Appended Form 1

Specifications for Major Program

Name of School (Program) [School of Pharmaceutical Sciences (Program of Pharmaceutical Sciences)]

Program name (Japanese)	
(English)	Program of Pharmaceutical Sciences
1. Degree to be obtained: E	Sachelor of Pharmaceutical Science

2. Overview

The Program of Pharmaceutical Sciences aims to foster students who are able to develop a new field of knowledge and contribute to local/global communities having a rich humanity by reinventing themselves looking ahead the future society based on the tradition of the pharmaceutical sciences. Specifically, this program provides students education to allow them to acquire 1) the fundamental knowledge and skills required to become pharmacists who are capable of understanding and diagnosing a patient's condition, of judging and suggesting prescriptions, and of taking responsibility for appropriate use of medicines and medical supplies; 2) the advanced skills required for exercising their creative thinking abilities to try to solve new problems actively and autonomously, as well as the opportunity to exercising those skills experimentally; 3) the advanced medical knowledge required to foster skills as pharmacists who have a high level of expertise and are capable of taking part in discussion in team medical care from a scientific point of view; 4) the ethics and improved communication skills required of a clinical pharmacist; and 5) the research abilities to orient them toward the world-leading researches in the pharmaceutical sciences and to enable them to contribute to the development of new drug therapy.

This program is highly systematically designed to foster students who will advance to graduate school and to acquire advanced knowledge and skills as expert pharmacists and ethics as medical staff while expecting them to become practical pharmacists in a medical institution, or to work as researchers engaged in such fields as the development of new medicine

mechanisms of action, and metabolic end result that are required for understanding the processes of the pharmacological action of medicines, and the ability to explain and exercise that knowledge, those skills, and that attitude;

- 5) The capability to understand basic and applied knowledge of drug therapy, and to explain the standard methods of drug therapy for major diseases of every organ;
- 6) Fundamental knowledge, skills, and attitude regarding the effect of medicines and chemical substances on a human being and the effect of living environment and global ecosystem on human health, and the ability to explain and exercise that knowledge, those skills, and that attitude;
- 7) The fundamental knowledge, skills, and attitude regarding pharmacy itself, laws and institutions related to medicines, and economics and pharmacy businesses that are required for understanding the responsibilities and duties of pharmacists in society, and the ability to explain and exercise that knowledge, those skills, and that attitude;
- 8) The fundamental knowledge, skills, and attitude for the dispensing, formulation, explanation of medicine instructions and assistance for prescription designing required for working as a member of a medical team, and the ability to explain and exercise that knowledge, those skills, and that attitude;
- 9) The ability to identify problems, and to indicate a way of solving them, to work as pharmacists who can flexibly cope with various needs of medical workers;
- 10) The fundamental capability to identify new information and knowledge, and to autonomously improve one's ability, in order to keep up with progress in pharmaceutical and other sciences and medicine;
- 11) An understanding of the importance of development of juniors medical staff, and the ability to contribute to it by educating the pharmacists of the next generation.
- 4. Curriculum policy (policy for arranging and implementing the curriculum)

Program of Pharmaceutical Sciences

Policy for design, education and learning method of curriculum

In the Program of Pharmaceutical Sciences, the curriculum (educational course) is arranged according to the policies described below in order to develop medical staff who have abilities mentioned in the diploma policy and have deep humanity and wide-ranging intelligence.

- 1) To allow students to acquire fundamental knowledge such as physics, biology, mathematics and "Psychology for Medical Care Workers" as well as basic study ability in a wide variety of areas, the curriculum provides the peace study subjects, fundamental subjects for university education, disciplinary subjects, foreign language subjects, information and data science subjects, health and sports subjects, society-related subjects, and fundamental subjects, structured in such a way as to provide those subjects to the whole university in the 1st and 2nd year;
- 2) To allow students to understand the fundamental characteristics on medicines and chemical substances including biological materials, and to learn the fundamental knowledge about typical reactions, separation methods, configuration determination methods, etc., the curriculum provides subjects on the structure and characteristics of materials besides natural medicine resources such as Organic Chemistry and Analytical Chemistry. After learning lectures about these subjects, the curriculum also provides the practical training subjects;
- 3) To allow students to understand structures of living organisms at the level of individuals, organs and cells, and to learn the fundameT, 9ga, tledge

- Specialized Subjects in the 1st and 2nd year, and subjects including more advanced contents like Physiological Chemistry and Cellular Biology as Specialized Subjects in the 3rd year. After taking lectures on these subjects, the practical training subjects are prepared for the fall semester in the 2nd year and the spring semester in the 3rd year in order to acquire the technical skills based on knowledge;
- 4) To allow students to understand the process of pharmacological actions of medicines, and to get the fundamental knowledge about the medicine's actions to diseases, the action mechanism and in vivo fate, the curriculum provides subjects related to the actions and the in vivo fate of medicines such as Pharmacology and Biopharmaceutics as the Basic Specialized Subjects in the 1st and 2nd year, and subjects including more advanced contents like Pharmacokinetics as the Specialized Subjects in the 3rd year. After taking lectures on these subjects, the practical training subjects are prepared for the fall semester in the 2nd year and the spring semester in the 3rd year in order to acquire the technical skills based on knowledge;
- 5) To allow students to understand the basic and advanced knowledge about the pharmacotherapy, and to learn the knowledge enough to explain the pharmacotherapy to major diseases regarding all organs, the curriculum provides the lecture subjects related to the diseases and the conditions such as Clinical Pharmacy and Pharmacotherapy in the 4th year, and group learning subjects as Program-based Learning like Clinical Pharmacology in the 5th and 6th year. The Pharmacy Practice is prepared for the fall semester in the 4th year while the Clerkships in Clinical Pharmacy are provided in the 5th year. In order to cultivate these abilities, a Seminar Subject (Japanese Pharmacopoeia) is given in the 6th year;
- 6) To allow students to learn the fundamental knowledge about effects of medicine and chemical substance to the human as well as the human health with the living environments and/or global ecosystem, the curriculum provides Lecture Subjects related to the health and the environment such as Public Health Chemistry in the 2nd and 3rd year. The practical training subjects are prepared for the 3rd year in order to acquire the technical skills and the attitudes based on knowledge;
- 7) To allow students to understand the social responsibilities and duties of pharmacists, and to learn the fundamental knowledge about laws, systems and economies regarding pharmacy and drugs as well as services at pharmacies, the curriculum provides Lecture Subjects related to the pharmacist services and the pharmaceutical affairs law such as Pharmaceutical Affairs Related Laws and Pharmacoeconomics in the 4th year. The Pharmacy Practice is prepared for the fall semester in the 4th year, and the Clerkships in Clinical Pharmacy are given in the 5th year in order to acquire more practical skills and the attitudes;
- 8) To allow students to learn the fundamental knowledge required to the pharmacist services such as drug dispensing, formulation and medication counseling in order to participate in the medical care as a team member, the curriculum provides Lecture Subjects related to the formulation adjustment and the drug management like Industrial Pharmaceutics and Drug Informatics in the 3rd and 4th year. The Pharmacy Practice is prepared for the fall semester in the 4th year, and the Clerkships in Clinical Pharmacy are given in the 5th year in order to acquire more practical skills and the attitudes;
- 9) To allow students to acquire the essential abilities to find and solve problems to be active as a pharmacist who can deal flexibly with the multiple needs required as a provider of medical care, the curriculum provides Seminar Subjects: Research Practices for the fall semester in the 3rd year, subjects including basic contents: Special laboratory Works in Pharmaceutical Sciences I -II for the fall semester in the 3rd year and in the whole 4th year, and subjects including more advanced contents: Special laboratory Works in Clinical Pharmacy I III as the Specialized Study for

