School and College Evaluations: Guidelines for the Preparation of the Self-Assessment Documents Provided to the Committee.

Recap: The Aims of School and College Evaluations

The first aim of the audits is retrospective: accountability, i.e. to provide evidence to the ETH Board and to the Federal Council that the performance mandate is being observed and fulfilled. The evaluation of EPFL Schools and Colleges examines the 6 missions of the institutions in the ETH domain. They are stated in the Swiss Federal Law on the Swiss Federal Institutes of Technology\(^1\) (1991):

<table>
<thead>
<tr>
<th>Art. 2 Purpose</th>
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<td>1 The role of the Swiss Federal Institutes of Technology (ETHs) and the Research Institutes is:</td>
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<tr>
<td>a. to educate students and specialists in scientific and technical fields and ensure continuing education;</td>
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<td>b. to expand scientific knowledge through research;</td>
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<td>c. to foster junior scientific staff;</td>
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<td>d. to provide scientific and technical services;</td>
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<td>e. to ensure a dialogue with the public;</td>
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<td>f. to implement their research findings.</td>
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The content of the self-assessment document provided by the School to the experts must accordingly provide a fair and true view of the situation, detail the strategy, perspectives and results related to these 6 missions, as well as their potential challenges. The content of the self-assessment document must also provide proof that the School is participating in the fulfilment of the six aims of the performance mandate 2008-2011 issued by the Swiss Federal Council for the ETH domain\(^2\).

The second aim is prospective: i.e. provision of help and guidance to the Deanship and to the Faculty by addressing specific questions to the Audit Committee. An important outcome of the study may in fact be the identification of other issues that the School wishes to address and in respect of which it may also wish to seek advice from the External Review Committee. Issues may also be identified by the Dean or Chair or the Committee, where appropriate, as the review unfolds.

Key issues identified by the School, the Senior Management of EPFL, the so-called “transversal” deans, will be transmitted to the External Review Committee using the terms of reference stipulated by the EPFL Presidency in the invitation letter, and will be sent with the self-assessment report(s) at least 1 month before the audit.

Documents A, B and C

The self-assessment document(s) generally comprise(s) three separate reports:

a) the general self assessment (A) of the School, an overview of the School’s activities;
b) the self-basement report (B) of institutes and laboratories: its content is specified in the general procedure for schools and evaluation at EPFL;
c) the alumni survey (C): see the separate EPFL guidelines for its preparation.

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\(^2\) Downloadable at URL: [http://www.ethrat.ch/download/Mandat%20de%20prestations%202008%20%C3%A0%202011.pdf](http://www.ethrat.ch/download/Mandat%20de%20prestations%202008%20%C3%A0%202011.pdf)
1. Content of the Self-Study Document - Document A

Overview

A key component of the review process is the comprehensive self-study document issued by the department, Document A. This self-study focuses on strategic thinking and planning and supports the department’s programmatic goals and intellectual and academic endeavours.

The review document requires each department to plan strategically and present a coherent vision of its short-term and long-term plans. The department should encourage all faculty members, students, and staff to participate in generating ideas, analyzing information, creating proposals and making decisions.

Self-study Document A should reflect the department’s culture and must include the following items:

A. A brief description of specific areas for in-depth analysis, established through a critical assessment of the department’s strengths and weaknesses, challenges and opportunities. This assessment should include a review of how this department perceives itself in a national and, where appropriate, international context.

B. A presentation and discussion of new scholarly directions, research plans, curricular or degree programme changes, faculty recruitment and plans for maintaining and enhancing the excellence and diversity of the faculty and students over the next eight to nine years. The nature of the research, teaching, and scholarly enterprise should be summarized here. In view of the ongoing budgetary constraints, the discussion should include ways to consolidate the department without receiving additional resources.

C. A brief description of the goals and missions of the graduate and undergraduate programmes; description of areas of excellence.

The School is required to provide the General Secretariat with 30-35 (depending on the number of external reviewers) double-sided, bound copies of the self-study and one electronic copy (Documents A, B and C). The cover page of the bound copies should be collared. A copy of the committee report of the previous School evaluation should be provided to all experts.

Sections, questions and items to assist self-study (Document A)

OBS: The structure of Document A should be organized according to the division of sections listed below. Please note that the items proposed for each section are not mandatory; their primary purpose is to assist and stimulate preparation and considerations by the School. However, the use of bibliometric indicators for section D must be declared.

