

STRATEGY 2000 FOR UNDERGRADUATE PROGRAMMES IN THE HEALTH SCIENCES AT LUND UNIVERSITY

STRATEGIC PROGRAMME OF ACTION FOR UNDERGRADUATE PROGRAMMES AT THE FACULTY OF MEDICINE

Audiology, Biomedicine, Biomedical Laboratory Technology, Medicine, Nursing,
Occupational Therapy, Physical Therapy, Speech Pathology and Therapy

UNDERGRADUATE EDUCATION IN HARMONY WITH CONTINUED PROFESSIONAL DEVELOPMENT AND POSTGRADUATE TRAINING

Undergraduate education is to be founded in science, prepare students for future professional work and provide the general qualifications required for admission to postgraduate training. Furthermore, students are to acquire an understanding of what is meant by a scientific attitude to their own work and professionalism in the discharge of their duties, and recognition of the need for life-long learning. Undergraduate education, as far as possible, is to be designed on the basis of the challenges the students are expected to encounter throughout their careers and the expectations of society at large (figure 1). The link between research and education is to be a distinctive mark of the undergraduate programmes of our faculty. However, special attention is to be paid to the aims and contents of the continued professional development of the students.

The undergraduate programmes of the Faculty of Medicine and their representatives, in consultation with the surrounding society, should try to enhance the appeal of the programmes and improve their own ability to take care of motivated and creative students, not least those from non-academic environments. That is the best way of satisfying demands for equal opportunity and social and ethnic diversity among students.

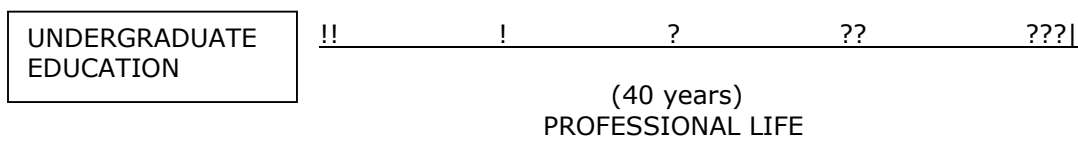


Figure 1. Undergraduate education is to be designed on the basis of the challenges the students are expected to meet throughout their careers.

Studies are to be task-based and outcome-based, i.e. the aims of courses and programmes should specify the type of tasks all students must be able to handle on completion of their studies. The teaching is to be planned, implemented and evaluated by teachers and students together and adapted to the needs of the students and their learning process. The role of the teacher is chiefly one of support and supervision, but the teacher is also responsible for assessment. As a natural consequence of this approach, students will be in contact with professional life from the start of the programmes. The learning process should focus on insight and understanding rather than the memorizing of facts. Evaluation is largely a matter

of analyzing student outcomes. Assessment is an important steering instrument and should mainly be concerned with tasks for the students to handle in accordance with the aims of the programme as a whole and for the various courses and units.

Horizontal and vertical integration is a basic principle. The idea behind it is that the students should master various aspects on the same problem area at the same point in time. The Faculty should also make sure that there is interaction between the different undergraduate programmes on problems of common interest in order to acquaint the students with the professional competencies of the different members of the health service staff and so promote teamwork across professional boundaries. Assessment methods should stimulate the integrative thinking of the students and focus on problem-solving exercises rather than the reproduction of factual knowledge.

In keeping with the perspective illustrated in figure 1, the Faculty should play a prominent part in continued professional development after completion of the undergraduate programme, e.g. at Master's level and in commissioned courses.

GUIDING PRINCIPLES

(1) Task-based and outcome-based learning

The concentration on outcome is the basis and point of departure for the choice of design, modes of work and assessment, teaching efforts, scope for the students' own work, the framing of aims and objectives and the choice of assessment criteria.

- A. Students are to train their ability to solve problems by finding their own knowledge, develop their skills and attitudes and reflect on their own development. Personal and intellectual maturity is furthered by cooperation with fellow students and the support of teachers and supervisors.
- B. Specified objectives for the programme as a whole are to form the basis for the choice of tasks which govern the work in units and courses.
- C. On completion of the programme, the students are to be able to handle clearly defined tasks in a professional manner.
- D. The implementation of units and courses are to optimize conditions for the students to achieve the aims and competencies laid down.
- E. The evaluation of the undergraduate programmes is to look into both the outcomes of the learning process and the modes of work employed to achieve them.
- F. Quality thinking and quality audit procedures is the common responsibility of teachers and students and should permeate all activities. Aspects of quality should be considered continuously in the daily work at course and term level.

