Outlines

- About HIAST
- Study at HIAST
- Research & Development
- Achievements and awards
- Scientific Collaboration
About HIAST

- Established in 1983
- Selecting students with top High School marks.
- Limited number of students.
- Graduating highly qualified engineers in many applied science fields.
- A highly qualified teaching staff.

Key Figures

- Staff:
  - 102 Ph.D (36 part-time employees)
  - 111 Engineers (11 part-time employees)
  - 90 Technicians.
  - 92 Administrative staff

- Students:
  - 323 undergraduates
  - 80 postgraduates (43 Master + 37 PhD)
Study at HIAST

• Accepted students are from two categories:
  – Students financed by public institutions
  – Self-financed students

• Offered degrees:
  – Bachelor Science in Engineering
  – Masters
  – PhDs

Study at HIAST

• Specialization
  – Informatics
  – Telecommunication
  – Electronic Systems
  – Mechatronics
  – Materials Science
  – Aeronautics
Training Activity

- In-house training courses to the employees to acquire knowledge and to enhance their professional skills
- Training courses are also provided to external customers (public and private sectors)
- Wide range of subjects: from office application to specialized industrial tools

R&D activities

- Informatics
  - ERP Systems
  - Arabic Language Processing
  - High Performance Computing
  - Information & Decision Support Systems
  - Big Data systems
- Automatic Control:
  - Non Linear, Fuzzy, Robust,
  - Stochastic filtering for Control and Navigation applications
- Robotics
  - Manipulators, Parallel Robots, Mobile Robots
- Power Management
  - Power Factor Correction
R&D activities

- Telecommunications
  - Radio, Optical and Digital communications
  - Signal processing
  - Communication networks and networking

- Physics
  - Materials Science: Polymers, Magnetic materials, Nano-materials and nano-fibers, Metallurgy
  - Optics and laser
  - Renewable energy

- Environment
  - Chemical pollutants analysis of water and soil
  - Air pollution analysis.
  - Water microbiological analysis.
  - Wastewater treatment stations

Achievements and awards (2017-2018)

- Graduated students: 60 Eng., 25 Masters, 7 PhDs
Achievements and awards (2017-2018)

- Publishing 8 Scientific Books (freely available to download from hiast.edu.sy)

- Publishing 19 papers in international Journals

- Synthesis and swelling behavior of metal-chelating superabsorbent hydrogels based on sodium alginate-g-poly(AMPS-co-AA-co-AM) obtained under microwave irradiation

- Comparative study of microwave absorption characteristics of (Polyaniline/NiZn ferrite) nanocomposites with different ferrite percentages
Achievements and awards (2017-2018)

- Developing Software applications for public institutions
  - Ministry of Justice
  - Ministry of Agriculture
  - Ministry of finance
  - Hospitals.
  - Higher institute for Business Administration
- Providing platform for performance analysis of the Solar thermal collectors to the National Energy Research Center

- Gold Medal for the best invention in the Al-Bassel Fair for invention and innovation-Damascus 2017, for the Scorpion Hybrid Robot
Achievements and awards (2017-2018)

• Wining the 1st place in the Syrian World Robot Olympiad (WRO-Syria 2017).

• Wining the 4th place in the World Robot Olympiad, Costa Rica 2018.
Achievements and awards (2017-2018)

- Wining the 1st place in the ACM Syrian Collegiate Programming Contest

Collaboration with COMSATS Network

- First contacts has been made to launch collaboration with some centers in COMSATS member countries:
  - IROST-Iran: Solar and fuel cell and hybrid PV systems
  - CERTE- Tunisia: Waste water treatment
  - COMSATS: Tele-health Program
  - Advanced Materials and Nanotechnology Research Center - Iran: microwave absorbing materials

- Seeking Collaboration between RIPCI-Syria (Research Institute for Pharmaceutical and Chemical Industries) and CBSCR (Center for Bioequivalence Study Drug research)
Collaboration with COMSATS Network

- HIAST is also ready to collaborate with other organizations in the R&D domains of common interests, especially in:
  - nanotechnology (ferrites materials, microwave absorbing materials, Carbon quantum dots, …)
  - conductive polymers, hydrogels, superabsorbent polymers
  - Renewable energy (Solar and fuel cell, hybrid PV systems, biofuel)

Collaboration could be:
- Joint researches or projects,
- Sharing expertise,
- Giving access to research resources (TEM, SEM, AFM, etc …)
- Exchange of students/researchers for short periods (1-4 weeks)
In Conclusion

- HIAST is a Center of Excellence for Higher Education and Research & Development in Syria.
- As a multidisciplinary institute, HIAST has a wide range of R&D Activities.
- HIAST is open and keen to all kind of collaboration with COMSATS Network.
- Collaboration could help HIAST to reduce the Brain Drain effect caused by the crisis in Syria.

Thank You!