You may begin with an introduction that presents the School, EPFL and the ETH domain “in a nutshell”.

A. Mission and Strategic Position

It is useful to draft responses to these questions at the beginning of the self-study and then to revisit, revise, and confirm your responses after addressing the following questions and points.

1) What is the present and future strategy of the School?
2) How is the present strategy 08-11 being implemented?
3) What is the School’s intellectual agenda in its discipline(s)/field(s) in the context of current trends? Do changes in the discipline/field suggest the department should re-examine its mission or programme focus?
4) What is the School’s reputation and what distinguishes it from its peers nationally and internationally?
5) Please expand on your overall impression of the culture, entrepreneurial spirit and level of enthusiasm of the School in the fields of education, research activity, technology transfer and innovation.
6) Where does the department fit in the ecology of the campus? Describe links with other features on the campus, such as joint faculty appointments, cross-listed courses, shared undergraduate and graduate services, courses and enrolments. Analyze whether there are
any overlaps in resources and programmatic goals. Also, note and discuss any links with research departments. Analyze how these links might be strengthened.

7) Please describe the main recommendations of the previous School evaluation and their implementation.

8) What are the three to four critical challenges and opportunities facing the School (SWOT analysis)?

B. Faculty

I. Recruitment and turnover

1) How successful has the department been in recruiting and retaining top quality faculty members?

2) Please comment on the current balance of your faculty members (PO, PA, PATT, PT and MER) in terms of background, age, gender, team spirit, entrepreneurial spirit, identification with the EPFL, etc.

3) Describe successful and unsuccessful efforts over the past five years to recruit women and under-represented minorities. Provide an analysis of obstacles to and determinants of successful recruitment. What more could the department do and what more could the centralised administration do to support the department in these efforts?

4) List the job offers made and accepted in the last five years. How do you envisage replacing retired faculty members? Do you plan to cover new research and teaching fields by renewing professorships?

5) What instruments are in place in your School to assist new faculty staff in settling down?

6) Please state how junior faculty staff are retained. How are they mentored? What is the level of their involvement in the intellectual life of the department?

7) Please address how underrepresented faculty are mentored and retained:
   - Are they fully involved in the intellectual life of the department?
   - Are their chosen areas of inquiry and activity given the appropriate recognition and suitably rewarded?
   - Are under-represented faculty members mentored, encouraged, and advised on how best to advance at all levels?
   - If such faculty members have left in the last review period, what were the causes?

II. Scholarly activity and interaction:

1) Discuss the culture of the department or School and the intellectual interaction that takes place.

2) Evaluate the international network, commitment and collaboration of the faculty members.

3) Provide information on collaborative efforts within and across Institutes, as well as within and across schools (if applicable).

4) Discuss the benefits and drawbacks of any collaborative efforts across Institutes and schools and analyze any overlaps in resources and programmatic goals.

5) Highlight achievements by the faculty, successful external funding, citations, external or internal awards, ceremonies), etc.

C. Teaching and Learning (Art. 2.1.a)

I. Bachelor and Master

For each complete course leading to the Master’s qualification.

1. Training objectives:

   1) Sectors of activity and functions aimed at employment and/or research.

   2) Main features of the training course.

   3) Vision of the Advisory Committee in terms of the labour market (Annex: members of the Advisory Committee) and the academic body in terms of the future development of the field.

   4) Profile corresponding to the Master’s qualification: learning outcomes (Annex: table of skills of the CTI, for instance).
2. Study plan:
   1) Drafting and management of the study plan, structure of the bachelor and master, skills acquired at both levels.
   2) Pedagogical methods: teaching methods, testing the acquired knowledge, breakdown of methods and types of teaching.
   3) Subsidiary courses, specialisations, courses of study.
   4) Training courses: organisation, grant, inclusion in the study plan.
   5) Importance and role of mobility, exchange policy.
   6) Vocational courses and transferable skills: teaching and assessment.
   7) Language of instruction, level of students, preparatory courses.
   8) Results: comparison with the educational objectives specified above.

