APPENDIX-I

CHALLENGES AND CHALLENGE CLUSTERS

CHALLENGES

• Maintaining program quality
• Maintaining a high quality faculty
• Strengthening of curriculum
• Changing the curriculum in response to technological development.
• Responding to the needs of a wider range of students
• Securing and maintaining state-of-the-art technical equipment.
• Increasing the use of computers in the classroom.
• Employing new teaching techniques.
• Keeping pace with the increasing cost of technology.
• Obtaining financial resources
• Addressing accountability issues
• Reallocating money to programs because of financial constraints.
• Serving at-risk students.
• Attracting new student populations
• Identifying unit leadership potential from among the faculty.
• Providing leadership training for faculty and chairs.
• Accommodating cultural diversity.
• Developing efficient advisory and registrations systems and procedure.
• Utilizing more faculty developmental techniques such as classroom assessment, peer coaching, etc.
• Maintaining the physical plant.
• Addressing the issues of training for senior faculty.
• Increasing human relations training.
• Promoting greater gender equity.
• Using quality management techniques (e.g. TQM).
• Increasing emphasis on the transfer program.
• Increasing the use of business and industry advisory committees.
• Increasing the general education requirements.
• Increasing influence and impact of state coordinating bodies.
• Offering courses through distance education.
• Increasing influence and impact of accrediting bodies.
• Internationalization of the curriculum.
• Increasing teaching programs sponsored by specific companies.
• Adapting to employees who utilize electronic communication systems and who work at home.
• Increasing involvement of the Government.
• Decreasing growth in transfer programs.

CHALLENGE CLUSTERS

Faculty Challenges

• Addressing issues of training for senior faculty.
• Employing new teaching techniques.
• Identifying unit leadership potential from among the faculty.
• Providing leadership training for faculty and chairs.
• Utilizing more faculty developmental techniques such as classroom assessment, peer coaching, etc.

Student Challenges

• Offering courses through distance education
• Promoting greater gender equity.
• Accommodating cultural diversity.
• Responding to the needs of a wider range of students.
• Serving at-risk students.
• Attracting new student populations

External Relations Challenges

• Decreasing growth in transfer programs.
• Increasing teaching programs sponsored specific companies.
• Adapting to employees who utilize electronic communications systems and who work at home.

**Technology Challenges**
• Changing the curriculum in response to technological development.
• Keeping pace with the increasing cost of technology.
• Securing and maintaining state-of-the-art technical equipment.
• Increasing the use of computers in classroom.

**Program Quality Challenges**
• Maintaining program quality
• Strengthening the curriculum
• Maintaining a high quality faculty

**External Accountability Challenges**
• Increasing influence and impact of state coordinating bodies
• Increasing influence and impact of accrediting bodies.
• Increasing involvement of the government

**Financial Resources Challenges**
• Obtaining financial resources
• Maintaining the physical plant
• Reallocating money to programs because of financial constraints.

**Curriculum Challenges**
• Increasing general education requirements.
• Increasing human relations training
• Internationalizing the curriculum.
• Increasing emphasis on the transfer program

**Internal Accountability Challenges**
• Using quality management techniques (e.g., TQM)
• Addressing accountability issues.
• Developing efficient advisory and registration systems and procedures.
STRATEGIES AND STRATEGIES CLUSTERS

STRATEGIES
• Conducting curriculum reviews to maintain relevance.
• Balancing personal and professional activities.
• Networking with other chairs.
• Assessing future employment trends and opportunities.
• Increasing the emphasis on long-range institutional plans.
• Emphasizing the integration of unit plans with institutional plans.
• Assessing the professional development needs of chairs.
• Considering different approaches for allocating financial resources.
• Building stronger partnerships with business and industry.
• Clarifying roles and responsibilities of chairs.
• Participating in a regional conference for chairs.
• Developing unit mission statements.
• Seeking external funding.
• Developing campus-wide mission statements.
• Becoming involved in mentoring.
• Participating in a training academy for chairs.
• Conducting internal/external environment assessments.
• Participating in a national conference for chairs.
• Providing training for clerical and service personnel.
• Assessing leadership styles and profiles of the chairs.
• Writing job descriptions for chairs.
• Participating in formal graduate courses.
• Reviewing and revising the organizational chart.