Graduation, well-instructing students individually;

- 10) To allow students to acquire the fundamental abilities required to keep improving themselves grasping the new information and knowledge in order to deal with progresses of pharmacy, sciences and medical cares, the curriculum provides a more professional foreign language subject: Practical English for Pharmaceutical Students in the 2nd year in addition to the Foreign Languages Subjects in the 1st and 2nd year. Besides, The Specialized Study for Graduation Subjects: Special laboratory Works in Pharmaceutical Sciences I II and Special laboratory Works in Clinical Pharmacy I III are provided from the fall semester in the 3rd year, well-instructing individually;
- 11) To allow students to understand the importance of teaching younger people and to acquire the abilities to carry it out in order to foster the next-generation pharmacists, the curriculum creates an environment in which students support the Specialized Study for Graduation of younger members in the same laboratory;

Evaluation Policy for Learning Achievements

The learning achievements are evaluated by the suitable ways to each learning method of the curriculum based on the above Curriculum policy 1) to 11), and the program aims to achieve the Diploma policy. Basically, the Lecture Subjects are evaluated by written-examinations or written-examinations besides report assignments. The Practice Subjects are evaluated comprehensively by report assignments, practice notes, etc. The participatory learning subjects are evaluated by report assignments and presentation. The Seminar Subjects are evaluated by written-examinations, report assignments or presentation. The Pharmacy Practice is evaluated by written and practical skills examination. The Clerkships in Clinical Pharmacy are evaluated by practice notes and presentation. The Specialized Study for Graduation Subjects are evaluated by a rubric determined separately.

Besides these evaluations, students are appraised by their attainment of the goals set by the Program of Pharmaceutical Sciences.

To promote the systematic learning, the program sets a certain standard for the assignment to laboratories. To take the Clerkships in Clinical Pharmacy, the Common Achievement Test which is also set a certain standard is assigned.

Start time and acceptance conditions
 Students select (start) this program in the first year.

6. Obtainable qualifications

- a) Qualification for national examination for pharmacists
- b) Technical supervisor in the office for the manufacture, import, and sale of medical devices, technical manager in a waste disposal plant, pollution control manager related to noise, dust, and vibration pollution, technical manager of environmental sanitation for buildings, and technical administrator for waterworks
- 7. Class subjects and their contents

For class subjects, refer to the subject table in Sheet 1. (The subject table is to be attached.)

For the details of the class subjects, refer to the syllabus that is published each academic year.

8. Academic achievement

The evaluation criteria are specified for each evaluation item for academic achievement, and the achievement level against these criteria is designated for each academic year.

The academic achievement, from when the student enters our university to the end of the last semester, is represented based on the average of evaluation scores for each evaluation item. The evaluation score for each subject is converted to

a numerical value (S = 4, A = 3, B = 2, and C = 1) and the evaluation standard for the academic achievement is determined using these values while applying weightings.

Achievement evaluation	Numerical conversion
S (Excellent:90 or more points)	4
A (Very good: 80 - 89 points)	3
B (Good: 70 - 79 points)	2
C (Passed: 60 - 69 points)	1
Academic achievement	Evaluation standard
Excellent	3.00 - 4.00
Very Good	2.00 - 2.99
Good	1.00 - 1.99

^{*} Refer to the relationship between evaluation items and evaluation criteria described in Sheet 2.

9 Graduation thesis (graduation research) (meaning, student allocation, timing, etc.)

Purpose

To enable students, through a topic of research, to acquire the capabilities for identifying something new, and solving problems based on a scientific point of view, required for comprehensively understanding pharmaceutical knowledge and contributing to the medical realm, as well as the attitude to endeavor to improve their capabilities throughout their lives.

Students present the results of their research at the graduation thesis presentation assembly that is held in the middle of December in the sixth year.

Overview

1. Attitude required for research activity

Students are expected to understand the basic philosophy and attitude required for joining in research activities in the future.

2. Studying research activity

Students are expected to experience a series of research processes to achieve the aims of the research, and to acquire the basic knowledge, skills, and attitude required for research activities, in order to become capable of performing research by themselves in the future.

3. Encounter with undiscovered things

Students are expected to experience pleasure in research activities that consists of the joy of invention and discovery in their own research.

Student allocation timing and method

Students are allocated to the laboratory in the second semester of the third year. The allocation method and requirements are defined separately.

10 Responsibility

(1) Responsibility for PDCA (plan, do, check, and act) cycle

The faculty committee of the Program of Pharmaceutical Sciences (head: Takuya Kumamoto (who is in charge of educational affairs) is engaged in the processes of "plan" and "do."

^{*} Refer to the relationship between evaluation items and class subjects described in Sheet 3.

^{*} Refer to the curriculum map in Sheet 4.

For the processes of "check" and "act", the dean of the school consults with the responsible committee and carries out the required actions while taking the results of consultations into consideration.

