

Program Specification

1	Program Name
	Pharmacy
2	Awarding Institution
	Universitas Muhammadiyah Surakarta
3	Faculty
	Faculty of Pharmacy
4	Description of the Program
	<p>Pharmacy Program of Universitas Muhammadiyah Surakarta (PP-UMS) was established in 1999. It is becoming one of a recognized pharmacy program in Indonesia. Not surprisingly, in 2015-2020 the registrants almost reached 2000-2500 applicants with about 180-200 people were admitted. At the campus the students learned drug formulations, quality control, prescribing, basic philosophy and drug discovery techniques and pharmacotherapy to choose the best medicine for patients. They also practice communicating and interacting with patients and colleagues of prospective doctors or nurses. With an A accreditation in the undergraduate program since 2008, students who come from almost all over Indonesia and even from abroad are interested in the campus. Normally, they complete a college degree for 3.5-4 years. Not only academics are developed, students can also train soft skills with a lot of extracurricular activities and optional activities such as martial arts, sports, journalism, leadership to the miniaturization of student parliaments.</p> <p>Basically, approximately 80% of the curriculum is specific skills to Pharmacy discipline and designed to generate graduates with the qualifications as in line with the vision of the SP-Pharmacy, i.e. high competency in the field of pharmaceuticals and high analytical capabilities to work in diverse pharmaceutical sectors, including pharmaceutical industry, traditional medicine industry, cosmetic industry, pharmacy, hospital, research and academic, BPOM, Puskesmas, and pharmaceutical consultancy.</p> <p>The last but not the least, Google has also become a reference source for things or services that are most recommended. That is why if typed "best pharmacy" on google, the top 10</p>

websites on Google include pharmacy UMS as one of each list in it. Pharmacy UMS has become the choice of the public for their children to learn pharmacy program.

Milestones:

1999: Faculty of Pharmacy was established on March 15th, 1999 based on Decree No. 54 / DIKTI / Kep / 1999. The establishment of this faculty is based on the demands of quality medical services, with the hope of being able to improve public health services, both formally and informally and in the future.

2003: S1 Program accredited B by the National Accreditation Board with a Decree No.019 / BAN-PT / Ak-VII / S1 / VIII / 2003

2004: Establishment of a Pharmacist professional program with an MoU with ISFI in 2004 and confirmed by Decree 364/D/T/2010 from the Director General of Higher Education regarding the implementation of Pharmacist Professional Education licenses.

2006: UMS Pharmacy Faculty successfully obtains the A-2 Competition Grant Program based on Decree No: K.001.0390 / KPMPT / PHK / 2006.

2008: Bachelor's program accredited A on November 13, 2008 based on BAN-PT Decree of the Ministry of National Education Republic of Indonesia No. 029 / BAN-PT / Ak-XI / S1 / XI / 2008.

2009: UMS Pharmacy Faculty was approved as a member of the Indonesian Pharmacy Higher Education Association (APTFI) Assembly based on Decree No: 01 / APTFI / MA / 2009.

2012: Pharmacist program accredited A by BAN DIKTI with Decree No. 001 / BAN-PT / Ak-UPSPA

2013: S1 program accredited A with Decree No. 242 / BAN-PT / Ak-XVI / S1 / XII / 2013.

2017: Pharmacist program accredited A by LAM-PTKes with Decree No. 0131/LAM-PTKes/Akr/Pro/III/2017

2019: S1 program accredited A with Decree No. 0036/LAM-PTKes/Akr/Sar/I/2019

5	a. Program accreditation	b. Final Award
	Accredited with grade A (Excellent) by LAM-PTKes, with total score 376 (in maximum 400) for the period of January 29th 2019 to January 28th 2024.	Bachelor of Pharmacy (<i>Sarjana Farmasi</i>)
6	a. Mode of Study	b. Type of Study
	Full Time	Campus based

