshops by industry at the School, starting with smaller projects.
- Better demonstration of the skills and abilities of the School and what it can deliver to industry
- Moderate changes of the curriculum to address industry needs better
- Inclusion of industry in teaching in fields where the School has gaps
- Increased communication between academia and industry, in response to the need to bridge the gap and to create more trust

#### **Workgroup 6 “Logistics, Marketing, Accounting” (SMLS)**

- Set up training schemes for staff
- Stronger incorporation of students in companies in order to develop technical, graphical and managerial skills, and to gain experience in practical matters
- Better connection of theory and practice, including ethical considerations
- More real case studies, ensuring confidentiality
- Focus on specific industries
- Integration of more specific skills into curriculum, e.g. strategic thinking, critical thinking
- Invitations to guest from industry to participate in teaching at GJU
- Attraction of more experts and identification of ways to compensate them appropriately
- Staff exchange: Industry partners welcome GJU staff for training and consultations
- Invitation of industry to discussions about overhaul of curricula

### **Workgroup 7 “Translation and Communication: Experiences and Perspectives” (SAHL)**

- Focus on two sectors: hotels/tourism/hospitality and translation industry
- Increase of the already excellent reputation of GJU graduates in the translation industry by increasing attention to real world necessities in academic training
- Still lack of orientation to the real world; orientation e.g. in form of internships to be provided at an early stage
- Passion of the students to be strengthened
- Possibility to establish an Industrial Officer and industry workshops for staff and students
- Establishment of field training with a suitable duration (one month of practical experience, as foreseen in the current curriculum, has proven to be insufficient and is not well accepted by the companies)
- Organization of workshops and small projects on the companies’ premises
- Use of the concept of Industrial Professors and part time lecturers from industry in the fields of translation, language consultancy, tourism

### **Workgroup 8 “Marketing and Operations” (TAG-SB)**

- Organization of joint workshops on the basis of three business case studies carried out with Hikma in the fields of marketing, operational excellence and international business strategy
- Brainstorming session in June to create a nucleus of innovation, generating new innovative ideas what GJU could offer to industry
- Development of formats to integrate innovation in the curriculum, with company representatives doing part of the teaching
- Creation of a “business clinic” once every semester, carrying out gap analyses of companies’ marketing and designing professional solutions to the identified problems
- Assignment of a special contact person at TAG-SB to assure that these initiatives come to live and will be pursued

### **Workgroup 9 “Dual Study Programs at GJU” (OIL)**

- Organization of a follow-up meeting with a larger number of representatives of Jordanian companies
- Approaching additional companies which could not participate in the workshop, provision of relevant information, with the aim to integrate them in the project
- Visit to the recently established Dual Studies College at al-Quds University to gather information on its organizational set up at the university and curricular details, as well as on the organizational set up in the companies and their involvement in curriculum design
- Identification of 3 possible GJU pilot programs for Dual Studies

### **Workgroup 10 “Innovation & Entrepreneurship” (PIE)**

- Focus on graduation projects and on addressing challenges in the establishment of start ups
- Attempts to increase the number of interdisciplinary projects (mainly in the fields of engineering and business)
- Continuation of discussions to define an internship programs for students in start ups
- GJU hackathons on a regular base (with the third hackathon devoted to Green Technology)
- Extension of hackathons’ content, adding business trainings and work on industry-sponsored challenges, prototyping and testing the solutions with the companies

## 8 CONCLUSION



In his concluding words, the President of GJU, Prof. Natheer Abu Obeid, thanked all the teams who worked in the workgroups and stressed that not only the connections between GJU (as a whole) and the industry should be strengthened, but also the cooperation between the individual Schools and industry. Talks have to continue and be made sustainable. The “Friends of the GJU Forum” is a good platform to institutionalize cooperation and to make contacts more sustainable.

Addressing the representatives from industry, Prof. Natheer Abu Obeid assured that GJU would stay in close contact in order to follow up with them. He pointed out that GJU aims to create a sustainable model for Jordan and potentially beyond. He extended his sincere thanks to the representatives of the companies and the other guests for their interest and active participation. He invited them to join the Friends of GJU Forum and to participate in follow-up meetings that shall capitalize on the results of this workshop.