(2) Evaluation of the program

Perspectives for evaluation of the program

This program is evaluated from the perspectives of "educational effectiveness" and "social effectiveness." The "educational effectiveness" is evaluated by the effects of implementation of the program on the educational achievement of students, based on such things as evaluation scores, evaluation of achievement, and GPA. The "social effectiveness" is evaluated by the social effectiveness of the program.

Evaluation method (also describes relation to class evaluation)

In this program, achievement in the program is evaluated from the perspectives described above for students in the second semester of the sixth year. Also, it is evaluated for each year, taking evaluation by students into consideration by conducting questionnaires for students to evaluate the program each semester.

The "educational effectiveness" is comprehensively evaluated based on such things as the evaluation scores, evaluation of achievement, and GPA of the students who took the program.

The "social effectiveness" is evaluated based on such things as the rate of employment in hospitals, pharmacies, corporations (such as pharmaceutical companies) and public offices that have a close connection with the contents of this program. We regularly request a member of human resources staff in an organization that employs mainly students of this program to evaluate the program. In addition, we request graduates of this program to evaluate their own achievement and that of the program.

Policy and method for feedback to students

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							Spri ng	Fall	Spri ng	Fall	Spring	Fall	Spring	Fal l	Spring	Fall	Spring	Fall
					2	Requi red	-	Turr	1 0	1411	1 0	rurr	1 0	1411	1 0	rurr	1 0	1 41 1
				Introduction to University Education	2	Requi red												
				Introductory Seminar for First-Year Students	2	Requi red												
				Courses in Arts and Humanities/SocialSciences	2	El ective/required												
			(Note 8)	Courses in Natural Sciences	2	Elective/required												
ľ				Communication Seminar I	1													
				Communication Seminar II	1	1												
				CommunicationI	1													
				Communication I	1	1												
				Communication II	1													
				Communication II	1	1												
	ľ	•		Basic Foreign Language	1													
				Basic Foreign Language II	1	1												
				Basic Foreign Language III	1													
				Basic Foreign Language IV	1	1												
ľ				Introduction to Information and Data Sciences(Note 4)	2	Requi red												
				Information and Data Science Courses	2	El ective/required												
ľ					1or2	El ective/required												
ľ					1or2	Free elective												
•				Psychology for Medical Care Workers(Note 5)	2													
				Statistics	2													
				Anatomy for understanding human being I	1													
				Anatomy for understanding human being II	1	<u></u>												
				Foundation physics for life science(Note 6)	2													
				Foundation biology for life science(Note 7)	2	<u> </u>												
			Г	Species Biology	2													
				Basic Calculus	2]												
				Basic Linear Algebra	2													

Table of Registration Standards for Liberal Arts Education Subjects Program of Pharmaceutical Sciences

4)	Subj ect type	Lesson Style	Requi red	macouereur soronees	N£	T									is t			
Type	j ect	s uoss	No. of credits	Class subjects, etc.	credits	Type of course registration		grade				_						-
	àns	res					Spri ng	Fall	Spri ng	Fall	Spri ng	Fall	Spri ng	Fall	Spri ng	Fall	Spri ng	Fal l
				Practical English for Pharmaceutical Students	2													
				Introduction to Pharmaceutical Sciences	2													
				General Chemistry	2													
				Pharmaceutical Analysis	2													
				Nuclear Pharmacy	2													
				Organic Chemistry I	1													
				Organic Chemistry I	1													
				Biochemistry I	2													
	S			Biochemistry II	2													
	ect			Biological Chemistry III	2													
	Subj			Public Health Chemistry I	2													
	pez	Lecture	43	Basic Kampo Medicine	2	Requi red												
	al i z	Lect	45	Mi crobi ol ogy	2	Required												
	eci			Public Health Chemistry II	2													
	c Sp			Pharmaceutical Physical Chemistry	2													
	Basic Specialized Subjects			Bio-Analytical Science	2													
	В			Natural Products Chemistry	2													
				Biological Chemistry IV	2													
				Bi opharmaceuti cs	2													
				Biochemistry V	2													
				Organic Chemistry	1													
S				Organic Chemistry	1													
ect				Pharmacology I	2													
Subj				AnOutline of Pathology	1													
Specialized Education Subjects			•	Total(Basic Specialized Subjects)	43		4	10	16	12			1					
cati				Japanese Pharmacopoeia	2													
Edu		ar	4	Research Practice	1	Requi red												
zed		omi nar		Research Practice	1													
i al i		Se	(2)	Practice for clinical food science	2	Free elective							2					
bec				Total (Seminar)	6						1	1	2				2	
O ₁			(2)	Clinical food science	2	Free elective							2					
				Herbal medicine & Kampo medicine	2													
				Pharmacoki neti cs	2													
				Biochemistry VI	2													
				Biophysical Chemistry	2													
	rs.			Antibiotics and Drug resistance	2													
	j ect			Physiological Chemistry	2													
	Specialized Subjects			Organic Chemistry III	2													
	zed			Medicinal Organic Chemistry	2													
	ali	۵)		Pharmacology II	2													
	peci	Lecture		Industrial Pharmaceutics	2													
	S	Lec	62	Cell Motility	2	Requi red												
				Genetic Engineering	2													
				Organic Chemistry IV	2													
				Public Health Chemistry III	2													Ĺ
				Biological Statistics	2			L				$oxedsymbol{oxedsymbol{oxed}}$	$oxedsymbol{oxed}$		L			Ĺ
				Pharmacology III	2													
				Pharmacol ogy I	2													Ĺ
				Clinical Pharmacy	2													
				Clinical Medicine and Pharmacotherapy I	2													
				Pharmacotherapy A	2													
				AnOutline of Immunology	2													

Academic achievements of Pharmaceutical Sciences Program Relationships between the evaluation items and evaluation criteria

