

Medicine

France's great medical tradition is internationally recognized, as exemplified by 13 Nobel prizes for physiology or medicine (Jules Hoffmann shared the 2011 Nobel prize in medicine with American Bruce Beutler) and nearly 80 medical firsts achieved by French practitioners between 1950 and 2011. Those firsts include the discovery of the genetic cause of Down syndrome (1958), the first kidney transplant from a related donor (1959), the hepatitis B vaccine (1981), the implantation of an insulin pump in a diabetic (1981), HIV (1983), the use of stem cells from umbilical blood (1993), allogeneic face transplant (2005), and human autotransfusion of red corpuscles from stem cells (2011).

Today's medicine combines knowledge and techniques from an array of sciences in order to promote human health and fight disease. Advances in knowledge and techniques have resulted in the emergence of 11 specialties from which medical students choose. In addition to the degree of doctor of medicine, pharmacy, or dental surgery, France's faculties of medicine and pharmacy grant the *licence* and master (both national diplomas) in specific health-related aspects of computer science, law, the health sciences, public health, the social sciences, and bio- and nanotechnologies.

A general medical degree requires nine years of postsecondary study. Specialists must put in another one to two years of study. Medical education is extremely selective in France. Only 15 to 20% of students pass the examination required to enter the second year of medical study (known as the PACES). The total number of places available in France's medical schools (all degree programs combined) is determined each year by a system known as the *numerus clausus*. In 2014-2015, 7,497 places were available. The number of students from outside the European Union is limited to a maximum of 8% of the places determined by the *numerus clausus* after the first-year PACES examination.

Medicine by the numbers

- 220,000 practicing physicians (2014)
- 130,000 practitioners in private or semi-private practices
- 70,000 practitioners employed by hospitals.
- 24,000 salaried physicians working outside hospitals (research, pharmaceuticals, analytical laboratories, public agencies, education, armed services, humanitarian organizations, etc.)

Source: www.insee.fr

MEDICAL EDUCATION FOR INTERNATIONAL STUDENTS

- Regardless of level of medical training, **international students must pass the examination given at the end of the first year of medical study (PACES).**
- **A medical residency competition governs entry into the third (doctoral level) stage of medical education.** Students must register by the end of March. Eligibility tests are given in September by French embassies (cultural office) and consulates. Admission tests are given in December. In 2015-2016, eight residencies were offered in seven specialties. www.cng.sante.fr/Concours-d-internat-de-medecine-a.htm
- General practitioners or specialists having earned medical degrees abroad must register for the DFMS (diplôme de formation médicale spécialisée) or DFMSA (diplôme de formation médicale spécialisée approfondie). Registration forms are available from the cultural office at French embassies. **The number of places available is limited by discipline and specialty for each region of the world.**

11 specialty areas

Anesthesiology and reanimation – Medical biology – Gynecology and obstetrics – General practice – Occupational medicine – Pediatrics – Psychiatry – Public health

Surgical specialties:

General surgery - Neurosurgery - Ophthalmology - Otolaryngology and cervicofacial surgery - Stomatology

Medical specialties:

Anatomy and cell pathology - Cardiology and vascular disease - Dermatology and venereology - Gastroenterology and hepatology - Medical genetics - Hematology - Internal medicine - Nuclear medicine - Physical medicine and rehabilitation - Nephrology - Neurology - Oncology - Pneumology - Radiodiagnostics and medical imaging - Rheumatology

Useful links

- National Academy of Medicine: www.academie-medecine.fr
- National Association of Medical Students in France (ANEFMF): www.anemf.org
- National residency center for medicine, pharmacy, and dentistry (CNCI) www.cnci.univ-paris5.fr
- National center for hospital practitioners: www.cng.sante.fr
- Independent medical and paramedical community (medical and paramedical students): www.remede.org
- Degree program in medical French (DFM) from the Paris chamber of commerce and industry (CCIP): www.fda.ccip.fr/examens/dfp-medical-b2
- École des Hautes Études en Santé Publique (EHESP): www.ehesp.fr
- Hôpitaux de France: www.hopital.fr
- Ministry of Labor, Employment, and Health (health office): www.sante.gouv.fr
- National Order of Physicians: www.conseil-national.medecin.fr
- Network of university hospital centers (CHRU): www.reseau-chu.org
- Université de Strasbourg, faculty of medicine (DFMS-DFMSA admission process): www.ulpmmed.u-strasbg.fr
- Francophone digital university of health and sport sciences: www.unf3s.org

CHOOSE YOUR PROGRAM

- Campus France program catalogue: www.campusfrance.org>Trouvez votre formation
- Catalogue of programs taught in English: www.campusfrance.org>Programs Taught in English
- Catalogue of short academic programs and language courses: www.coursdete.campusfrance.org
- CampusBourses, financing your studies in France: www.campusfrance.org>Financez vos études

First stage (DFGSM)

Integrated into the European LMB system, medical studies in France are divided into three stages. The universities deliver medical education in cooperation with France's 32 CHUs, or university hospital centers. The first year of medical education, known as PACES, is open to applicants with a French *baccalauréat* or equivalent, with a preference for a scientific diploma. Students may enroll in another institution for complementary training in order to improve their chances on the end-of-year examination.

Medical education is delivered in French only. Students must be proficient in French at level B2 (Common European Framework of Reference for Languages).

First year: PACES (first-year common curriculum in health)

Spent in a university faculty of medicine, the first year of medical education is the same for all four basic medical tracks: (i) medicine (including physical therapy and related therapies); (ii) dental surgery; (iii) pharmacy, and (iv) midwifery. At the end of the year, students may take up to two of four distinct examinations to determine if they will be permitted to continue into the second year.