STRATEGIES CLUSTERS
Chair Development Strategies
• Assessing leadership styles and profiles of chairs.
• Writing job descriptions for chairs.
• Participating in a training academy for chairs.
• Participating in regional conferences for chairs.
• Participating in a national conference for chairs.
• Participating in formal graduate courses.
• Reviewing and revising the organizational chart.
• Providing training for clerical and service personnel.
• Clarifying roles and responsibilities of chairs.
• Assessing the professional development needs of chairs.
• Networking with other chairs.

Planning Strategies
• Increasing the emphasis on long-range institutional planning.
• Developing unit mission statements.
• Developing campus-wide mission statements.
• Conducting internal/external assessments.
• Emphasizing the integration of unit plans with institutional plans.
• Conducting curriculum reviews to maintain relevance.

Personal and Professional Development Strategies
• Increasing staff development programs.
• Becoming involved in mentoring.
• Balancing personal and professional activities.

External and Financial Strategies
• Assessing future employment trends and opportunities.
• Considering different approaches for allocating financial resources.
• Seeking external funding.
• Building stronger partnerships with business and industry.

APPENDIX-II

GOOD UNIVERSITY LEADERSHIP

- Being innovative and oriented towards change
- Wanting one's department to be a major force.
- Knowing when and how to compromise, and how to accommodate dissenters.
- Asking what we are trying to do, and our methods for doing it may not be as successful as they should be.
- Focusing on students
- Questioning 'sacred cows' (for example, traditional teaching methods).
- Doing things differently (for example, employers participating more in course design).
- Giving people freedom so that new ideas can surface.
- Being able to change your leadership style when necessary (from 'consultative' to 'coercive' for example.
- Building a small group who think like you do in order to launch new ideas.
- Being an example to one's colleagues.
- Being a person who networks and knows what's going on
- Relating to people in a congenial way.
- Understanding where people are coming from.
- Getting feedback from your constituents.
- Knowing the boundaries of what you can achieve.
- Having a clear vision which is flexible and open.
- Being a good manager of resources.
- Being strategic and knowing about the wider system.
- Being able to talk people into doing things (especially the case in academic leadership, because academic culture gives people a lot of hiding places).
- Working in teams.
- Having good planning skills and a strong sense of direction.
- Planning ahead, not just being reactive.
- Being determined, but not rigid.
- Being skilled at motivating and enabling people through identifying their needs and fears.
- Creating mechanisms for implementation informally before making it happen formally.
- Fighting complacency
- Finding out what people want to achieve, and helping them achieve it.
- Acknowledging people's work.
- Helping staff learn and develop.
- Learning from your own mistakes.
BAD UNIVERSITY LEADERSHIP

- Being unclear about what you want to achieve.
- Not listening to people.
- Being authoritarian
- Being weak and defensive
- Not having an interest in people.
- Not thinking about what you do
- Bending too many rules, without consultation.
- Favouring one area to the exclusion of others.
- Trying to push things forward without resources.
- Doing deals behind the scenes without regard for equity and values.
- Not looking into what worked and what didn't work on previous occasions before doing something new
- Being dictatorial
- Being too self-interested
- Communicating poorly
- Giving directives with no explanation
- Staying in the job too long
- Not being able to admit your mistakes
- Not having the respect of your colleagues because you didn't have academic credibility.
- Staying hidden in your office.
- Following rules because you are insecure in your ability to do things independently.
- Being unable or unwilling to delegate.

