Dear colleagues,

I am prisoner in Hong Kong and deeply ashamed not to be in Chexbres today.

Thanks to Philippe and Dominique to take care of the morning.

Don't hesitate to call me for any question wrt education.

Pierre Dillenbourg
This morning is about education

The afternoon is about research and lab management.
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Office Fédéral de la Statistique
History of EPFL

1853
Creation of the « Ecole spéciale de Lausanne »

1946 - 1968
EPUL - École Polytechnique de l’Université de Lausanne

Since 1969
EPFL - Ecole Polytechnique Fédérale de Lausanne
The Bologna Process aims to create a **European Higher Education Area by 2010**, in which students can choose from a wide and transparent range of high quality courses and benefit from smooth recognition procedures.

The **Bologna Declaration** of June 1999 has put in motion a series of reforms needed to make European Higher Education **more compatible** and comparable, more competitive and more attractive for Europeans and for students and scholars from other continents.
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Bologna Unified Structure

Bachelor (180 Credits)
Master (90-120 Credits)
Doctoral
What is a “1 Bologna Credit”?

- 1 credit = 28-30 hours of student’s work
- The default EPFL equation: 1 credit = 1 h class-contact
  \[14 \text{ weeks} \times (1 \text{ class-contact} + 1 \text{ homework}) + 2 = 30\]

... but you have more freedom
  e.g. 6 credits / 4 h class-contact + project

- It’s easier to estimate workload by dividing:
  30 credits = 1 semester
  6 credits = 1 day/week
  3 credits = \(\frac{1}{2}\) day week
  ....
Be realistic

Yes, they should work a lot but don’t generate a workload that is not proportional to the number of credits assigned to your course otherwise passing your course means failing other courses!

- You may negotiate with your directeur de section the number of credits assigned to your course (but changing it can only be done for next year)

- EPFL prefers to gather several small courses of 1 credits into a large course of 4 credits, where students go deep into one domain
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Bologna Unified Structure

- Bachelor (180 Credits)
- Master (90-120 Credits)
- Doctoral

1. “Propédeutique”
2. Control
3. Mobility point (not an entry into job market)
An orthogonal organization

<table>
<thead>
<tr>
<th>Schools</th>
<th>Educational programs</th>
<th>Curricula</th>
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</thead>
<tbody>
<tr>
<td>Basic Sciences</td>
<td></td>
<td>1. Physics</td>
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<tr>
<td>Engineering</td>
<td></td>
<td>2. Chemistry / Chemical Eng.</td>
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<tr>
<td>Computer &amp; Communication Sciences</td>
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<td>3. Mathematics</td>
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<tr>
<td>Architecture, Civil and Environmental Engineering</td>
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<td>4. Material Sciences</td>
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<tr>
<td>Life Sciences</td>
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<td>5. Electrical Engineering</td>
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<td>Social Sciences &amp; Humanities</td>
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<td>6. Microengineering</td>
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<td>Management of Technology</td>
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<td>7. Mechanical Engineering</td>
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<td>8. Computer science</td>
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<td>9. Communication systems</td>
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<td>10. Architecture</td>
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<td>11. Civil Engineering</td>
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<td>12. Environmental Science &amp; Ei</td>
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<td>13. Life Sciences &amp; Technology</td>
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<td>14. Management of Technology</td>
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<td>15. Financial Engineering</td>
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<td>16. Nuclear Engineering</td>
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<td>17. Computational Sciences</td>
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</tbody>
</table>
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President

VPAA

Dean bachelor-master
Dean doctoral school
Dean cont’d education
Dean research

IC SB ENAC STI SV Cdm CDH
Each class elects two students as representatives

“délégués de classe”
Two key annual events

JSP

Magistrale
New students entering the bachelor
Entrants HEU aux niveaux licence/diplôme et bachelor selon le sexe et la haute école, en 2009

© OFS
Compulsory Military Service

18-21 weeks

Ecole de Recrues

Cours de répétition
Swiss Education
Bologna
EPFL
Bachelor
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PhD

Success rate at the end of first year ("propédeutique")
If you give a "cours de service"

Section X provides a course to students from Section Y

⇒ Talk to directeur de section Y !!!!
New: TUTORING

- Math & physics 1st year
- 8 students + assistant étudiant
- same group, every week
### Sciences Humaines & Sociales
(8% of the curriculum)

<table>
<thead>
<tr>
<th>Cours</th>
<th>Code</th>
<th>Sections</th>
<th>Enseignants</th>
<th>Bachelor 1</th>
<th>Bachelor 2</th>
<th>Examen</th>
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<td>Technologies, société et culture : approches historiques</td>
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<td>Humair</td>
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2nd – 3rd year
Students leaving after the bachelor

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DAF/OGIF
New master students that don’t have an EPFL bachelor degree

DAF/OGIF

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Worldwide
European
Swiss (+ French)
Are external students better than our bachelors?