(2) Task-based description of aims

A task-based description of aims describes the aims of a programme, course or course unit in terms of the tasks which the student is to be able to handle after having completed the course etc.

It could have to do with patient work, research and development tasks or tasks related to explanations of phenomena, events and processes etc. Expected outcomes also influence the choice and design of assessment techniques. Students work largely independently (with

teacher and supervisor support) to achieve the competencies they need to be able to handle in a professional manner the tasks they have been set. They must be able to view their own knowledge and skills in a larger perspective, national and international, examine all information critically and master the fundamental principles of scientific method.

So, their active search for knowledge plays a prominent part, whereas the role of the teachers as supervisors and standby teachers is emphasized. In that way, the learning situation becomes more like the real world and the work environments the students will encounter after graduation. The importance of problem-solving techniques and group interaction is stressed. Openness and flexibility are encouraged.

In project work, students learn to frame problems, plan and carry through their own work, summarize results, draw conclusions and make evaluations. They become used to reporting their results orally and in writing, facing criticism, arguing a case, acting as opponent and defendant and modifying their views. Familiarity with information and communication technology (ICT) is fostered in this kind of work.

Aims can be outlined at different levels.

- **What students can do on completion of the undergraduate programme (what different kinds of tasks they can handle)**
- **The manner in which the students perform their tasks, with reasons given for their choice of action and methods. This includes an ability to describe and explain how people function and react when healthy or ill.**
- **A professional attitude**

(3) *Core curriculum*

A core curriculum is the core of tasks which all students must be able to handle in a satisfactory manner. Tasks are first defined for the programme as a whole and then allocated to terms, courses and course units. The students' ability to handle the tasks grows little by little, and their insights into how human beings function physically, mentally and socially are gradually deepened.

The following aspects should be given special attention:

- A. Fundamental social, mental, biological and pathological phenomena and processes
- B. Important health problems in the home environment and in a global perspective
- C. Openness, preparedness for change and critical thinking
- D. Values and ethical judgments
- E. Competencies necessary for every graduate in her/his respective professional field (to be defined in consultation with representatives of the professions)

(4) *Performance-based budgeting system under pedagogic control*

Financial compensation for various teaching efforts should be calculated on the basis of the volume of these efforts and their importance to the aims of the programme in question.

The budgeting system should be designed so that it helps the students achieve the aims of the programme. An example (from the medical programme) of a performance-based budgeting system is outlined in the attached memorandum.

(5) *Practical training*

The practical training, based on the theoretical parts, is to be designed jointly by the teachers in charge, training supervisors in charge and students concerned. Task-based aims are to be defined for the practical training, requiring that supervisors and students are to refer continuously to the theoretical background as well as established professional practice. Theory and practice are thus naturally coordinated and interwoven.

Supervisors are to maintain a scientific attitude and adapt their efforts to the future professional role of the students. The outcomes of the practical training are to be assessed by teachers familiar with the curriculum and with high professional competence.

As regards biomedical issues in the various programmes, access to modern, well equipped laboratories is a necessary prerequisite if the students are to be able to prepare for that kind of work. The same requirement applies to phenomena and methods in speech therapy, audiology, physical therapy, occupational therapy and nursing.

The Faculty must establish a good working relationship with the Region of Scania and other partners in matters of education. Special attention must be paid to clinical supervision, continuity in the practical training, and specified aims for practical training and their achievement.

(6) *Student participation and shared responsibility*

The development of the curriculum is the shared responsibility of students, teachers and practice supervisors.

Contacts between the programme management, teachers in charge, practice supervisors and the individual students must function well. The programme management should distribute continual information about its decisions and the reasons behind them and strive to recruit distinguished teachers and researchers. Student participation in and shared responsibility for the implementation of teaching, assessment and evaluation must be made an unambiguous basic principle.

Students must be convinced that they contribute actively to the quality of education. They must feel that teachers, other staff, fellow students and the training environment form a good support structure for their studies. They are to have a decisive influence on their own learning and feel motivated to strive for self-improvement. The learning process and the studies are to give the students new insights and strengthen their self-confidence. Furthermore, the students must feel that they are involved with knowledge close to the cutting edge of research, that they have modern study aids at their disposal, and that they are getting adequate preparation for professional life and continued professional development. The teachers must be given opportunities to continue their own training in their scientific or professional speciality as well as in modern pedagogy. They must also be allowed to remain active in research, development work and undergraduate education. Continuing training of the teachers is to contribute to a universal agreement on important pedagogical principles and to a running dialogue between teachers and management on the educational philosophy of the Faculty. To support such

activities, there should be a department of medical education with an affiliated group of teachers with a special interest in medical education, and an ICT department.