MANAGING RESOURCES STRATEGICALLY

- Remember that the forceful and instructive advocacy of the educational importance of student services to the institution rests primarily with the CSAO.
- Know your institution inside and out—its values, need, and hidden pockets.
- Consider that budgets must evolve from goals and objectives and should reflect institutional and divisional priorities.
- Accept that nothing of substance happens until specific budget reduction targets are imposed from above.
- Ask yourself, "Who can do it any better?" If you do not, someone else will, and he or she will not do it as well.
- Remember that strategic planning is just as effective during period of growth as it is in period of decline; plan for both.
- Plan ahead and stick to your game plan. A recessional period forces us to employ a long-term view rather than short-term responses.
- Set deadlines, move rapidly to restructure, and be in command of the situation. Inconsistency sends mixed messages.
- Keep in mind that period of recession destroy conventional planning and lead to ad hoc maneuvering in the absence of strategic planning.
- As painful as it may be, accept the fact that there will be certain things you cannot do any longer.
- Avoid one-time or short-term adjustments because such actions only delay the inevitable and certainly do not eliminate the basic problems.
- Get advice, listen, look, and then decide. There is lots of brain power around. Both inside and outside the institution. Use it!
- Shun across-the-board cuts.
- Accept that shifting costs elsewhere does not equate to savings unless the shift is to sources outside of the institution.
- Be as open as humanly possible regarding what you are doing, why you are doing it, how you are planning to do it, and when it will happen. Communication is all-important.
- Train your mid-and lower-level managers how to manage change (to handle layoffs, survival guilt, and so forth).
- When developing a financial contingency plan, be certain to weigh the expected impact on your units before implementation.
- Keep a balance between line functions and staff functions (direct providers and those who support the effort).
- Find ways to recognize and express appreciation to your staff.
- Do not complain. The CSAO is the designated captain and cheerleader. Set the tone, keep a sense of perspective, avoid ambiguity and negativism, and try to maintain morale.
- Keep in mind that trying to do everything will result in mediocrity. Be selective.
- Get away from the "we-they" mentality. The fact is that there are two enduring institutional cultures (academic and service), so do not fight the situation. Educate your colleagues on the faculty about what student affairs does and how it interrelates with their work.
- Your repositioning and restructuring should be permanent. When and if new money becomes available, it should be applied to new initiatives.
- On occasion, toot your own (student affairs) horn. Do not assume that others know what you are doing.
- Always hold some resources in reserve, thus maintaining some financial flexibility.
- Remember that initial budget cuts are easy; thereafter, they require creativity, knowledge, and commitment.

## APPENDIX-IV

### SYSTEMS TO ENCOURAGE UNIVERSITY INDUSTRY COLLABORATION

<table>
<thead>
<tr>
<th>Measures</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure extended by the university side</td>
<td>Joint research with private sector</td>
</tr>
<tr>
<td>Common research</td>
<td></td>
</tr>
<tr>
<td>Commissioned researched</td>
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<tr>
<td>Centers for cooperative Research</td>
<td></td>
</tr>
<tr>
<td>Measures extended by industry side</td>
<td>Grants and endowments</td>
</tr>
<tr>
<td>Other measures</td>
<td>Joint research by Mombusho grants</td>
</tr>
<tr>
<td>JSPS Program</td>
<td></td>
</tr>
</tbody>
</table>

How are institutions of Higher Education Administered?

Chart I illustrates the administration of universities, junior colleges and colleges of technology. The establishment of a local public and private university, junior college or college of technology requires the approval of the Minister of Education, Science and Culture. The Minister refers each application for approval to the Council for University Chartering and School Juridical Person, and minister's decision is based on the recommendation of the Council. The standards for the establishment of a university, junior college or college of technology are prescribed by ministerial ordinances. On the basis of these standards, the Council makes deliberations on applications for the establishment of local public and private universities and other higher education institutions.

The Council is composed of no more than 65 members, who are appointed by the Minister from among personnel of universities, junior colleges and colleges of technology, directors of school juridical persons (corporate organs running private higher education institutions), and persons of learning and experience. All of the universities, junior colleges and colleges of technology approved in this way come under the jurisdiction of the Ministry of Education, Science and Culture. Each institution is governed by its own governing agency.

The University Council, which was established in 1987, makes inquiries and deliberations on basic matters concerning universities, junior colleges and colleges of technology, such as standards for the establishment of a university and other institutions, policies for awarding academic degrees and plans for the development of higher education. It can also make recommendations on these matters to the Minister of Education, Science and Culture. The Council is composed of no more than 20 persons, who are appointed by the Minister (with approval of the Cabinet) from among persons with a broad and high level of knowledge with respect to higher education institutions.

Educational expenditures for operating national and local public institutions of higher education are mainly borne by national and local governments, respectively. In private institutions, tuition and other fees and working profits of their property constitute the main source of financial resources.

In view of the important role private schools play in Japanese school education, the national government has been taking a number of measures under the Private School Promotion Subsidy Law as one of its major policies. In order to maintain and improve the quality of education at private universities, junior colleges and colleges of technology, as well as to mitigate the financial burden on the enrolled students, the Ministry has provided school juridical persons of these institutions with subsidies through the Japan Private School Promotion Foundation in respect of their current expenditure. In addition, for the purpose of promoting characteristic education and research subsidies have been provided directly from the Ministry of Education, Science and Culture to supply private universities and other institutions with research and educational equipment. The Foundation has also provided long-term low-interest loans in respect of funds necessary for improving facilities, equipment, etc.
How Are National Universities Administered?

