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INSTITUTIONS OF HIGHER EDUCATION IN NORWAY

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BULLETIN 1934, No. 2

UNITED STATES DEPARTMENT OF THE INTERIOR - - Harold L. Iches, Secretary

OFFICE OF EDUCATION - - - - - George F. Zook, Commissioner

UNITED STATES GOVERNMENT PRINTING OFFICE - - - - - WASHINGTON : 1934

Sold by the Superintendent of Documents, Washington, D.C. - - - - - Price 10 cents

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LETTER OF TRANSMITTAL

DEPARTMENT OF THE INTERIOR,
OFFICE OF EDUCATION,
Washington, D.C., May 1, 1934.

SIR: The Office of Education, almost from the time of its establishment, has had among its responsibilities and duties that of helping to keep the people of the United States informed about education in other countries. In the past decade a generally increased interest on the part of our citizenry in international affairs has been reflected in their desire to know more about school systems abroad, a desire that the Office of Education attempts to meet in the different ways at its command, including that of issuing publications dealing with various phases of foreign and comparative education.

This manuscript on institutions of higher education in Norway is one of a series of studies undertaken at the request of the American Association of Collegiate Registrars and primarily intended to furnish data of a kind that the association needs. It is, however, useful for purposes other than the specific one for which it was written. Students of the general field of comparative education, college and university authorities, and others will find it worthy of their attention. I recommend its publication as a bulletin of the Office of Education.

Respectfully submitted.

GEORGE F. ZOOK,
Commissioner.

The SECRETARY OF THE INTERIOR.

INSTITUTIONS OF HIGHER EDUCATION IN NORWAY

A. INTRODUCTION

Purpose of the study.—The purpose of this bulletin is to present to collegiate registrars, committees of admission, and State departments of public instruction such data about the institutions of higher education in Norway as will enable those officials and offices to form fairly accurate judgments of how higher training in Norway compares with that in the United States. The information is intended mainly for use in connection with evaluating the credentials of students trained in Norway who wish to continue their studies in the United States, but it should be of value also to anyone interested in higher education.

The following section on the organization and the work of the secondary schools is a brief explanation of the place which the institutions of university rank hold in the national scheme of education in Norway.

PREPARATION FOR HIGHER STUDIES

Organization of instruction.—Organized instruction in Norway in preparation for an institution of higher education is based on a folkeskole (folk or primary school) which the child attends between the ages of 7 and 14 years. This is followed by a 6-year period of secondary instruction divided for 3 years each between the middelskole (middle school) and the gymnasium. The curricula in the secondary schools are prescribed by royal statute. In the middelskole the program of study is the same for all pupils but a gymnasium may offer one, two, or three lines of instruction—the real, the language-history, and the Latin. In addition there may be a *Norrøn* (Norse) line where the Storting (Parliament) has so determined. The real line stresses mathematics and the natural

sciences, the language-history line emphasizes the modern languages, while the Latin and Norse lines stress the language for which each is named.

In rural communities there are rural gymnasia which offer 4-year courses of instruction based on landsfolkeskolen (rural folk school) and 6 months at a fortsaettelseskole (continuation school), or upon landsfolkeskolen and courses at a fylke (county) school, at a folkehöiskole (folk high school), or at an ungdomsskole (young people's school).

Secondary education in Norway is commonly coeducational but several middle schools and gymnasia are separate for girls and boys.

Secondary school curricula.—The following is a summary of the plan of study at the middle schools and in each of the various 3-year lines at the gymnasia as expressed in subjects and total number of week-hours:¹

Curricula of the secondary schools

Subjects of instruction	Middel-skole	Gymnasium			
		Real line	Language-history	Latin	Latin-Greek
1	2	3	4	5	6
Theoretical subjects:					
Christianity.....	5	3	3	3	3
Norwegian.....	13	15	18	17	16
German.....	17	7	10	7	5
English.....	14	6	19	6	2
French.....		10	12	12	6
Latin.....				22	22
Greek.....					13
History.....	9	9	13	9	9
Geography.....	6	3	2	2	2
Natural sciences.....	9	18	6	6	6
Mathematics.....	15	17	8	8	8
Practical subjects:					
Drawing.....	5	2			
Penmanship.....	1				
Physical training.....	9	9	9	9	9
Domestic science and manual training.....	4				
Music.....	1	7	8	7	7
Total.....	108	108	108	108	108

Interpretation of the table.—In studying the foregoing table for a consideration of the fullness of the training that a graduate from the secondary school system of Norway has had, it is well to keep the following points in mind:

1. The middelskole offers the lower level of secondary training and closes with the middelskole eksamen (middle

¹ The term "week-hour" as used here means one class-hour of 45 minutes throughout a school year.

school examination). A certificate of having passed this examination admits the holder to a gymnasium.

2. A gymnasium usually offers three lines of training: The real or scientific, the language-history, and the Latin. A few gymnasia also offer a Latin-Greek line, and since 1930 where the Parliament has so specified a Norse line may be offered.

3. Graduation from a gymnasium is marked by a certificate of having passed the eksamen artium (artium examination). This certificate is the regular prerequisite for admission to institutions of university rank in Norway.

4. In the middelskole and the gymnasium the school year consists of 40 weeks with 6 days of instruction per week and 6 periods of 45 minutes each of recitation per day.

5. The total number of recitation periods in a 3-year course in one of the above schools is 4,320. Dividing this number by 25 which is the average number of recitation periods per week in a high school in the United States the 4,320 recitation periods correspond to 172.8 5-day weeks. Counting 40 weeks as a school year we find that on a purely time basis it takes a secondary pupil in the United States 4.32 years to do the same amount of work that a secondary pupil in Norway does in 3 years.

6. Primary and secondary education in Norway is normally completed in 13 years. Ordinarily the graduate of a gymnasium will be about 20 years of age when he receives the certificate of having passed the eksamen artium. If he has a good mastery of English he should be able to take up the work at a standard university or college in the United States at the beginning of the sophomore year, or in some cases on a more advanced level depending upon his ability and industry.

7. The secondary schools of Norway are under the direct guidance of the Undervisningsråd (National Council of Education) composed of seven members appointed by the King and confirmed by the Ministry of Church and Education. The National Council of Education prepares common curricula for all secondary schools, appoints one of the five members of the local board for each school, exercises supervision over the selection of textbooks, and supervises the final examinations.

8. The middelskole eksamen and the eksamen artium are national examinations conducted according to minute regu-

lations. Matters concerning the appointment of examination committees, the making out of the questions, the grading of the papers, and the final decision as to whether or not a pupil shall pass are in the hands of the National Council of Education and entirely outside the control of the pupil's school or teachers.

9. The examinations are given at accredited schools only. Pupils from nonaccredited schools who wish to try the eksamen artium must do so at one of the accredited gymnasia. They are known as privatister (private pupils) and must show their credentials and take a special examination before they are permitted to present themselves for the eksamen artium.

It is only after passing the eksamen artium that one has right to the title "student" in Norway. Most of those who pass the eksamen artium register at the University and become akademiske borgere (academic citizens) not because they intend to take up work at the University, but because by registering they receive the Akademiske Borgerbrev, an honorary academic certificate which admits them to the society of academicians. It has been estimated, however, that about 40 percent of those who pass the eksamen artium do enter the University to pursue higher learning.²

B. INSTITUTIONS OF UNIVERSITY RANK

The institutions of higher education in Norway³ include:

- (1) One national university: The Royal Frederik University at Oslo (Det Kongelige Frederiks Universitet).
- (2) One technical university: Technical University of Norway at Trondheim (Norges Tekniske Høiskole).
- (3) One agricultural university: Agricultural University of Norway at Ås (Norges Landbrukshøiskole).

² For a complete account of secondary education in Norway, see Gabriel E. Loftfield, *Secondary Education in Norway*, United States Office of Education Bulletin, 1930, No. 17, Washington, United States Government Printing Office, 1930. Most of the information in this account on secondary education in Norway and the statistics used are taken from it.

³ The enrollment of students at the institutions of higher training in Norway according to the latest available statistics for each is as follows: Det Kongelige Frederiks Universitet (fall 1931), 3, 615; Norges Tekniske Høiskole (fall 1931), 713; Norges Landbrukshøiskole (fall 1931), 112; Norges Tannlaegehøiskole (fall 1931), 150; Oslo Handelsgymnasium (1932-33), 514; Det Teologiske Menighets Fakultet (fall 1931), 240; Det Pedagogiske Seminar (fall 1931), 41; Norges Laererhøiskole (1931), 60; Bergens Museum (1931), 39; Den Kongelige Norske Krigsskole (fall 1931), 56; Militære Høiskole (fall 1929), 20; Laererkoier (1930-31), 393 distributed as follows: Volda and Elverum 60 each, Hamar 32, Stord 31, the remaining seven, 20 each. (These statistics include the laererkoier at Holmestrand which was discontinued at the close of the year 1930-31.)

- (4) At least 12 institutions which offer advanced training in trade and professional lines:
- (a) Veterinary College at Oslo (Veterinaer Höiskole).
 - (b) College of Dentistry of Norway at Oslo (Norges Tannlaegehöiskole).
 - (c) Pharmaceutical Institute of the University at Oslo (Universitetets Farmasøitiske Institutt).
 - (d) The Pedagogical Seminary at Oslo (Det Pedagogiske Seminar).
 - (e) Schools for the training of teachers in the folk school (Laererskoler for laerere i folkeskolen).
 - (f) Teachers College of Norway at Trondheim (Norges Laerer Höiskole).
 - (g) The Practical Theological Seminary at Oslo (Det Praktisk Teologiske Seminar).
 - (h) The Theological Congregational Faculty at Oslo (Det Teologiske Menighets Fakultet).
 - (i) Commercial Gymnasium at Oslo (Oslo Handelsgymnasium).
 - (j) Museum at Bergen (Bergens Museum).
 - (k) The Royal Military School at Oslo (Den Kongelige Norske Krigsskole).
 - (l) Military College at Oslo (Militaere Höiskole).

I. THE ROYAL FREDERIK UNIVERSITY (DET KONGELIGE FREDERIKS UNIVERSITET)

ADMINISTRATION AND ORGANIZATION

The Royal Frederik University at Oslo was founded by royal resolution of September 2, 1811, and opened in August 1813. It is a national institution governed according to royal regulations by its rector and akademiske kollegium (academic council). The rector is elected for a term of 3 years at a general meeting of the professors. To be eligible for election he must have served as professor for at least 5 years and be at least 30 years of age. The academic council is composed of the deans of the various faculties. The rector is the dean of his faculty and also serves as chairman of the academic council.

Instruction is divided among 5 faculties, each of which elects 1 of its members to act as dean for a period of 3 years—

Det historisk-filosofiske fakultet (history-philosophy).

Det matematisk-naturvidenskabelige fakultet (mathematics-science).

Det juridiske fakultet (law).

Det medisinske fakultet (medicine).

Det teologiske fakultet (theology).

Studie og undervisnings planer (*Plans of study and instruction*).—Each faculty or, where it is more convenient, an examination deputation of the faculty is responsible for the preparation of a studie og undervisnings plan (plan of study and instruction) which shall give the requirements for the various examinations offered by the faculty, the plans of instruction, and other necessary information for the guidance of students in preparing for these examinations. The plans of study and instruction are submitted to the academic council for approval and may be altered only with its consent. On them as a basis the faculties and examination deputations arrange the lectures and practical work for each semester.

Academic year.—The academic activities are divided between two semesters of which the first begins on January 15 and closes on June 15; the second begins on September 3 and closes at Christmas. Each faculty decides as to whether or not instruction within the faculty shall cease during examination periods.

Requirements for admission.—Any one who has bestått artium (passed the artium examination) and can produce proof of good character may be admitted to the university as an academic citizen on payment of the regularly prescribed admission fee of 25 kroner.⁴ Admission is granted also to one who has not passed the eksamen artium but who has bestått avgangseksamen (passed the leaving examination) from Norges Tekniske Høiskole (Technical University of Norway), or from the upper department of the Kongelige Norske Krigsskole (Royal Military School of Norway), or of Sjøkrigsskolen (Naval Warfare School). A person who has passed in a foreign country an examination corresponding in content to the eksamen artium and qualifying for entrance to the universities of that country may be admitted on satisfactory proof of good character.

Women were admitted to the university in 1882, and permitted to take the eksamen artium,⁵ and the andeneksamen or philosophicum which has since been replaced by the forberedende prøver (preliminary examinations—see page 7). The other examinations were opened to women 2 years later

⁴ One krone at mint par is .4537 cents in coinage of the United States.