Continued contacts with the students of the Faculty after graduation (alumnae/i) is important if the Faculty wishes to profit from their experiences and from their position as ambassadors of the Faculty to their employers and other sectors of the community.

(7) Pedagogical research and development

Pedagogical research and development should be given a stronger position in the Faculty.

A department of medical education is to be the hub of pedagogical research and development in association with a group of teachers with a special interest in medical education. Work is to be organized as projects, as far as possible. All projects are to be evaluated and their results published. Pedagogical qualifications to be required of young PhD's, docents, assistant professors, associate professors and full professors are to be defined.

(8) Theory of science and research methodology. In-depth studies and elective study modules

Elements of the theory of science and research methodology as well as in-depth studies and elective study modules should be expanded in several programmes.

The volume of elective study modules is defined in relation to the core curriculum. Students should be allowed to include courses from other faculties in their undergraduate programme. A significant portion of scientific work with written reports should always be included. Training in written and oral presentation should be extensive. Written reports from scientific projects should be presented by every student once or twice during the course of the programme.

Every student must be made aware of R&D work and its importance. Undergraduate education should always be designed in such a way that the interested student can acquire the qualifications required for admission to postgraduate training without taking extra courses. Postgraduate training, in other words, is to link up directly to preparatory course units in the undergraduate programmes. Additional special recruitment schemes, e.g. preparatory graduate schools and summer scholarships etc, should be encouraged and supported. The link with research should be further reinforced through continual training of critical thinking. This could be done e.g. by demonstrations of what is meant by evidence-based measures and by allowing elements of basic medical science to recur in practical training and assessment. Practice supervisors should always encourage students to strive to understand the theoretical basis of professional practice. Undergraduate education can thus stimulate recruitment to research and development work in many different ways.

(9) Information and communication technology

ICT competencies, particularly with regard to database management and the handling of information, are to be well developed in teachers as well as students. The utilization of ICT is to be founded on pedagogical principles and professional requirements.

Every student should have access to a computer of her/his own. On well laid-out homepages, the students should be able to find all they need of course information, illustrations, training material, examples of questions from tests, evaluation results etc.

(10) Leadership

Undergraduate leadership training is primarily focused on the future professional role of the student and its requirements.

Interaction between different professional categories is of central importance. Issues concerning leadership are to be discussed and practised in relation to the environments where the students regularly find themselves, e.g. PBL groups and locations for practical training. Administration and health economics are to be included.

(11) Communication skills

Communication between different professional categories and social competencies are becoming more and more prominent elements in the professional lives of university graduates and are to be paid due attention in the undergraduate programmes.

Examples of activities which require communicative skills:

- Listen and talk to people from different groups, of different ages
- Lead and supervise
- Cooperate in projects across boundaries between disciplines and professions
- Summarize and document results from investigations, projects and research
- Teach, inform and instruct
- Argue, disagree and convince
- Engage and inspire other people
- Make decisions and priorities in consultation with other people

(12) International exchange

International studies constitute an important and desirable element in undergraduate education.

The Faculty should strive to offer a period of studies abroad to all students who want it and give them generous academic credit for courses and course units taken at other universities. The Faculty should have a positive and generous attitude towards foreign students who want to come here.

SUMMARY

The design of the learning process in a student-centred programme is one of the great challenges for a university. Such a training programme emphasizes not only knowledge and skills but also deep insight and contextual understanding. Students are to be able to apply scientific methods, exhibit independence and flexibility and be able to make decisions of their own. Teachers should be in close touch with cutting-edge research in their field, be at liberty to engage in research and development and at the same time have pedagogical qualifications and a teaching profile which is in harmony with the design and implementation of modern programmes of undergraduate education.

Instead of being able to reproduce great masses of factual knowledge, students should have developed an ability to take in and analyze the task at hand as they busy themselves with different professional tasks and issues relating to empathy and social competence. Analytical skills, a critical attitude, problem-solving skills and an ability to cooperate are general competencies that the students should acquire.

By planning, implementing and developing undergraduate education in close consultation with representatives of continued professional development and postgraduate education, the Faculty focuses on the vital connection between education, professional life and research.