		Academic achievements		Evaluation criteria	
		Evaluation items	Excellent	Very Good	Good
	(1)		2. The learning attainment level is calculated as an average evaluation of grades based on designated	 Being able to clearly explain about general education subjects along with natural science and social science. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%. 	 Being able to explain about general education subjects along with natural science and social science. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
	(2)	The basic knowledge and understanding of basic structures, physical characters and reaction of medicine and other inorganic and organic compounds.	inorganic and organic compounds. 2. The learning attainment level is calculated as an	1. Being able to explain clearly about the basic structure, physical characteristics and reaction of medicine and inorganic and organic compounds. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%.	 Being able to explain about the basic structure, physical characteristics and reaction of medicine and inorganic and organic compounds. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
anding	(3)	Knowledge and understanding of the biological maintenance system of homeostasis and the ability to adjust to the environment.	homeostasis and dynamic adjustment. 2. The learning attainment level is calculated as an average evaluation of grades based on designated	 Being able to clearly explain about maintenance mechanism of ecosystem homeostasis and dynamic adjustment. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%. 	 Being able to explain about maintenance mechanism of ecosystem homeostasis and dynamic adjustment. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
dge and Understanding	(4)	understanding about proper drug treatment for major diseases related to various organ.	organs from medical point of view. 2. The learning attainment level is calculated as an average evaluation of grades based on designated	 Being able to comprehensively explain appropriate medication to major diseases relating to various organs. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%. 	 Being able to explain appropriate medication to major diseases relating to various organs. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
Knowledge	(5)	environment, causes of environmental pollutants, and their influences on humans.	components of environmental contamination, and human effects. 2. The learning attainment level is calculated as an	1. Being able to clearly explain about ecosystem, preservation of living environment, components of environmental contamination, and human effects. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%.	1. Being able to explain from about ecosystem, preservation of living environment, components of environmental contamination, and human effects. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
	(6)	Knowledge and understanding about rational analyses of pharmacokinetics in order to to understand effects.		1. Being able to comprehensively explain the logical analysis of pharmacokinetics to understand medical 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%.	1. Being able to explain the logical analysis of pharmacokinetics to understand medical effects and 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
	(7)	The knowledge and understanding of communication with medical teams relating to medication.	team. 2. The learning attainment level is calculated as an	 Being able to make communication with other medical staff on medication. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%. 	 Being able to explain to other medical staff on medication. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.

		Academic achievements		Evaluation criteria	
		Evaluation items	Excellent	Very Good	Good
unding	(8)	Improving English comprehension to chemical English.	The level of achievement will be assessed based on a formula that includes the average points calculated based on the student's TOEIC score and an evaluation in class. 80% is minimum.	The level of achievement will be assessed based on a formula that includes the average points calculated based on the student's TOEIC score and an evaluation in class. 70% is minimum.	The level of achievement will be assessed based on a formula that includes the average points calculated based on the student's TOEIC score and an evaluation in class.
e and Understanding	(9)	The ability of considering basic pharmacological effects of medicine to chemical structure.	 Being able to explain basic medical effects relating to chemical structures of medicine. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%. 	 Being able to enumerate and explain basic medical effects and chemical structures of medicine. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%. 	 Being able to explain basic medical effects and chemical structures of medicine. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
Knowledge	(10)	major diseases from aberration of clinical test values.	 Being able to enumerate and explain major diseases assumed from abnormal clinical scores. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%. 	 Being able to enumerate and explain basic points of major diseases assumed from abnormal clinical scores. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%. 	 Being able to explain basic points of major diseases assumed from abnormal clinical scores. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
	(1)	Abilities of collecting necessary information of drug treatment her/him self.	 Being able to collect necessary information on medication. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%. 	 Being able to enumerate and explain basic points necessary for medication. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%. 	 Being able to explain basic points necessary for medication. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
	(2)	Being able to search for toxic doses, targeted organs, symptoms of poisoning, emergency procedure and detoxication of chemical substances.	 Being able to explain and search for measures on poisoning, targeted organs, poisoning symptoms, emergency treatments and detoxification of chemical substances. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%. 	1. Being able to search for measures on poisoning, targeted organs, poisoning symptoms, emergency treatments and detoxification of chemical substances. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%.	 Being able to explain search measures on poisoning, targeted organs, poisoning symptoms, emergency treatments and detoxification of chemical substances. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
Abilities and Skills	(3)	coping to reduce harmful effects(side effects) of madicine.	1. Being able to enumerate basic matters relating to measures to decrease harmful effects (side effects) of medicine and conduct ways of solution. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%.	1. Being able to enumerate basic matters relating to measures to decrease harmful effects (side effects) of medicine and explain ways of solution. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%.	1. Being able to enumerate basic matters relating to measures to decrease harmful effects (side effects) of medicine and explain them. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
Al	(4)	To be able to handle major analysis methods written in the Japanese Pharmacopoeia.	1. Being able to construct experimental ways and analyze representative official medicine of Japanese Pharmacopoeia. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%.	1. Being able to analyze representative official medicine of Japanese Pharmacopoeia. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%.	1. Being able to analyze representative official medicine of Japanese Pharmacopoeia. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
	(5)	Using available compounds as starting materials, to be able to handle organic synthesis in order to chemically transform medicine into a target substance.	1. Being able to plan organic synthesis to have chemical conversion into desired compounds including medicine from compounds hard to get and synthesize them. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%.	1. Being able to conduct organic synthesis to have chemical conversion into desired compounds including medicine from compounds hard to get. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%.	synthesis to have chemical conversion into desired compounds including medicine from compounds hard to get. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.

		Academic achievements		Evaluation criteria	
		Evaluation items	Excellent	Very Good	Good
	(6)	Using available compounds as starting materials, to be able to handle organic synthesis in order to chemically transform medicine into a target substance.	1. Being able to plan organic synthesis to have chemical conversion into desired compounds including medicine from compounds hard to get and synthesize them. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%.	1. Being able to conduct organic synthesis to have chemical conversion into desired compounds including medicine from compounds hard to get. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%.	synthesis to have chemical conversion into desired compounds including medicine from compounds hard to get. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
and Skills	(7)	Ability and skills to measure drug blood level concerning major drugs.	 Being able to construct experiment plan to measure representative drug blood level and measure them. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%. 	2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%.	measure representative drug blood level. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
Abilities	(8)	The ability and skills of communication with medical teams relating to medication.	 Being able to make communication with other medical staff on medication as a member of medical team. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%. 	 Being able to make communication with other medical staff on medication. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%. 	 Being able to explain to other medical staff on medication. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
	(9)	The ability and skills to appropriately deal with contraindication or inappropriate treatments of medicine.	 Being able to appropriately deal with contraindications or inappropriate prescription of medicine by themselves. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%. 	 Being able to appropriately deal with contraindications or inappropriate prescription of medicine. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%. 	 Being able to explain appropriate measures to contraindications or inappropriate prescription of medicine. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
Attitudes	(1)	The knowledge and understanding to have communication not only with	1. Being aware that a pharmacist is a professional relating to human life, being able to have an attitude to take the appropriate mind and make appropriate communication not only with ailing people but with patients and other medical staff as a member of a medical team. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%.	1. Being aware that a pharmacist is a professional relating to human life, Bing able to have an attitude to take the appropriate mind and make communication not only with ailing people but with patients and other medical staff as a member of a medical team. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%.	1. Being aware that a pharmacist is a professional relating to human life, having had an attitude to take the appropriate mind and make communication not only with ailing people but with patients and other medical staff as a member of a medical team. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
A	(2)	Ability to be a pharmacist who is relied on not only by a medical team but also by citizens; the ability to be considerate of patients.	 Being able to always keep the existence of patients and take action to become a reliable pharmacist not only from medical teams but also from national people. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%. 	 Being able to always keep the existence of patients and try to take action to become a reliable pharmacist not only from medical teams but also from national people. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%. 	 Being able to always keep the existence of patients and explain necessary matters to become a reliable pharmacist not only from medical teams but also from national people. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.