⁵ Until 1884 the eksamen artium was a university examination given at the university.

and since then women have had the same opportunities and privileges as men to study at the university, take its examinations, and receive its degrees.

An applicant for admission shall inform the secretary of the university as to his choice of private preceptor (a professor to whom the student may go for advice on all matters concerning his studies and personal affairs).

Examinations.—In conformity with royal regulations each faculty arranges for its own examinations which are public and conducted regularly by the professors or, on summons of the faculty, by other instructors at the university. One or more censors regularly assist as judges. As far as possible, at least one of the examiners or censors is some one not connected with the university and appointed by the King or his representative, but permission for the omission of these outsiders may be obtained from the academic council if it finds their presence unnecessary.

In most instances the regulations include detailed instructions as to how to grade each examination which is ordinarily both written and oral. The final grade is generally, though not always, the average of the grades for the subjects or groups of subjects.

Preparation for the various final and important examinations usually consists of lectures, minor examinations, and practical work. Attendance at lectures is open to anyone whether student or not, except in cases in which circumstances make it advisable to limit the attendance to the regularly registered students. The extent to which the practical work offered by the university is open to others than students, is decided by the faculty concerned.

The examinations are in the main the *forberedende prøver* (preliminary examinations) and the *embedseksamener* (professional examinations).

Forberedende prøver (preliminary examinations).—These are preliminary tests in different subjects and all students in all faculties must pass them in philosophy and Latin, while theological students must in addition pass them in Hebrew and Greek, and students preparing for the *matematisk-naturvidenskabelige embedseksamen* (professional examination in mathematics-science) must pass them in mathematics unless mathematics is included as one of the subjects

of the embedseksamen. In the statsøkonomisk eksamen (examination in national economics) other qualifications (see p. 21) may be substituted for forberedende prøver in Latin and philosophy, and exemptions from them in either Latin or Greek or both are granted to those who have completed the gymnasium curriculum and passed the eksamen artium in either or both.

Study at the University in preparation for the forberedende prøver is carried on at the same time and along with study for the embedseksamen (professional examination) and though the former must be passed before the student may be a candidate for the latter, it is not expected that the one must be entirely completed before work leading to the other is begun. In medicine the first part of section I of the embedseksamen may be taken before the forberedende prøver are completed but they must be completed before part 2 of section I of the examination may be taken.

The forberedende prøve in philosophy is based on a 2-semester course of a total of 4 to 5 hours a week of lectures in psychology, logic, and history of philosophy. That in Latin for students in the faculties of philosophy and theology calls for a 3-semester course of 6 hours weekly; for students in law, 2 semesters of the above course; and for medical students or those pursuing scientific lines, the material covered in the first semester of the course. Preparation for the forberedende prøve in Greek is 3 semesters of 7 hours weekly; and in Hebrew, 2 semesters of 4 to 5 weekly.

Forberedende prøver are held at the close of each semester and one examination may include all the necessary subjects or one or more of them according to the desires of the applicant. Thus a student who wishes, may be examined in Latin and philosophy at one examination or take each of them at a separate session. Within a subject, however, there is no separation. For instance, the forberedende prøve in philosophy must include psychology, logic, and the history of philosophy in the same test.

The examinations are conducted by a deputation appointed by the academic council and a censor for each subject, chosen by the council on the recommendation of the deputation, always participates. Application for permission to take

them shall be made at a time set by the academic council and must be accompanied by a fee of 20 kroner.⁶

In grading, a separate mark expressed in a whole number is given for each subject with 1 as the highest grade. Less than 4 is a failure in the subject and the student must be reexamined in it in a later semester. The *hovedkarakter* (average and final grade) for the examination may be expressed with one decimal and to *bestå prøven* (pass the examination) it must not be lower than 3.5.

A person who has passed elsewhere in Norway or other countries examinations that fulfill the demands of the *forberedende prøver* and offers satisfactory proof of good character may be excused from them by the King or his authorized representative.

Embedseksamener (professional examinations).—The *embedseksamener* are professional examinations on the results of which degrees are granted or refused and are open only to students who have passed the required *forberedende prøver* or shown equivalent training.

We shall now take up in the order named below, the degrees that are granted by the Royal Frederik University and the examinations that must be passed to attain a degree in each of the five faculties: History-philosophy, mathematics-science, law, medicine, and theology. The graph on page VIII will aid the reader in understanding the somewhat complicated plan of instruction used in the university. It must be kept in mind that the attainment of a degree depends more on knowledge and ability shown in the regular work and in the comprehensive examinations than on any set number of semesters or years of attendance though some minimal time limits are fixed within which certain examinations may not be attempted.

The fee for each of the *embedseksamener* is 50 kroner, payable at the time of application. If a candidate for the language-history professional examination or the mathematics-science professional examination already has passed his *adjunkteksamen* (see pp. 10, 16) in either of these faculties the fee is reduced to 25 kroner since the application for the *adjunkteksamen* in either of them must be accompanied by a fee of 25 kroner.

⁶ The fees for the *forberedende prøver* must be paid by all students. Fees for other examinations may be waived by the academic council for students who lack funds.

If a faculty because of special circumstances has granted permission for one who has matriculated at the university to take an examination corresponding to an embedseksamen and the examination has been passed, the King on the application of the faculty and academic council may grant that such examination be regarded as equivalent to the regular embedseksamen.

DEGREES IN PHILOSOPHY

Det Historisk-filosofiske fakultet (history-philosophy faculty).—The degrees granted by the historisk-filosofiske fakultet (history-philosophy, liberal arts, or, as it is generally called, the faculty of philosophy) are:

Kandidat magister (candidatus magisteriae) usually written "cand. mag.", attained after 3 or 4 years of study, and success in a lower examination called the adjunkteksamen.

Filologisk kandidat (candidatus philologiae) usually written "cand. philol.", requires 3 years of study beyond the adjunkteksamen, and success in a higher examination called the lektoreksamen.

Magister artium (master of arts) usually written "mag. art." requires about 7 years of preparation and is of the same rank as the degree of filologisk kandidat.

Doctor philosophiae (doctor of philosophy) usually written "dr. philos.", may be attained by a filologisk kandidat or by a magister artium after success in the public defense of a thesis based on personal investigation of a subject covering some phase of the candidate's major field.

EXAMINATIONS

Sproglig-historisk embedseksamen (language-history professional examination).—The adjunkteksamen and the lektoreksamen mentioned above are laerereksamener (examinations for teachers) and a candidate who has passed one or both of them is eligible for the 1-semester theoretical and practical course at the Pedagogical Seminary (see p. 67). The adjunkteksamen prepares the candidate to teach in schools below the gymnasium, generally in the middelskole (middle school); while the lektoreksamen prepares for the position of rector or lektor in a secondary school.

The adjunkteksamen is only a part of the language-history professional examination and as such it may form the basis for the lektoreksamen. However, a candidate wishing to prepare for the lektoreksamen may work for that directly without first passing the adjunkteksamen.

The language-history professional examination is open to one who has passed the eksamen artium in any one of the lines of instruction at the gymnasium supplemented by forberedende prøve in philosophy, or in Latin and philosophy (see pp. 7-9). It includes any three of the following subjects: History, geography and ethnology, Norwegian, German, English, French, Latin, and Greek. In case a secondary school subject includes two of the subjects offered at the university, a candidate who has passed examination in only one of them must pass a tilleggskurs (literally "additional course" practically "teachers course") in the other. (See p. 2.)

Preparation in each of the languages either for the adjunkteksamen or for the lektoreksamen consists of a study of the language and of its history and literature. When applying for permission to take the first section of the examination including a language either in the adjunkteksamen or the lektoreksamen the candidate must present evidence of having participated to a satisfactory degree in the propædeutic courses mentioned in the plans of study and instruction, or he must be prepared to be examined in these courses at the time of the examination.

The examination is written and oral and is offered at the end of each semester by an eksamensdeputasjon (examination committee) appointed by the faculty. Application for the examination is made to the secretary of the faculty.

Adjunkteksamen.—Since the adjunkteksamen prepares the candidate to teach in schools below the gymnasium at least two of the subjects included in the examination must be selected from among those in the above list which are included in the curriculum of the middelskole; for one of them, however, French, Latin, or Greek may be substituted. When such substitution is made one of the remaining subjects must be a language. The examination may be taken in one, two, or three sections. In the written part of this examination

the student is given two *opgaver* (themes or propositions) in each subject included in the examination except in English and German, in each of which he is given three propositions.

Lektoreksamen.—Preparation for appointment as *lektor* in a gymnasium requires that the *lektoreksamen* cover at least two of the subjects included in the curriculum of the gymnasium. In this examination one subject is selected as a major while the remaining two subjects are studied as minors with requirements corresponding to those of the *adjunkteksamen* for the same subjects. The examination may be taken in two or three sections including one or two subjects each. The examination in the major is reserved for the last section. In the written part of the examination in the major four themes or propositions are required in Norwegian; three in each of Latin, Greek, and history; and two in each of the other subjects. Before he is eligible for examination in the major the candidate must have produced and have had accepted a thesis on a self-selected subject based on scientific investigation of some special phase of his major subject.

When the *lektoreksamen* is taken after the *adjunkteksamen* has been passed and the candidate wishes to use one of his *adjunkteksamen* subjects as *hovedfag* (major subject) he may do so by passing a written and oral supplementary examination in the subject in addition to producing a thesis. In the written part of this supplementary examination the candidate is given two propositions.

The numbers used in grading the language-history professional examination are the same as those for the *forberedende prøver*. Since each subject forms a unit by itself the student may be reexamined in a subject provided he applies for reexamination before the examination certificate has been made out. In case of reexamination the last mark received is the accepted grade for the subject.

Hovedkarakteren (average and final grade) for the *adjunkteksamen* is the average of the grades received for the subjects included in the examination.

Hovedkarakteren for the *lektoreksamen* is based on the grades received for the subjects included in the examination with the grade for each minor having a weight of one fourth and the grade for the major subject having a weight of one

half. In determining the grade for the major the thesis is taken into consideration.

The grades for the language-history professional examination with their numerical equivalents are:

Laudabilis prae ceteris.....	1. 00 to 1. 50
Laudabilis.....	1. 51 to 2. 50
Haud illaudabilis.....	2. 51 to 3. 50
Non contemnendus.....	3. 50 through 4

Magister artium (master of arts).—In response to an ever increasing demand for regularly organized scientific training at the university in lines other than those provided for by the professional examinations in the various faculties a royal statute in 1920, provided for the degree of magister which has been offered by the faculty of history and philosophy and by the faculty of mathematics-science since 1923. The former offers the degree of magister artium (master of arts) and the latter the degree of magister scientiarum (master of science).

The degree of magister does not of itself qualify for any special position, but it does offer a standard of achievement in scientific training in a far wider range of subjects than is included in the professional examinations.

The degree may be attained by passing a videnskabelig prøve (scientific examination) including one major subject with tilhørende støttfag (related supporting subjects). The examination presupposes a broad and thorough preparation including the production of a thesis based on broader study of the subject and more thorough and profound research of special phases than that required in the major subject of one of the professional examinations.

In its report the committee responsible for this examination granted that preparation of the kind contemplated would require more time than preparation for the major subject in one of the teaching examinations, but it felt that this would be counterbalanced by the fact that the supporting subjects would be considerably less comprehensive than the minor subjects in the embedseksamen, and by the fact that before taking up work in preparation for this examination the candidate will have passed his forberedende prøver. The for-

¹ For a detailed account of the teaching examinations at the university see Loftfield, *Secondary Education in Norway*, pp. 77-86.

beredende prøver required for this examination are those most closely related to the major subject (see pp. 7-9).

The subjects of the examination are prescribed by royal regulation and no subject may be selected as a major which is not included among the subjects offered by a professor at the university. Each faculty decides what the required supporting subjects for each of the major subjects within its own field shall be and generally, especially in the examination for magister artium, the number of subjects included in the examination corresponds closely to the number included in the embedseksamen of the faculty. Each faculty decides also what the minimum informational requirements for each subject shall be. The subjects from among which the major may be selected are:

Philosophy	Scandinavian
Psychology	Celtic
Pedagogics	Slavic
History	Semitic
Archeology	Finnish-Ugrian
History of art	Mineralogy and petrography
History of religion	Historical geology and paleontology
History of literature	Mathematics
Science of folklore	Mechanics
Church history	Chemistry
History of law	Physics
Social economics	Botany
Statistics	Zoology
Comparative Indo-European philology.	Anthropology
Phonetics	Astronomy
Indian (India)	Meteorology
Greek	Geography
Latin	Ethnography
Romance	Marine biology
English	Physiology
German	

The written part of the examination for the degree of magister consists of two or more themes or propositions within the field of the major and supporting subjects and of practical tests in subjects requiring laboratory preparation. The oral part of the examination is more than an ordinary examination, for in addition to examination in each of the subjects offered by the candidate it includes a public lecture on an assigned subject with not more than one week of preparation.