7	Lead College/Teaching Institution		
	Anita Sukmawati, PhD., Apt.		
8	Educational Aims of the Programme		
	<p>PEO-1: to produce pharmacy graduates with academic and professional attitudes by internalizing Islamic values.</p> <p>PEO-2: to generate pharmacy graduates with a strong and well defined concept in the pharmaceutical sciences, pharmaceutical care, and natural medicine.</p> <p>PEO-3: to produce highly competence pharmacy graduates with strong communication skills, entrepreneurial skills, and effective skills to work in an interdisciplinary team.</p>		
9	Expected Learning Outcomes		
ELO A. Attitudes and Values	1	Ability to perform noble personal and interpersonal manners by internalizing Islamic attitudes and values.	
	2	Ability to perform noble academic and professional attitudes.	
ELO B. Proficiency in science and technology	3	Ability to apply theoretical concepts in pharmaceutics, pharmaceutical biology, pharmacology and clinical pharmacy, and pharmaceutical chemistry.	
	4	Ability to apply theoretical concepts about pharmaceutical management, entrepreneurship, socio-pharmacy, pharmaceutical law and ethics, communication techniques, and basic principles of work safety.	
ELO B. General skills	5	Ability to critically analyse pharmaceutical problems, compile information, design and conduct current issue based on research that supports the development of the health sector by utilizing information technology.	
	6	Ability to disseminate the latest drugs/medication knowledge, both verbally and in written form, as well as interdisciplinary and multidisciplinary.	
	7	Ability to evaluate themselves and manage self-learning in an effort to improve pharmacy technical skills.	
	8	Ability to manage pharmacy tasks independently or under the supervision of pharmacists, lead and manage group work, and be responsible for the results of group work.	

ELO D. Specific skills	9	Ability to apply pharmaceutical science and technology in the phase of formulation and development, production, and quality assurance of pharmaceutical and traditional medicine, cosmetics and food preparations, including the application of halal haram principles.
	10	Ability to evaluate drug-related problems using an evidence-based approach to optimize therapeutic success.
	11	Ability to apply the concept of discovery and development of medicinal materials and natural medicine ingredients.
	12	Ability to do pharmaceutical tasks under the supervision of pharmacists in a responsible manner and in accordance with statutory provisions and applicable codes of ethics.

10. Program Structure

NO.	Course code	Course	Credit
SEMESTER 1			20
1	UMS10112	Religious Education	2
2	UMS10212	Pancasila	2
3	UMS10312	English For Academic Purposes	2
4	FFA10422	Pharmaceutical Botany	2
5	FFA10522	Chemistry	2
6	FFA10622	Organic Chemistry I	2
7	FFA10722	Cell Biology	2
8	FFA08221	Pharmaceutics I Lab.	1
9	FFA10922	Anatomy Human Physiology and Medical Terminology	2
10	FFA11022	Pharmaceutics I	2
11	FFA11121	Practice Basic Skills Lab	1
SEMESTER 2			20
12	UMS20112	Ibadah and Muamalah	2
13	UMS20212	Civic Studies	2
14	UMS20312	Standardized Test Preparation	2
15	FFA20423	Analytical Chemistry	3
16	FFA20522	Organic Chemistry II	2
17	FFA20622	Statistics	2
18	FFA20722	Pharmacology	2
19	FFA20822	Physical Chemistry	2
20	FFA20921	Physical Chemistry Lab.	1
21	FFA21021	Analytical Chemistry Lab.	1
22	FFA21121	Pharmacology Lab.	1
SEMESTER 3			20
23	UMS30112	Islam, Science and Technology	2
24	FFA30222	Instrumental Analysis	2
25	FFA30322	Environmental Chemistry	2
26	FFA30422	Chromatography	2
27	FFA30522	Biochemistry	2
28	FFA30622	Pharmaceutical Microbiology	2
29	FFA30722	Pharmacognosy I	2
30	FFA30822	Physical Pharmacy	2
31	FFA30921	Introduction GMP	1
32	FFA31021	Pharmaceutical Analysis Lab.	1
33	FFA31121	Pharmaceutical Microbiology Lab.	1

