International academic collaboration with the culturally rich country
Asociacion De Amistad Irano Espanola

• Strong relationship between Iran and Spain over centuries
  – Philosophy, math, music, literature, astronomy, art
• Exchange of knowledge via scholars
  – Ebnesina, Farabi, Zakaria Razi, Ebn e Arabi
• Recent relationship
  – Barcelona, Politechnic Madrid, Santiago de Compostela, ...
AUT Campuses

Sustainable Development Pioneer in Iran
AUT in Brief

- Founded in 1958
- First Rank between Technological Universities in Iran
- More than 35000 alumni since 1977
- 16 faculties/schools
- 16 Centers of Excellence
- 32 Research Centers and Institutes
- 16 National Macro (Mega) Projects
- 4 in Minister Post served by faculty members
- Papers published since 2012 (5779 ISI, 18326 conference)
Current Students

- Masters: 6188
- Bachelors: 5345
- PhD: 1220
Alumni
Faculty

AUT Amirkabir University of Technology

Professor 110
Associate 172
Assistant 190
Lecturer 38

[Pie chart showing the distribution of faculty members by rank: Professor: 110, Associate: 172, Assistant: 190, Lecturer: 38]
## Patents & Papers

<table>
<thead>
<tr>
<th></th>
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<td>Patents</td>
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<td>143</td>
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<td>1105</td>
<td>1126</td>
<td>1139</td>
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</tbody>
</table>

### Patents Graph

- **Number of Patents per Year**
- **Year**: 2001 to 2012
- **Number**: 0 to 150

### Patents, National journal papers, International journal papers, ISI Papers Graphs

- **National journal papers**
- **International journal papers**
- **ISI Papers**
- **Year**: 2001 to 2012
- **Number**: 0 to 1600

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**Sustainable Development Pioneer in Iran**
AUT in Brief

First Rank between Universities (in engineering) in Iran 2014

Top 150-200
# Departments and Faculties

## Engineering
- Aerospace Engineering
- Biomedical Engineering
- Chemical Engineering
- Civil and Environmental Engineering
- Industrial Engineering and Management Systems
- Electrical Engineering
- Mathematics and Computer Science
- Computer Engineering and Information Technology
- Mining Engineering
- Petroleum Engineering
- Energy Engineering and Physics
- Polymer Engineering and Colour Technology
- Textile Engineering
- Marine Engineering
- Mechanical Engineering

## Pure Science
- Physics
- Chemistry
- Mathematics

## Social Science
- Master of Business in Engineering
### E-Learning Programs

<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>• Systems Management and Productivity Engineering</td>
<td>• Marine Engineering</td>
<td>• Advanced Chemical Engineering</td>
<td>• Biomedical-Biomaterial Engineering</td>
</tr>
<tr>
<td>• Social and Economic Systems</td>
<td>• Construction Engineering Management</td>
<td></td>
<td>• Medical Information Technology</td>
</tr>
</tbody>
</table>

_AUT Amirkabir University of Technology_
<table>
<thead>
<tr>
<th>E-Learning Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Computer Eng.</strong></td>
</tr>
<tr>
<td>• Information Technology</td>
</tr>
<tr>
<td>• Information and Communication Technology</td>
</tr>
<tr>
<td>• Computer Architecture Engineering</td>
</tr>
<tr>
<td>• Computer Networks</td>
</tr>
<tr>
<td>• Artificial Intelligence</td>
</tr>
<tr>
<td><strong>Physics</strong></td>
</tr>
<tr>
<td>• Nuclear Engineering</td>
</tr>
<tr>
<td><strong>Electrical Eng.</strong></td>
</tr>
<tr>
<td>• Electrical Energy Management</td>
</tr>
<tr>
<td>• Electrical Engineering and Communication</td>
</tr>
<tr>
<td><strong>Polymer and Colour Eng.</strong></td>
</tr>
<tr>
<td>• Polymer Engineering</td>
</tr>
<tr>
<td>• Colour Technology</td>
</tr>
</tbody>
</table>
Programs in English

Bachelors
- Civil Engineering
- Mechanical Engineering
- Electrical Engineering

Masters
- Applied Mechanics
- Chemical Engineering
- Control and Power
- Information Technology (IT)
- Biomechanics
- Construction Engineering & Management
- Systems Engineering
- Master of Business in Engineering

PhD
- Civil Engineering
- Mechanical Engineering
- Electrical Engineering
## Centers of Excellence

<table>
<thead>
<tr>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedical Engineering</td>
</tr>
<tr>
<td>Petrochemical Engineering</td>
</tr>
<tr>
<td>Power Systems</td>
</tr>
<tr>
<td>Radio Communications</td>
</tr>
<tr>
<td>Energy and Control</td>
</tr>
<tr>
<td>Textile Engineering</td>
</tr>
<tr>
<td>Computational Aerospace</td>
</tr>
<tr>
<td>Retrofitting &amp; Optimization of Structures and Lifelines</td>
</tr>
<tr>
<td>Thermo-Elasticity</td>
</tr>
<tr>
<td>Strengthening and Optimization of Buildings, Virtual Structures, and Roads</td>
</tr>
<tr>
<td>Biomechanics</td>
</tr>
<tr>
<td>Interactive Fiber Structures and Environmental Enhancement</td>
</tr>
<tr>
<td>Material Forming Processes</td>
</tr>
<tr>
<td>Digital Processing Systems</td>
</tr>
</tbody>
</table>

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Sustainable Development Pioneer in Iran