A candidate who has passed an embedseksamen at the university or an equivalent examination may be excused by the faculty concerned from the written and practical part of this examination. A student who has passed an adjunkteksamen or a bifagseksamen (examination in minor subjects) including the supporting subjects of the examination for the degree of magister may be excused from examination in the supporting subjects in which the examination was passed.

Should it appear that a candidate is not sufficiently prepared to pass the entire examination for the degree of magister, the faculty concerned may grant permission for the examination to be retaken either in part or in its entirety without the preparation of a new thesis.

No grades are given in the examination for the degree of magister. The examinations are either bestått (passed), or ikke bestått (not passed). In case of possible combination with other examinations after the examination for the degree of magister has been passed and the degree conferred the examination for the degree of magister is evaluated as laud or meget godt (very good).

At the university the degree of magister is on a par with a degree obtained by an embedseksamen in that one who has obtained the degree is eligible to disputation for the doctorate. It is also on a par with a degree resulting from an embedseksamen in that appointment to a scientific position either at the university or at an institution connected with the university is dependent on having passed either an embedseksamen or an examination for the degree of magister.

One who has attained the degree of magister artium or of magister scientiarum and who wishes to qualify for a teaching position may pass either the language-history or the mathematics-science professional examination and obtain the degree of cand. philol. or of cand. real by taking the prescribed examinations in the minor subjects required for the degree he desires to attain (see pp. 10, 16).

DEGREES IN MATHEMATICS-SCIENCE

Det matematisk-naturvidenskabelige fakultet (mathematics-science faculty).—The degrees which may be conferred by this faculty are:

Kandidat magister (candidatus magisteriae) usually written "cand. mag.", attained after 3 or 4 years of study and success in a lower examination called the adjunkteksamen.

Kandidat real (candidatus real) usually written "cand. real", requires 3 years of study beyond the adjunkteksamen, and success in a higher examination called the lektoreksamen.

Magister scientiarum (master of science) usually written "mag. scient.", requires about 7 years of preparation and is of the same rank as the degree of kandidat real.

Doctor philosophiae (doctor of philosophy) usually written "dr. philos.", may be attained by a cand. real or by a mag. scient. after success in the public defense of a thesis based on personal investigation of a subject covering some phase of the candidate's major field.

EXAMINATIONS

Matematisk og Naturvidenskabelige embedseksamen (professional examination in mathematics-science).—The adjunkteksamen and the lektoreksamen mentioned above constitute the two parts of the professional examination in mathematics-science. They are similar to the adjunkteksamen and the lektoreksamen in the faculty of history and philosophy in that they are teaching examinations and a candidate who has passed one or both of them is eligible to the one-semester theoretical and practical course at the Pedagogical Seminary (see p. 67). They are similar also in that if a secondary school subject as, for instance, natural science, includes 2 of the subjects offered at the University, as botany and zoology, a candidate who has passed examination in only 1 of them must pass a tilleggskurs (additional or teachers' course) in the other.

The professional examination in mathematics-science is based on eksamen artium in the real line, or, on eksamen artium in one of the other lines of instruction at the gymnasium with tilleggs prøver (supplementary examinations) in mathematics and physics according to the regulations of the eksamen artium for these subjects. In addition to the forberedende prøver in Latin and philosophy (see p. 7) a student preparing for this examination who does not select mathematics as one of his examination subjects must pass forberedende prøve in mathematics based on a 2-semester course of 2 hours of instruction per week. This preliminary

examination is oral and is graded simply *bestått* (passed) or *ikke bestått* (failed).

This *embedseksamen* is offered at the end of each semester and the application for it accompanied by proof that the applicant has passed satisfactorily the practical work connected with the subjects of the examination, must be sent to the examination committee within a period announced by the secretary of the university.

Adjunkteksamen.—The *adjunkteksamen* includes 3 of the subjects named below of which at least 2 must be included in the curriculum of the *middelskole* if the candidate wishes to prepare himself for appointment as *adjunkt*. The examination is written and oral, and the candidate may be examined in one or more subjects at a time according to his own choice. The written part of the examination consists of 2 themes or propositions in each of the 3 subjects of the examination. The subjects of this examination with their requirements are:

- (1) Mathematics:
 - (a) Elementary subjects, a 2-semester course of 2 hours of instruction per week.
 - (b) Analysis and infinitesimals, a 2-semester course of 5 hours of instruction per week.
 - (c) Geometry, a 2-semester course of 4 hours of instruction per week.
 - (d) Didactical course, 2 semesters of 1 hour of instruction per week.
- (2) Mechanics: A 4-semester course of 4 hours of instruction per week.
- (3) Physics: A 4-semester course of 4 hours of instruction per week including mechanics, acoustics, optics, study of heat, magnetism, and electricity; and a 1-semester course of about 300 hours of practical work.
- (4) Chemistry: About 180 hours distributed between 4 semesters, and a 1-semester course of about 300 hours of practical work.
- (5) Astronomy: A 4-semester course of 2 hours of instruction per week.
- (6) Geography: A 4-semester course of 4 hours of instruction per week, and a 1-semester course of 2 hours of instruction per week of practical work and field trips.
- (7) Mineralogy and petrography: A 3-semester course of 3 to 4 hours of instruction per week plus field trips and about 50 hours of practical work.

- (8) Historical geology and paleontology: A 3-semester course of 4 hours of instruction per week with field trips and practical work.
- (9) Botany: A 2-semester course of 5 hours of instruction per week plus about 80 hours of practical work and field trips.
- (10) Zoology and physiology:
 - Zoology, a 3- or 4-semester course of 3 hours of instruction per week plus about forty 2-hour periods of practical work and field trips.
 - Physiology, a 1-semester course of 2 hours of instruction per week.

Lektoreksamen.—The lektoreksamen includes the three subjects of the adjunkteksamen as minor subjects and an additional subject from the foregoing list as a fourth and major subject. A candidate wishing to use one of the subjects of his adjunkteksamen as hovedfag (major subject) must take an examination fulfilling the requirements of the adjunkteksamen in another subject before he may be examined in his major. The examination of a candidate wishing to prepare himself for appointment as lektor in a gymnasium must include at least two of the subjects contained in the curriculum of the gymnasium.

The hovedfageksamen (examination in the major) consists of a general and a special part, both of which may be taken during the same semester. The general part of the examination is identical with the adjunkteksamen in the subject and is graded in a similar manner. The special part of the examination in the major consists of (a) an oral examination, which according to the nature of the subject may be modified so as to include also a written test or a practical project, and (b) either a written theme or proposition on an assigned subject which must be completed within a limited time, or a thesis based on the scientific investigation of a self-selected subject covering some phase of the major field.

The oral examination covers the whole field of the major, with the requirements limited, however, to the extent that normally the student should be able to complete them within 3 or 4 semesters.

The subject of the written theme or proposition is decided on by the examiner and an appointed censor within a limited phase of a subject given by the candidate. The extent to which this specialization may be carried is decided by the examiner with the consent of the faculty. The subject

of the thesis may be selected by the candidate with the approval of the examiner within the entire field of the major.

A student may not present himself for examination in a subject more than three times. In case of reexamination the last mark received is the final mark for the written or oral examination in the subject. A student desiring reexamination in his major subject must apply for such reexamination before receiving the certificate for the lektoreksamen.

In grading, a separate mark ranging from 1 to 4 with 1 as the highest is given for the written and oral examination in a subject. The hovedkarakter (average and final grade) for the adjunkteksamen is the average of the six individual marks received in the examination.

For the examination in the major, three special grades, each of which may be expressed with one decimal, are given. One grade is the average of the two marks received in the oral and written parts of the general part of the examination, and in this the value of the decimal is raised if its second figure would be 5 or over. The two remaining grades represent the evaluation of the oral and written phases of the special part of the examination. The hovedkarakter for the examination in the major may be expressed with two decimals and is the average of the three grades received in the subject of the major.

The final grade for the lektoreksamen is the average of the two hovedkarakterer (final grades) received in the adjunkteksamen and in the examination in the major.

Application for the lektoreksamen presupposes that the applicant has not presented himself more than once for examination in a subject (in case he has presented himself more than once, the fact is to be indicated on his examination certificate), that he has produced an independent scientific piece of work in his major field, and that the final grade for the first section of the examination (adjunkteksamen) and each of the three special grades in the major is at least 1.5 and that no individual grade is less than 2.

The grades for the professional examination in mathematics-science with their numerical equivalents are:

Utmerket godt (excellent)	1. 00 to 1. 50
Meget godt (very good)	1. 50 to 2. 50
Godt (good)	2. 51 to 3. 25
Temmelig godt (pretty good)	3. 26 to 4. 00

Magister scientiarum (master of science).—The regulations governing preparation for this degree are included in the discussion of those governing preparation for the degree of *magister artium* (see pp. 13–15).

DEGREES IN LAW

Det juridiske fakultet (faculty of law).—The degrees conferred by the faculty of law are:

Kandidat juris (candidate in law), usually written “*cand. jur.*”, attained after about 3½ to 5 years of study, and success in the *juridiske embedseksamen* (professional examination in law).

Ökonomisk kandidat (candidate in economics), usually written “*cand. öecon.*”, requires about 3 years of preparation, and success in an examination called the *statsökonomiske eksamen* (examination in national economics).

Aktuar kandidat (actuary candidate), usually written “*aktuar cand.*”, requires about 5 years of preparation, and success in an examination called the *aktuareksamen* (actuary examination).

Doctor juris (doctor of law), usually written “*dr. jur.*”, may be attained by a *cand. jur.* or by a *cand. öecon.* after success in the public defense of a thesis based on personal investigation of a subject connected with some phase of the candidate's major field.

EXAMINATIONS

Juridisk embedseksamen (professional examination in law).—This examination is open to academic citizens (see p. 4) who have passed *forberedende prøver* in Latin and in philosophy (see pp. 7–9). The examination is both written and oral and includes the following subjects:

- General law
- Public and private laws of Norway
- History of Norwegian law
- Legal hermeneutics
- Positive folk law and national law
- Statistics
- National economy
- Roman law, including its history and antiquity

The chief emphasis in this examination is laid on the writing of a number of themes in the various branches of

legal sciences including 10 theoretical themes and 1 theme involving a practical case.

After the examination has been passed the degree of kandidat juris is conferred on the student. No special license beyond the degree is necessary for the pleading of minor cases in the lower courts before a county judge or before a deputy judge in the country. To plead in the higher and middle courts requires a certificate from the Department of Justice. To obtain this certificate one must have practiced for 3 years as a lawyer, pleaded a certain number of cases, and received certificates from the judges before whom the pleadings were held. To plead cases before the supreme court one must have received at least the grade "laudabilis" in the professional examination in law, have had at least 3 years of experience as a lawyer, and pleaded certain cases before the supreme court of which at least one must be for the defense and at least one for the prosecution. A committee of seven judges of the supreme court decides whether or not the candidate shall be granted the privilege of permanent permission to plead before the court. If the decision rendered by the committee is unfavorable the candidate may have another trial after the expiration of 2 years.

Statsökonomisk eksamen (examination in national economics).—This examination which is entirely independent of the professional examination in law was designed not to prepare the candidate for any particular profession but to offer him training that would afford an opening to various positions either in the service of the state or in private life. It has been offered by the faculty of law since 1908. It was given regularly only at the close of the spring semester of each year until 1924 when a royal resolution authorized it to be given also at the close of the fall semester. The fee for this examination is 30 kroner.

Requirements for admission.—The statsökonomisk eksamen is open to one who has passed the eksamen artium, registered at the university, and who in addition has fulfilled one of the following conditions:

- (1) Passed the forberedende prøver in philosophy and in Latin unless Latin was included in the eksamen artium. For this examination the forberedende prøve in Latin is based on the work of the first semester at the university; or

- (2) Passed the avgangseksamen (leaving examination) from Krigsskolens øverste avdeling (higher department of the Military School); or
- (3) Passed the avgangseksamen from Norges Tekniske Høiskole (Technical University of Norway).

The statsøkonomisk eksamen is open also to one who has not passed the eksamen artium, but who can qualify under the following conditions:

(1) Passed the avgangseksamen (leaving examination) with at least the hovedkarakter (final grade) meget godt (very good) from Norges Landbrukshøiskole (Agricultural University of Norway) or from one of the commercial or technical schools designated by the King.

(2) Passed the middelskoleeksamen (middle-school examination) unless special dispensation from the fulfillment of this requirement has been granted by the academic council.