3. Implementation and quality control
   1) Bachelor recruitment, promotion of the field, including gender aspects.
   2) Master recruitment: policy adopted, including gender aspects.
   3) Analysis of teaching appointments, use of outside and in-house lecturers, appointment policy, monitoring of students, projects for the Master's degree, involvement of lecturers in the foundation courses, etc.
   4) Mobilisation and organisation of the scientific staff members (teaching loas, etc.).
   5) Ratio of supervisory staff and infrastructure problems, range of laboratories and practical work.
   6) Assessments of courses, measures adopted incentives and evaluation of the teaching.
   7) Teaching innovations, plurality of pedagogical methods, implementation.
   8) Teaching Committee: its composition, operation, drive, outputs, involvement of students.
   9) Mobility: partner universities, double and joint degrees, etc.
   10) In-house monitoring of cohorts (statistics: number, nationality of the students, gender, etc.) duration of studies.
   11) Academic placement: ratio of future PhD students by department.
   12) Results: professional satisfaction of graduates after 5 years, employers' feedback (Management Summary of Document C)

4. Analysis of strengths and weaknesses (SWOT analysis)

5. Future projects and developments
   1) Professional vision 10 years from now.
   2) Vision of the researcher 10 years from now.
   3) Planning and vision of the expansion of the Master’s degree.

II. Doctoral Schools (Art.2.1.c)
For each complete course leading to a doctoral degree.
1. Training objectives:
   1) Sectors of activity and functions aimed at employment and/or research.
   2) Main features of the training course.
   3) Learning outcomes.
2. Course structure:
   1) Development and management of the doctoral training course.
   2) Training courses implemented with the assistance of other university institutes and institutions.
   3) Choice of courses, lecturer(s), degree of participation.
   4) Pedagogical methods: teaching methods, testing the acquired knowledge, breakdown of methods and types of teaching.
   5) Vocational courses and transferable skills: teaching and evaluation.
   6) Concomitant research work: methods and results, mobility of PhD students during the completing of their thesis.
   7) Result: comparison with the training objectives specified above.
   8) Implementation and quality control.
3. Recruitment and intake of PhD students: policy, gender aspects and results.
4. Assessment of courses, measures adopted, incentives and evaluation of teaching
5. Doctoral Committee: its composition, operation, drive, the role of the programme
director, its outputs, the involvement of PhD students.
6. In-house monitoring of cohorts (statistics: number, nationality of the students, gender,
etc.), duration of studies.
7. Result of questionnaires sent to new graduates, academic placement, supervision and
analysis of the academic placement.
6. Analysis of strengths and weaknesses (SWOT analysis).
7. Future projects and developments:
   1) Vision of the researcher 10 years from now.
   2) Planning and vision of the expansion of PhD training courses.

III. Continuing education (Art. 2.1.a)
a. Which continuing education programmes leading to a degree (Executive Master/MBA,
Master of Advanced Studies, Certificate of Advanced Studies) were organized in the
past 5 years by the members and/or departments of your School? Please specify for
each programme the title, the type, the dates, the teaching staff at your School that
were involved, the budget and delineate the usual statistics (number, nationality of
the students, gender, etc.) the approximate number of students.
b. Which short programmes of continuing education (not leading to a degree) were
organized in the past 5 years by the members and/or departments of your School?
Please specify for each programme the title, the dates, the teaching staff at your
School that were involved, the budget and the approximate number of students.
c. How do you evaluate the quantitative and qualitative levels of participation by your
School in the organization of programmes of continuing education leading to a
degree? What are the relevant future plans of your School in this domain? Especially in
relation to the Life Long Learning Programme of the EU, adopted by Swiss
Universities?
d. How do you evaluate the quantitative and qualitative levels of participation by your
school in the organization of short programmes of continuing education that do not
lead to a degree? What are the relevant future plans of your school in this area?
e. How do members of your School participate in continuing education outside the EPFL?
Do you think the balance of internal and external activities in this area is right or does
it require corrective actions?

D. Research (Art.2.1.b)
(Some points in this sector are dealt with in depth in Document B)

I. Research strengths (and outputs) of the Institutes? Bibliometric
indicators
1) Please provide an assessment of the quality of the research performed by the School
and Institutes. You should use the (bibliometric) indicators that are most appropriate
for the field and explain why such indicators are appropriate.
2) You should specify the fields in which the quality of the department is world class by
comparing it to the best departments in the corresponding fields.
3) If the research is not world class, what measures need to be taken to improve the
situation?