The President then closed the workshop by once again expressing his thanks towards all attendees for their participation and asked them to continue discussions and exchange during the following networking lunch.

## 9 NEXT STEPS

The workgroups agreed on various actions and activities, such as the establishment of the function of Industrial Officers and the set up of special Industrial Courses as part of the Schools' curricula. These plans need to be substantiated during the coming months in order to further strengthen university-industry relations. The different proposals now have to be transferred into reality. Therefore, the President asked the workgroups to forward the results of their fruitful discussions to Britta Kaehler, Head of the Office for Industrial Links. He further asked the Industry Relations Committee (IRC), headed by Dr. Ziad Abuelrub, to process the minutes of the meetings of the workgroups and to draft an overarching action plan on two levels, strategic and operational, serving to translate the outcomes into concrete activities.

GJU's Industrial Relations Committee will follow up on the implementation of the proposed actions and suggestions. It will develop an action plan for the University, coordinate the next steps to be taken and supervise the respective action plans of the Schools.

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## 10 ANNEX

### 10.1 SCHOOLS' INDUSTRY LINKS, CAPABILITIES AND COMPETENCIES



## SCHOOL OF NATURAL RESOURCES ENGINEERING AND MANAGEMENT

### INDUSTRY LINKS CAPABILITIES AND COMPETENCIES

#### Water resources engineering and management

- Water availability studies
- Water balance and budget analysis
- Watershed hydrology modeling and management
- Groundwater flow and well hydraulics modeling
- River hydraulics
- Irrigation system design and operation

#### Groundwater modeling and management

- Analysis of ground water resources
- Groundwater availability models
- Groundwater modeling, quality and quantity

#### Surface water modeling and management

- Analysis of surface water resources
- Lake and stream modeling, quality and quantity

#### Pipe networks

- Potable water network design and analysis
- Storm and sewer network design and analysis

#### Environmental Engineering

- Treatment processes (Design and operation)
- Environmental remediation and attenuation techniques
- Water quality evaluations, remote sensing
- Physical, chemical and biological treatment of wastewater
- Chemical processes design

#### Environmental and water data analysis

- Statistical analysis and summarization of environmental data
- Data quality control

#### Geology and Geochemistry

- Geochemical prospecting
- Water quality
- Surficial processes
- Mineralogy
- Groundwater
- Geochemical modelling
- Isotopic studies

#### Environment

- Radiological hazards
- Environmental assessment and planning
- Geomorphology
- Landscape studies
- Environmental hazards
- Environmental and climate change

#### Heritage studies

- Archaeological landscapes
- Archaeometry

#### Environmental Management

- Environmental compliance auditing for industrial organizations
- Environmental Management system auditing for the industrial organizations

#### Water Quality Engineering and Management

- Reservoir water quality prediction and management modeling
- Point source and nonpoint source pollution modeling
- Groundwater quality modeling and protection
- Industrial and domestic wastewater management
- Treated wastewater recycling and reuse
- Gray water reuse

#### Waste Engineering and Management

- Characterization and generation rates of waste analysis
- Routing analysis and optimizing for Solid Waste collection
- Landfill Engineering design and operation
- Heat content analysis for solid waste
- Landfill Biogas generation rates analysis and collection system design
- Leachate collection system design and leachate management
- Medical waste and Hazardous waste management

#### Climate Change

- Downscaling Modeling of Climate Change impacts on water resources on the basins
- Evaluation of mitigation and adaptation options to the impacts of climate change
- Policy and strategy formulation on climate change for different sectors

#### Hydrology and Water Resources

- Hydrologic modeling
- GIS applications in water resources
- Integrated water resources management
- Basin rehabilitation
- Flood modeling
- Meteorological analysis
- Climate change impact on land and water resources
- Water resources best management practices
- Low impact urban development
- Drought analysis