(3) If the candidate comes from a school which does not offer sufficient instruction in mathematics and in foreign language he must have passed an examination in these subjects and received at least the grade nogenlunde tilfredstillende (quite satisfactory) in the written part of the examination and at least the grade tilfredstillende (satisfactory) in the oral part of the examination.

The requirement in mathematics may be fulfilled by passing an examination corresponding to the eksamen artium in mathematics in the language-history line, or by passing an examination covering a 1-semester course of 2 or 3 hours of instruction per week in elements of functions and analytical geometry. The requirements may be considered fulfilled by one who has passed the avgangseksamen at Norges Landbrukshøiskoles skogsbruks og utskiftningsavdeling (agricultural and land apportionment division of the Agricultural University of Norway), at Ås, or at the technical schools at Oslo and Bergen.

The language requirement may be fulfilled by an examination in French corresponding to the eksamen artium in that subject in the language-history line, or by an examination in English or German corresponding to the eksamen artium in those subjects in the real line. It may be considered fulfilled by one who has passed the avgangseksamen from the 2-year courses in German, French, and English at the Handelsgymnasium (Commercial Gymnasium) at Oslo, Bergen, Trondheim, Stavanger, or Kristiansand, or at the Kommunale (Communal) Handelsgymnasium at Sandefjord.

One who has passed the leaving examination from Sjøkrigsskolens nederste avdeling (lower department of the Naval

Warfare School) may take the statsøkonomisk eksamen without having passed the eksamen artium in enkelte fag (single or individual subjects) and without the forberedende prøve.

The examination.—The statsøkonomisk eksamen includes the following subjects:

Social economy—theoretical, historical, and practical science of finance.

Statistical methods.

Historical and statistical study of the economic conditions of the population of Norway.

Before presenting himself for the examination the candidate must produce in addition, evidence of having completed the 2-semester course of 3 hours of practical work per week in national economic statistics. With the approval of the faculty a candidate who is especially well prepared may take the examination after one semester of practical work in national economic statistics by presenting a statement from the instructor of the course that he has reached the degree of attainment that the course aims to give.

The examination consists of:

(1) Two written themes in social economics, one dealing with the theoretical phase and the other with the historical and the practical phases; and one written theme in the science of finance. These themes are to be written at the university without any kind of assistance and with a time limit for each of 9 hours.

(2) One or two written themes, according to the decision of the faculty or of the examination committee in each individual case, in each of the two other subjects listed above. The length of time within which each of these themes is to be written is decided by the faculty or by the examination committee.

(3) An oral examination which may cover all the subjects included in the statsøkonomisk eksamen.

When the examination has been passed the student is given a vidnesbyrd (certificate) with one of the following grades each having the indicated numerical value:

Utmerket godt (excellent).....	1.00 to 1.50
Meget godt (very good).....	1.51 to 2.50
Godt (good).....	2.51 to 3.25

In the final grade for this examination the marks for the written part of it carry double weight. If the average grade for the written part or for the entire examination is less than 3.25 the examination has not been passed.

Aktuareksamen (actuary examination).—The aktuareksamen has been offered since the fall of 1917. It is independent of the professional examination in law, is considered a rather difficult examination, and is taken by comparatively few students. It consists of a mathematics-science section given by the mathematics-science faculty and of a social videnskabelig avdeling (social science section) given by the faculty of law. The candidate may choose the order in which he wishes to be examined in these two sections.

The regulations governing the application for this examination are the same as those for the professional examinations of the two faculties concerned. The fee for a candidate taking both parts of the examination is 50 kroner while that for one who may use a previously passed university examination as a part of his aktuareksamen is 20 kroner.

Requirements for admission.—The aktuareksamen is open to any one who has matriculated at the university and has passed the forberedende prøver in philosophy and Latin required by the faculty of law (see pp. 7-9).

One who has fulfilled the above requirements and in addition has passed the statsøkonomisk eksamen may pass the aktuareksamen by taking a tilleggseksamen (supplementary examination), including the mathematics section of the aktuareksamen and bookkeeping.

One who has passed the embedseksamen in mathematics-science (see p. 16) with mathematics as a major or minor may pass the aktuareksamen by passing the social science section of the aktuareksamen, the examination in actuary mathematics, and an examination in bookkeeping.

The examination.—The mathematics section of the aktuareksamen includes general and actuary mathematics. The requirements for general mathematics are the same as those for the general section (adjunktseksamen) of the embedseksamen in mathematics-science (see pp. 16-18).

Preparation for the examination in actuary mathematics requires 4 semesters of about 6 hours of instruction per week. The examination is offered once a year at the close of the fall semester. It is both written and oral and includes the rule of probabilities, the study of adjustments or equalization, interpolation, statistics, and insurance mathematics.

To be eligible for this examination the candidate must have passed the examination in general mathematics. He also must present evidence of having attended the seminary in insurance mathematics 5 hours per week for 2 semesters, or in some other manner prescribed by the examiners and censors prove to their satisfaction that he has the required skill and mastery of technical insurance mathematics. The written part of the examination lasts 4 days during each of which the student is given 10 hours in which to write one or more themes or propositions.

The social science section of the aktualeksamen includes the statsøkonomisk eksamen (see pp. 21-23) and a written examination in bookkeeping based on a 2-semester course of 2 hours of instruction per week. The examination in bookkeeping may be taken either as a separate examination or in connection with the social-science section of the aktualeksamen. A certificate of having passed the examination in bookkeeping at a commercial school offering at least a 1-year course in bookkeeping and authorized to give examinations may be accepted as fulfilling the above requirement.

General mathematics is graded according to the regular system of grading in the mathematics-science faculty (see p. 19). In actuary mathematics a separate mark with one decimal is given for each of the oral and written parts of the examination. The average of these two marks with that for the written part carrying double weight is the final grade for actuary mathematics and must be at least 3.25. In determining the grade for the mathematics-science section of the aktualeksamen the grade for actuary mathematics carries double weight.

The grading of the subjects included in the social-science section of the aktualeksamen is the same as for those of the statsøkonomisk eksamen (see p. 23).

The final grade for the aktualeksamen is the average of the grades for the two sections of the examination excluding the grade for bookkeeping.

The certificate of having passed the aktualeksamen is made out jointly by the mathematics-science faculty and the faculty of law. It is signed by the deans of the 2 faculties and by 1 of the instructors in actuary mathematics.

DEGREES IN MEDICINE

Det medisinske fakultet (faculty of medicine).—The number of students to be admitted to the study of medicine is limited to about 60 each year. The regulations governing the selection of those to be admitted are determined by the academic council. The degrees conferred by the faculty of medicine are:

Medisinsk kandidat (candidate in medicine) usually written "cand. med.", requires from 7 to 7½ years of study beyond the eksamen artium and success in an examination called the medisinske embedseksamen (professional examination in medicine).

Doctor medicinae (doctor of medicine) usually written "dr. med.", may be attained by a medisinsk kandidat who through personal research has made some definite contribution to medicine and has written and publicly defended a thesis based on this research.

EXAMINATIONS

Medisinsk embedseksamen (professional examinations in medicine).—One who has passed this examination may obtain a license to practice medicine in Norway as a laege (physician) from the Department of Social Affairs on presentation of evidence that he has passed the medisinske embedseksamen, that he has performed the required practical work, and that he is of good character. In addition he must promise in writing to perform the duties of a physician according to the dictates of honor and conscience.

The medisinske embedseksamen is offered at the end of each semester. It is given in three sections. Section I consists of two parts, of which the first is an examination in chemistry and physics, and the second an examination in anatomy and physiology. The examination in chemistry and physics must be passed before a student is eligible to enter the practical courses in physiology. The application for this examination must be accompanied by evidence that the two courses included in the examination have been passed and by a receipt from the treasurer of the university showing that the examination fee has been paid.

The application for part 2 of section I of the examination must be accompanied by bevis for bestått forberedende prøver (certificate of having passed the preliminary exami-

nations) in Latin and philosophy (see p. 7), and by proofs of having passed the practical courses in anatomy and physiology. After passing the examinations in section I the student may participate in the practical work at the clinical divisions at the Rikshospital (National Hospital at Oslo.)

Section II of the examination includes:

- General pathology and pathological anatomy
- Medical pathology and therapeutics
- Surgical pathology and therapeutics
- Dermatology
- Ophthalmology
- Pharmacology and toxicology

It also includes a written theme or proposition in one of the subjects of the section. The application for permission to take this examination must be accompanied by evidence of having passed the practical courses in pathological histology, bacteriology, and surgery.

Section III of the examination includes:

- Clinical medicine
- Clinical surgery
- Hygiene and bacteriology with immunology
- Obstetrics
- Gynecology
- Pediatrics
- Medical jurisprudence
- Psychiatry
- Otology and rhinology

The application for this section of the examination must be accompanied by evidence of having passed the practical course in hygiene. The examination in section III may be taken at the close of the semester following that in which section II of the examination was passed. If it has not been taken by the end of the second semester after that in which section II of the examination was passed credit for examination in the sections already passed is forfeited and the examinations of these sections must be retaken if the student wishes to pass the medisinske embedseksamen.

In addition to the courses and practical work mentioned above preparation for the medisinske embedseksamen includes practical courses in microscopic anatomy, physiological chemistry, chemical analysis, and dissection, including

at least one dissection with accompanying demonstration and record. The preparation includes also the following clinical work:

Medical division, 2 semesters

Surgical division, 2 semesters

Divisions for eye, head, ear, nose, and throat diseases, one half semester or its equivalent.

Children's division, and the obstetrics and gynecology division, 1 semester.

Psychiatric clinic, 1 semester, with the number of hours per week to be decided by the faculty

In order to receive an eksamenstestimonium (certificate of having passed the embedseksamen in medicine) evidence must be forwarded to the secretary of the faculty from the head physician of the departments concerned showing that the required practical clinical work and the post-mortem examinations have been performed satisfactorily.

The oral examinations are graded by the instructor of the course aided by a censor. The written examinations are graded by three censors of whom at least one must be a member of the faculty. For each subject included in the examination the student is given a grade ranging from 1 to 12 with 12 as the highest grade. The grade for a subject is the average of the marks given for the subject by each censor. In making out the average anything less than 0.5 is disregarded and 0.5 to 1 is regarded as 1. A grade of 1 for a subject is declared umoden (immature) and a student receiving it is not eligible for the examination of the following semester.

With a grade of 5 or less for one of the subjects in part 1 of section I of the examination the student must be reexamined in both subjects. The same holds true for part 2 of section I. The student may present himself for examination not more than three times in each of the two parts of this section.

A grade of 5 or less in one subject included in sections II or III requires reexamination in the subject the following semester, and unless the student then receives a grade that will average at least 6 with his previous grade in the subject he must be reexamined in all the subjects of the section. If in this second reexamination, which in the case of section III must come the following semester, he should receive 5 or less in a subject he forfeits the grades received in the section or sections already passed.

The hovedkarakter (average and final grade) for the examination is the sum of the products obtained by multiplying the grade received in each subject by the following numbers:

In section I the grades received in anatomy and physiology are each multiplied by 1.5 and those for the oral examination in chemistry and physics by 0.5. To pass this section of the examination the sum of the products must be at least 24.

In section II the grades for all subjects, including that for the written opgave, are multiplied by 1 except the grades for dermatology and ophthalmology, which are multiplied by 0.5. To pass this section of the examination the sum of the products must be at least 48.

In section III the grades received in clinical medicine, clinical surgery, obstetrics, and hygiene and bacteriology with immunology, are multiplied by 1 and the grades for the remaining subjects by 0.5. To pass this section of the examination the sum of the products must be at least 39.

If the sum of the products of a section is less than the standard for passing, the examination for that section must be retaken. In the case of section III the reexamination must come the following semester. If a passing grade is not received in the reexamination, credit for examination in the section or sections already passed is forfeited.

The grades for the medisinske embedseksamen with their numerical equivalents are:

Laudabilis cum litteris commendatitiis.	203.5 and above
Laudabilis.....	166.5 to 203
Haud illaudabilis.....	129.5 to 166
Non contemnendus.....	111.0 to 129

When a student receives 203.5 or above as his final grade for the medisinske embedseksamen, mention of the fact is made to the King.

DEGREES IN THEOLOGY

Det Teologiske fakultet (faculty of theology).—The degrees conferred by the faculty of theology are:

Teologisk kandidat (candidate in theology), usually written "cand. theol.", requires about 5 years of study and success in an examination called the teologiske embedseksamen (professional examination in theology).

