

German Medical Education System

ca. 80.000 medical students in Germany in 36 medical faculties



Ludwig Maximilian Universität München



LMU University 03 / 04:

ca. 48.000 students (29.000 female)

810 professors

Medical faculty:

ca. 5.500 students (ca. 50% female)



Harlaching



Schwabing

Innenstadt



Großhadern

Hospitals of the LMU Munich



Preclinical Part

1. - 4. Semester

Physikum

1. Clinical Part

(clinical-theoretical Medicine)

5. and 6. Semester

National board Exam

2. Clinical Part

(clinical-practical Medicine)

7. - 10. Semester

National Board Exam

3. Clinical Part

Practical Year

11. and 12. Semester

National Board Exam

Preclinical Studies

- 2 yrs / 4 semesters basic studies:

Anatomy, Biochemistry, Physiology, Psychology,
Histology, Chemistry, Biology, Physics, Terminology,
Introduction to clinical medicine

Lectures, practical courses, lab work,
seminars, bed side - teaching

Zeit	Montag	Dienstag	Mittwoch	Donnerstag	Freitag
7.50 - 8.55	Praktikum der Medizinischen Terminologie	Praktikum der Biologie	Praktikum der Biologie	Praktikum der Biologie	Praktikum der Biologie
9.10 - 9.55	Vorlesung Anatomie I - Bewegungsapparat	Vorlesung Anatomie I - Bewegungsapparat	Vorlesung Anatomie I - Bewegungsapparat	Vorlesung Anatomie I - Bewegungsapparat	Vorlesung Anatomie I - Bewegungsapparat
10.05 - 10.50	Vorlesung Histologie und Mikroskopische Anatomie	Vorlesung Histologie und Mikroskopische Anatomie	Vorlesung Histologie und Mikroskopische Anatomie)	Vorlesung Histologie und Mikroskopische Anatomie)	Anatomische Demonstrationen und Kolloquien
12.15 - 14.30			Vorlesung Chemie I/II	Vorlesung Chemie I/II	Praktikum der Medizinischen Terminologie
12.00 - 19.30	Proseminar und Praktikum der Chemie	Proseminar und Praktikum der Chemie			Proseminar und Praktikum der Chemie
13.00 - 16.00	Praktikum der Physik	Praktikum der Physik			
16.00 - 17.00	Begleitende Vorlesung zum Praktikum der Physik	Begleitende Vorlesung zum Praktikum der Physik			
15.15 - 16.45			Praktikum zur Einführung in die Klinische Medizin	Praktikum zur Einführung in die Klinische Medizin	

Extra courses

- Nursing (3 months) in a hospital
- First Aid course

National Board Exam = Physikum

- Written exam: 320 MC questions, 2 days all subjects
- Oral exam 2 subjects by lottery, known 10 days in advance lasting up to 4 hours
- Data March 04:
attendants 4303
failing written part 24,6 %

Clinical Studies part I

- 1 yr / 2 semester

basic clinical/theoretical subjects:

Clinical chemistry, microbiology, radiology, pharmacology, internal medicine, emergency medicine, history of medicine, statistics, immunology

- Lectures, practical courses, lab work, seminars, bed side -teaching

Extra Courses

- Harvard Principle = Problem based learning
1 month, small groups (6-8 students, 1 tutor)
5 x 1,5 hours course / week, bed side teaching, seminars, practical courses
Cardiovascular Course (KVK)
Immunology & Infectious diseases (IKI)

National Board Exam =

1. Staatsexamen

- Written Exam: 290 MC questions, 2 days
- Data March 04
Attendants 678
Failing 10,8 %

Clinical Studies part 2

- 2 yrs / 4 semesters

clinical subjects: surgery, internal medicine (most of the departments), pediatrics, Ob/Gyn, Orthopedics, Psychiatry, Pharmacology, ENT, Dermatology, Neurology, Psychosomatics, Urology, Palliative medicine, Family medicine, Emergency medicine