#### Chemistry

- Water quality analysis
- Air quality analysis
- Organic chemistry

#### Renewable Energy (PV, Solar thermal, Wind, Geothermal, Biogas, Biomass)

- Project development
- Consultation
- Design
- Supervision
- Tender document preparation
- Tender document evaluation
- Owner representative

#### Energy Audit

- Energy auditing consultation
- Energy efficacy measure
- Energy solution
- Energy economics study and analysis

#### Power Transmission and Distribution

- Consultation
- Design and development
- Supervision

#### Energy Storage

- Consultation
- Design
- Supervision

#### Pump and Lift Stations

- Consultation
- Design
- Supervision

#### Power Electronics for Energy Applications

- Design
- Prototyping
- Testing and validation
- Integration and control

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## SCHOOL OF APPLIED MEDICAL SCIENCES

### INDUSTRY LINKS CAPABILITIES AND COMPETENCIES

#### Industrial zone

- Innovation lab for prototyping and testing equipment
- Host industrial projects
- Working spaces or small offices for industry sponsored projects

#### Research and Development

- Innovation in drug delivery systems
- Material sciences / compatibility,... etc

#### Production unit

- Scaling up and development

#### Troubleshooting

- Find and solve technical problems in production, utilities and waste treatment units
- Solve energy problems

#### Quality Control

- Analytical methods / training and validation
- Environmental aspects / water treatment

#### Medicinal chemistry (API towards synthesis)

- Training software for design
- Extraction of active ingredients from plants

#### Training

- Technical support
- Training employees to understand theory behind practical work
- Training on instrumental methods of analysis

#### Microbiology

- Antibiotic resistance surveillance for development of new antibiotics
- Set recommendations for MOH for vaccination based on results of surveillance studies
- Training of academic and doctors for methodology in other countries where their results are necessary for industry

#### Modeling and simulation (static and dynamic)

- Dynamic systems, structural

#### Artificial limbs

- Design, modeling, manufacturing

#### Noise detection

- Industrial noise

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## SCHOOL OF ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY

### INDUSTRY LINKS CAPABILITIES AND COMPETENCIES

#### Wireless Communication

- 4G and 5G wireless networks consulting services
- Millimeter wave applications and analysis
- Free space optical applications and analysis
- MIMO systems and massive MIMO systems planning and design
- Marketing Knowledge Management

#### Bioinformatics, cancer and disease analysis

- Analysis of high-throughput cancer or disease data
- Gene expression, methylation, microarrays, RNAseq, microRNAs
- Statistical analysis of cancer or disease features and survival rates
- Analysis and suggestions of potential cancer/disease markers
- Analysis of potential drug targets (Protein level)
- Statistical analysis of protein/DNA sequences (Sequence homology, motifs, etc.)
- Classification and prediction of protein functional classes

#### Business/industrial optimization

- Developing business intelligence tools
- Planning, scheduling and resource allocation
- Optimal solutions computed by dedicated programs

#### Communication systems, computer networks

- Performance evaluation of real-time Internet traffic over wired/wireless networks
- Design and implement Media Access Protocols (MAC) for wireless networks
- Video/audio streaming over wired/wireless networks
- Multi-parity audio and video conferencing
- Network coding, QoS routing, Network measurements
- Voice over IP over wired and wireless networks
- Developing and implementing optimization algorithms for resource optimization for wireless network
- WWAN standard and technologies such as WiMax, WCDMA/HSPA, LTE, WLAN and WPAN technologies such as (802.11n, Bluetooth, UWB)
- E-health services
- Mobile technologies
- Smart Grid communication and networking

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# SCHOOL OF ARCHITECTURE AND BUILT ENVIRONMENT

## INDUSTRY LINKS CAPABILITIES AND COMPETENCIES

### DEPARTMENT OF ARCHITECTURE AND INTERIOR ARCHITECTURE

#### Architectural Planning and Design

- Conceptualization
- Architectural Design Planning Strategies
- Design of public, academic, healthcare, industrial and housings buildings, Airports, and Residential Buildings
- Production of working drawings and tendering process
- Creative Design Thinking Tools and Techniques
- Design Thinking Processes