Doctor theologiae (doctor of theology), usually written "dr. theol.", may be attained by a candidate in theology after

success in the public defense of a thesis based on personal investigation of a subject connected with some phase of the candidate's major field.

EXAMINATION

Teologisk embedseksamen (professional examination in theology).—A candidate who has passed the teologiske embedseksamen may prepare himself for ordination and church appointment in Norway by passing the practical theological examination either at the Praktisk Teologiske Seminar (Practical Theological Seminary, see p. 75) or at the Teologiske Menighets Fakultet (Theological Congregational Faculty—see p. 77). He may prepare himself for teaching by passing the pedagogical examination at the Pedagogiske Seminar (Pedagogical Seminary, see p. 67); he may obtain the rights accompanying the adjunkteksamen by passing the examination in history or in one of the languages included in the adjunkteksamen, or he may obtain those of the lektoreksamen by passing the examination in the major in one of the subjects of this examination.

Requirements for admission.—The teologiske embedseksamen is offered at the end of each semester at a time previously announced by the faculty. Application for the examination must be in writing and must be given by the candidate in person to the secretary of the faculty. The application must contain a brief biography of the candidate and account of his studies and of the subjects selected for special study. It must be accompanied by certificates of having passed the eksamen artium and the forberedende prøver in philosophy, Latin, Hebrew, and Greek (see pp. 7-9), and by a receipt from the treasurer of the university showing that the examination fee has been paid.

The examination.—The examination gives the candidate an opportunity to display his information in Old and New Testament exegesis in the original language together with related general information. It includes all of the New Testament but only such portions of the Old Testament as are decided on by the academic council on recommendation of the theological faculty. It also includes dogmatics, history of dogma, ecclesiastical history, Christian morality, and natural theology. The written part of the examination consists of:

A. Four hovedopgaver (major themes or propositions) to be answered within 10 hours; each based on one of the following subjects:

- (1) Old Testament
- (2) New Testament
- (3) Ecclesiastical history or the history of dogma
- (4) Systematic theology either in dogmatics or in one of the two other systematic subjects selected by the candidate for special study

B. Two biopgaver (minor themes or propositions) to be answered within 5 hours:

- (1) One opgave in general science of religion and in history of religion, or in one of the New Testament subjects
- (2) One opgave in church history or in systematic theology

A student who has majored in the Old Testament or in ecclesiastical history is assigned two written themes or propositions in the subject of his major and is given only an oral examination in his minor subject.

The extent to which a student may use the Hebrew lexicon or concordance in answering his propositions in the Old Testament is decided by the theological faculty.

The subjects included in the oral examination are the Old and New Testament, ecclesiastical history and history of dogma, and systematic theology.

Preparation for the teologiske embedseksamen may include a thesis based on the investigation of a subject selected by the student, barring a work for which a university medal has been awarded or which has been accepted at the university as a doctoral dissertation. This thesis with a bibliography of the material used must be delivered to the dean of the faculty before the beginning of the semester in which the examination is to be taken.

In grading, a separate mark ranging from 1 to 5 with 1 as the highest is given for the written and oral examination in a subject. The final grade for the entire examination is the average of the 10 individual marks and is expressed according to its numerical value by one of the following terms:

Laudabilis prae ceteris	1
Laudabilis	2
Haud illaudabilis primi gradus	3
Haud illaudabilis secundi gradus	4
Non contemnendus	5

To receive a final grade of *laudabilis præ ceteris* the candidate must receive this grade in at least five of his tests and each of the other marks must be at least *laudabilis*.

A grade of *immaturus* is given for work that does not come up to the standard of *non contemnendus*. With an *immaturus* in either a written or oral *prøve* (test) in this examination the *teologiske embedseksamen* cannot be passed.

If a thesis has been produced the grade for this is not included in the final grade for the examination but is indicated separately on the examination certificate together with the title of the dissertation and a mark of *Approbatur*, *Approbatur cum Laude*, or *Approbatur magna cum Laude*.

When receiving his certificate of having passed the professional examination in theology the candidate must promise to live and teach in accordance with the Scriptures.

The *teologiske embedseksamen* may be taken in 2 parts with not more than 1 semester intervening. In this case part I includes examination in the Old and New Testament and in general science of religion, part II includes examination in the remaining subjects. If there is a thesis, that must be handed in before the beginning of the semester in which the examination is to be completed.

LAPP AND QUAINISH

Eksamen i Lappisk og Kvensk (examination in Lapp and Quainish).—*Kvensk* (Quainish) is a language quite similar to Finnish and is spoken by the *Kvæner* (Quains), a group of people in the northern part of Norway who are of Finnish descent. *Lapp* is the language of the *Lapps* who are found also in the northern part of Norway.

Examination in either of these languages is given by the instructor of these languages whenever there is a candidate who wishes to be examined in one or both of them. The examination is given at a time decided on by the examiner. In either language the examination consists of:

- (a) Reading and translation of books published in the language
- (b) Grammatical forms and construction
- (c) Translation from Norwegian into the language in which the examination is being given

Whenever censors are available the instructor is to be assisted in giving the examination by such censors. When

the examination has been passed a certificate of having passed the examination in the language in which the examination was taken is made out by the examiner and the censors. For this examination the candidate may receive one of two grades—*laudabilis* or *haud illaudabilis*.

THE DOCTORATE¹

Akademisk disputation og doktorpromosjoner (*academic disputation and promotion to the doctorate*).—The degree of doctor is not very common in Norway. It is conferred most frequently by the faculties of mathematics-science, medicine, and history-philosophy. The degrees of doctor juris and doctor theologiae are comparatively rare.

A student who has passed the *embedseksamen* in any one of the five faculties with at least the grade *laudabilis* or *meget godt* (very good) is eligible as candidate for the doctorate in the faculty in which his *embedseksamen* was passed; so is also a student who has attained either the degree of *magister artium*, or of *magister scientiarum*, or who has passed the *statsøkonomisk eksamen* with at least the grade *meget godt*. A candidate who has not passed the *embedseksamen* with the required grade or who does not have one of the above examinations to his credit may be permitted to work for the doctorate if the faculty concerned finds that he is qualified on other grounds.

One may prove that he is qualified as candidate for the doctorate also by developing satisfactorily 3 written themes or propositions in 3 different subjects in the field of the doctorate. The propositions are assigned by the faculty or by appointed censors and the candidate may have 10 hours within which to answer each proposition. No references are to be used except such as may be permitted by the faculty or censors.

Upon recommendation of the faculty of history-philosophy the academic council may confer the degree of doctor of philosophy on a candidate who has passed other examinations than those already mentioned or who by earlier performed scientific work has demonstrated that he has the required informational insight and preparation. Before such recommendation is made by the faculty the qualifica-

¹ Not shown on the graph (page VIII).

tions of the candidate must be investigated by a competent faculty committee.

To obtain the doctorate the candidate must write and publicly defend a thesis based on personal research and dealing with a subject covering some phase of his major field. The thesis may be written in any language approved by the faculty. When it is written in a foreign language the faculty may request that an abstract written in Norwegian accompany it. Most theses are written in English, German, or French, for in this way they reach more people than if they were written in Norwegian.

When a thesis has been approved either by the faculty concerned or by a committee of censors appointed by the faculty, the candidate must give two *prøve forelaesninger* (public lectures) of which one shall be on a subject of his own choice and the other assigned either by the faculty or by the censors. The candidate may have 10 days in which to prepare his discourse on the assigned subject.

Success in the public lectures is followed by a public disputation. This is opened and closed by two opponents appointed by the faculty. Members of the audience may oppose the candidate *ex auditorio* by making arrangement with the leader of the disputation before its opening. The defense may be conducted in Norwegian or in a language approved by the faculty. The opponents are not to use a language other than Norwegian or that used by the candidate except with the consent of the latter.

The disputation is generally conducted by the dean of the faculty concerned. The dean, or whoever is in charge, is responsible for seeing that the disputation proceeds according to prescribed regulations, that dignity and order are maintained throughout, and that the disputation does not last more than 6 hours.

After the thesis, the lectures, the public disputation, and the three written themes or propositions in cases where the themes or propositions are required, have been approved, the result is reported by the faculty concerned to the academic council and the latter decides as to whether or not the doctorate shall be conferred on the candidate. The diploma for the doctorate is prepared by the academic council, signed by the rector, and countersigned by the secretary of the university.

If a thesis is not accepted, a period of 2 years must elapse before the author may present a new thesis for approval. No thesis may be accepted which has been used previously in fulfillment of an examination requirement or for which a university medal has been awarded.

On the recommendation of a faculty an honorary doctor's degree in the faculty concerned may be conferred on a foreigner.

II. NORGES TEKNISKE HÖISKOLE (TECHNICAL UNIVERSITY OF NORWAY)

General data.—Norges Tekniske Høiskole at Trondheim was founded by royal resolution on May 31, 1900, and opened on September 15, 1910. Its object is to impart instruction based on scientific and architectural foundations for the training of engineers and architects, and to further the development of technical science and architecture. It is administered by a rector with the assistance of the professorutvalg (faculty committee) and of the professorråd (faculty council). The faculty committee is composed of the chairmen of the seven departments of instruction, while the faculty council is composed of all of the professors at the Technical University.

A fall term from September 1 to December 18 and a spring term from January 12 to June 15 with 10 days of vacation at Easter comprise the academic year.

Requirements for admission.—Admission as fast studerende (regular student) is dependent on a certificate of having passed the eksamen artium in the real line, or on having passed the eksamen artium in one of the other lines of study at the gymnasium with supplementary examinations in the real or scientific subjects. One who in a foreign country has passed an examination corresponding in content to the eksamen artium and which would admit him to a technical university or college in the country in which the examination was passed may be admitted on presentation of his credentials, including a certificate of good character.

In exceptional cases, and especially in the case of a more mature applicant possessing technical experience and who has displayed unusual ability for technical study, dispensation from the above requirements may be granted by the Department of Church and Education on the recommendation of the

faculty council when the applicant has shown that he has preparation equivalent to the eksamen artium by:

- (1) An oral examination in English and German.
- (2) A written and oral examination in mathematics and physics.
- (3) A written examination in Norwegian.

The conditions under which one who has passed the avgangseksamen (leaving examination) from one of landets krigsskoler (military schools of the kingdom) or from Norges Landbrukshøiskole (Agricultural University of Norway) but who has not passed the eksamen artium is eligible for admission to the Technical University is decided by the Department of Church and Education.

Application for admission to Norges Tekniske Høiskole is made in writing to the rector within an announced period of time, generally by July 20 of each year. The application must be accompanied by eksamensvidnesbyrd (certificate of having passed the eksamen artium), certificates of practical work and of other preparation, and any other information that may aid the authorities of the Technical University to evaluate the qualifications of the applicant for profitable participation in the instruction offered. The applicant must indicate also in which department of instruction he wishes to study, and, when necessary, in which line of study offered by the department.

After admission to a department, transfer to another department is dependent on conditions set by the faculty council.

Hospitanter (temporary students) who are qualified may be admitted to instruction in one or more subjects with the consent of the instructor and of the rector, provided there is room in the classes they wish to enter.

A fee of 75 kroner per semester payable in advance is charged before a student may participate in instruction. This includes the fee for each part of the examination. In case of reexamination there are additional fees of 40 kroner for the first and 60 kroner for the second part of the examination.

Departments of instruction.—Instruction at Norges Tekniske Høiskole is divided between the seven departments named below and is conducted by means of lectures, laboratory work, examinations, and field trips. The work of each department is arranged into a 4-year course with an additional eksamenssemester (examination semester) in the departments

of mining, electro-technics, machines and shipbuilding, and the lines of technical physics. The work of a course may be covered in less than 4 years, but frequently a student requires 5, 6, or even 7 years.

Ordinarily the examination for each department is given in two parts which are completed at the end of the second and fourth years, respectively. Each part of the examination is further subdivided so that examination in certain groups of subjects may be taken at the close of the first and third years of study.

The following is a list of the departments with the degree conferred by each, the amount of practical experience required, and the subjects of instruction offered. The number or numbers following each subject represent the number of hours of instruction per week for one semester that the course includes. The first number represents the number of lectures, while the number in parentheses represents the number of hours of practical or laboratory work.

LARKITEKTUR (ARCHITECTURE) DEGREE CONFERRED: ARKITEKT (ARCHITECT)

At least 8 months of practical experience are required for admission to the department and before taking examination in part I, group 2, it is necessary, as a rule, to have had 9 months of practical experience as a mason, carpenter, or joiner in the building trade.