	Academic achievements		Evaluation criteria	
	Evaluation items	Excellent	Very Good	Good
(1	Comprehensive problem-solving ability and educational ability: Concerning the influences caused by numerous chemical substances existing on the earth, to be able to analyze and argue about the survival of the human race. Also, to have the ability and skills to give instruction to youth.	1. Being able as a pharmacist or medical researcher to analyze effects of various kinds of chemical substances on earth to humans, generally estimate ways of survival of humans, actively try to find the solution of the issues and advise the next generation. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%.	1. Being able as a pharmacist or medical researcher to analyze effects of various kinds of chemical substances on earth to humans and try to find solution for survival of humans, and advise the next generation. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%.	medical researcher to analyze effects of various kinds of chemical substances on earth to humans and try to find solution for survival of humans, and being able to advise the next generation. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
(2	Self-betterment of character formation as a medical professional: the appropriate action and attitude being aware of that a pharmacist is a professional relating to human life. The knowledge and understanding to have communication not only with ailing people but with other medical staff in a medical team.	1. Being aware that a pharmacist is a professional relating to human life, being able to have an attitude to take the appropriate mind and make appropriate communication not only with ailing people but with patients and other medical staff as a member of a medical team. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%.	1. Being aware that a pharmacist is a professional relating to human life, Bing able to have an attitude to take the appropriate mind and make communication not only with ailing people but with patients and other medical staff as a member of a medical team. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%.	1. Being aware that a pharmacist is a professional relating to human life, having had an attitude to take the appropriate mind and make communication not only with ailing people but with patients and other medical staff as a member of a medical team. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.
(3	The research ability: the ability to select issues to be solved in the professional field of pharmacist and carry out measures and research to solve the issues.	1. Being able to select issues to be solved in the professional area of pharmacist, plan the ways of solution by themselves and conduct the research. 2. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 80%.	 Being able to select issues to be solved in the professional area of pharmacist and conduct ways or research to solve the issues. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 70%. 	 Being able to conduct measures or research to solve issues to be solved in the professional area of pharmacist. The learning attainment level is calculated as an average evaluation of grades based on designated formulae. The standard is more than 60%.

Role of liberal arts education in this major program

Relationships between the evaluation items and class subjects(Program of Pharmaceutical Sciences)

	Withhall Witha	1 William William	l Wisha l Wisha l	Wakid Waki	. I Westerl Wester	1 137	1 Waland Walan	1 Wilder I Wo	and Maightan Ma	talend Wainhead W	Waishtad W	: J. t. 1 Watchtod Watch	. J. Wainhead Wainh	Waightad Waig	Level Waterhand W	Western Western W	Waishtad W	intend Weighted	Wighted Wei	July Walahad Wa	ightad Waight	Weighted I	Jaightad Waig	atad Waightad	Weighted Weig	htad Woightad	Waterhead	
	evaluation evaluation	ed Weighted Weighted of values of values of evaluation evaluation		Weighted weighted values of values of evaluation evaluation								ighted Weighted Weightes of values o	tion evaluation evalua													ation evaluation	evaluation	
	items in items the subject	the subject	the subject	the subject	the subject	the subject	the subject	the subject	the subject	the subject	the subject	the subject	items in items the subject	the subject	the subject	tems items in ite the subject	the subject	the subject	t the s	s in items item subject the	subject	the subject	ems items the si	in items ibject	the subject	items in the subject	tems	
Liberal Arts Education Peace Science Courses 2 Required 3-2T	100 1																										10	100
iberal Arts Education Introduction to University Education 2 Required 1-1T	50 1																				10 1	10	1 1	0 1	10	1 10	1 10	100
peral Arts Education Introductory Seminar for First-Year Students 2 Required 1-1T																					20 1	20	1 2	0 1	20	1 20	1 10	100
al Arts Education Area Courses 8 Elective/required 1 2																											10	100
Tal Arts Education Communication Seminar 2 Required $\begin{array}{ccc} 1-1T \\ 2-3T \end{array}$								80	1									20	1								10	100
ral Arts Education Communication 2 Required 1								80	1									20	1								10	100
al Arts Education Communication 2 Required 2								70	1									30	1								10	100
ral Arts Education Non-English Foreign Languages 0 Free elective 1 2								100	1																		10	100
eral Arts Education Information and Data Science Courses 2																										L		
ecialized Education General Chemistry 2 Require 50200307	00 50 1	50 1																									10	100
medialized Education Pharmaceutical Analysis 2 Required 2- T														100	1												10	100

