University of Toyama School of Pharmacy and Pharmaceutical Sciences Curriculum Chart (for students admitted in the 2019 year)

**1st Year**

- With a focus on lectures etc. for a liberal arts education, introductory education in specialized fields is also provided.
- Lecture-based subjects on mainly basic science including physics, chemistry and biology, as well as practical pharmacy training involving physics and chemistry are conducted.

**2nd Year**

- Lecture-based subjects focusing on the fields of biology, drugs, pharmacology, hygiene and medicine, as well as basic practical pharmacy training and general pharmacy practice are conducted.

**3rd Year**

- Graduation Research is the main focus. Medical Pharmacy lectures can also be taken as an option. There are also lectures for focusing on post-graduation career paths.

**4th Year**

- Examination

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**Abilities Needed for Bachelor's Degrees (Pharmaceutical Sciences)**

**Extensive Knowledge**

Through the multiple disciplines of humanities, social sciences, natural sciences, and health sciences, students acquire the ability to understand regions and communities with different cultural and historical backgrounds, and to behave accordingly.

**Specialist Knowledge**

Based on physics, chemistry, and biology, students build and develop a broad academic foundation relating to pharmaceutical sciences, from traditional medicine to advanced pharmaceutical sciences, and acquire the creative thinking and practical skills necessary to work in pharmaceutical research and development.

**Problem Identification/Solving Ability**

Students acquire the ability to focus on issues in the pharmaceutical sciences field, with strong intellectual curiosity and a spirit of inquiry toward natural phenomena, the ability to logically consider results obtained from the collection and analysis of academic information and research activities such as experiments, and the ability to discuss and present ideas towards solutions.

**Ability to Contribute Socially**

With the discipline and ethics of medical professionals, and with an understanding of patients and the standpoints of medical professionals, students acquire awareness of the expectations of the roles they will play, and acquire the ability to behave responsibly in team-based medicine and community health medicine.

**Communication Ability**

Students acquire the ability to carry out sincere and flexible communication with others, self-growth while building helpful human relationships, and understanding of the perspectives of people with different ideas, languages, and cultures.
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**Department of Pharmacy**

<table>
<thead>
<tr>
<th>Year</th>
<th>Courses</th>
<th>Credits</th>
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<tbody>
<tr>
<td>1st Year</td>
<td>Core Education</td>
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<td>2nd Year</td>
<td>Core Education</td>
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<td>3rd Year</td>
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<td>5th Year</td>
<td>Core Education</td>
<td>15</td>
</tr>
<tr>
<td>6th Year</td>
<td>Core Education</td>
<td>15</td>
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</tbody>
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**Core Education**

- **Basic English I**
- **Basic English II**
- **Technical English I**
- **Technical English II**
- **Introduction to Intellectual Property**
- **Business and Pharmaceutical Economics**
- **Practical Learning of Pharmacy**
- **Pharmaceutical Health Sciences I**
- **Pharmaceutical Health Sciences II**
- **Microbiology Microbial Chemistry Lab.**
- **Microbiology Microbial Chemistry Lab.**
- **Pharmacology Lab.**
- **Pharmaceutics Lab.**
- **Biopharmacy Physical Pharmacy**
- **Yaku Science**
- **Pharmaceutical Common Achievement Tests**
- **National Examination for Pharmacists**

**Specialized Courses**

- **Chemistry Field: Pharmaceutical Sciences**
  - **Basic Chemistry Chemical Experiment**
  - **Organic Chemistry I**
  - **Organic Chemistry II**
  - **Inorganic Chemistry**
  - **Synthetic Organic Chemistry**
  - **Physical Chemistry I Lab**
  - **Analytical Chemistry Lab**
  - **Analytical Chemistry Lab**

- **Physics Field: Pharmaceutical Sciences**
  - **Basic Physics Physical Laboratory**
  - **Physiological Chemistry**
  - **Biophysics**
  - **Medical Chemistry**
  - **Biological Chemistry**
  - **Pharmacology**
  - **Toxicology**
  - **Toxicology**

- **Biology Field: Pharmaceutical Sciences**
  - **Cell Biology (Note1)**
  - **Biochemistry Lab.**
  - **Clinical Microbiology**
  - **Life Science Biological Laboratory**
  - **Physiological Chemistry**
  - **Biological Chemistry**
  - **Toxicology**
  - **Toxicology**

- **Pharmaceutical Health Care and Service**
  - **Pharmaceutical Health Sciences I**
  - **Pharmaceutical Health Sciences II**
  - **Medical Ethics**
  - **Pharmacists Foundation**
  - **Community Pharmacy**
  - **Pharmacists Foundation for Pharmacists**
  - **Hospital Pharmacy**
  - **Advancement to Hospital Pharmacy**
  - **Medical Therapeutics**

**Assignment to laboratories**

**Graduation Research**

**Midpoint Presentation Poster**

**Presentation Oral**

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