Princess Sumaya University for Technology

STEM Education for Women, Vocational Training and Strengthening the Link Between Higher Education and the Job Market

Gender Empowerment and Entrepreneurial Development in Rural Context: The Role of Renewable Energy for the REGEND

Presented by
Dr. Majd Ghazi Batarseh
Table of Content

• PSUT: Overview, facts and practices
  – STEM Education for Women
  – Vocational Training
  – Strengthening the Link Between Higher Education and the Job Market
Overview of PSUT today: Facts & Figures 2019

- A Private Not-profit University
- Founded in 1991
- Number of students 3650
- Number of faculty members 140
- PSUT is the academic arm of El Hassan Science City
- Owned by the Royal Scientific Society (RSS)
King Hussein School of Computing Sciences

King Abdullah II School of Engineering

King Talal School of Business Technology
Deanships

- King Abdullah I School of Graduate Studies & Scientific Research
- Deanship of Students Affairs
- Deanship of Admissions & Registration

Units

- El Hassan Library
- General Requirements Unit
Education in General
B. Sc. Degree Programs

Engineering
- Electronics Engineering
- Computer Engineering
- Communications Engineering
- Electrical Power & Energy Engineering
- Networks & Information Security Engineering

IT
- Computer Science
- Computer Graphics & Animation
- Software Engineering
- Data Science and Artificial Intelligence

Business Technology
- Business Administration
- Accounting
- E-Marketing & Social Media
- Business Information Technology

First in Jordan 1st
M. Sc. Degree Programs

Engineering
- Electrical Engineering
- Engineering Management (Joint with University of Arizona)
- Intelligent Systems and Computer Engineering

IT
- Computer Science
- Information System Security & Digital Criminology
- Enterprise System Engineering
- Data Science

Business
- MIS (Joint with Hasselt, Belgium)
- Business Entrepreneurship
- Accounting (Joint with University of Arizona)
- Business Analytics
- European Studies (Joint with HHU Düsseldorf)

First in Jordan 1st
56% of our programs are unique in Jordan
Supporting Units – Deanship of Students Affairs

On Campus Student Activities

STUDENT ACTIVITIES

- Musical Band
- Theater Team
- Social Work Team
- Athletics
- Folklore Band
- GYM

STUDENT CLUBS

- IEEE
- ACM-Association for Computing Machinery
- ARC-Automation and Robotics
- AEE-Association of Energy Engineering
- Cyber Security
- Antares - Astrology
- CGA-Computer Graphics and Animation
- Nuun (Cultural)
- Debate Club
- MUN-Model United Nations
- Dart (Entrepreneurship)
- Apollo
- Tera
- JCI-Junior chamber international
- Good youth Volunteer
- Rekt Gaming
# Enrollment Overview

<table>
<thead>
<tr>
<th>Year</th>
<th>Business Technology</th>
<th>Engineering</th>
<th>Computer Sciences</th>
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<tr>
<td>2009</td>
<td>298</td>
<td>0</td>
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<tr>
<td>2010</td>
<td>593</td>
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<td>50</td>
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<td>2011</td>
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<td>2012</td>
<td>951</td>
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<td>2013</td>
<td>823</td>
<td>200</td>
<td>250</td>
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<tr>
<td>2014</td>
<td>619</td>
<td>250</td>
<td>300</td>
</tr>
<tr>
<td>2015</td>
<td>653</td>
<td>300</td>
<td>350</td>
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<tr>
<td>2016</td>
<td>697</td>
<td>350</td>
<td>400</td>
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<tr>
<td>2017</td>
<td>627</td>
<td>400</td>
<td>450</td>
</tr>
<tr>
<td>2018</td>
<td>943</td>
<td>450</td>
<td>500</td>
</tr>
<tr>
<td>2019</td>
<td>1000</td>
<td>500</td>
<td>550</td>
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**REJECTION RATE > 65%**
University Statistics

Female & Male Ratio

OVER ALL THE UNIVERSITY

Male 57%  Female 43%

POSTGRADUATE STUDENTS

Male 45%  Female 55%

King Hussein School of Computing Sciences
Male 61%  Female 39%

King Abdullah II School of Engineering
Male 70%  Female 30%

King Talal School of Business Technology
Male 46%  Female 54%
## Engineering Records of admissions over the past 7 years

<table>
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<tr>
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<tr>
<td>Communications Engineering Program</td>
<td>89</td>
<td>93</td>
<td>82</td>
<td>54</td>
<td>40</td>
<td>14</td>
<td>12</td>
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<tr>
<td>Computer Engineering Program</td>
<td>25</td>
<td>31</td>
<td>23</td>
<td>18</td>
<td>12</td>
<td>27</td>
<td>23</td>
</tr>
<tr>
<td>Electrical Power and Energy Engineering Program</td>
<td>69</td>
<td>89</td>
<td>40</td>
<td>10</td>
<td>35</td>
<td>82</td>
<td>57</td>
</tr>
<tr>
<td>Electronics Engineering Program</td>
<td>21</td>
<td>27</td>
<td>50</td>
<td>30</td>
<td>23</td>
<td>17</td>
<td>11</td>
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</tbody>
</table>