Subjects studied during years 1 and 2

Mathematics.....	2	(2)
Descriptive geometry.....	5	(7)
Mechanics.....	3	(5)
Rocks and orology.....	1	
Freehand drawing.....		(14)
Drawing from sculpture and living models..		(5)
Water-color painting.....		(6)
Architectural forms and history of archi- tecture.....		(18)
House building.....	8	(30)
Surveying.....	1	(2)
Building engineering.....	6	(4)
Free and applied art *.....	1	
Building statics.....	5	(6)
Bookkeeping.....	1	(2)
Study of building materials.....	2	
Testing of building materials.....		(3)

* Optional.

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Subjects studied during the years 3 and 4

Old Norse wood building.....	2	(2)
Building administration.....	2	
City planning.....	2	(4)
Architecture.....	10	(65)
Sculpture.....		(10)
Stress in iron.....	3	(4)
Free and applied art *.....	2	
Law, social science, finance, statics.....	8	(1)
Electrical installations.....	4	
Installing of heat and sanitary systems.....	4	(2)
Architecture and its historical development, 1650-1830.....	2	
Fire prevention *.....	2	
Housing problem *.....		

II. BERGFAG (MINING) DEGREE CONFERRED: BERGINGENIÖR (MINING ENGINEER)

At least 9 months of practical experience, 6 months of which must be shop work, are required for admission to this department. Before examination may be taken in the last group of subjects in the examination 12 months of practical experience are required, of which 6 months are to be devoted to shop work and 6 months to construction work and metallurgical installation at a mine.

Subjects studied during the years 1 and 2

Mathematics.....	8	(6)
Descriptive geometry.....	3	(3)
Mechanics.....	5	(5)
Physics.....	8	(7)
Chemistry.....	5	(5)
Surveying.....	7	(9)
Machine elements.....	4	(7)
Machine design.....	2	(3)
Power machines.....	2	
Bookkeeping.....	1	(2)
Mechanical technology.....	3	(1)
Mineralogy and crystallography.....	4	(4)
Technical writing (hours to be arranged).....		
House building.....	2	(3)
Building engineering.....	4	(2)
Testing of building materials.....	1	(2)
Ambulance course (5 weeks of field work).....		

* Optional.

Subjects studied during the years 3 and 4

Electrotechnics.....	4	(3)
Petrography.....	2	(1)
Mining.....	10	(4)
Mining law.....	4	
Mining surveying.....	2	(2)
Construction.....	9	
Geology, including geology or ores.....	32	
Mineral and mining microscopy.....	4	(1)
Construction laboratory (hours to be arranged).		
Metallurgy (laboratory hours to be arranged)	12	
Law, social economics, finance, and statistics.	8	(1)
Physical and electrical chemistry *.....	1	

III. BYGNINGSINGENIÖRFAG (BUILDING ENGINEERING) DEGREE CONFERRED: BYGNINGSINGENIÖR (BUILDING ENGINEER)

Subjects studied during the years 1 and 2

Mathematics.....	12	(10)
Descriptive geometry.....	4	(7)
Mechanics.....	11	(14)
Physics.....	8	(7)
Freehand drawing.....		(3)
Building statics.....	5	(6)
Wood and iron bridges.....	2	
Housebuilding.....	5	(9)
Machine elements.....	4	(4)
Machine design.....	2	(3)
Technical writing (hours to be arranged).....		
Mineralogy and geology.....	4	(2)
Power machines.....	2	
Building materials.....	2	
Testing of building materials.....		(3)
Mechanical technology.....	3	
Surveying †.....	6	(9)
Bookkeeping.....	1	(2)
Chemistry.....	4	

* Optional.

† About 5 weeks of additional practical work in the field are required in surveying during the summer vacation following the fourth semester.

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Subjects studied during the years 3 and 4

City planning.....	2	
Building statics.....	4	(4)
Wood and iron bridges.....	6	(10)
Stress in iron.....	4	(6)
Surveying.....	1	
Massive bridges.....	6	(5)
Electrotechnics.....	4	
Law, social economics, finance and statistics.....	8	(1)
Road and railway construction.....	16	(8)
Hydraulic construction.....	14	(6)
Installation of heating and sanitary systems.....	4	

Electives

Selected chapters on massive bridges and on stress in iron.....	2	(6)
Selected chapters on road and railway construction.....	2	(6)
Selected chapters on surveying and geodesy.....	2	(4)
Ascertaining positions by astronomy.....	1	
Hydraulic construction.....		(6)
Building statics.....		(6)
Equalization mathematics.....	2	(1)
Wood and iron bridges.....		(6)

Optional subjects

Practical work in the installation of heating and sanitary systems.....		
Practical work in hydraulic construction laboratories.....		
Practical work in city planning.....		
Mathematics.....		
Technics of fire prevention.....		
Form and architectural design.....	1	

IV. ELEKTROTEKNIKK (ELECTRO-TECHNICS) DEGREE CONFERRED:
ELEKTROINGENIÖR (ELECTRICAL ENGINEER)

At least 9 months of practical experience are required for admission to the department and before examination may be taken in the last group of subjects the candidate must have had at least 3 months of additional practical experience. The work may be performed at a mechanical or electrical shop recognized by the department or it may be divided between 6 months at a shop recognized by the department and 6 months as an artisan, as an employee in a drawing office, or the like.

Subjects studied during the years 1 and 2

Mathematics.....	12	(10)
Descriptive geometry.....	4	(7)
Mechanics.....	12	(14)
Physics.....	8	(10)
Chemistry.....	4	
Machine parts.....	9	(18)
Fundamentals of electro-technics.....	6	(2)
Alternating currents.....	2	
Electrical installations.....	2	
Mechanical technology.....	7	(2)
Lifting machines*.....	2	
Testing of materials.....	1	(2)
Surveying.....	1	(2)
Bookkeeping.....	1	(2)
Housebuilding.....	2	
Building engineering.....	2	
Electro-technical laboratory.....		(3)

Subjects studied during the years 3 and 4

A. Sterkstrømlinje (Strong current line)

Electro-machine construction.....	10	(12)
Alternating current technics.....	12	(4)
Electro-technical laboratory.....		(22)
Electrical installations.....	8	(10)
Electrical railways.....	4	
Weak current technics.....	1	
Thermodynamics.....	3	(2)
Water-power machines.....	4	(3)
Steam and water-power laboratory.....		(3)
Law, social economics, finance, and statistics.....	8	(1)

Electives

Technical hydraulics.....	4	
Water-power installation.....	4	
Turbine regulators.....	4	
Steam-power machines.....	3	
Turbo-motors.....	4	
Hydraulic construction.....	4	
High frequency and radio technics.....	2	
Mathematics.....	2	(2)
Tool machines.....	4	(1)

* Optional.

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Subjects studied during the years 3 and 4—Continued

B. Svaktstrømlinje (Weak current line)

Electro-machine construction	10	(6)
Alternating-current technics	12	(4)
Electro-technical laboratory		(22)
Electrical installations	8	(10)
Mathematics	2	(2)
High frequency and radio technics	2	
Weak current technics	4	(12)
Law, social economics, finance, and statistics	8	(1)

Electives

Electrical railways	4	
Water-power machines	4	(3)
Technical hydraulics	4	
Turbine regulators	4	
Steam engines	3	
Turbo-motors	5	
Water-power installations	4	
Thermodynamics	3	(2)
Steam-power laboratory		(3)
Manufacturing	2	
Tool machines	4	(1)
Acoustics	4	

V. KJEMI (CHEMISTRY), DEGREE CONFERRED: KEMIINGENIÖR (CHEMICAL ENGINEER)

This department offers three lines of instruction:

1. Uorganisk og elektrokjemisk linje (inorganic and electro chemical line)
2. Almindelig kjemisk linje (general chemical line)
3. Organisk kjemisk linje med næringsmiddelkjemi (Organic chemical line with chemistry of nutrition)

Subjects studied during the years 1 and 2

Mathematics	12	(10)
Mechanics	5	(5)
Physics	8	(10)
Chemistry	20	
Machine elements	4	(4)
Machine design	2	
Power engines	2	
Mineralogy and crystallography	6	(2)
Ambulance course (about 10 hours)		
Bookkeeping	1	(2)
Housebuilding	5	
Building engineering	2	
Testing of materials	1	(2)

Subjects studied during the years 3 and 4

Chemistry.....	26	
Combustible materials.....	4	
Metallurgy.....	12	
Paper manufacturing.....	2	
Electrotechnics.....	4	(3)
Mathematics (optional).....	2	(2)
Chemico technical apparatus.....	2	
Means of nourishment and enjoyment.....	4	
Botany and physiology of fermentation.....	2	(2)
Law, social economics, finance, and statistics	8	(1)
Mathematics*.....	2	(2)

In addition chemical laboratory daily except on Saturday.

VI. MASKINTEKNIKK OG SKIBSBYGNING (MECHANICAL TECHNICIS AND SHIP BUILDING)

- A. Linje for maskiningeniører (line for mechanical engineers)
Degree conferred: Maskiningeniør (mechanical engineer)
- B. Linje for skibs- og skibsmaskiningeniører
(Line for naval and naval mechanical engineers)
(Degree conferred: Skibsingeniør (naval engineer))

At least 9 months of practical experience are required for admission to the department and before examination in the last group of subjects may be taken it is necessary to have had at least 3 months of additional practical work. The practical work for the machine engineering line may be performed in a mechanical shop recognized by the department and that for the ship building line may be performed either in a ship yard or in a mechanical shop approved by the department.

Subjects studied during the years 1 and 2

The course is the same for both lines except in the subjects indicated.

Mathematics.....	12	(10)
Descriptive geometry.....	4	(7)
Mechanics.....	12	(14)
Physics.....	8	(10)
Chemistry.....	4	
Machine parts.....	9	(24)
Lifting machines.....	2	
Thermodynamica.....	3	(2)

* Optional.

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Subjects studied during the years 1 and 2—Continued

Mechanical technology.....	7	(2)
Housebuilding (line A).....	2	
Building engineering (line A).....	4	
Bookkeeping.....	1	(2)
Surveying (line A).....	1	(2)
Testing materials.....	1	(2)
Shipbuilding (line B).....	2	

Subjects studied during the years 3 and 4

A. Line for machine engineers

Steam engines and boilers.....	11	(15)
Combustion power engines.....	4	
Water power engines and pumps.....	12	(12)
Steam, waterpower, and oil-engine laboratory.....		(10)
Tool machines.....	4	(3)
Building engineering.....		(3)
Electrotechnics.....	6	(3)
Law, social economics, finance, and statistics.....	8	(1)
Selected project.....		(6)

ELECTIVES

Carburetor machines with laboratory.....	2	(6)
Water construction.....	4	
Heating and ventilation.....	4	(2)
Steam locomotives.....	2	(2)
Compressors.....	4	

Optional subjects

Combustion materials.....	4	
Hydrodynamics.....	2	
Compressors.....	4	
Mathematics.....	2	(2)
Paper manufacturing.....	2	

B. Line for naval engineers

Shipbuilding.....	14	(36)
Steam boilers.....	3	(3)
Steam engines.....	5	(10)
Tool machines.....	4	(3)
Hydrodynamics.....	2	
Naval machine construction.....	12	(27)
Manufacturing.....	2	
Electrotechnics.....	4	(3)
Navigation equipment for ships.....	2	
Law, social economics, finance, and statistics.....	8	(1)

Subjects studied during the years 3 and 4—Continued

Optional subjects

Water power engines and pumps.....	8	(10)
Compressors.....	4	
Combustion materials.....	4	
Mathematics.....	2	(2)
Building statics.....	4	(4)
Oil machines.....	2	

VII. DEN ALMINDELIGE AVDELING (GENERAL DEPARTMENT)

This department includes a linje for teknisk fysikk (a technical physical line) and mathematical, scientific, and general educational subjects which belong to no particular department.

Subjects studied during the years 1 and 2

During these two years the student may follow the work as outlined in one of the departments offering complete courses in mathematics, mechanics, and physics (departments III, IV, or VI). A student from department II or V may transfer to the technical physical line but before the end of the sixth semester a student transferring from department II must pass an examination covering the requirement in mathematics and mechanics and a student transferring from department V must pass an examination covering the requirement in mechanics.

Subjects studied during the years 3 and 4

Mathematics.....	4	(4)
Mechanics.....	2	
Instrument-making.....		(3)
Chemistry.....	10	(12)
Law, social economics, finance, and statistics.....	8	(1)
Theoretical physics (with laboratory in addition).....	4	

In addition to the above, examination must be taken also in a number of elective subjects according to more specific examination regulations.

