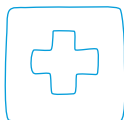


Pharmacy



At a crossroads with biology, chemistry, and medicine, pharmacy is the scientific discipline of inventing, preparing, and dispensing medication. It takes into account potential drug interactions, proper dosages, and identifies any possible contraindications.

A pharmacy is also a facility where medications are stored and dispensed under the full responsibility of a qualified pharmacist. Pharmacists are authorized to prepare custom-made medications for a specific patient following a physician's prescription, and supervise the work of pharmacy assistants.

Additionally, pharmacists may provide medication monitoring for patients, substitute brand-name drugs with generics, adjust dosages, renew treatments for chronic conditions, and suggest therapeutic modifications together with a physician. Effective communication and collaboration with physicians are essential for public health. Pharmacy offers various specializations in different sectors, including community pharmacy, hospital pharmacy, veterinary pharmacy, institutional pharmacy, pharmaceutical industry, humanitarian pharmacy, and military pharmacy, among others.

In France, it takes 6 years of study to practice as a pharmacist or in the pharmaceutical industry, and 9 years to obtain a *Diplôme d'études spécialisées* (DES). There are two alternatives for the first year: a specific program called PASS ("accès santé") with a minor in another discipline, or any *Licence* offering the "accès santé" option (L.AS). Promotion to the second year of pharmacy studies is contingent on passing an admission examination.

• **62.3** billion euros of sales in the French pharmaceutical industry, including 50% of exports (2021)

• **240** pharmaceutical companies in France (2018)

• **74,039** pharmacists in France (2022)

• **68%** of French pharmacists are women (2022)

• **20,787** pharmacies in France (2022)

Sources: National Institute of Statistics and Economic Studies (Institut national des statistiques et des études économiques) www.insee.fr, National College of Pharmacists (Ordre national des pharmaciens) www.ordre.pharmacien.fr

International

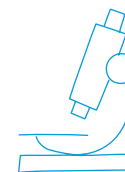
ADMISSION FOR FOREIGN STUDENTS

Regardless of their level of medical education, foreign students must take an admission exam at the end of the first year of a PASS or L.AS program.

To access the third cycle (advanced studies), two specific competitive exams for the Pharmacy Internship program (*Internat*) are organized for European and foreign candidates. The registration file must be submitted no later than the end of March. The eligibility exams are held in September at the Embassy of France (*Service de Coopération et d'Action Culturelle*) or at the Consulate, and the admission exams take place in December.

National Pharmacy Internship Exam (PHA):
www.cng.sante.fr/candidats/internats/concours-medicaux/etudiants/concours-national-dinternat-pharmacie-pha

National Pharmacy Internship Exam for foreign students (PHA-ET):
www.cng.sante.fr/candidats/internats/concours-medicaux/docteurs-juniors-praticiens/concours-dinternat-pharmacie-titre-etranger-pha



FIELDS AND SPECIALIZATIONS

- Biotechnologies
- Clinical pharmacology
- Community pharmacy practice
- Drug sciences • Epidemiology
 - Hospital Pharmacy
 - Medical Biology
- Pharmaceutical industry/production
 - Pharmacy for internal use
- Physiology • Physiopathology
 - Public health • Toxicology
- Wholesale drug distribution

Useful links

- Académie nationale de pharmacie : www.acadpharm.org
- Annales de pharmacie : www.cnci.univ-paris5.fr
- Annuaire des Facultés de pharmacie : www.ordre.pharmacien.fr > Les pharmaciens > Comment devenir pharmacien > Annuaire des facultés de pharmacie (national schools of pharmaceutical Studies directory)
- Association nationale des étudiants en pharmacie de France (ANEFMF) : www.anepf.org
- Centre national de gestion des praticiens hospitaliers : www.cng.sante.fr
- École des hautes études en santé publique (EHESP) : www.ehesp.fr
- Hôpitaux de France : www.hopital.fr
- Internat en Pharmacie - CNCI : www.cnci.parisdescartes.fr/pharmacie
- Ministère de la santé et de la prévention : www.solidarites-sante.gouv.fr
- Ordre national des pharmaciens : www.ordre.pharmacien.fr
- Réseau CHRU - Centres hospitaliers régionaux et universitaires : www.reseau-chu.org
- Université numérique en santé et sport : www.uness.fr

NIVEL 1st cycle

Pharmaceutical Studies follow the European LMD system and are divided into 3 cycles. Each university is linked to one of the 32 Regional or University Hospital Centers (CHRU). The courses are taught exclusively in French (a B2 proficiency CEFR level is required). There are two options for the first year, which is common to medicine, midwifery, dentistry, pharmacy and physical therapy (MMOPK).

FIRST YEAR OF LICENCE IN MEDICINE, MIDWIFERY, DENTISTRY, PHARMACY AND PHYSICAL THERAPY (MMOPK) WITH A MINOR IN ANOTHER DISCIPLINE (PASS) – L1

Taught in a university, a Faculty or an UFR (*Unité de Formation et de recherche*), the first year is common to the five fields - medicine, dental surgery, pharmacy, midwifery and physical therapy - and gives access to the admission examination for the second year.

FIRST YEAR OF LICENCE WITH THE "ACCES SANTE" OPTION (L.AS) ALL DISCIPLINES

As part of a university program, the first year of *Licence* must offer courses in the "accès santé" option. Admission in the second or third year of the first cycle in medicine, dentistry, midwifery, pharmacy or physical therapy, requires students obtain at least 60 or 120 ECTS credits respectively, including 10 ECTS in Health units.

Promotion to the second year is contingent on the results of the admission examination at the end of the PASS or L.AS programs. Sometimes, complementary oral examinations are organized.