The administrative organization of universities varies among national, local public and private institutions. Each private university is governed in its own way within the framework set forth by the Private School Law of 1949.

There are some differences even among national universities, particularly due to variations in the number of faculties owned by a university. A "Faculty" is an organizational unit of a university differentiated according to academic disciplines. The University of Tokyo, for example, consists of the following faculties: Literature, Education, Law, Economics, Science, Medicine, Engineering, Agriculture, Pharmacy, and College of General Education. Chart II shows an example of a national university's administrative organization. In national universities, generally, the president, the university senate, deans and faculty meetings act as governing bodies, and the self-governing administration of the university is carried out through these bodies. The responsibilities of these bodies are prescribed in the School Education Law, the Law for Special Regulations Concerning Educational Public Service Personnel and other laws and regulations.

The president is the overall supervisor of the university. In considering important affairs that concern the whole university (for example, enactment, revision or abolition of university regulations, formulation of the budget, or student guidance and welfare), he/she must join in deliberation with the university senate. In most cases the conclusion of the university senate is considered to be the university's decision. The senate is in principle composed of the president, the deans of faculties, a number of professors elected from each faculty, etc.

With regard to the actual operation of university administration, each faculty decides on its policies for education, research and personnel affairs. The faculty meeting is attended by all the full professors, assistant professors and in some cases includes some other staff. The dean of the faculty is elected by members attending the faculty meeting. Important matters affecting the faculty including recruitment of new faculty members are determined in the faculty meeting.

Legally, all the administrators and teachers in the national universities and junior colleges are appointed by the Minister of Education, Science and Culture on the basis of nominations presented by these institutions. The president is selected by the university senate. In practice, the person who has been elected by the institution's academic staff is selected by the senate as president nominee. The dean of a faculty is selected according to the result of the faculty meeting election. Teachers are nominated by the president in accordance with the results of deliberations in the faculty meetings. The president conventionally follows the decisions of the faculty meetings.

The University of Tsukuba, newly established universities of medicine, universities of technology and science and other institutions have, in addition to the above governing bodies, one or more vice-presidents to assist the president.
CHART-II ADMINISTRATIVE ORGANISATION OF A TYPICAL NATIONAL UNIVERSITY

Ministry of Education, Science and Culture

Appointment

Nomination of Deans & Teachers

Nomination of President

President

Request of advice

Deliberation

Recruitment

University Senate

Selection of President

Formulation of Standards for the Selection of the President

Formulation of Standards for the Selection of the teachers

Decision of Standards

Proposal of Deans & Teachers

Deans

Faculty meeting

Requests of Advice

Instructional Affairs

Accounting

Facilities

Welfare Guidance

Proposal of Deans & Teachers

Deliberation

Recruitment

Teaching Staff

Secretariat

General Affairs Accounting

Welfare Guidance

Instructional Affairs

Director

Director

Director

Director

Director

Faculty meeting

Attended School

Attached School

Principal

Director

Library

Research Institutes

Supervision

Supervision
How Is University Reform Promoted?

In order to maintain vitality in various fields of society and to actively contribute to the world, it is necessary to continue reform of universities and other institutions of higher education which are responsible for the promotion of science and human resources development. Therefore, the Ministry of Education, Science and Culture is steadily promoting the overall reform of higher education, based on discussions of the University Council.

The University Council was inaugurated in 1987 as an advisory body to the Minister of Education, Science and Culture to consider future directions for universities and other higher education institutions, as well as relevant measures for their reform. Up to now, the Council has submitted a total of 13 reports. The basic direction indicated in these reports is the "qualitative improvement of higher education".

Among the reports are "Allowing More Flexibility to the Existing System of Graduate Schools" presented in 1988, "The Improvement of University Education" and "A Review of the Existing System of Academic Degree and the Evaluation of Graduate Schools" both submitted in February 1991, which made recommendations on measures for the overall reform of higher education.