#### Interior Architectural planning and design

- Furniture Design and Industrial Production
- Interior Architectural Design Planning Strategies

#### Urban planning and design

- Urban Analysis, Planning, and Design
- Training in urban planning and design
- Consultation on different projects in urban planning to yield results dealing with Master plans and strategic plans in different cities and regions
- Urban Regeneration
- Urban and Regional Planning
- Planning of Spatial Systems
- Planning of Mega Projects
- Transport Planning and Transport Impact Assessment TIA
- Geographic Information Systems GIS Applications

#### Landscape Design

- Landscape Design
- Landscape Architecture Presentation
- Soft-scape and plants Design
- Landscape Architecture (Design concept)
- Xeriscaping
- Landscape construction

#### Urban Regeneration and Heritage Conservation

- Architectural Heritage conservation
- Risk Management of cultural heritage sites
- Conservation materials (stone and mortar)
- Preventive Conservation
- Urban conservation of historic centers of buildings
- preparation of world heritage folders for inscription

#### Acoustics and Lighting design

- Acoustics and sound
- Lighting design

#### Green Architecture

- Green buildings evaluation and assessment
- Jordan Green Building Guide and rating system
- Assessment and evaluation, for incentives process
- Energy modeling and simulation for energy efficiency in architecture

#### Computer Technologies

- CAD, Revit Architecture, 3D Max, Adobe Photoshop, Illustrator, In-design, Rhino

#### Utility Planning and design

- Utility Planning in buildings
- Storm water & Bio swales management in site plans

#### Structural Systems and Construction

- Building material
- Structural soft wares
- Analysis of Structural systems: non linier, static/dynamic analysis, pushover analysis, performance based design methods, fiber reinforced concrete
- Construction of different systems and site supervision.
- Building technologies and detailing
- Architectural research and Management
- Project management and decision making skills
- Site management
- Development planning assessment & Strategy building
- Qualitative and quantitative assessment of significance
- Promoting and developing Teaching methods and learning outcomes in relation to exchange of ideas, knowledge transfer and learning from different planning cultures
- Building permission regulations

## DEPARTMENT OF DESIGN AND VISUAL COMMUNICATION

### Design Research and Critical Design

- Critical Design
- Design Thinking
- Resource Planning
- Conceptualization, Concept development evaluation and testing
- Exhibition Design

### Product development and Design

- Product Design Planning Strategies
- Quality Assurance for Industry
- Ergonomics and Ergonomics analysis of products
- Product manufacturing processes and design for manufacturing
- Materials science for product designs
- Design for product safety and survivability
- Design for reliability / Maintainability
- Model making and Experience prototyping
- Product design history
- Industrial / Product Design
- Textile Design: traditional weaving, Contemporary accessories using crafts, Product development (in textiles) and finished product
- App Design

### Graphic Design

- Post Printing machines skills (folding machine, cutting machine, binding machine, .. etc)
- Handmade binding skill (book binding)
- Silkscreen skills
- Calligraphy and Typography softwares

### Branding, Rebranding, and advertising design

- Branding
- Sketching and Rendering techniques for product designs (Free hand & Computer software's)
- Consumer buying behavior
- Cross-Media Design

### Animation, Film and TV Production and Design

- 2D and 3D Animation
- Visual Communication
- Film directing (various field's as fiction, documentary, commercial, image film, music video, industrial film)
- TV Production (Shows, News, Magazines)
- Storyboarding and developing use case scenarios
- Screenwriting
- Script doctoring
- Dramaturgy
- Concept developing
- Film science, Film history, Film theory
- Photography
- Cinematography
- Sound Engineering Studio and on set
- Production of Radio plays, Radio commercials
- Editing and Montage

### Design Programs

- 3D Design
- Rapid Prototyping
- Photoshop, Illustrator, In-design and Computer software's related to design