572 Notes Master (BA à l’EPFL)

101 Notes Master (BA hors EPFL)
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Projects

Bachelor (180 Credits)

Master (90-120 Credits)

Doctoral

Bachelor (180 Credits)

Master Thesis

Semester projects
Different from the European model but not identical to the US model:

- The selection is done by your doctoral programme
- Students take 12 credits (30 in I&C), including 4 the first year. They can follow advanced master courses
- They submit their project and pass a qualifying exam after 1 year. Then they have 3 years to complete their PhD.
- You pay them (about 60K/year)
- Every doctoral programme is autonomous
### Tableau récapitulatif des candidats EDOC pour les principaux pays de formation

<table>
<thead>
<tr>
<th>Pays de formation</th>
<th>Candidatures</th>
<th>Admis</th>
<th>% admis</th>
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<tbody>
<tr>
<td>Iran</td>
<td>491</td>
<td>79</td>
<td>16%</td>
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<tr>
<td>Suisse</td>
<td>237</td>
<td>166</td>
<td>70%</td>
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<tr>
<td>Inde</td>
<td>232</td>
<td>26</td>
<td>11%</td>
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<tr>
<td>Italie</td>
<td>132</td>
<td>73</td>
<td>55%</td>
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<tr>
<td>France</td>
<td>103</td>
<td>36</td>
<td>35%</td>
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<tr>
<td>Chine</td>
<td>90</td>
<td>19</td>
<td>21%</td>
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<tr>
<td>Allemagne</td>
<td>89</td>
<td>42</td>
<td>47%</td>
</tr>
<tr>
<td>Etats-Unis</td>
<td>84</td>
<td>24</td>
<td>29%</td>
</tr>
</tbody>
</table>
EPFL expect professors to be seriously about the supervision of PhD students.

- You spend one hour with PhDs every second week
- You push students to submit conference papers and attend conferences
- You advise students in choosing their courses (and not only the courses given by the supervisor 😊) and follow their results
- Don’t let problems inflate, address them (e.g. with colleagues) as soon as they appear.
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Teaching Language

Bachelor: French*
Master: English*
Doctoral: English*
Presence?

The lectures have to be given by the professors not by the assistants.

If you have the impossibility to be on campus, think about a videolecture.

Exercises sessions are managed by assistants but it is recommended that you attend part of the sessions to find out what are the main difficulties of your students.

(Again, you have to be there for the exam)
Methods

Learning results from intense information processing.

During lecture, engage students into intensive activities such as:

- Include a question in your lecture, ask them to discuss the answers with 2 neighbors for 3 minutes and then to vote for the best answer,
- Include a problem, give them 15 minutes to open their laptops and search for solutions in matlab and to return to you the computed value
- Ask one student to summarize the last lecture
- .....
Laptops

Almost all students have a laptop, but they don’t bring them on campus every day ➔ Tell them if you need a laptop in next week’s course.

If two students work on a single laptop, that’s no a problem, they even learn more

Discuss software issues with the “service informatique” of your faculté (and prefer free software).
We had several cases of students committing suicide over the last years.

If you perceive at-risk situation, please contact this service.
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Teaching assistants

UnderGrads
("Etudiants-assistants")

PhD students

20% of their time whenever the funding comes from!

25 CHF / hour

Section pools

#TAs

needs

resources
Teaching Load
1. You combine them as you want into the final grade
2. The assessment mode defined in the "livret de cours" is a contract you cannot change over the semester
3. Make clear from the beginning what you expect from students. Show examples of questions from previous year exams
4. The exam dates are chosen by the Service Académique: limited space for negotiation → avoid conferences during these 2 weeks
5. Don’t communicate exam marks to students
6. No "rattrapage", no negotiation, no special conditions, ...
7. Keep traces for 4 years
<table>
<thead>
<tr>
<th>Subject</th>
<th>Grade</th>
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<tbody>
<tr>
<td>Bachelor</td>
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<tr>
<td>Master</td>
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<tr>
<td>PhD</td>
<td>5.0</td>
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<tr>
<td>Teaching</td>
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<td>Exams</td>
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<td>Evaluation</td>
<td>3.5</td>
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<td>Tools</td>
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<td>Services</td>
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</table>
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Teaching Exams Evaluation Tools Services RLC

Witten Oral Assignments

- Cheating happens
- YOU must be there
- TA’s must be coached
- ID must be checked
- room map with names
- transversal grading
- mid-terms / bonus
• External observers chosen by the ‘section’
• You may ask the “délégué de classe” to set up the schedule, but include pauses for you.
• Keep traces
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- Measure complex skills
- Please think section-wise
  - Reasonable workload
  - Coordinate deadlines with section
- Provide feedback
- EPFL offers two antiplagiarism tools
- Balance group grade with individual exam
Very soon, you will be able to use a tool to monitor your grades distributions:

- how does it compare to last year
- if I have students from 2 different sections, how do they compare?
- how does it compare to the grading of the same students by my colleagues
[Week 9] Smoke Detector (1 → 6; comments)

[Week 14] Diagnostic Evaluation

- With or without CRAFT
- Discuss changes to directeur de section
Is student satisfaction an accurate measure of teaching quality?