- Lectures, practical courses, lab work, seminars, bed side - teaching

Extra Courses

- Harvard Principle = Problem based learning
1 month, small groups (6-8 students, 1 tutor)
5 x 1,5 hours / week seminar, bed side
teaching, seminars, practical courses
Neurology & Psychiatry (NerV)
Musculo-Skeletal System (MuSKEL)
- 4 month of clinical clerkship

National Board Exam =

2. Staatsexamen

- Written exam: 580 Mc questions 4 days
 - Oral exam: 2 Subjects, known 10 days in advance
 - Datas March 04:
 - attendants: 4.878
 - failing written part: 5,3 %
- =>About 10.000 students each year to start 6th year
- =>15.000 places each year at medical faculties
- =>Cave: lots of delay so it is a imaginative number of drop outs

Practical Year

- 12 Month (3x 4 months)
 - 4 months surgery
 - 4 months internal medicine
 - 4 months free choice

Hospitals affiliated to LMU

National Board Exam =

3. Staatsexamen

- Oral exam:
surgery, internal medicine, free choice subject and one lottery subject
- Licensing to apply for being a Physician

Admission

- General Office (ZVS)
- Depending on High school grades
- Admission range from 1,0 to 3,0

August 2004:

8.444 places - 33.921 applicants (4.0 app./place)

⇒ waiting time

Tuition-fees

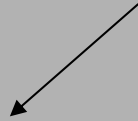
- 35 universities free of charge
- 1 private university (Witten-Herdecke University): 15.185,37 € for whole course of studies (medicine)
- Administration fee, depending on University (20-250€)

Scholarships

- Are rare due to lack of tuition fees
- Some private foundations support outstanding students
- Mainly research grants or material/equipment grants for the completion of fixed-topic or fixed-term research projects (doctoral thesis)

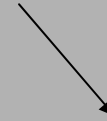
Doctoral Thesis

- research work in order to obtain M.D. title
- Start possible in 1st year
- Usually done 3rd till 5th year
- Barely time after graduation, due to long working hours during residency
- Application non-formal



Clinical Thesis

- Duration about ½ year
- Most often based on clinical data (analyzing patient records, telephone surveys)
- „short way to the M.D.“



Scientific Thesis

- Duration usually from 1 to 2 years
- Based on basic sciences (designing own experiments)
- For students planning career in research/at university

- Argument: great variety in scientific quality but same title in the end
- average of 85% of students taking 2nd National Board Exam are working on doctoral thesis at the same time
- 30% of students drop out of doctoral thesis at least once

Postgraduate Program

- Only few created by Professors, not common on universities
- Further education mainly in private schools (evening seminars, correspondance courses)
- Often done abroad
- „Public Health“ becomes more recognized
- „MBA“ also available at many schools but not a protected title in germany

Alternative Career Choices

- Every 6th graduate works in alternative field:
 - hospital management/controlling
 - consulting
 - journalism
 - pharmaceutic industry
 - medical information technology
- Main reasons are worsening working conditions (increasing administration duties, therefore less time for patients, financial pressure)
- Also a chance for drop outs, even more frequently M.D. title is required

Students life

- 25-30 hours/week lectures and courses
- many have not enough financial support and have to do part time jobs (waiting tables, assistance in doctors offices, nursing help, paramedics,...)
- later also doctoral thesis
- some start studies at late age → childcare
- housing costs/places (LMU provides for 10% of students dormitories)
- only few students clubs

Student Representative Work

- Election every year
- 4 students in medical faculty board
- 12 official students representatives

Tasks

- Student office
- Information & Consulting
- Material, Learning
- Working groups
- National students organisation
- Exchange Program
- Official Board Meeting every second month
- Professors calls, writing statements
- As official student representative in working groups
- 1 student in university senate

Working closely with professors:

Evaluation concept

Information and Connection, Consultation

List serves

Introductory lesson for freshmen

Forum and Chat board

New concepts in medical education

2003: Change in Governmental regulation for medical education

- One frame for all the universities, but every university can fill in the blanks in an individual way.

preclinical	4 semesters	National board exam
clinical	6 semesters	
Practical year	2 semesters	National board exam