Doctor technicae (doctor of technology) usually written "dr. techn."—In 1922 Norges Tekniske Høiskole was authorized to confer the degree of doctor in technical and other sciences

of outstanding importance in the activities of the Technical University. One who has bestått avgangseksamen (passed the leaving examination) at Norges Tekniske Høiskole with at least the grade tilfredsstillende (satisfactory) is eligible as candidate for this degree. A regular student at the Tekniske Høiskole who has not received the required grade for his avgangseksamen or who has no avgangseksamen to his credit may be admitted as a candidate for the doctorate by the faculty committee if it finds that he has fulfilled the requirements in some other way. An applicant may prove his eligibility also by successfully developing three opgaver (themes or propositions) on assigned subjects in his major field.

Application for candidacy for the doctorate must be sent to the faculty committee accompanied by a brief account of the candidate's life and scholastic training and by a declaration that the thesis which also must accompany the application was written by himself as the result of personal investigation of the subject covered.

The thesis may be written in English, French, German, or in one of the Scandinavian languages. If the thesis is written in a foreign language the committee may request that an abstract of it be made in Norwegian and that the committee be presented with at least five printed or typewritten copies.

The procedure for obtaining the doctorate in technology including the two public lectures, the public defense of the thesis, and the assignment and writing of the three themes or propositions in cases where these are required is quite similar to that for obtaining the doctorate in one of the faculties at the Royal Frederik University at Oslo. The requirement that in case a thesis is not accepted 2 years must elapse before the author may present a new thesis for approval is also the same.

Three censors are appointed by the faculty committee to judge the thesis and any other work connected with the doctorate that may be assigned to them by the faculty committee. When all the requirements for the degree have been fulfilled the censors report to the faculty committee and the latter decides as to whether or not the degree shall be conferred.

A foreigner who wishes to be examined for the doctorate must present satisfactory evidence of his training and scholas-

tic activities to the faculty committee and pay an examination fee of 300 kroner.

III. NORGES LANDBRUKSHÖISKOLE (AGRICULTURAL UNIVERSITY OF NORWAY)

General data.—Norges Landbrukshöiskole at Ås was founded in 1854, and opened in 1859. It began as a higher agricultural school and functioned as such until 1897, when it was reorganized into a university. Its object is to impart scientific instruction and to further scientific research in each of its five departments of agriculture (jordbruksavdelingen), forestry (skogbruksavdelingen), horticulture (hagebruksavdelingen), land redistribution (utskiftningsavdelingen), and dairying (meieravdelingen).

The Agricultural University is under the control of Landbruksdepartementet (Department of Agriculture) and under the immediate direction of its rector, professorutvalg (faculty committee), and professorråd (faculty council). The rector is appointed for 3 years at a time by the King from among three candidates nominated by the faculty. The faculty committee consists of the rector as chairman and of two of the permanent members of the faculty selected by the faculty council which in turn is composed of all the permanent instructors. In addition each department selects a chairman from within its own faculty who serves for a period of 3 years.

Requirements for admission.—Applications for admission to the Agricultural University of Norway accompanied by copies of testimonials are sent to the secretary within a specified time. Admission as a regular student is open to both men and women and is dependent on:

1. A certificate of good character.
2. A medical certificate showing that the applicant has no affliction that will in any way hinder him from participation in the instruction offered.

These certificates must not be more than 1 year old.

3. At least 2 years of practical work of such nature that it is preparatory to the work of the department to which the applicant wishes to be admitted. Admission to hagebruksavdelingen (department of horticulture) requires 3 years of practical work in horticulture or 2 years of practical work in each of horticulture and agriculture. Admission to utskiftningsavdelingen (department of land redistribution) requires 2 years of practical work in agriculture which may

include not more than 1 year of surveying. In all instances practical work performed at school may be included in fulfillment of the entrance requirement.

4. (a) A certificate of having passed an offentlig godkjent almindelig fagskole (lower professional school, literally, "publicly accredited common professional school") offering work preparatory to the department which the student wishes to enter at the Agricultural University and having a theoretical course including at least 1,000 hours of instruction, and
- (1) A certificate of having passed the eksamen artium; or
 - (2) Evidence of having passed a written examination in Norwegian and mathematics corresponding to the eksamen artium in these subjects, and an examination in German and English corresponding to the middelskoleeksamen (middle school examination) in German and English; or
- (b) Other certified theoretical training acceptable to the faculty council as equivalent to (a).

Admission as a regular student is granted also to an applicant who can qualify under one of the following listed supplementary regulations:

(a) An aspirant who has bestått årsprøve (passed the year examination) in mathematics as a regular pupil in class 2 of the real line with at least the grade tilfredstillende (satisfactory) may be admitted after passing the written artiumsprøve (artium examination) in Norwegian.

(b) An applicant who has passed a høiere lærerprøve (higher teaching examination) may be admitted after passing the middelskoleeksamen in German and English and a written examination in mathematics in the language-history line at a gymnasium.

(c) An applicant who has passed the avgangsprøve (leaving examination) from the 2-årige avdeling (2-year department) of a handelsgymnasium (commercial gymnasium) accredited by the Department of Commerce, may be admitted after passing a written examination in mathematics and Norwegian in the language-history line at a gymnasium.

An applicant who has passed the avgangsprøve from a 3-year commercial gymnasium corresponding to the above may be admitted after passing a written examination in mathematics in the language-history line at a gymnasium.

(d) An aspirant who has passed the examination from Sjøkrigsskolens nederste avdeling (lower department of the Naval Warfare School) may be admitted provided his training corresponds to that mentioned above under 4 (a).

(e) An applicant who has passed the avgangsprøve from the 2-årige tekniske mellemskole (2-year technical middle school), state or communal, at Oslo, Bergen, or Trondheim may be admitted after passing a written examination in Norwegian at a gymnasium, and a written ex-

amination in German and English at a middelskole unless the middelskoleeksamen has already been passed.

On a competitive basis for admission this qualification is rather weak. It may be strengthened by passing an examination in mathematics in the language-history line at a gymnasium.

(f) An aspirant who in a foreign country has passed an examination corresponding to the artium examination and which qualifies him for admission to a university in that country and who otherwise fulfills the admission requirements may be admitted as a regular student.

For those who have not passed the eksamen artium but who desire admission to the Agricultural University, a 1-year forberedelseskurs (preparatory course) is offered under the direction of Norges Landbrukshöiskole at Hamar offentlige gymnasium (public gymnasium at Hamar). In Norwegian and mathematics this course aims to fulfill the requirements of the eksamen artium in the language-history line; in German and English those of the middelskoleeksamen; while in history the reading is directed with regard to the requirements of one of the two language forms. The requirements for admission to this course are the same as those listed above under 1, 2, 3, and 4 (a) with the omission of (1) and (2) under 4 (a).

Hospitanter (temporary students) are admitted to the first year of instruction and to the examination at the end of that year on presentation of a certificate of good character and a medical certificate. A temporary student desiring to remain at the Agricultural University beyond 1 year must become a regular student and qualify as such.

Admission to the departments of agriculture and dairying is annual; matriculation to the remaining departments is biennial and occurs in odd numbered years (1933, 1935).

Instruction and examinations.—In each of its departments the Agricultural University offers a 3-year course of instruction consisting of lectures, tests, demonstrations, and field trips. With the consent of the faculty council a student may spend 2 years in one class; in special instances, with the consent of the department concerned, the time may be extended to 3 years.

The work of each year begins on August 20, and closes with an examination which for the first year is given before June 20; for the second year before June 25; and for the third year before the end of April. The examinations are written and oral. They are conducted by the instructor of the subject concerned assisted by a censor selected by the faculty council.

In grading, whole and half numbers from 1 to 5 are used with 1 as the highest. The mark for a subject is the average of the individual marks given by the instructor and the censor. This average must be at least 4.5 for each subject included in the examination of the first year and at least 4 for each subject included in the examinations of the second and third years.

Middelkarakteren or the average and final grade for the examination of each year is the average of the marks received in the subjects included in the examination. To pass the examination this average must be at least 3.25.

Hovedkarakteren is the final grade given the student for his studies at the college. It is the average of the middelkarakterer or final grades received in each of the three annual examinations and is indicated by:

Utmerket godt (exceptionally good).....	1. 00-1. 50
Meget godt (very good).....	1. 51-2. 50
Godt (good).....	2. 51-3. 00
Antagelig (acceptable).....	3. 01-2. 25

When a student receives utmerket godt as hovedkarakter (average and final grade) and 1.5 or more in his major subjects mention of the fact is made to the King and recorded on his examination certificate.

Failure in a subject included in the examination of the first year or in a nonmajor subject of the examinations for the second and third years may be removed by a reexamination in the subject. Failure in a major subject in the examination of the second or third year, or in two or more subjects included in the examination of the first, second, or third year, causes failure in the entire examination of the year.

The examinations may include a hovedopgave (major theme or thesis) on an assigned subject, either theoretical or practical in nature, in a field which in some cases may be indicated by the student. At least 3 months are to be granted for its preparation.

After success in the examination of the third year the degree of kandidat (candidate) is conferred on the student and he is given an avgangsvidnesbyrd (leaving certificate) signed by the rector and secretary of the Agricultural University. On this certificate are recorded the marks received in the subjects included in the final examination for each of the 3

years, the average and final mark for the examination of each year, the average or final grade for all three examinations, and the record of the candidate's academic training at the time of his admission to Norge's Landbrukshøiskole.

The leaving certificate from one department of the Agricultural University admits the holder to study and examination in one or all subjects included in the second and third year of another department provided he has to his credit at least 1 year of practical work in the field of the new department. For an examination including all the subjects of the department or line the student may be granted a leaving certificate. If the examination does not include all the subjects, the student, on request, is given a copy of his examination record.

DEPARTMENTS OF INSTRUCTION

Below are listed the departments of instruction with the degree conferred by each, the subjects of instruction in preparation for the degree, and the examination requirements:

1. *Jordbruksavdelingen (department of agriculture)*.—Landbrukskandidat (candidate in agriculture), usually written "landbr. kand."

Year 1

Mathematics	Anatomy and physiology
Chemistry	Microbiology
Botany	Heredity
Zoology	National economy
Physics and meteorology	Surveying
Geology and mineralogy	

Admission to första årspröve (examination at the end of the first year) is dependent on evidence of having participated satisfactorily in the training and in producing the required övelsesböcker (exercise—or notebooks) in physics, chemistry, geology, botany, zoology, and anatomy.

The examination includes:

- (a) Written examination in each of the natural sciences.
Written opgave (theme) in one of the natural sciences.
- (b) Oral examination in all of the subjects listed above except mathematics and microbiology.
- (c) Work for the year in map drawing and surveying is graded at the time of the examination.

Year 2

Admission to annen årspröve (examination at the close of the second year) requires evidence of having satisfactorily

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participated in the instruction arranged in animal husbandry, agricultural chemistry, microbiology, plant pathology, and surveying and leveling; and of having completed the required practical work.

The examination includes:

(a) Written examination in farm management, animal husbandry, and bookkeeping.

(b) Oral examination in:

History of agriculture	Agricultural chemistry
Farm management	Microbiology
Animal husbandry	Plant pathology
Soils	Law

Year 3

Major subjects: Farm management and animal husbandry.

Admission to tredje årsprøve (examination for the third year) requires evidence:

1. Of having participated satisfactorily in training and practical work with animals, farm machinery, and plant culture; and of having completed the prescribed assignments.
2. Of having completed the courses in animal pathology and horse-shoeing.

The examination includes:

- (a) Written examination in plant culture, and in soil culture or technics of agriculture.
- (b) Oral examination in soil culture, plant culture, building, farm machinery, and animal husbandry.
- (c) Practical work in building with drawings and computations is graded at the time of the examination.

In addition to the examination subjects the work of the second and third years includes also training in dairy management, milk hygiene, fresh water fishing, commerce and exchange in connection with bookkeeping, and the optional subjects pedagogics and seminary in practical work.

II. Skogbruksavdelingen (department of forestry).—Skogbrukskandidat (candidate in forestry), usually written "skogbr. kand."

Year 1

Mathematics	Microbiology
Physics	Zoology
Chemistry	Heredity
Botany	National economy
Geology and mineralogy	Surveying

Admission to the examination is dependent on evidence of having participated in the training and in producing the required exercise—or notebooks in physics, chemistry, geology and mineralogy, botany, and zoology.

The examination includes:

- (a) Written examination in the natural sciences and in mathematics.
A written theme in mathematics or in one of the natural sciences excluding zoology.
- (b) Oral examination in all the subjects listed above except microbiology.
- (c) Grading of the work for the year in map drawing and surveying.

Year 2

Admission to this examination requires evidence of having completed satisfactorily the training and required practical work in forestry, forest valuation, surveying, plant pathology, and soils.

