Ural Federal University
Institute of Chemical Engineering

UrFU Admission Campaign-2020

Institute of Chemical Engineering

http://hti.urfu.ru
World University Rankings by Subject 2020

QS by Subject – Chemistry: 401-450
7th-8th place among Russian universities
(1st entry into ranking was in 2019), ascended from 600th place

QS by Subject – Materials Science: 301-350
(1st entry into ranking was in 2019), ascended from 600th place

QS by Subject – Natural Science: 386
U.S. News Best Global Universities – Materials Science: 367
Institute of Chemical Engineering today:
FACTS AND FIGURES

1007 Bachelor students – 773 Master students - 234

76 FOREIGN STUDENTS

87 PhD

12 Postdoc

3 Academicians, RAS
1 Corr. Mem., RAS
32 Dr. Sci.
121 Cand. Sci.
12 PhD

20 Major industrial partners

25 Russian and foreign academic partners

RAS: Russian Academy of Sciences
Corr. Mem.: Corresponding Member
Institute of Chemical Engineering today: Who are our Graduates

- **Technological chemists** fit for the enterprises of chemical and pharmaceutical industries, mechanical engineering and metallurgy
- **Researchers** in chemistry, materials science, biotechnology
- **Specialists in analytical laboratories**, product quality control laboratories and laboratory that test corrosion-resistant materials
- **Designers** expertise in calculating and designing the chemical machines and apparatuses using electronic design automation tools
- **Experts** in the field of organization and control over the implementation of the technological process in accordance with the regulations
- **Microbiologists and biotechnologists** in the experimental analysis and assessment of vital processes of biological objects; modification of the genotypes of biological objects with economically valuable traits; industrial microbiological control, and examining the raw materials and final products
Institute today: Our Units

Departments
• Analytical chemistry
• Immunochemistry
• Machinery and Apparatus for Chemical Production
• Organic & Biomolecular Chemistry
• Technology for Organic Synthesis
• Electrochemical Production Technologies
• Physical and Colloidal Chemistry
• Chemical Technology of Fuel and Industrial Ecology

Scientific laboratories
• Fiber Technology and Photonics
• Petrochemistry
• Medical chemistry and promising materials
• Physiologically Active compounds

Innovation Center for Chemical and Pharmaceutical Technologies
Education Program: Bachelor

- All areas of research belong to the order of priority set by the development of science and technology;
- Education is carried out in a full-time and part-time mode of study;
- Student classes are provided in the form of lectures, laboratory, and practical courses.

<table>
<thead>
<tr>
<th>Direction</th>
<th>Scientific Program</th>
<th>State-funded places</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.03.01 Chemical Technology</td>
<td>Chemical technology of inorganic, organic materials, natural energy and medicines</td>
<td>125 (Full-time) 10 (Extramural)</td>
</tr>
<tr>
<td>18.03.02 Energy and resource saving processes in chemical technology, petrochemistry and biotechnology</td>
<td>Energy and resource saving processes in chemical technology, petrochemistry and biotechnology</td>
<td>40 (Full-time)</td>
</tr>
<tr>
<td>19.03.01 Biotechnology</td>
<td>Biotechnology</td>
<td>30 (Full-time) 10 (Extramural)</td>
</tr>
</tbody>
</table>

342 State-funded places
Bachelor — 215
Master — 127
## Education Program: Master

<table>
<thead>
<tr>
<th>Direction</th>
<th>Scientific Program</th>
<th>State-funded places</th>
</tr>
</thead>
<tbody>
<tr>
<td>04.04.01 Chemistry</td>
<td>Medical and pharmaceutical chemistry</td>
<td>14</td>
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<tr>
<td>18.04.01 Chemical Technology</td>
<td>Chemical Engineering of Electronics Materials, Sensory Analytics and Inorganic Substances</td>
<td>12</td>
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<tr>
<td></td>
<td>Chemical technology of organic materials and biologically active substances</td>
<td>20</td>
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<td></td>
<td>Chemical Engineering of Natural Energy Carriers, Petrochemical Products and Polymers</td>
<td>9</td>
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<tr>
<td></td>
<td>Electrochemical synthesis of materials and corrosion protection</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Organization of Medications Production (Full-time, Extramural)</td>
<td>7</td>
</tr>
<tr>
<td>18.04.02 Energy and resource saving processes in chemical technology, petrochemistry and biotechnology</td>
<td>Machinery and Apparatus of Chemical and Nuclear Productions</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Industrial ecology and rational use of natural resources</td>
<td>10</td>
</tr>
<tr>
<td>19.04.01 Biotechnology</td>
<td>Molecular Biotechnology and Bioengineering</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Food Biotechnology) (In English / Russian)</td>
<td>8 / 2</td>
</tr>
<tr>
<td></td>
<td>Cell and gene technologies in cosmetology, pharmaceuticals and medicine of the future (Full-time, Extramural)</td>
<td>5</td>
</tr>
</tbody>
</table>