																						Evaluati	ion items	 S																				Т
									Knowl	ledge an	d Under	standin))										_			Abi	ilities and	Skills								Atti	tudes			Compr	rehensiv	e Abilities	.S	Total
Subject Classification Subject Nar	me Credits	Type of course registrati on Grade	evaluation eval	ighted weigh values of luation items the su	in items	d Weighted values of evaluation items in the subject	items	Weighted values of evaluation items in the subject	ghted Weighte values o evaluation items in the subj	ion evaluation items	Weighted values of evaluation	evaluation items	Veighted alues of valuation tems in he subject	ation evaluat	n items	weighted walues of values of evaluation items in the subjection	items	Weighted values of evaluation items in the subject	Weighted values of evaluation items	Weighted values of evaluation items in the subject	ghted Weigh es of values uation evalua items i the sul	in litems	Weighted values of evaluation items in the subject	tems lit	(4) Veighted alues of valuation ems in the subject	tems lite	Weighted alues of valuation tems in the subject Weight alues	ed Weighted values of evaluation items in the subject	items		ems it	(8) Weighted values of evaluation tems in he subject	Weighted values of evaluation items in the subjection	n evaluation	Weighted values of evaluation items in the subject	evaluation	Weighted values of evaluation items in the subject	evaluation items	evaluation eva	alues of valuation events	alues of valu	ighted Weighted values of luation evaluations items in the subj	of values of evaluation items	evaluatio
Specialized Education Pharmacotherap	oy A 2	Required 7- 7	,					20	1									20	1		20	0 1	20	1									20	1										100
Specialized Education AnOutline of Immu	nunology 2	Required 7-2T				50	1	50	1																																			100
Specialized Education Clinical Medicine and Pharmac	acotherapy II 2	Required 8-37	,			10	1	10	1		10	1	10	1		10	1	10	1											10	1	10 1	10	1	5	1	5	1						100
Specialized Education Pharmaceutical Affairs Rel	elated Laws 2	Required 7-2T		20	0 1				20	1	20	1	10	1											10	1	10 1								10	1								100
Specialized Education Clinical Pharmaco	ology A 2	Required 8-37				10	1	10	1		10	1	10	1		10	1	10	1											10	1	10 1	10	1	5	1	5	1						100
Specialized Education Pharmacotherap	by B 2	Required 7-17				10	1	10	1		10	1	10	1		10	1	10	1											10	1	10 1	10	1	5	1	5	1						100
Specialized Education Drug Informatics	es 2	Required 8-37									25	1	25	1 25	1					25	1																							100
Specialized Education Clinical Medicine and Pharmaco	cotherapy III 2	Required 8-37	,			10	1	10	1		10	1	10	1		10	1	10	1											10	1	10 1	10	1	5	1	5	1						100
Specialized Education Clinical Pharmaco	ology 2	Required 11-1	Γ			10	1	10	1		10	1	10	1		10	1	10	1											10	1	10 1	10	1	5	1	5	1						100
Specialized Education Clinical Pharmaco	ology 2	Required 11-1	Γ			10	1	10	1		10	1	10	1		10	1	10	1											10	1	10 1	10	1	5	1	5	1						100
Specialized Education Pharmacoeconor	mics 2	Required 7-17	,								50	1								50	1																							100
Specialized Education Clinical Evaluation	cion 2	Required 8-37																		100	1																							100
Specialized Education Experiments in Analytical	l Chemistry 1	Required 4														100	1																											100
Specialized Education Training of Physical C	Chemistry 1	Required 4	50	1 50	0 1																																							100
Specialized Education Experiments in Organic (Chemistry 1	Required 4		50	0 1																							50	1															100
Specialized Education Experiments of Cellular and Mole	lecular Biology 1	Required 4																																								100) 2	100
Specialized Education Experiments of Biological	Chemistry 1	Required 4																							100	1																		100
Specialized Education Experiments of Pharm	nacognosy 1	Required 5																							100	1																		100
Specialized Education Experiments of Microbial (Chemistry 1	Required 5				30	1									30	1								20	1																20	1	100
Specialized Education Pharmacology P	Practice 1	Required 5																												100	1													100
Specialized Education Practice of Pharma	aceutics 1	Required 5																												100	1													100
Specialized Education Experiments of Public health	h Chemistry 1	Required 5																																								100) 1	100
Specialized Education Pharmacy Practi	rice 3	Required 8						10	1											10	1						10 1					10 1	10	1	20	1	20	1			10	1		100
Specialized Education Clerkship in Clinical Ph	harmacy 10	Required 9 10)																														20	3	20	3	20	3			40	3		100
Specialized Education Clerkship in Clinical Ph	Pharmacy 10	Required 9 10)																														20	3	20	3	20	3			40	3		100
Specialized Education Special laboratory Works in Pharmaceut	utical Sciences I 2	Required 6 8		10	0 1															10	1							10	1	10	1								30	1		30	1	100
Specialized Education Special laboratory Works in Pharmaceut	utical Sciences 2	Required 6 8		10	0 1															10	1							10	1	10	1								30	1		30	1	100
Specialized Education Special laboratory Works in Clinical	al Pharmacy 2	Required 9 1	2																	15	1									15	1								35	1		35	1	100
Specialized Education Special laboratory Works in Clinical	al Pharmacy 2	Required 9 1	2																	15	1									15	1								35	1		35	1	100
Specialized Education Special laboratory Works in Clinical	al Pharmacy 2	Required 9 1	2																	15	1									15	1								35	1		35	1	100
То	otal	<u> </u>	360	6 138	80 27	1430	31	260	15 220	3	540	20	125	1 45	5 8	390	19	240	14	415	19 55	5 3	195	7	410	8	30 3	390	11	365	17	190 14	170	17	230	22	220	21	265	11	170	12 515	5 17	9020