AUT

Amirkabir University of Technology
## Research Centers and Institutes

- Institute of Science Technology and Nano Engineering
- Institute of Information and Communication Technology (ICT)
- Food Processing and Biotechnology Research Center
- Institute of Space Science and Technology
- Institute of Energy and Process Design
- Institute of Petroleum
- Institute of Gas and Petrochemical
- Environmental Research Institute
- New Technology Research Center
- Institute of Telecommunications, Technology and
Research Centers and Institutes

- Applied Electromagnetics
- Secure Network Operations Center
- Institute of Advanced Textile, Materials and Technology
- Research Institute for Radiation Processing
- Institute of Optics, Lasers, and Photonics
- Institute of Transportation and Intelligent Systems
- Research and Concrete Technology Center
- Industrial Research and Productivity Center
- Department of Surveying and Spatial Information
National Macro (Mega) Research Projects
Development of 100-150 Passenger Aircraft
Access to the technology needed to send a spacecraft into orbit carrying live entities

Keeping it in orbit for at least one week and returning it safe
Bidirectional flow of electricity and information with creating a telecommunication platform with the ability to control and data processing.
Intelligent Transportation System

Architecture of intelligent transport systems in urban and suburban

Designing Laboratories to test intelligent transportation systems to extract Standards
Small Cyclotron Design & Manufacturing

Energy: 9-13 MeV
A suitable lead shield
Using the third generation of magnet
National Platform For Automobiles

Chassis
Transmission
Suspension
Brake
Power System Protection Numerical Relay
Underground Storage Of Gas And Oil

Acquiring technical knowledge of underground storage of oil and gas

Mapping the country's total oil underground storage

Provide guidance and instruction design of underground oil and gas reservoirs
Design and create cyber defense center
Design and manufacture of hardware
Infrastructure of cyberspace
Setting up laboratories for analysis of events
Independence in the field of cyber defense
Secure Software Base
Platform

Production and securing basic software such as operating system, data base and web browser
South Pars Gas Field Integrated Management
Satellite "Autsat"

The weight is about 85 kg
ECSS Standard
Engineering Model Completed and Approved
Flight Model near Completion
Most Recent Mega Projects

- Design and Implementation of a Constellation of Telecomm. Satellites
- Design of Implementation of the Launch Vehicle Propulsion Subsystem
- National Information Network
International Collaborations

Sustainable Development Pioneer in Iran
International Collaboration

- Memorandum of Understanding
- Memorandum of Agreement
- Joint Program
- Joint Supervision
- Joint Course
- Joint conference

Sustainable Development Pioneer in Iran
## Memorandum of Understanding

<table>
<thead>
<tr>
<th>University</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sukhoi University</td>
<td>Belarus</td>
</tr>
<tr>
<td>Belarusian State Technological University</td>
<td>Belarus</td>
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<tr>
<td>Pontifícia Universidade Católica do Rio de Janeiro</td>
<td>Brazil</td>
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<tr>
<td>Eastern Mediterranean University</td>
<td>Cyprus</td>
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<tr>
<td>University of Bolton</td>
<td>England</td>
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<td>Valenciennes University</td>
<td>France</td>
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<tr>
<td>Hochschule Furtwangen University</td>
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<td>Hochschule Niederrhein University of Applied Sciences</td>
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<tr>
<td>University of Bayreuth</td>
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<tr>
<td>Steinbeis University</td>
<td>Germany</td>
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</table>
## Memorandum of Understanding

<table>
<thead>
<tr>
<th>University</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bandung Institute of Technology</td>
<td>Indonesia</td>
</tr>
<tr>
<td>University of Karbala</td>
<td>Iraq</td>
</tr>
<tr>
<td>University of Kufa</td>
<td>Iraq</td>
</tr>
<tr>
<td>University of Babylon</td>
<td>Iraq</td>
</tr>
<tr>
<td>University of Basrah</td>
<td>Iraq</td>
</tr>
<tr>
<td>Islamic University College</td>
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<tr>
<td>Politechnic of Milan</td>
<td>Italy</td>
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<tr>
<td>University of Camerino</td>
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</tr>
<tr>
<td>Salahaddin University</td>
<td>Kurdistan</td>
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<tr>
<td>University of Malaya</td>
<td>Malaysia</td>
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</table>
## Memorandum of Understanding

<table>
<thead>
<tr>
<th>University</th>
<th>Country</th>
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<tbody>
<tr>
<td>Multimedia University</td>
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<td>University Technology Malaysia</td>
<td>Malaysia</td>
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<tr>
<td>MAHSA University</td>
<td>Malaysia</td>
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<tr>
<td>Tomsk State University of Control System and Radio Electronics</td>
<td>Russia</td>
</tr>
<tr>
<td>Slovak University of Technology in Bratislava</td>
<td>Slovakia</td>
</tr>
<tr>
<td>Politechnic of Madrid</td>
<td>Spain</td>
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<td>University of Barcelona</td>
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<td>University of Santiago de Compostela</td>
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<tr>
<td>California State University of Saint Marcos</td>
<td>USA</td>
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</tbody>
</table>
Memorandum of Agreement

- University Technology Malaysia, Malaysia
- University of Malaya, Malaysia
- Multi Media University, Malaysia
- University of Bayreuth, Germany
- Steinbeis University, Germany
Sustainable Development Pioneer in Iran

Joint-Course, Joint-Supervision, and Webinars

**Joint Course**
- University of Waterloo, Canada
- University of Montreal, Canada

**Joint Supervision**
- University of Burgundy, France
- Eastern Mediterranean University, Cyprus
- Leuven University, Belgium
- University of Groningen, Germany

**Webinar**
- Iowa State University, USA
- Stanford University, USA
- Queensland University, Australia
- City University, UK
Thank you