In response to these recommendations, the Ministry revised the Standards for the Establishment of Graduate Schools in 1989, broadened and simplified the Standards for the Establishment of Universities and other regulations and introduced a system of self-evaluation. Thus, it became possible for each university and institution to independently develop its own unique style of education, according to its own ideas and aims.

In response to these reforms in the higher education system, each university is currently carrying out its own curriculum improvement, review of its education and research organization, preparation of a self-monitoring and self-evaluation system, etc.

a. Improvement of content and methods of education

1. Introducing curriculum reflecting the features of each university or faculty.
   - Review of general education, which has often been criticized as being a mere repetition of upper secondary education (introducing a four-year consistent curriculum with specialized education from the first year of study)
   - Review of the ratio of required and elective subjects and expanding the range of student's subject choice.
   - Introducing new comprehensive subjects.
   - Enriching education in the areas of practical foreign languages and information processing.

2. Introducing more small group lessons in the form of laboratory work, practical work and seminars, etc., and employing more dialogue and discussion in classes.

3. Preparing and providing a detailed syllabus for each subject.

b. Self-monitoring and self-evaluation
Chart III VARIOUS MEASURES FOR THE REFORM OF UNIVERSITIES

The University Council

Qualitative improvement of higher education

| Enhancement of educational function | Education and research of world class standard | Copying with lifelong learning |

Diversification of higher education

Universities (Undergraduate departments) Junior colleges

Qualitative improvements rather than quantitative expansion

- Simplifying and broadening the provisions of the Standards for the Establishment of Universities (i.e., national regulations laid down by the Ministry of Education, Science and Culture to provide for a basic national framework for the structure and programs of universities)

1) Abolishing the regulations on subject areas and review of requirements for graduation

<Former requirements>
- General education subjects (humanities, social science, natural science): 36 credits, foreign languages: 8 credits
- Health and physical education: 4 credits
- Subjects on specialized education: 76 credits

Total number of credits: 124

<After reform>
- No requirements for subject’s areas
- (Each university organizes its curriculum at its discretion)

Total number of credits: 124

2) Review of staffing (abolishing the regulation on the number of necessary full-time teaching staff for each subject area)

3) Review of the method of calculating credits (enabling each university to decide the teaching hours required for a credit and thus promoting small group lessons such as seminars)

4) Abolishing faculty models (in order to make faculty structure more flexible in coping with changes in society)

- Introducing a system of self-monitoring and self-evaluation of universities (in order to endeavor to vitalize education and research activities, improve their quality and fulfill social responsibility)

- Developing of new systems to meet life long learning needs

  1) Making modes of student learning more flexible (by introducing a system under which universities may admit non-degree students who wish to study a limited number of subjects only, and by introducing courses offered both in the daytime and in the evening, etc.)

  2) Creation of the National Institute for Academic Degrees.

  3) Reserving a fixed number of places for transfer students.

Scale of higher education

Considering the sharp decrease in the population group of 18 years of age (from 2,050,000 in 1992 to 1,510,000 in 2000), establishment of universities and expansion of existing universities will be restrained in principle.

Sophistication of education and research

Graduate schools

Drastic improvement, both in qualitative and in quantitative terms

- Allowing more flexibility to the qualifications for graduate school entrance, the duration of courses, etc.

  1) Admitting those who have finished the third-year undergraduate study to master’s courses

  2) Admitting holders of a bachelor’s degree with more than two years of work experience to doctor’s courses

  3) Decreasing the duration to complete the master’s course to 1 year (normally 2 years) for those who have accomplished especially successful work

  4) Establishing a system of evening graduate schools

- Strengthening the organization of teaching staff, improving facilities and equipment, increasing expenditures for education and research programs

- Improving the status if the graduate students (enrichment of student aid programs Japan Scholarship Foundation and introducing the system of Teaching Assistant and the Fellowship Program for Young Japanese Researchers operated by the Japan Society for the Promotion of Science)

- Expanding the scale (increasing the graduate school enrollment to at least twice that of 1991 by 2000)

Vitalizing organization and management

- Currently being deliberated in the Subcommittee for Organization and Management of the University Council. In 1993, proposals were made on such issues as (1) employing more teaching staff with various background and experience, graduates of other Universities or those with work experience, (2) actively making use of the system of open recruitment and (3) employing more teaching staff from all

- Other matters being deliberated in the Subcommittee: (1) organization of teaching staff, (2) collaboration and cooperation between university and other organizations in society and (3) effective management of universities.
1. Establishing an organization for self-evaluation within the university. An increasing number of universities are publishing the results of self-monitoring and self-evaluation.