34	FFA31221	Physical Pharmacy Lab.	1
SEMESTER 4			19
35	UMS40112	Muhammadiyah Studies	2
36	UMS40212	Indonesian Language	2
37	FFA40322	Pharmaceutical Analysis	2
38	FFA40422	Molecular Biology	2
39	FFA40522	Pharmacognosy II	2
40	FFA40622	Toxicology	2
41	FFA40722	Introduction to Pharmacokinetics	2
42	FFA40822	Solid Dosage Form Formulation & Technology	2
43	FFA40921	Formulation & Technology I Lab.	1
44	FFA41021	Syntheis and Analysis of Drug Lab	1
45	FFA41121	Molecular Biology Lab.	1
SEMESTER 5			20
46	FFA50122	Clinical Data Interpretation	2
47	FFA50223	Medicinal Chemistry	3
48	FFA50322	Purification and Standardization of Natural Materials	2
49	FFA50422	Introduction to Pharmacotherapy	2
50	FFA50522	Applied Biopharmaceutics & Pharmacokinetics	2
51	FFA50622	Non-Solid Dosage Form Formulation & Technology	2
52	FFA50722	Sterile Dosage Form Formulation & Technology	2
53	FFA50822	Drug Stability	2
54	FFA50921	Formulation & Technology II Lab.	1
55	FFA51021	Natural Materials Lab	1
56	FFA51121	Diagnostic Clinic Lab	1
SEMESTER 6			20
57	FFA60122	Research Methodology	2
58	FFA60222	Introduction to Phytotherapy	2
59	FFA60322	Pharmacotherapy I	2
60	FFA60422	Entrepreneurship	2
61	FFA60522	Molecular Pharmacology	2
62	FFA60622	Drug Communication & Education	2
63	FFA60722	Pharmaceutics II	2
64	FFA60821	Pharmaceutics II Lab.	1
65	FFA60921	Pharmacotherapy I Lab	1
66	UMS61012	Life Skills	2
		Elective course*	2
67	FFA61242	Pharmaceutical Protein	2
68	FFA61342	Radiopharmaceutical	2
69	FFA61442	Pharmacogenomics	2
70	FFA61542	Genetic Engineering	2
71	FFA61642	Cosmetology	2
72	FFA61742	Marine Natural Sources	2
73	FFA61842	Nano Technology	2
SEMESTER 7			17
74	FFA70122	Basic Management	2
75	FFA70222	Self-Medication System	2
76	FFA70321	Data Processing and Presentation Practice	1
Major in Pharmaceutical Science and Natural Medicine			12
77	FFA70432	Food & Cosmetic Analysis	2
78	FFA70532	Structure Elucidation	2
79	FFA70631	Drug Synthesis	1
80	FFA70732	Clinical Phytotherapy	2
81	FFA70832	Natural Medicine Formulation & Technology	2
82	FFA70932	Drug Delivery System	2

83	FFA71032	Food & Cosmetic Analysis Lab.	1
Major in Clinical Pharmacy			12
84	FFA71132	Pharmacotherapy 2	2
85	FFA71232	Pharmacotherapy 3	2
86	FFA71332	Pharmacotherapy 4	2
87	FFA71432	Immunology	2
88	FFA71532	Pharmacoeconomics	2
89	FFA71632	Pharmacoepidemiology	1
90	FFA71731	Pharmacotherapy II Lab	1
SEMESTER 8			8
91	FFA80124	Thesis I	4
92	FFA80232	Clinical Pharmacy	2
Major in Pharmaceutical Science and Natural Medicine			2
93	FFA80332	Drug Design	2
Major in Clinical Pharmacy			2
94	FFA80432	Applied Pharmacotherapy	2

11	Registration Period
	The normal period of registration for a full-time bachelors degree is four years and the maximum period is seven years.
12	Typical Entry Requirement
	The requirements for students of SP-Pharmacy are: senior high school graduate with sciences major or vocational high school graduate with chemistry or pharmacy major, non-colour blind, and pass the admission test of Universitas Muhammadiyah Surakarta. The passing grade of admission test is 65 in average during the admission process.
13	Program Regulation
	<p>The programme consists of 144 credits with typically 19-20 credits taken at each semester. Normally not more than 24 credits would be allowed in any one term.</p> <p>To graduate from the study program, the students should:</p> <ul style="list-style-type: none"> • complete 144 credits (<i>Sistem Kredit Semester/SKS</i>) in minimum and have a cumulative grade point average/GPA (<i>Indeks Prestasi Kumulatif/IPK</i>) of 2.0 in minimum. • Achieve at least C mark for Al Islam and Kemuhammadiyah • Achieve at least C mark for Pancasila and Kewarganegaraan (Civic Education) • Achieve score at least of 400 for English for Academic Purposes (EAP) test • Have no more than 14 credits of D mark

	<ul style="list-style-type: none"> Starting in semester 3, students can take more credits, depends on the study result in the previous semester, with the maximum credits is 24.
14	Regulation of Assessment and Academic Standards

The grading scheme of the student assessment is regulated by the University (*SM-UMS 04: Standar Mutu Penilaian*). The grading scheme for students is stated in A, AB, B, BC, C, D and E marks with criteria and grade point representation as follows:

Score	Letter	Grade Point
≥ 77	A	4.0
70-76.99	AB	3.5
63-69.99	B	3.0
56-62.99	BC	2.5
50-55.99	C	2.0
35-49.99	D	1.0
≤ 0	E	0.0

The completion of a subject is determined using the criteria as follows:

1. Minimum passing grade is C or 2.0 out of 4.0.
2. Minimum 75% attendance.

15	College Support for Students and Students' Learning
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The students will be supervised by the academic advisor since their first semester. Moreover, they are also equipped with an academic guide book. Basically, they have to adopt the university education style. In the end of semester, all student must consult their academic performance to the advisor. The main duty of the advisor is to control the student's academic achievement and to guide the student to optimize their ability. In addition, the advisor should assist the students to find an appropriate co-curricular activities suitable with their academic potentials and interests. To prepare leadership, teamwork, and soft skills, there are 30 student activity units in UMS, and 6 activity centres at the Faculty of Pharmacy for student extra-curricular activities (<http://kemahasiswaan.ums.ac.id/daftar-ukm/>)

The facilities provided in the SP-Pharmacy are sufficient to support the educational process, including curriculum, lectures, laboratory practices and research experiments, thesis

consultation, and extracurricular activities. There are four main laboratories in the SP Pharmacy, i.e. Laboratory of Pharmaceutics, Laboratory of Pharmaceutical Biology, Laboratory of Pharmacology and Clinical Pharmacy, and Laboratory of Pharmaceutical Chemistry. Each main laboratory consists of several sub-laboratories according to the practical courses conducted in respective sub-laboratory.

The students of SP Pharmacy UMS are allowed to access the UMS Central Library which occupies 4-storey building with a total area of 5.000 m², located in Campus 2 UMS (7 minutes by walking from the Pharmacy Faculty building). In addition, a reading room located on the 4th floor of Pharmacy Faculty Building is also provided for students.

The UMS Library is a central library that can be accessed by all students, lecturers and employees of UMS. It is also open for public. The library is open from 07:00 am to 08:00 pm on Monday to Friday, and from 07:00 am to 04:00 pm on Saturday. UMS library employs the Koha automation system, a web-based and international standard automation system. The system integrates the process of procurement, processing, circulation, membership, catalogue or online public access catalogue (OPAC), payment and printing of book labels or membership cards. The OPAC can be accessed 24 hours through the website or android apps (<http://library.ums.ac.id/>).

16 University Support for Students and Students' Learning

The university provides natural public space and 4 ha Edu-park for the students. Essentially, besides the academic demand for passing the national exam, the study program and the university have designed a balance activity between social, individual, spiritual, and physical aspects of the student.

Primary health care is provided by the university in the form of the Muhammadiyah University Medical Center (MMC). The medical checks and prescriptions are free for academic members of UMS. Moreover, each student is supported by the health insurance initiated by the University.

A centralized IT system is set up at the university level for various academic activities and other services. The speed of the internet to support learning activities is 1.2 GB per second. Access network uses UTP cable, max 100 Mbps, plus variable speed Wi-Fi of 10 Mbps to facilitate those used to support learning: Pharmacotherapy, Molecular Biology sub bioinformatics, drug design, and independent assignments. The duration of internet usage applies between 6:00 a.m. to 10:00 p.m. in the SP-Pharmacy campus area.

A highly encrypted information system for services: academic (ADUMS), grades (ANUMS), thesis, student admission, staff development and graduates is available supported by bandwidth and security systems. The intranet speed to support this activity is 1 Gbps with the support of fibre optic cables between buildings.

17 Indicators of Quality and Standards

Since 2008, there are two accreditation periods in which the Undergraduate Pharmacy Programme UMS achieves the A grade of accreditation conducted by the Independent Accreditation Agency for Indonesian Higher Education. Thus, the programme has owned and demonstrated a very good quality in management system.

18 Methods for Evaluating and Improving Quality and Standards

The SP-Pharmacy draw on a range of data to review the quality of educational provision. The program documents the performance in each of its taught programs, against a range of criteria on an annual basis:

- Key Performance Indicator of SP-Pharmacy
- Staff evaluation
- Teaching and learning evaluation
- Student evaluation
- Input from stakeholders and alumni

Subject areas are reviewed every five years through a curriculum review scheme that includes external contributions.

19 Partner College(s)/ institution

APTFI, APTFM, Ritsumeikan University (Japan), Universiti Teknologi Mara (Malaysia), UTHM (Malaysia), UPM (Malaysia).