Curriculum Map of Pharmaceutical Sciences Program

Sheet 4

Curriculum wap of Finanmac												Dilect
Academic achievements	1st	grade	2nc	l grade	3rc	l grade	4th	grade	5th g	rade	6th	grade
Evaluation items	Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester
To have a wide range of knowledge of	Liberal Arts Education Subjects GPA	A Liberal Arts Education Subjects GP	A Peace Science Courses	Training of Physical Chemistry		•		•				
liberal arts as well as basic understanding and knowledge of natural science and	Introduction to University Education	Area Courses										_
social science.	Area Courses	Introduction to Pharmaceutical Sciences										_
	General Chemistry											
The basic knowledge and	Foundation Courses	Foundation Courses	Pharmaceutical Physical Chemistry	Basic Kampo Medicine	Biophysical Chemistry	Special laboratory	y Works in Pharmaceu	utical Sciences I				Japanese Pharmacopoeia
understanding of basic structures, physical characters and reaction of	Organic Chemistry A	Organic Chemistry A	Nuclear Pharmacy(Training of Physical Chemistry	Medicinal Organic Chemistry	Special laboratory	Works in Pharmaceu	tical Sciences				
medicine and other inorganic and organic	Organic Chemistry B	Organic Chemistry B	Bio- Analytical Science	Experiments in Organic Chemistry	Research PracticeA	Industrial Pharmaceutics	Pharmaceutical Affairs Related Laws					_
compounds.	General Chemistry		Natural Products Chemistry	Organic Chemistry	Herbal medicine & Kampo medicine	Research PracticeB						_
quality			Organic Chemistry		Pharmacology III	Pharmacology IV						_
Knowledge and understanding of the biological maintenance system of	Foundation Courses	Foundation Courses	Biological Chemistry III	Pharmacology I	Physiological Chemistry	Cell Motility	AnOutline of Pathology	Clinical Pharmacology A			Clinical Pharmacology	Japanese Pharmacopoeia
homeostasis and the ability to adjust to		Biochemistry I	Biological Chemistry IV	Biochemistry V	Antibiotics and Drug resistance	Genetic Engineering	_	_				
the environment.								_				_
quality					_						<u> </u>	_
												_
							P					_
Fundamental knowledge understanding				Basic Kampo Medicine	Pharmacology III	Pharmacology IV	AnOutline of Pathology	Pharmacy Practice			Clinical Pharmacology	
about proper drug treatment for major							Pharmacotherapy A	Clinical Pharmacology A			Clinical Pharmacology	
diseases related to various organ. quality							Clinical Pharmacy	Clinical Medicine and Pharmacotherapy III				_
4							Clinical Medicine and Pharmacotherapy I	Clinical Medicine and Pharmacotherapy II				=
							AnOutline of Immunology					=
ρ							Pharmacotherapy B					_
Understanding concerning preservation of the eco system and life environment,			Public Health Chemistry I				Pharmaceutical Affairs Related Laws					
'1			Public Health Chemistry II									_
causes of environmental pollutants, and their influences on humans.												_
causes of environmental pollutants, and their influences on humans. quality												_
Knowledge and understanding about				Dhamasaland	D ID (A	חיי חו	Clinia al Diamona	Donas Information	ı		Clinia Di Li	
rational analyses of pharmacokinetics in				Pharmacology I	Research PracticeA	Research PracticeB	Clinical Pharmacy	Drug Informatics	_		Clinical Pharmacology	_
order to to understand quantitatively			_	Biopharmaceutics	Pharmacokinetics	Public Health Chemistry III	Clinical Medicine and Pharmacotherapy I	Clinical Pharmacology A			Clinical Pharmacology	
madicinal effects or side effects. quality				Basic Kampo Medicine		Biological Statistics	Pharmacotherapy B	Clinical Medicine and Pharmacotherapy II				_
quanty				Pharmacology II			Pharmaceutical Affairs Related Laws	Clinical Medicine and Pharmacotherapy III				_
The knowledge and understanding of							Pharmacoeconomics	Donas Information	l		Clinia In Inc.	
communication with medical teams		Introduction to Pharmaceutical Sciences					Clinical Pharmacy	Drug Informatics			Clinical Pharmacology	_
relating to medication.							Clinical Medicine and Pharmacotherapy I	Clinical Pharmacology A			Clinical Pharmacology	
quality						<u> </u>	Pharmacotherapy B	Clinical Medicine and Pharmacotherapy II				
							Pharmaceutical Affairs Related Laws	Clinical Medicine and Pharmacotherapy III Pharmacology III Pharmacology IV			k s	P g d Pharmacology III
Improving English comprehension to												
acquire capacity of medical or chemical												
English.												
The ability of considering basic												
pharmacological effects of medicine to												
chemical structure.												
quality									l			
10 Abilities skills of citing speculated							Pharmacotherapy A	Clinical Pharmacology A			Clinical Pharmacology	Japanese Pharmacopoeia
major diseases from aberration of clinical							PRAITTHACOUNE TAPY A Research Practice Practice for clinical food science	Clinical Pharmacology A Clinical Medicine and Pharmacotherapy II			Clinical Pharmacology Clinical Pharmacology	заранезе гнантисороета
test values.								Clinical Medicine and Pharmacotherapy III			Cirrical Marriacology	
qualities							Clinical Pharmacu	Similican wedicine and Pharmacotherapy III	l			
							Clinical Pharmacy					
							Clinical Medicine and Pharmacotherapy I					
							Pharmacotherapy B					