SECOND YEAR OF LICENCE IN PHARMACY STUDIES (DFGSP 2) – L2

While the first year is dedicated to general health theory and the systems of the human body, second-year disciplines include: biochemistry (general, metabolic), biology (cell biology, vegetal biology, molecular genetics), chemistry (analytical, mineral and organic chemistry), physics, physiology, anatomy, computer science and English. A six-week internship in a community pharmacy must be completed before the beginning of the third year. The intern is introduced to dispensing medications and learns posology (dosage), drug recognition, legislation and custom drug making.

THIRD YEAR (DFGSP 3) – L3

The third year further expands the curriculum with courses in pharmacology and galenic formulations. At the end of the third year, students are awarded the *Diplôme de Formation Générale en Sciences Pharmaceutiques* (DFGSP), which is the equivalent to a Bachelor's degree.

NIVEL 2nd cycle

FOURTH YEAR (DFSAP 1) – M1

A common core curriculum deepens pharmaceutical technical and scientific knowledge during the first semester, followed by a short internship. In the second semester, students can choose among four specializations: **Community Pharmacy, Pharmaceutical Industry, Hospital Internship** (Internat), or **Research**. The **DFSAP 1** concludes with the examination of the Certificat de synthèse pharmaceutique (CSP), an oral exam covering the entire common basic training.

FIFTH YEAR (DFSAP 2) – M2

Regardless of the chosen specialization – community pharmacy, industry, or hospital – students in the fifth year work in a hospital on a part-time paid job. At the same time, they continue their university education on major diseases (infectious diseases, oncology, etc.). Other teaching units are dependent on the chosen specialization.

Parcours d'Orientation Professionnelle Officine (Community Pharmacy Specialization)

The hospital internship lasts for 6 months and includes a teaching unit on hospital practices. The specific curriculum consists of the following teaching units: Specialized Activities in Community Pharmacy, Pharmacy Management and Administration – Quality Management, Pharmaceutical Patient Care, Communication with Patients and Collaboration with other healthcare professionals, Pharmacists and the Environment, Mycology.

Additional AFGSU course (Certificate of Training in Emergency First-Aid) is required. Students are required to both follow the university courses and engage in practical fieldwork.

Parcours d'Orientation Professionnelle Industrie et Recherche (Pharmaceutical Industry and Research Specialization)

This training consists of two parts:

- > A 5-month full-time hospital internship, including the teaching unit on hospital practices.
- > Specific coursework on: Technical and Regulatory, Medical and Economic Aspects in the Life Cycle of Medications and Medical Devices, Quality Assurance and Quality Management, Case Study, English, and an internship.

An additional AFGSU course (Certificate of Training in Emergency First-Aid) is required. With the implementation of the health service, students must also follow the related teachings and engage in practical fieldwork. Students are required to both follow the university courses and engage in practical fieldwork.

Parcours d'Orientation Professionnelle Pharmacie Hospitalière, Biologie Médicale, Recherche (Hospital Pharmacy, Medical Biology and Research Specialization)

This training consists of two parts:

- > A 6-month full-time hospital internship, including the teaching unit on hospital practices.
- > Specific coursework to prepare for the Internship examination.

An additional AFGSU course (Certificate of Training in Emergency First-Aid) is required. Students are required to both follow academic instruction and engage in hospital training.

At the end of the fifth year, students are awarded the *Diplôme de Formation Approfondie en Sciences Pharmaceutiques* (DFSAP), which is equivalent to a **Master's degree**.

Internship Examination

In the beginning of the DFSAP 2, students can decide to take the Internship Examination (the access is competitive). If successful, they will pursue a fifth year with a hospital specialization, and their Internship will begin in the 6th year. Students who do not pass the examination can retake it at the end of their 5th or 6th year. The examination can only be attempted twice.

www.cng.sante.fr/candidats/internats/concours-medicaux/docteurs-juniors-praticiens/concours-dinternat-pharmacie-titre-etranger-pha

NIVEL 3rd cycle

SIXTH YEAR OF PHARMACY SPECIALIZED THIRD CYCLE (SHORT 1-YEAR CYCLE)

This short one-year third cycle is intended for students in the pharmacy and pharmaceutical industry fields. Students must complete one or two teaching units and a 6-month internship in a community pharmacy, in the pharmaceutical industry, or a research laboratory. At the same time, students should write their thesis and defend it by the end of the year. If successful, the student is awarded the *Diplôme d'État de Docteur en pharmacie* (a PharmD degree).

PHARMACY INTERNSHIP (LONG 4-YEAR CYCLE)

During this long four-year third cycle, the students/pharmacy interns continue their academic training alongside a pharmacy professional activity in a hospital. Their minimum entry-level salary start at 1,600 euros. Three different specialized diplomas are possible (DES):

- > Medical Biology,
- > Pharmacy,
- > Pharmaceutical Innovation and Research.

Holders of a DES can prepare a one-year additional *Diplôme d'études spécialisées complémentaires* (DESC). Students who successfully completed their internship and defended their Pharmacy DES thesis are awarded the *Diplôme d'État de Docteur en pharmacie* (a PharmD degree).

The complementary *Diplôme d'études spécialisées complémentaires* (DESC) in medicine can be obtained during the third cycle of pharmacy studies and grants the specialist qualification corresponding to the title of the diploma. The DESC is completed in four or six semesters, depending on the specialty.

OTHER DIPLOMAS

Master 1 : Pharmacology, Public Health Master degree

Master 2 Sciences, Technologies, Health : Biotechnologies, Epidemiology, Clinical Pharmacology, Physiology, Public Health, Drug Sciences, Toxicology.