2. Evaluation of lessons by students and evaluation of education and research by outsiders are conducted in some universities.

The University Council submitted reports in May and November 1991, which proposes (1) directions for improving higher education from 1994 and beyond, when the population group of 18 years of age will sharply decrease; (2) measures to drastically improve graduate schools both in qualitative and in quantitative terms and (3) the necessity of doubling the 1991 number of graduate students by the year 2000. In order to further promote higher education reform, the Council is now deliberating on vitalizing the organization and management of university, including personnel management of teaching staff.

Based on the reports of the University Council, the Ministry of Education, Science and Culture is actively conducting university reform in order to meet the various demands of Japanese society and to make the university a place of education and research that will meet today's international standards.
What Are the Requirements for Graduation from Institutions of Higher Education?

Chart IV illustrates the duration of study and number of credits required for graduating from colleges of technology, junior colleges, universities and graduate schools as prescribed by the ordinances of the Ministry of Education, Science and Culture.

For graduation from colleges of technology, 167 credits or more must be earned over a five year period of study. Graduates are awarded the title of associate and can apply for transfer to the upper division of a university.

Junior colleges require 62 credits or more for graduation over a period of not less than two years. Graduates from junior colleges are also awarded the title of associate and can apply for transfer to the upper division of a university.

To graduate from universities, students must obtain 124 credits (188 for medicine and dentistry and 182 for veterinary medicine) or more over a period of not less than four years (six years for medicine, dentistry and veterinary medicine). University graduates are awarded a bachelor's degree. Most students obtain a degree within the minimum duration; 80.7 percent of those students who entered four-year courses in 1988 completed their study in 1992.

Universities generally group subjects into required, elective and other subjects and set the number of credits required from among the three groups of subjects according to courses of specialization. One credit is normally granted for 45 hours of study, composed of formal teaching and student preparation. Of the 45 hours, teaching hours are fixed by individual universities at between 15 and 30 hours for lecture and seminar classes and between 30 and 45 hours for laboratory classes, practice and exercise. The study for one credit is conducted over a period of 10 or 15 weeks. One academic year is composed of 35 teaching weeks, including periodic examinations and other activities.

Graduate schools are divided into master's doctor's courses. A master's degree is awarded to those who have completed a master's course which lasts normally two years (at least one year), and a doctor's degree to those having completed a doctor's course which normally lasts five years (at least three years) including a two year study in a master's course. In the cases of doctoral degrees in medicine, dentistry and veterinary medicine, completion of a four-year doctor's course (at least three years) is required. To obtain either of these two advanced degrees, students are required, in addition to acquiring 30 credit, to prepare a dissertation under the supervision of the teacher concerned, to submit it for approval and to pass examinations.
Chart-IV: REQUIREMENTS FOR GRADUATION FROM INSTITUTION OF HIGHER EDUCATION

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>College of Technology</th>
<th>Junior College</th>
<th>University</th>
<th>Graduate School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Course</td>
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<td></td>
</tr>
<tr>
<td>University</td>
<td>2-year course</td>
<td>3-year course</td>
<td>Courses other than Medicine, Dentistry &amp; Veterinary Medicine</td>
<td>Medicine, Dentistry and Veterinary Medicine Course</td>
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<tr>
<td>Institute technology</td>
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<td></td>
<td>Masters' Course</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 years</td>
</tr>
<tr>
<td>Length of Course</td>
<td>5 years</td>
<td>2 years</td>
<td>3 years</td>
<td>4 years</td>
</tr>
<tr>
<td>Credits for Subject</td>
<td></td>
<td></td>
<td></td>
<td>Allocation of credits to each subject is determined by individual institutions</td>
</tr>
<tr>
<td></td>
<td>General Subjects</td>
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<td></td>
<td>Specialized Subjects</td>
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<tr>
<td></td>
<td>75</td>
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<td></td>
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<tr>
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<td>131</td>
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<td></td>
<td>-</td>
</tr>
</tbody>
</table>

Note: 1. For medicine, dentistry and veterinary medicine, doctor's course is four years.
2. Number in the brackets shows the number of credits required in veterinary medicine course.
3. Variable requirements, with variable credits.