In the first semester, the core curriculum combines the study of basic sciences (chemistry, biology, embryology, histology) with functional aspects of the organization of systems and mechanisms. Students take an examination at the end of the semester and are ranked by performance. On average, 85% of students are allowed to continue in PACES, while the remaining 15% are steered into another field of study. In the second semester, students continue studying the functional aspects of the organization of systems and mechanisms. This is complemented by morphological aspects, pharmacology, humanities, and social sciences (health, society, humanity). Students also choose one or more courses specific to the four tracks outlined above. At the end of the semester, they take an examination specific to the track they have chosen. Examination results are combined into a ranking known as the *numerus clausus*. The possibility of continuing medical education is determined by one's ranking. Students have the right, upon considering their ranking, to reconsider their chosen track, which may improve their chances of being offered a place for the second year. The number of second-year admissions is set each year by decree.

Attention: students may only repeat the first year of medical education one time.

Second year: PCEM 2 (second year of first stage of medical study) – *Diplôme de Formation Générale en Sciences Médicales (DFGSM 2)*

The second year advances the training provided in the first year and leads to a diploma. The DFGSM 2 recognizes general training in medical sciences. Students must complete a 4-week nursing internship in a hospital setting. At the end of the second year, students take an examination to determine their eligibility to continue into the second stage of medical education.

Second stage (DCEM)

First year: DCEM 1 (third year of undergraduate education)

Students deepen the education received in the first stage, adding new disciplines such as clinical semiology and medical imaging, as well as foreign languages, computer science, and law.

Second, third, and fourth years: DCEM 2-4 (internship)

These three years, known in French as the *externat*, because they take place primarily outside the university, are devoted to learning in a hospital setting. Students complete 36 months of internships, 4 per year in each of the several specialized services. Interns learn to recognize signs of illness. Students also take courses. An evaluation at the end of each year combines examination results and an assessment of the student's performance as an intern. Students receive a monthly salary of €128 to €277 as contract employees of the hospital group with which their university is affiliated. The group may be a CHU (university hospital center), an IHU (a university hospital institute), or a CHRU (a regional university hospital center). Interns work under the direction of a clinical resident or attending physician.

The fourth and final year of the second stage ends with a **national ranking examination and set of national ranking tests (ECN)**, which open the way to residency. Once ranked, the student chooses a university hospital center, one of the 11 specialties listed in the table below, and the units in which he/she will complete a series of 6-month internships.

During **residency**, students remain in the hospital setting under the supervision of a senior resident, but they are considered doctors and are authorized to prescribe medications. They receive a gross monthly salary of €1,364 to €2,095, supplemented by compensation for time spent on call (€119 to €130 for each on-call period). The residency provides initial professional experience in the doctor's chosen specialty. It lasts three years for general practice and 4 to 5 years for certain specialties. Before receiving the DES (*diplôme d'études spécialisées*), the resident must complete all of the 6-month internships required in the specialty area, receive academic and practical instruction, and prepare a thesis. After these requirements are fulfilled, students earn the degree of medical doctor (**diplôme d'État de Docteur en médecine**), which permits them to focus solely in their chosen specialty. 4 to 5 years are required for most specialty areas (3 for general medicine). The **DESC (diplôme d'études spécialisées complémentaires de médecine)** can be earned during the third stage of medical education and serves as a professional qualification for the student to practice in their specialty area. The DESC takes 4 or 6 semesters, depending on the specialty.

Beyond the primary curriculum

DFMS and DFMSA: degree programs for foreign physicians
Physicians and pharmacists from outside the European Union who hold a degree that permits them to practice medicine or pharmacy in their home country or who are undergoing specialized training may earn a DFMS (*diplôme de formation médicale spécialisée*) or DFMSA (*diplôme de formation médicale spécialisée approfondie*) in a French medical school. They choose courses pertinent to their specialty from among those offered in the curriculum leading to the DES (*diplôme d'études spécialisées*) or the DESC (*diplôme d'études spécialisées complémentaires*).
DFMS and DFMSA programs involve between 1 and 2 semesters of study.

The DFMS and the DFMSA do not confer the right to practice medicine in France.

Information on admission to DFMS and DFMSA programs is available from the faculty of medicine at the Université de Strasbourg:

- <http://med.unistra.fr>>3^e cycle>DFMS-DFMSA

Other programs and diplomas

Most institution-specific diplomas are for short and specialized programs. Many are open to foreign physicians or medical students.

The DU and DIU are offered through programs and conventions and are for citizens of the European Union.

The **Capacité de Médecine (CAPME)** is a complementary program that leads to a national or state diploma. Various specialized CAPMEs are offered at various universities and are open to foreign physicians. They include assessment and treatment of pain, gerontology, and medical hydrology and climatology, etc. Most require 2 years (about 800 hours of instruction and 800 hours of internship).

The **Diplôme Universitaire (DU)** is a specialized degree aimed at physicians and students pursuing a DES or DESC. The DU offers future physicians advanced technical knowledge in a particular field, such as gynecological and obstetric ultrasound, workplace emergencies, neuro-reanimation, and emergency obstetrics and perinatal care.

The **Diplôme Inter-Universitaire (DIU)** is an institution-specific degree. Most DIU programs are designed for holders of a French MD degree, residents, international students pursuing a DIS degree, or holders of a medical degree from another country in the European Union. DIUs are very specialized degrees in all parts of medicine. Examples include anatomy applied to clinical examination and imaging, spinal deformations in children and adults, arthroscopy, digestive-tract cancers, dermatological surgery, etc.

Some DUs and DIUs are offered in alternative, noninvasive, natural, and complementary medicine, such as osteopathy, which is now recognized in maternity setting.