### Freehand Rendering and Presentation

- Freehand Graphic art presentation
- Free hand Rendering Techniques

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## SCHOOL OF APPLIED TECHNICAL SCIENCES

### INDUSTRY LINKS CAPABILITIES AND COMPETENCIES

#### Planning

- Warehousing operations and design planning
- Transportation planning
- Workforce scheduling in service industry (e.g. healthcare)
- Resources allocation/utilization planning
- Forecasting

#### Operations Management

- Supply Chain Management (SCM), and Supply Chain Excellence, CSCP
- Enterprise Resource Planning (ERP), and Enterprise Applications Integration (EAI)
- Operations Optimization
- Production Planning and Analysis, CAPM
- Warehouse Management Systems (WMS)
- Strategic Management
- Lean Manufacturing
- Operations scheduling
- Inventory management
- Spare parts management
- Joint production maintenance policies
- Fleet management

#### Quality Management

- Six Sigma
- Statistical process control (CQE-ASQ: certified quality engineer)
- Service Quality Management
- Customer Relationship Management (CRM)
- Business process reengineering
- Quality Management Systems (QMS) development
- QMS auditing and performance measurement
- Quality assurance applications and good manufacturing practices (GMP) in pharmaceutical industry.
- Applied statistics applications
- Statistical Dynamic Data Analysis
- Maintenance Management

#### Manufacturing Processes, Materials Processing and Characterizations

- Materials composites optimization
- Materials properties (Mechanical/thermal/physical/electrical) testing
- Finite element modeling and analysis (mechanical engineering design of components and manufacturing processes, e.g. including metal forming)
- Non-Destructive
- Corrosion Testing
- Microfabrication and Nanofabrication Technologies
- Materials processing (thermal, surface, etc.)
- Additive Manufacturing Technologies
- Micro and Nano Fabrication
- Optical microscopy and scanning electron microscopy (microstructural analysis)
- Chemical analysis of components (EDX, XRD, XPS)

#### Ergonomics and Human factors

- Ergonomic Workspace Assessment
- Environmental Ergonomics
- Driver and Vehicle Ergonomics
- Occupational Health and Safety

#### Energy Efficiency & Management

- Energy efficiency in buildings and industry.
- Heavy industries energy management.
- Photovoltaic Systems.
- HVAC
- Thermal hybrid systems
- ISO50001.
- CEM & CMVP.
- Green buildings

#### Structural Mechanics

- Vibration diagnosing and controlling.
- Structural health monitoring
- Troubleshooting of mechanical systems.

#### Simulation in Engineering

- Production Systems Simulation
- Discrete Event Simulation
- Computational fluid dynamics (CFD)

#### Control and Automation

- Process control systems (Distributed Control Systems –DCS and Supervisory Control and Data Acquisition Systems –SCADA)
- Industrial Instrumentation Systems
- Industrial Automation and Programmable
- Logic Controllers (PLCs)
- Passive vibration control
- Active vibration control
- Machine automation

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## SCHOOL OF MANAGEMENT AND LOGISTIC SCIENCES

### INDUSTRY LINKS CAPABILITIES AND COMPETENCIES

#### Marketing and Strategic Management

- Marketing & Business planning
- Online marketing planning & consultation
- Quantitative marketing research
- Qualitative marketing research
- Advanced segmentation analysis
- Modes of entering markets and competitiveness

#### Economics

- Economic Policy Advisor
- Fiscal Reform
- Budget planning and reform.
- Tax Administration
- Tax Policy Reform issues
- Subsidies.
- Strategic Planning
- Fiscal Decentralization
- Financial Forecasting and Modeling
- Feasibility Studies
- Medium Term Planning
- Investment and trade

#### Accounting and Auditing

- Preparing financial statements
- Analyzing and interpretation of financial statements
- Applying International Financial Reporting Standards
- Financial Planning
- Financial performance measurement
- Designing financial Accounting system
- Islamic finance transactions analysis
- Implementing accounting standards for Islamic financial institutions
- Setting-up costing systems for manufacturing firms
- The application of Activity-based Costing, Target Costing, and Kaizen Costing
- Budgeting and forecasting
- Technical accounting skills
- Financial due diligence
- Auditing and assurance services