Curriculum Map of Pharmaceutical Sciences Program

Social Cooperation Courses

Sheet 4

Academic achievements	1ct	grade	2nd	grade	3rd	l grade	4th	grade	5th g	rade	6th	grade
Evaluation items		Fall semester		Fall semester		Fall semester		Fall semester	i	Fall semester		Fall semester
Evaluation items	Spring semester Information and Data Science Courses	Information and Data Science Courses	Spring semester	Pharmacology I	Spring semester Research PracticeA	r'an semester	Spring semester	r all selliester	Spring semester	ran semester	Spring semester	ran semester
	HIOHIATOH AIRI DAIA SCIERCE COUISES	Introduction to Pharmaceutical Sciences		Microbiology 1	Antibiotics and Drug resistance							
		an occident of hambedged secrees		Pharmacology II	Pharmacology III	Research PracticeB	Pharmacoeconomics	Drug Informatics				
				Training of the	Trainacology in	Pharmacology IV	Transcoccoronics	Clinical Evaluation				
						Transcology IV		Pharmacy Practice				
				Pharmacology I			Research PracticePractice for clinical food science					
				<u> </u>			Pharmacotherapy A					
								_				
		Introduction to Pharmaceutical Sciences		Biopharmaceutics	Pharmacokinetics	Biological Statistics	Pharmacotherapy A					
				Pharmacology II	Antibiotics and Drug resistance							
		Pharmaceutical Analysis	Nuclear Pharmacy(Experiments of Biological Chemistry	Experiments of Pharmacognosy		Pharmaceutical Affairs Related Laws					Japanese Pharmacopoei
		1 121 11 decedered 1 if 21 year	Bio- Analytical Science	,	Experiments of Microbial Chemistry							oapariese Filamiesepse.
							Pharmaceutical Affairs Related Laws	Pharmacy Practice				Japanese Pharmacopoe
	Organic Chemistry A	Organic Chemistry A	Organic Chemistry	Experiments in Organic Chemistry	Research PracticeA							
	Organic Chemistry B	Organic Chemistry B	Organic Chemistry	Organic Chemistry	research racticeA							
	organic criticality 2			0.84.40 0.161.254		Research PracticeB						
					Research PracticeA							
					Practice of Pharmaceutics							
					Pharmacology Practice	Research PracticeB	Clinical Pharmacy	Clinical Pharmacology A				
							Clinical Medicine and Pharmacotherapy I	Clinical Medicine and Pharmacotherapy II			Clinical Pharmacology	
							Pharmacotherapy B	Clinical Medicine and Pharmacotherapy III			Clinical Pharmacology	
	Communication Seminar	Communication Seminar		Practical English for Pharmaceutical Students			Clinical Pharmacy	Pharmacy Practice			Clinical Pharmacology	
	Communication	Communication					Clinical Medicine and Pharmacotherapy I	Clinical Pharmacology A Clinical Medicine and Pharmacotherapy II			Clinical Pharmacology	
		Introduction to Pharmaceutical Sciences					Pharmacotherapy B	Clinical Medicine and Pharmacotherapy II Clinical Medicine and Pharmacotherapy III				
he ability and skills to appropriately				Basic Kampo Medicine			Clinical Pharmacy	Pharmacy Practice	Clerkship in Clinica	al Pharmacy	Clinical Pharmacology	1
with contraindication or inappropriate							Clinical Medicine and Pharmacotherapy I	Clinical Pharmacology A(Clerkship in Clinica	ŭ	Clinical Pharmacology	
ments of medicine. ality							Pharmacotherapy B	Clinical Medicine and Pharmacotherapy II	1	i i		
uncy							Pharmacotherapy A	Clinical Medicine and Pharmacotherapy III				
elf-betterment of character formation	Introductory Seminar for First-Year Students	Health and Sports Courses					Clinical Pharmacy	Pharmacy Practice	Clerkship in Clinica	al Pharmacy	Clinical Pharmacology	
medical professional: the appropriate on and attitude being aware of that a	Information and Data Science Courses	Information and Data Science Courses					Clinical Medicine and Pharmacotherapy I	Clinical Pharmacology A	Clerkship in Clinica	al Pharmacy	Clinical Pharmacology	
macist is a professional relating to	Health and Sports Courses	Social Cooperation Courses					Pharmacotherapy B	Clinical Medicine and Pharmacotherapy II				
an life. The knowledge and	Introduction to University Education	Introduction to Pharmaceutical Sciences					Pharmaceutical Affairs Related Laws	Clinical Medicine and Pharmacotherapy III				
with ailing people but with other	Social Cooperation Courses											
ical staff in a medical team.												
uality												
bility to be a pharmoiat upe is relied		H. M. 10					Clini 1 D	Dl			Clinia Di La	ı
Ability to be a pharmacist who is relied not only 12.4 3ECC3F@≱2.5 3F11≱.78E	Introductory Seminar for First-Year Students CC3FD & EC3F10	Health and Sports Courses C≱2.4 &F14≱2.5 &FØ	& F1E 5 .5 & F1 9 . & F D	.9&F D97 &F156.3 &F1F	F4.1 3F2 9 5 3ECC3F2	23 ≰.7 8F14 ≱ 2.5 8F1B ≨	Clinical Pharmacy 2,4 3ECC3F156.3 3	Pharmacy Practice F1F4.1 3ECC3F1E5.5	3F11≱.78F1 8 3F1154	16 5 7F199A96 3EE	hum] 3.252, 3F18F1	153Fan lmz. 6 T7
PAT -1	Information and Data Science Courses Health and Sports Courses	Information and Data Science Courses Social Cooperation Courses						Clinical Pharmacology A Clinical Medicine and Pharmacotherapy II			Chilical Pharmacology	
	Introduction to University Education	Introduction to Pharmaceutical Sciences					Pharmacotherapy B	Clinical Medicine and Pharmacotherapy II Clinical Medicine and Pharmacotherapy III				
	outcome or aversity Editediof1	Discount to Frantibectured Sciences										

Curriculum Map of Pharmaceutical Sciences Program

Sheet 4

Academic achievements	1st grade		2nd grade		3rd grade		4th grade		5th grade		6th grade	
Evaluation items	Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester	Spring semester	Fall semester
and educational ability: Concerning the influences caused by numerous chemical substances existing on the earth, to be able to analyze and argue about the	Introductory Seminar for First-Year Students	Social Cooperation Courses			Research PracticeA	Special laboratory	Works in Pharmaceutical Sciences I		Special laboratory Works in Clinical Pharmacy			
	Introduction to University Education	Introduction to Pharmaceutical Sciences				Special laboratory Works in Pharmaceutical Sciences			Special laboratory Works in Clinical Pharmacy			
	Social Cooperation Courses					Research PracticeB	esearch PracticeB		Special laboratory Works in Clinical Pharmacy			
survival of the human race. Also, to have the ability and skills to give instruction to												
youth.					-	-						
quality												
S C IC I									a	1 = 1		
human life. The knowledge and understanding to have communication not only with ailing people but with other						_		Pharmacy Practice	Clerkship in Clinical Pharmacy			
	Information and Data Science Courses	Information and Data Science Courses			_	_			Clerkship in Clinica	al Pharmacy		
		Introduction to Pharmaceutical Sciences			_	_			-			
	Social Cooperation Courses		_									
medical staff in a medical team.			_									
quality			_	-	-	_		-	.		-	
The research ability: the ability to select issues to be solved in the professional field of pharmacist and carry out measures and research to solve the	Introductory Seminar for First-Year Students	Social Cooperation Courses	Nuclear Pharmacy()	Experiments of Cellular and Molecular Biology	Research PracticeA	Special laboratory	Works in Pharmaceut	ical Sciences I	Special laboratory Works in Clinical Pha		in Clinical Pharmacy	
	Information and Data Science Courses	Information and Data Science Courses			Experiments of Public health Chemistry	Special laboratory	Forks in Pharmaceutical Sciences Special laboratory Works in Clinical F		in Clinical Pharmacy			
	Introduction to University Education	Introduction to Pharmaceutical Sciences			Experiments of Microbial Chemistry	Research PracticeB			Specia	al laboratory Works	in Clinical Pharmacy	
issues.	Social Cooperation Courses											
quality												

Fundamental qualities required for pharmacists
Attitude as a pharmacist
Viewpoint oriented to patients and ordinary citizens
Communication skills
Participation in team medical care
Basic scientific knowledge and skills
Practical capabilities regarding pharmacotherapy
Practical capabilities for health and medical care in the local community
Research ability
Self- improvement
Educational skills

Liberal Arts Education Subjects Basic Specialized Subjects Specialized Subjects Specialized Education Subjects Graduation Thesis Clerkship in Clinical Pharmacy Required Free elective