**342 State-funded places**
- Bachelor — 215
- Master — 127
• Prior to the payment of tuition fees (Per academic year)— 4% **discount** is given

• Discounts are eligible for Russian citizens and neighbouring countries based on the results of admission tests:

• For the scores from **155 points and above - a discount is given for the entire period of study** ("Chemical Technology" – scoring 179 and above)

• The high scores (based on their order) are given- **20% discount for the first academic year** (it can be extended upon passing the examinations with grades “good” and “excellent”)

• More information about the tuition fees/sending requests are available on the following website:

  [http://skidki.urfu.ru](http://skidki.urfu.ru)
Strategic Planning Guidelines

Achieving UrFU global competitiveness among leading research institutions, educational and innovation centres in the following areas:

Promising Organic Materials, Chemical-Pharmaceutical and Biotechnologies

Novel materials and sensor technology, optics, and alternative energy

Electrochemical materials design for sustainable energy and space technology

Global agenda
World-class research and education

Ural scientific and educational centers, Ural region, Ural Branch of the Russian Academy of Sciences

Advanced system cooperation
Network of foreign and Russian partners

TOP Universities Ranking QS by Subject:
• Chemistry
• Engineering – Chemical
• Materials Science
• Natural Science

Ural Federal University
named after the first President of Russia B.N.Yeltsin
Institute of Chemical Engineering

80 % SPW Institute of Chemical Engineering scientific research institutes
20 % Foreign SPW
Institute of Chemical Engineering - the youngest institutes (middle age of SPW – 43 years)

SPW: Scientific and pedagogical worker
### Science and Innovation: Key Projects

**Promising Organic Materials, Chemical-Pharmaceutical and Biotechnologies**
- Development Project “Launch and Development of an Innovation Center for Chemical and Pharmaceutical Technologies” (headed by A. Kozitsina)
- “Admission quotas” New methods in the synthesis of bioactive substances (head. Chupakhin O.N.)
- “Admission quotas” Molecular Technologies (headed by V. Charushin)
- Joint Laboratory of Medical Chemistry and Advanced Organic Materials with the IOS of the Ural Branch of RAS (headed by V. Rusinov)

**Modern materials and sensor technology, optics and alternative energy**
- Development project “Promising current-film materials of sensors and alternative energy” (headed by Markov V.F.)
- “Admission quotas” Molecular Technologies (headed by V. Charushin)
- “Independent newspaper” Fiber optics (headed by L. Zhukova)
- “NL international” Advanced research in the field of petrochemistry, chemical technology, biotechnology (headed by T. Glukhareva)

**Electrochemical materials design for sustainable energy and space technology**
- Development project “Creation and implementation of a joint master's program” Electrochemical synthesis of promising materials for the energy sector and high-tech industries” (headed by T. Ostanina)
- Joint laboratory for Materials and Devices for Electrochemical Power Engineering, UrFU- Institute of High Temperature Electrochemistry, of the Ural Branch of RAS, (Scientific adviser Tsiakaras P.).

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**Scientific and technological center "Synthetic"**
- IOS UB RAS, UrFU, INEC, RAS, MSU

- **80 % SPW Institute of Chemical Engineering scientific research institutes**
- **20 % Foreign SPW**

- **Institute of Chemical Engineering - the youngest institutes (middle age of SPW – 43 years)**

- **Triazavirin**
  - Is available in Medsintez factory
Academic Partners and International Affairs
Opportunities: EMPLOYMENT
Opportunities: FELLOWSHIPS

UrFU spends 200 000 000 rubles in talent investment

23 NAMED FELLOWSHIPS

- President of the Russian Federation
- Government of the Russian Federation
- First President of the Russian Federation
- Governor of the Sverdlovsk Region named after V.I. Vernadsky
- V. Potanin
- R-Pharm
Opportunities: **STUDENT LIFE**

From the first year, the institute organizes tournaments, amateur art shows, Olympiads and contests;

It also publishes XUM’ERA newspaper;

Charity work;

Active scientific activity
Opportunities: Extracurricular activities

The Institute organizes sporting activities, cultural events and contests
Opportunities:
Extracurricular activities

The Institute organizes meetings and excursions for both graduates and high-school students.
Personal account of the applicant

Registration: [https://urfu.ru/en/international/](https://urfu.ru/en/international/)

- Registration is the initial step in the electronic submission process
- Catalogue of academic programs
- Examination calculator
- Training courses
- Events for applicants
Institute contacts

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• Central Admission Committee:
  +7 (343) 375-44-74