#### Logistics Industry

- Lean production / logistics systems
- Agile production / logistics systems
- Inventory management and control
- Transportation systems management
- Quantitative models in logistics and operations management
- Project management
- Firm's performance analysis (KPI)
- Supply chain practices
- Supply Chain Management
- Strategic Management & analysis
- Warehousing and storage
- Humanitarian logistics and emergency management
- Sustainable supply chain: green and reverse logistics
- Fleet Management

#### Humanitarian & Green Logistics

- Humanitarian logistics and emergency management
- Sustainable supply chain: green and reverse logistics
- Humanitarian logistics and aid operations

#### Research Methodology and Design, Evaluation

- Discrete event simulation (with Arena Rockwell)
- Heuristic optimization (savings and genetic algorithms)
- Research and financial analysis abilities
- Quantitative and Qualitative Socioeconomic Analysis and Research

#### Legal and Business law

- Legal Consultation on Business and Trade Contracts
- Legal Consultations on establishing and running Business Companies
- Quality Assurance and Development of Insurance Policies from Legal and Business Perspectives
- Leadership and Contracts Training
- Managing Humanitarian Projects and Programs
- Youth Developments and Empowerment through Training and Youth Programs
- Management Development and Quality Communication Skills Development

#### Human Resources Management and Development

- Human Resource Management
- Organizational Behavior
- Career Guidance, Counselling, and Planning
- Qualitative and Quantitative Research Methods
- Managing changes and crises
- Business Development and Team Working
- Business communication and effective training
- Leadership
- Emotional intelligence

#### Quality Assurance and Planning

- Quality assurance and improvement
- Quality planning
- Business process analysis and improvement

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## SCHOOL OF APPLIED HUMANITIES AND LANGUAGES

### INDUSTRY LINKS CAPABILITIES AND COMPETENCIES

#### CAPABILITIES AND COMPETENCIES OF STUDENTS RELATED TO INDUSTRIAL COOPERATION

- BA German and English for Business Communication (GEBC)
- BA Translation: Arabic, English, German
- MA German as a Foreign Language

##### Communication

High command of three working languages (German, English, Arabic)

- Ability to compose professional texts like reports, formal letters, summaries etc. as well as to do content writing
- Corporate and public relation skills in verbal and non-verbal communication

##### Translation (BA Translation)

- Theoretical knowledge and practical skills in general translation between the three working languages (German, English, Arabic) in addition to two fields of specialized translation
- Skills in subtitling and localization
- Skills in consecutive interpreting

##### Business (BA GEBC)

- Management
- Marketing and Public Relations
- Human Resources
- Logistics

##### Intercultural Communication

Excellent cultural and intercultural communication skills with regard to their own culture and cultures in which their working languages are used

##### Language Teaching

- Graduates have the prerequisites for further training in language teaching.
- MA students are well equipped for teaching German.
- Arabic Language and Culture for non-native speakers

##### Social Work

Professional Diploma "Migration and Refugees" (new major)

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كلية طلال أبوغزاله للدراسات العليا في إدارة الأعمال  
Talal Abu-Ghazaleh Graduate School of Business

## TALAL ABU-GHAZALEH GRADUATE SCHOOL OF BUSINESS

### INDUSTRY LINKS CAPABILITIES AND COMPETENCIES

#### Marketing and Strategic Management

- Strategic Management: business strategies and plans
- Industry and competition analysis
- Marketing Strategies and plans
- Strategic Marketing Planning
- Marketing Knowledge Management
- Service Quality, Customer Service and Customer Care
- Marketing Communications and Promotion
- Strategic Brand Management
- Quantitative and Qualitative Marketing and Market Research
- Political Marketing: Studies, Surveys, Branding and Campaigns

#### Finance and Banking

- Asset – Liability Management
- Foreign Exchange Management
- Management of Foreign Exchange Exposure
- Restructuring
- Mergers

