It is often forgotten that Louis Pasteur was not a medical doctor by training but a
chemist and biologist. With a well-established high-tech pharmaceutical industry
(Aventis, Sanofi-Synthélabo, Servier), France is the number one European producer
and the world’s fourth leading exporter of pharmaceutical products.
It also is Europe’s third leading country in biotechnology companies. Clermont-
Ferrand, Évry near Paris, Lille, Marseille, Montpellier, Strasbourg, and Toulouse are
all centers for genome studies that bring together research organizations and
firms developing applications. Biology, of course, deals with research but also
with applications for humans, animals, and plants. Biology has entered the indus-
trial world today through biotechnology, a new science created from basic
research with applications in the fields of health, chemistry, agri-food industries, the
pharmaceuticals, energy, perfume and cosmetics, and environmental engineering.

Institutions and Programs

UNIVERSITIES

Specializations are available at all academic levels in licence, licence professionnelle (Bac + 3), master’s (bac + 5), and doctoral
(bac + 8) programs. The following lists are not exhaustive.

Licence programs (bac + 3)
(concentrations in molecular and cellular and structural biochemistry)
- Cellular biology and physiology (concentration in molecular and cell-
lar genetics) - Biology of populations and ecosystems.

- Biology of organisms - General biology and earth sciences – Geos-
ciences.

puter sciences of living organisms.

Tours, http://www.univ-tours.fr : Licence professionnelle in the per-
sonal care and beauty products industries.


Diplôme européen en environmental sciences (Bac + 4)
et Metz, http://www.univ-metz.fr : Post-graduate university pro-
gram in environmental sciences administered in collaboration with
four European Union countries: Germany, Belgium, France, Luxem-
bourg.

Master’s programs (bac + 5)
Aix-Marseille II, École supérieure d’ingénieurs de Luminy,
http://mediterranee.univ-aix.fr : Diplômes d’ingénieurs in Biologi-
cal engineering and applied microbiology - Biomedical engineer-
ing - Masters in bio-computer sciences, structural and genetics
biochemistry - Biology of eukaryotes - Microbiology of plants and biotechnology.

systems – Plant technologies.

Clermont-Ferrand I, http://www.u-clermont1.fr : Nutrition and
food sciences.

Public : Biodiversity and operation of ecosystems – Bio com-
puter science – Human nutrition – Restoration of water and land
environments.

Dijon, École nationale supérieure de biologie appliquée à
la nutrition et à l’alimentation, http://www.u-bourgogne.fr/
ENSBIANA : Food sciences - Microbiology applications in the
agri-food industry and agricultural environment – Microbiolo-
gical safety – Quality control of food and commodities – Man-
gement of sensory properties of food – Management of agri-
food industries – Fermentation processes for the agri-food
industry.

Évry Val d’Essonne, http://www.univ-evry.fr : Biological and
computing engineering – Genetics (jointly administered with the
Université Versailles Saint-Quentin-en-Yvelines) – Func-
tional genetic engineering – Structure and dynamics of biomole-
cules.

countent in intellectual property law and practice related to
new technologies.

Lille I, http://www.univ-lille1.fr : Biology – Health – Manage-
ment for nutritional quality and marketing of food products –
Hygiene, safety, quality and environment – Proteomics.

Lyon I, http://www.univ-lyon1.fr in cooperation with the INSA:
Structural and functional biochemistry – Molecular biocom-
puting – Chemistry, biochemistry and environment.

Statistical methods for the agri-food and pharmaceutical indus-
tries.

rights.


Doctorate (Bac + 8)

Doctoral candidates must have completed a research master’s before embarking on a thesis in the life sciences.

Major research institutions:

- Ademe (environmental mastery in energy), [http://www.ademe.fr](http://www.ademe.fr)
- Cea (nuclear energy), [http://www.cea.fr](http://www.cea.fr)
- CIRAD (agronomy for development), [http://www.cirad.fr](http://www.cirad.fr)
- CNRS (scientific), [http://www.cnrs.fr](http://www.cnrs.fr)
- IFREMER (exploitation of the sea), [http://www.ifremer.fr](http://www.ifremer.fr)
- INRA (agronomy), [http://www.inra.fr](http://www.inra.fr)
- INSERM (health – medical), [http://www.inserm.fr](http://www.inserm.fr)
- Institut Curie (cancer treatment and research), [http://www.curie.fr](http://www.curie.fr)
- Institut Pasteur (prevention and treatment of diseases), [http://www.pasteur.fr](http://www.pasteur.fr)
- IRD (development), [http://www.ird.fr](http://www.ird.fr)

ENGINEERING SCHOOLS


USEFUL LINKS

- [http://www.edufrance.fr](http://www.edufrance.fr): more than 40 programs are listed in the EduFrance catalog (search headings under Agriculture-Agri-Food, Health and Medical sciences, Natural Sciences)