II. Development of new areas
Select the most important and most promising areas in the field of the department and
provide:
1) a description of the areas that should be developed;
2) and the areas where efforts should be scaled back.

III. Sources of external funding
1) Please provide a detailed account of the sources of external funding.
2) Ascertain whether there is an appropriate balance of internal and external funding and
whether the various potential sources of funding in the field are suitably balanced.
3) Are there potential funding schemes that have not been properly explored?
IV. Adequacy of facilities
1) Does the equipment suffice to provide an adequate basis for research excellence?
2) Is the replacement or improvement of basic technology properly planned?
3) Is the right manpower assigned to the tasks? Is the financial contribution by the users duly included?

V. How do the research strengths of the faculty assist the curriculum?
1) Please provide an estimate of the teaching needs of the whole EPFL in the areas covered by the department.
2) Is the number of faculty members appropriate and are the different fields adequately covered?

E. Innovation and Technology Transfer (Art.2.1.f)
1) With the support of SRI, which will make its statistics available, please conduct the quantitative evaluation below (per institute).

<table>
<thead>
<tr>
<th>Name of the Institute, period / year(s) of survey</th>
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<tbody>
<tr>
<td>Total number of staff employed by the Institute (date + FTEs)</td>
<td></td>
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<tr>
<td>No. of signed industrial contracts (research and services)</td>
<td>Total</td>
</tr>
<tr>
<td>including the number of contracts with CTI funding</td>
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<tr>
<td>including the number of contracts with direct industry funding</td>
<td></td>
</tr>
<tr>
<td>Contractual amounts of these industrial contracts (in millions of CHF)</td>
<td>Total</td>
</tr>
<tr>
<td>including the amount from contracts with CTI funding</td>
<td></td>
</tr>
<tr>
<td>including the amount from contracts with direct industry funding</td>
<td></td>
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<tr>
<td>No. of technology disclosures (inventions and software) received by SRI</td>
<td></td>
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<tr>
<td>No. of priority patent applications filed in the name of EPFL</td>
<td></td>
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<tr>
<td>No. of patents granted to EPFL</td>
<td></td>
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<tr>
<td>No. of signed licenses, options and TT agreements (through SRI)</td>
<td></td>
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<tr>
<td>No. of new start-up companies out of the Institute</td>
<td></td>
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</table>

2) Please comment on the above data and make comparisons between the Institutes, compare the aggregated data of the entire School with previous years and discuss the trends.

3) To your knowledge, how does the overall performance of knowledge and technology transfer of your School compare to that of other “world-class” universities/schools in the same field?

4) What are your main “success stories” in the field of technology transfer and relations with industry during the last 4 years?

5) Please comment on the output and appropriate balance of the various types of technology transfer within your School (start-ups, licences and IPR transfers, research and service contracts with industry).
6) Describe the other types of interaction with the economy (continuing education, contributions to the definition of standards, internships, etc.) that your School has in place and/or plans in order to improve the output of knowledge and technology transfer?

7) Which measures are likely to improve (quantitatively and qualitatively) the success of the knowledge and technology transfer by your School? At the level of the School, Institutes or Labs? At the level of EPFL?

F. HR, Staffing Facilities
1) How would you rate the instruments and policies in place in your School and at EPFL for the development of career opportunities for scientific as well as for administrative and technical staff? What would you change or implement to improve the situation?
2) What instruments are in place in your School to promote gender equity and equality (staff)?
3) Please comment on the competitiveness of the EPFL salary model and policy (including other fringe benefits) compared to your experience at other institutions?
4) How do you cope with the issue of fixed-term vs. permanent contracts? What would you change?
5) How reliant is the department on temporary academic staff (lectures, etc.)? How do they complement the ladder faculty? Could the department deploy these resources differently?
6) In what ways do staff members contribute to and support departmental excellence?
7) What is the current ratio of faculty members to staff and the ratio of staff to students? How is the level of support measured? Is it adequate?
8) How do staff and faculty members interact, collaborate and share responsibility for departmental administrative functions?
9) Comment on the morale of staff, as indicated by turnover rates, absenteeism, number of grievance procedures, mediation, medical or stress leave?
10) How are staff hired and trained? Are there formal efforts to mentor staff?