*not including summer admissions
<table>
<thead>
<tr>
<th>PEO-1</th>
<th>Graduates have specialized theoretical knowledge and practical skills to be effective contributors to the local and regional economies.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEO-2</td>
<td>Graduates are able to adapt to and thrive in constantly evolving technologies in addition to building effective platforms for relevant research.</td>
</tr>
<tr>
<td>PEO-3</td>
<td>Graduates are capable of ethically working in multidisciplinary teams and communicating effectively.</td>
</tr>
</tbody>
</table>
Program Constituencies – Continuous Improvement

- Faculty
- Students
- Employers
- Alumni

Methodology for evaluating and improving the program educational objectives
Level of Achievement of PEOs
Using Alumni and Employers Surveys
### Mapping between the PEOs and SOs

<table>
<thead>
<tr>
<th>Student Outcome</th>
<th>PEO-1</th>
<th>PEO-2</th>
<th>PEO-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) An ability to apply knowledge of mathematics, science, and engineering</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>(b) An ability to design and conduct experiments, as well as to analyze and interpret data</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>(c) An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) An ability to function on multidisciplinary teams</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>(e) An ability to identify, formulate, and solve engineering problems</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) An understanding of professional and ethical responsibility</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>(g) An ability to communicate effectively</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>(h) The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>(i) A recognition of the need for, and an ability to engage in life-long learning</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>(j) A knowledge of contemporary issues</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>(k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>
Continuous Improvement Cycle

Program Constituents

Faculty
Students
Alumni
Employers

Feedback Channels

Regular Feedback Channels
- CAF
- CAS
- Facilities Survey
- ESAB
- Faculty Evaluation
- Employee Survey
- ETAC
- Consultancy Council
- Alumni Survey
- National Competency Exam
- Meeting with Graduates
- Exit Survey

Ad-hoc Feedback Channels
- Open Door Policy
- HEE Student Branch
- Social Media
- Students Council

Audit & Feedback from Regulatory Bodies
- HKAC
- JEA
- ABET
- QAC

Reviewing Body
- Dean's Council
- School Council
- Department Council
- University Administration

Corrective Actions
- Curriculum or Academic content change
- Feedback to Faculty
- Procedural Change
- Facility and equipment changes

Program

Evaluation & Implementation

Continuous Improvement Cycle
The Career Guidance and Graduates Affairs Office is established in the Deanships of Student Affairs to prepare the students for the job market and provide them with several training courses and programs that aim to improve their skills and personalities.

The office consists of the following two units:

- **Career Guidance unit:**
  - Performs the office and field work in cooperation with students and academic staff and it also advises students during their period of study in the university

- **Graduates Affairs Unit:**
  - Performs the office and field work with the university graduates to update their information and enhance their relation with the university
Students are required to undertake industrial/practical training in an industrial institution for at least eight successive weeks for the training held inside the country and for six weeks for the outside training.

The students must submit a comprehensive report after the end of the training period, specifying the nature of training undertook, and the benefits and expertise gained form the training.
Under the NASA training initiative lead by HRH Crown Prince Al Hussein Foundation, among university students in Jordan, 12 engineering students were shortlisted, out of which 4 students were PSUT students.
Student Accomplishments

Under the Airbus training Initiative lead by HRH Crown Prince Al Hussein Foundation, among university students in Jordan,

4 engineering students were short listed, out of which 2 students were PSUT students.
Toshiba Internships in Japan

7 fully covered engineering internships at Toshiba Memory Corporation

TOSHIBA
Preparation for Job Market: Events Samples

**PSUT Career Fair**
Meet your future employers and learn from the experts.

**PSUT Career 2019**
Your future is waiting for you.

3rd National Conference on the Harmonization of PSUT's Academic Programs and the Requirements of the Labor Market
April 9, 2019
Friendship Auditorium
PSUT Campus, Amman

2nd National Conference on “the Harmonization of PSUT’s Academic Programs and the Requirements of the Labor Market”
Amman, April 4, 2017
Number of Graduates

Total No. of Graduates = 6968
Number of graduates entering full-time employment

Six months after graduation

**KING HUSSEIN SCHOOL OF COMPUTING SCIENCES**

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>PERCENTAGE</th>
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<tbody>
<tr>
<td>CS</td>
<td>96%</td>
</tr>
<tr>
<td>CG</td>
<td>85.7%</td>
</tr>
<tr>
<td>SE</td>
<td>93.3%</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>91%</strong></td>
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**KING TALAL SCHOOL OF BUSINESS TECHNOLOGY**

<table>
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<tr>
<th>DEPARTMENT</th>
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<tr>
<td>BA</td>
<td>84.4%</td>
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<tr>
<td>MIS</td>
<td>83.8%</td>
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<tr>
<td>ACCO</td>
<td>96%</td>
</tr>
<tr>
<td>EM</td>
<td>90.3%</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>89.7%</strong></td>
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</table>

**KING ABDULLAH II SCHOOL OF ENGINEERING**

<table>
<thead>
<tr>
<th>DEPARTMENT</th>
<th>PERCENTAGE</th>
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</thead>
<tbody>
<tr>
<td>COM E</td>
<td>85.7%</td>
</tr>
<tr>
<td>CE</td>
<td>94.4%</td>
</tr>
<tr>
<td>EE</td>
<td>77.8%</td>
</tr>
<tr>
<td>PEE</td>
<td>80.1%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>84.7%</strong></td>
</tr>
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</table>

**Overall Employability rate**

88.6%
Some of our Employed Alumni
Queen Rania Center for Entrepreneurship Alumni & Start-ups
Thank You