NO!
We evaluate teaching and not teachers.

Prof Schmidt X.

Course A: 5

Course B: 3
Do easier courses receive higher evaluations?

\[ r = 0.14 \quad r = 0.20 \]
Teaching Portfolio

For every promotion, your file has to include a teaching portfolio.

- Which courses? How many students? Which teaching methods?
- Anything worth reporting: prizes, books or any new teaching material,...
- Evaluations by IS-Academia + deep evaluations

Special requirements for tenure track profs:
- at least large 1 undergrad course
- at least one deep evaluation
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Moodle

• Standard, reliable, open
• Not compulsory but >60% EPFL teachers use it
• Uses the EPFL standard authentication (AAI/Gaspar)
• Import students data from IS-Academia
• Full support from CRAFT
Access to EPFL academic data for Bachelor / Master

This page contains all the public links for EPFL academic data. These lists are in development. Use this page to discover what's new and send your comments to the address at the bottom of this page.

For authorized access to the IS-Academia using your GASPAR login, secure access.

Registration for Bachelor / Master semesters

List of registered students by section and semester

List of registered students for Bachelor / Master courses

Registrations by subject (by category)
Registrations by lecturer (according to study plans)
Registrations for projects, TP (practical work), seminars, labs by lecturer (according to information provided by students)
Registrations for projects, TP (practical work), seminars, labs by section and/or semester

Bachelor / Master Courses timetable

These temporary schedules can change between odd and even weeks. Check your schedule by specifying a date in each of the first two weeks, for example, 21.09.2009 then 29.09.2009.

Timetable by lecturer
Timetable by class
Course description

List of students registered for Bachelor / Master exams

Registrations for exams by section and lecturer

Bachelor / Master exams timetable

The January exam timetable will be available from end November and the June/July timetable will be available April. Please check the timetable again before the start of the exam session as the time or date of an exam can change due to unavoidable circumstances.

Timetable by student
Timetable by class
Timetable by lecturer or expert/observer
This guide provides useful information and links about teaching at EPFL.

The contents of this site are grouped around the fifteen questions listed below in chronological order according to the academic calendar.

Each of these main themes is then subdivided into about a dozen related questions leading in just 1 or 2 clicks to over 250 answers or reference texts.

In the "RESOURCES" menu you will also find other useful information directly connected with teaching, such as the Academic Calendar or organization of studies at EPFL.

Finally, this guide is designed to evolve - its content won't be complete without your cooperation. Any comments or suggestions? Please contact us!
Missions of the Registrar's Office

The Registrar's Office is the administrative department in charge of processing and storing the files of students following Bachelor, Master or PhD studies and Continuing Education. The department employs some fifteen specialists with targeted skills depending on the curriculum and type of issue to be solved.

We oversee admission and registration procedures according to EPFL rules, set the course and exam schedules and keep the students permanently informed about their academic rights and obligations.

Registrar's Office Services

The Registrar's Office offers a wide range of services to students, lecturers and those in charge of administration and education.

Highlights

- Management of external and unregistered students attending lectures at EPFL
- Bachelor-Master course timetables
- Admission requirements at EPFL
- Application for a temporary residence permit for study purposes in the canton of Vaud (form 3.1 or 3.3)
- Online payment for certified copies of transcripts
- Equivalence and recognition of qualifications
- Grade system comparison
- Official document from the Confederation for visa applications with a pre-enrolment certificate
Central Library

All libraries moved to the Rolex learning center. Infoscience (online repository)
“information search” courses for your students
SAVE (“service audio-visuel”)

Rent / Install all audio-visual equipment for your courses.

Set up video-conferencing (if you don’t use simple IP-based tools)
CRAFT ("teacher’s service")

- **in-depth evaluation**
  1. we adapt the questionnaire to your course
  2. we distribute/collect paper form
  3. we analyze the answers
  4. we discuss what could be done

  !!! this is strictly **confidential**: we don’t give the info to anyone, even to the VPAA

  !!! this service is used by all teachers, not only those who “must” because of the smoke detector

- **personal follow-up**
  - we meet before your course
  - we attend some of your lectures (with video or not)
  - we meet 2-3 times during the semester
  - we end up by an in-depth evaluation

- ... and many more
The Rolex Learning Center:

The place where students will work (individually or in teams) on the problems assigned to them!

Open every day from 07:00 to 24:00
Create a lively campus

EPFL Campus More Than a Place to Work