G. Social Responsibility: Dialogue with Stakeholders (Art. 2.1.e)
1) Describe the vision of the social responsibility of the School, its role and impact, communication policy, especially regarding the general acceptance of technology in the social community and global sustainability.
2) Delineate the strategy, objectives and implementation of the dialogue with stakeholders.
3) Provide some highlights or typical achievements.
4) How does the faculty communicate and/or collaborate, with political bodies, the media, citizens and with the economy in general?
5) Are further developments planned?

H. Alumni and School Fund Raising
1) What mechanisms does the School use to establish and nurture outreach and alumni relations?
2) Describe the School’s fund raising and development activities.
3) Do you keep track or intend to keep track of your PhD alumni?
4) Do you keep track of alumni as a potential donor base? If not, are there resources you need to enable you to do so? If so, what are they?

I. School Governance, Finance and Administration
1) Please describe the School’s governance and management: what are the key processes and working groups, committees, etc?
2) Describe the management, managerial skills and overall governance of your School, the role of the dean, deanships and executive committee. Please provide names of other departmental committees, their role and impact.
3) How do you evaluate the importance and influence of top-down and bottom-up processes? Does the faculty actively participate in the preparation of key decisions by the School?
4) What are the centralized and/or decentralized administrative functions within your School and why have you decided to implement them in this manner? Please also comment on the participation of the various staff bodies (lecturers, scientists, students, technical and administrative staff).
5) How would you rate the efficiency of this organization with respect to the tasks assigned to the School in terms of education, research and technology transfer/innovation? Which are the areas need to be improved and how do you plan or propose to implement the necessary changes?

6) How do you rate the administrative burden of non-administrative staff such as lecturers and scientists based on your experience of other institutions?

7) How would you characterize the managerial and leadership roles of the School’s Dean?

8) How do you evaluate the strategic, financial and managerial autonomy of the school?

9) Does the department have a board of external or internal advisors? How is this group selected? How active is this group in providing strategic guidance and, where appropriate, oversight? How can the board be used to best effect?

10) Describe how faculty members engage in informed collective discussion on all-important departmental issues.

11) Describe the role of the dean, deanships, and the executive committee. Please provide names of other departmental committees, their role and impact.

12) Do untenured faculty members participate in the departmental governance decisions concerning academic personnel and in departmental administration? Is there a mentoring programme for junior faculty staff?

13) List all student participation in committees and in other roles in departmental governance, as well as its effectiveness.

14) How would you rate the balance between the centralized and the decentralized budget in the way your School is managed?

15) On which basis do you allocate the budget to the sub-entities (institutes, departments, labs, platforms, etc.) within your School? Do you apply special schemes and ratings and/or controlling models?

16) How would you rate the balance of hard and soft money in your School’s overall budget?

17) How do you cope with the investment needs of education and research within your School? How do you think the EPFL should tackle this issue?

**J. Infrastructure and Others**

1) How would you rate the quality of the infrastructure in your School? Where do you see a need for improvement?

2) How well does the current space available to the department meet its research and teaching needs? What are the long-term space requirements of the department? Does (will) the department have sufficient funding to maintain the space at its disposal?

3) Please comment on the quality and efficiency of the administrative support provided by the centralized services in the area of infrastructure resources (buildings, IT, etc.):
   - What do you lack and what would you change?
   - How would you rate the balance between centralized and decentralized support in each of these areas?

4) Please comment on the quality and efficiency of the administrative support provided by the centralized services in the area of Human Resources.
   - What do you lack and what would you change?
   - How would you rate the balance of centralized and decentralized support in that area?

**2. Content of the self-study document - Document B**

Document B is a report that includes the institutes and all the laboratories, drafted in accordance with a common, standardised method for each laboratory or department (please refer to 1 D. for more information):

- the CV of the senior lecturer and other lecturers (½ page per lecturer);
- the list of team members in the department, specifying their post;
- financing of the department, including external funds over the last four years;
- the research profile of the department and a brief retrospective;
- a brief description of the research environment and external collaboration;
- a description of the research approach as well as the vision and strategy over the next 4 years;
- a presentation of the research results with the list of major publications of the last 4 years;
• a presentation of the teaching and training activities of the department;
• a short indication of the social impact, technology transfer and innovation during the last four years;
• a SWOT analysis, emphasising the potential of the department (if for reasons of confidentiality reasons, the SWOT analysis was not published, the experts should be able to consult it on request).