#### Accounting and Auditing

- International Financial Reporting Standards (IFRS)
- International Standards on Auditing (ISA)
- Accounting Regulations
- Accounting Standards for micro, small and medium enterprises
- Management Accounting

#### Logistics Industry

- Optimizing Warehouse Operations
- Fleet Management
- Developing Purchasing Strategies
- Supply Chain Analysis
- Operation (manufacturing & Services) Analysis

#### Statistics, Research Methodology and Design, Evaluation

- Study designs, quantitative, qualitative, & mixed designs
- Statistical analysis; meta-analysis, missing data, hierarchical & longitudinal multilevel analysis, growth curve models, large complex sampling data, and alike
- Statistical software packages
- Evaluation of companies, projects, programs, system & operations, service, etc.; formative and summative considering the culture of the setting
- Performance appraisal-human resources

#### Marketing & Entrepreneurship

- Market research
- Consumer behavior research
- Marketing entrepreneurial orientations' application
- Electronic & Social Media marketing
- Marketing Knowledge Management
- B2B marketing

#### Management and Cost Accounting

- Quality Assurance in Higher Education
- Strategic Planning
- Institutional Performance Assessment
- Performance Measurement Systems
- Financial Analysis
- Cost Analysis and Evaluation
- Capital Budgeting
- Balanced scorecard
- Activity Based Costing and Management
- Budgeting

**Quality Management, Operations Management**

- Six Sigma (Certified Six Sigma Master Black Belt)
- Project Management (certified Project Management Professional – PMP)
- Quality management systems (Certified quality manager)
- Total quality management
- Lean manufacturing / Lean management
- KAIZEN
- Business process re-engineering
- Balanced score cards
- Strategic planning
- Operations management and optimization
- Applied statistical analysis
- Process management
- Excellence Models (King Abdullah II Award for Excellence)
- Supply chain management
- Performance management
- And other related capacities

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## 10.2 ARTICLE IN AL-RAI

<http://www.alrai.com/article/791432.html>



### (الألمانية الأردنية) تعقد ورشة لبحث التعاون مع القطاع الصناعي

عمان - الرأي - نظمت الجامعة الألمانية الاردنية ورشة عمل حول التعاون والشاركة مع القطاع الصناعي بحضور رئيس غرفة صناعة الاردن عدنان ابو الراغب ورئيس الجامعة الدكتور نظير ابو عبيد وجمع من الخبراء والمختصين العاملين في القطاع الصناعي. وتهدف الورشة الى بحث سبل التعاون بين الجامعة وشركائها في القطاع الصناعي وخلق مشاريع مشتركة ترجمة لرؤية الجامعة القائمة على العلوم التقنية التطبيقية وبالتالي تجسير الفجوة بين مخرجات التعليم وإحتياجات سوق العمل.

وقال ابو الراغب ان هذه الورشة تبحث اهمية الدور الذي يمكن للقطاع الاكاديمي ان يلعبه في تطوير القطاع الصناعي وتمكين الصناعة من تعزيز التكنولوجيا والابتكار ومشاريع التخرج في عملية التنمية الصناعية بدءا من توفير المواد الاولية للإنتاج ومرورا بتكنولوجيا التصنيع والطاقة وانتهاء بعملية التسويق والمبيعات ما يساهم في تعزيز النمو الاقتصادي.

واشار الى اهمية التشاركية بين القطاعين في تعزيز دور الصناعة الوطنية في العمل على استحداث المزيد من فرص العمل ورفع مستوى جودة المنتج بما يؤهله لدخول اسواق تصديرية منوها بأن الصناعة تشكل ما نسبته 25 بالمئة من الناتج المحلي الاجمالي وما نسبته 18 بالمئة من القوى العاملة بما يعادل 200 الف عامل وعاملة وتستحوذ على 90 بالمئة من صادرات الاردن من القطاع الصناعي.

وبين ان الصناعات المحلية تواجه تحديات عديدة يمكن التعامل معها من خلال تعزيز التعاون ما بين القطاع الصناعي والقطاع الاكاديمي من خلال رفع مستوى التعاون واستحداث برامج جديدة تساهم في تطوير الربط بين المنشآت الصناعية والمؤسسات التعليمية الاكاديمية والبحث العلمي.

وتحدث الدكتور ابو عبيد حول اشكالية التعليم العالي في هذه الفترة منوها بأن هناك الكثير من الطروحات بخصوص التعليم التطبيقي والمهني مشيرا الى ان هناك صحوة من خلالها نتلمس التعليم من اجل العمل وليس المعرفة والتي نشأت بسبب الفجوة الواضحة بين مخرجات التعليم العالي ومتطلبات سوق العمل.

ولفت الى ان الجامعة تطرح نموذجا بديلا يوفر منصة تربط بين التعليم وسوق العمل لتكون بيئة لهذه الممارسات وهذا نموذج يتأثر بنموذج التعليم في المانيا الذي يركز على التواصل مع الصناعيين وسوق العمل.

### 10.3 PRESS RELEASE GJU WEBSITE

## University Industry Collaboration Workshop at GJU : Cooperation Opportunities and Challenges



<http://www.gju.edu.jo/news/university-industry-collaboration-workshop-gju-cooperation-opportunities-and-challenges-5853>

Amman- June 1, 2016



Under the patronage of HE Mr. Adnan Abu Al Ragheb, Chairman of Jordan Chamber of Industry, the German Jordanian University organized a workshop entitled: " University - Industry Collaboration: Cooperation Opportunities and Challenges" on Wednesday, June 1, 2016

The aim of this workshop was to discuss the areas of cooperation between the university and its partners from the industry. This is considered one of the most important goals that the university is seeking to achieve in the near future. This is because such cooperation will link the outputs of the university with the needs of the labor market, industry and community.

Mr. Abul Ragheb, Chairman of Jordan Chamber of Industry, pointed to the importance of the industrial sector in Jordan in terms of its contribution to the gross domestic product, jobs provision and exports. He also stressed the importance of the role of the academic sector in the development of the industry. Therefore, the Chamber has sponsored several programs to promote this role, such as: faculty for factory program, and the award for graduation projects implemented in industry.

From his side, Professor Natheer Abu Obeid, GJU President, pointed to the gap between education and labor market requirements. He shared a vision of making GJU a great model for an applied university at the local and regional level. He added that GJU can benefit from cooperation with its German partners' experience in applied education and that it is possible to create a special form that considers Jordan's circumstances.

He also stressed that applied education develops skills and innovation. Therefore, GJU achieved the first step toward innovation through establishing GJU Program Innovation & Entrepreneurship (GJU PIE). This program creates a mechanism for converting selected graduation projects into entrepreneur projects.

The workshop included several lectures in the opening session, which include: Best practice from Jordan: "The Solar Cooling Project", Best practice from Germany : "SAP Dual Study Training", Best practice from the region: "Dual Studies at Al-Quds University", Best practice GJU Alumni: "Arabia Weather – A Startup Success Story".

Then the attendees visited the exhibition "Made at GJU", which included posters that gave a summary of the research that has been done in collaboration with the industry, as well as some of the products made at GJU.

The exhibition was followed by ten parallel workshops included direct dialogue between the different schools and their invited industrial partners. These workshops discussed the following topics: "Energy and Environment",

“Health”, “Industry Driving the Technology”, “Construction & Design”, “From Engineering to Industry”, “Logistics, Accounting, Management”, “Translation and Communication: Experiences and Perspectives”, “Marketing and Operations”, “Dual Study Program at GJU”, “Innovation & Entrepreneurship”.

A wrap-up session was chaired by Prof. Natheer Abu Obeid, President of GJU. This session presented the conclusions of these parallel workshops and the action plan for the near future. In addition, GJU president pointed out that the Industrial Relations Committee will follow up on the implementation of these outcomes. Further, he invited the industrial partners to join the Friends of GJU program and pointed out that there will be other meetings that capitalize on the results of the this workshop.