The examination includes:

- (a) Written examination in forestry, forest valuation, and mathematics.
- (b) Oral examination in:

Forestry	Forest zoology
Forest technology	Soils
Forest valuation	Building
Forest botany	Surveying
Plant pathology and microbiology	Law
- (c) Grading of work for the year:
 1. Practical work in building with drawings and computation.
 2. A praktisk-skriftlig opgave (practical written theme) in diagnostic wood anatomy.

In addition to the examination subjects the work of the year includes training in bookkeeping with commerce and exchange.

Major subjects: Forestry, forest technology, and forest valuation.

Year 3

Admission to this examination requires evidence of having completed satisfactorily the required work in forestry, forest valuation, and surveying; of having made daybook entries

with a plan or draft for a contract; and of having collected, classified, and prepared botanical and zoological material.

The examination includes:

- (a) Written examination in bookkeeping.
- (b) Oral examination in forest management and history of forestry, hunting and fresh water fishing, and soils.
- (c) Grading of the following work of the year:
 1. Work plan.
 2. Work chart.
 3. General map.
 4. Theme in forest botany with vegetation chart.
 5. Soil chart with descriptions and analyses.

Major subjects: Work plan, and forest management with history of forestry.

The work of the year includes 6 or 7 weeks of field work beginning the first part of July. It may include also the optional subjects pedagogics and seminary in practical work.

In making out the hovedkarakter (final mark for the three examinations) in this department the marks for years 1 and 2 are each given a weight of 3, and that for year 3 a weight of 2.

III. Hagebruksavdelingen (department of horticulture) Hagebrukskandidat (Candidate in horticulture), usually written "hagebr. kand."

Year 1

Mathematics	Zoology
Physics	Heredity
Chemistry	National economy
Geology	Surveying
Botany	Freehand and perspective drawing
Microbiology	

Admission to the examination is dependent on evidence of having participated in the training and in producing the required exercise or notebooks in physics, chemistry, geology, botany, and zoology.

The examination includes:

- (a) Written examination in the natural science subjects.
A written theme in one of the natural science subjects excluding zoology.
- (b) Oral examination in all the subjects listed above, excluding mathematics, microbiology, and freehand and perspective drawing.
- (c) Grading of the work for the year in map drawing, surveying, freehand and perspective drawing.

Year 2

For years 2 and 3 this department offers two lines of instruction. The subjects included are practically the same for the two lines during year 2, but line I stresses the cultivation of fruits and vegetables while line II stresses landscape gardening.

Admission to the examination for year 2 is dependent on evidence of successful participation in practical work in agricultural chemistry, microbiology, and plant pathology.

The examination includes:

- (a) Written examination in nursery work and bookkeeping.
- (b) Oral examination in:

Fruit cultivation	Technics of horticulture
Vegetable cultivation	Agricultural chemistry
Nursery work	Plant pathology
Landscape gardening	Microbiology
History of agriculture and horticulture	Special botany
Horticultural work	Law

- (c) Grading of work for the year of drawings in landscape gardening.

Major subjects: Nursery work, fruit cultivation, vegetable cultivation.

Year 3

LINE I

Admission to the examination is dependent on evidence of successful participation in practical work in soils and in the instruction in technics of heat and refrigeration.

The examination includes:

- (a) Written examination in fruit cultivation and in vegetable cultivation.
- (b) Oral examination in:
 - Fruit cultivation and nursery cultivation of fruit.
 - Vegetable cultivation and nursery cultivation of vegetables
 - Preservation and keeping of fruits and vegetables
 - Flower cultivation
 - Soils
 - Soil culture
 - Building

- (c) Grading of work for the year in drawing of building plans.

Major subjects: Fruit cultivation, vegetable cultivation.

One who selects fruit cultivation as his major subject is assigned his written theme in vegetable cultivation and vice versa.

In addition to the examination subjects the work of years 2 and 3 includes training in horticultural machinery and tools and in the optional subjects pedagogics and seminary in practical work.

LEVE II

Admission to this examination is dependent on evidence of successful participation in practical work in soils.

The examination includes:

- (a) Written examination in landscape gardening, flower gardening, soils, soil cultivation, and building.
- (b) Grading of work for the year:
 1. Landscape drawing with projects, description, and computation.
 2. Landscape drawing with surveying and staking.
 3. Drawing of building plans.

Major subjects: Landscape gardening, flower cultivation, special botany.

In addition to the examination subjects the work of years 2 and 3 includes training in horticultural machinery and tools, preservation and keeping of berries and fruit, and in the optional subjects pedagogics and seminary in practical work.

IV. *Utskiftningsavdelingen* (department of land redistribution).—*Utskiftningskandidat* (candidate in land redistribution), usually written "utskiftningskand".

Year 1

Mathematics	Microbiology
Physics	Heredity
Chemistry	National economy
Geology	Surveying
Botany	Projection drawing

Admission to the examination is dependent on evidence of successful participation in the training and in producing the required exercise—or notebooks in physics, geology, and botany.

The examination includes:

- (a) Written examination in the natural science subjects, mathematics, and projection drawing
Written theme in physics, geology, botany, or mathematics

(b) Oral examination in:

Mathematics
Physics and meteorology
Geology and mineralogy
Chemistry
Botany
National economy
Surveying

(c) Grading of work for the year in map drawing, surveying, freehand and perspective drawing

Year 2

Admission to this examination requires evidence of successful participation in the instruction in surveying, land redistribution subjects, forestry subjects, and soil, and of having completed the required practical work.

The examination includes:

- (a) Written examination in mathematics, surveying, and in land redistribution subjects
- (b) Oral examination in land redistribution subjects, forestry subjects, surveying, law, history of agriculture, building, and work in land redistribution
- (c) Grading of the work for the year in building with accompanying computations and drawings

Major subjects: Land redistribution subjects, surveying, mathematics, and law.

Additional subjects included in the work of the year are fruit tree valuation, soil, and agricultural technics.

Year 3

The examination for this year includes:

- (a) Oral examination in soils, and technics of agriculture
- (b) Grading of work for the year:
 - 1. Surveying (maps with outlines and computations)
 - 2. Practical work in land redistribution, including maps and computations
 - 3. Work in technics of agriculture with drawings and computations
 - 4. Soil chart with description and analysis

Major subjects: Practical work in surveying and in land redistribution.

Additional subjects included in the training of this year are law, plans of regulation, and the optional practical seminary work.

Hovedkarakteren or the average and final grade for one who completes his work in this department is made out in the same manner as the final grade in forestry (see p. 54).

V. *Meieriavdelingen* (dairy department). Meierikandidat (candidate in dairying), usually written "meierikand".

Year 1

Mathematics	Anatomy and physiology
Physics	Heredity
Chemistry	National economy
Botany	Surveying
Microbiology	Freehand and perspective drawing
Zoology	

Admission to this examination is dependent on evidence of having participated satisfactorily in the training and in producing the required exercise—or notebooks in physics, chemistry, botany, zoology, anatomy, and surveying.

The examination includes:

- (a) Written examination in natural science subjects and a written theme in one of them
- (b) Oral examination in all the above-listed subjects, except mathematics, microbiology, and freehand and perspective drawing
- (c) Grading of practical work for the year in freehand and perspective drawing

Year 2

This examination includes:

- (a) Written examination in animal husbandry, chemistry of dairying, and in either the bacteriology or the technics of dairying
- (b) Oral examination in:
 - Chemistry of dairying
 - Bacteriology of dairying
 - Technology of dairying
 - Technics of heat and refrigeration
 - Animal husbandry and milk hygiene
 - History of agriculture
 - Law
 - Building
 - Dairy machinery
- (c) Grading of work for year:
 1. Laboratory work in chemistry, bacteriology, and technology
 2. Drawings from courses in dairy machinery and building

Major subjects: Chemistry of dairying, bacteriology of chemistry, technology of chemistry, and animal husbandry.

The work of the year includes also trips to dairies and other industrial places connected with dairying.

Year 3

This examination includes:

- (a) Written examination in dairy work
- (b) Oral examination in dairy work and history of dairying
- (c) Grading of hovedopgaven (major theme or thesis) and of plan for dairy building

Major subjects: The major theme or thesis, and dairy building.

The work of the year also includes field trips and the optional training in pedagogics and seminary of practical work.

Doktorgraden i landbruksvidenskap (doctor of agricultural science).—Ordinarily a candidate for doktorgraden i landbruksvidenskap (degree of doctor of agricultural science) must have bestått avgangseksamen (passed the leaving examination) from Norges Landbrukshøiskole (Agricultural University of Norway) with at least the grade 2.5. One who has passed the avgangseksamen with a lower grade or one who has no avgangseksamen to his credit may be eligible for the doctorate if the faculty council in some other manner finds that he is qualified, or if he successfully develops in writing three assigned subjects in his major field.

A written application for the doctorate must be sent to the faculty council accompanied by an account of the scholastic training of the candidate and by a declaration that doktoravhandlingen (the doctoral dissertation) which also must accompany the application, was written by himself as the result of personal investigation of the subject covered.

The thesis must deal with a subject related to one of the courses offered at the college. It may be written in Norwegian or in some other language approved by the faculty council. If it is written in a foreign language it must be accompanied by an abstract in Norwegian. A dissertation will not be accepted if it has been in print more than 1 year, if it has been used as eksamensbesvarelse (answer in an examination), or if it has been awarded a medal either at the university at Oslo or at some other institution of higher training. When a dissertation is rejected, 2 years must elapse before the author may present a new thesis for approval.

The procedure for obtaining the doctorate in agricultural science, including the two public lectures, the public defense of the thesis, and the written developments of the three assigned subjects in cases where these are required, is quite similar to that for obtaining the doctorate in one of the faculties of the Royal Frederik University at Oslo. (See pp. 33-35.)

The dissertation and the three assigned subjects, in case there are such, are judged by a committee of three censors appointed by the faculty council.

With the unanimous consent of the faculty council an honorary degree of doctor in agricultural science may be conferred on a man or woman of recognized scientific reputation from a foreign country.

IV. OTHER INSTITUTIONS

Veterinaerhöiskole (Veterinary College)

In 1918, plans were made for the establishment of a veterinary college at Oslo. By 1926, the construction of the necessary buildings was under way. The college will be under the direction of the forestry and veterinary section of the Department of Agriculture.

Veterinary students in Norway are required to have passed the eksamen artium.

Norges Tannlaege Höiskole (College of Dentistry of Norway)

General data.—Norges Tannlaege Höiskole at Oslo was founded in 1909, as Statens Tannlaegeinstitut (National Institute of Dentistry). Its object is to give theoretical and practical training for the practice of dentistry and to further dental science in its various branches.

The college is under the supervision of the Department of Church and Education and governed by a styre (board of directors) composed of the directors of each of its five divisions of instruction. The rector is appointed by the Department of Church and Education for a period of 3 years from among the directors upon the recommendation of the board.

The Tannlaege Höiskole offers a 3-year course of instruction leading to the tannlaegeeksamen (dental examination). One who has passed the tannlaegeeksamen may obtain a license from the Department of Social Affairs to practice as a

tannlaege (dentist) in Norway on presentation of evidence that he has passed the tannlaegeeksamen, that he has performed the required practical work, and that he is of good character. He must promise in writing also to practice dentistry according to the dictates of honor and conscience.

Instruction at the college is divided between the departments of anatomy, prosthetics, orthodontia, preservation of teeth, and dental surgery. In addition to the courses named on page 62 it includes study of the physiology of nutrition and of pathological histology and roentgen.

The academic year is comprised of a fall semester lasting from September 3 to December 15 and a spring semester lasting from January 15 to June 30.

Requirements for admission.—New students are admitted to the college at the beginning of the fall term only. The application for admission must be sent in before the preceding July 10 and must be accompanied by a certificate of health and by evidence of having passed the eksamen artium. Students who have passed the first section of the medisinske embedseksamen (see p. 26) or who have passed a dental examination in a foreign country are given preferential right of admission.

One who has been admitted as a student at the Tannlaege Høiskole must assume in writing the obligation to practice dentistry for a period of at least 5 years after graduation wherever he may be assigned by the administration and to fulfill all obligations connected with the authorization to practice dentistry.

Tannlaegeeksamen (dental examination).—The tannlaegeeksamen is given in three sections near the close of the first, second, and third years of study, respectively. The application for each section of the examination must be accompanied by evidence of having completed the courses included in the section for which application is made. In addition, application for section I must be accompanied by evidence of having completed the phantom or dummy courses in prosthetics, filling, and orthodontia; and that for section II by evidence of having completed the work in the phantom course in prosthetics for that section.

The examination fee is 100 kroner which must be paid in advance at the time of the first section of the examination.

Section I includes oral or written examination in:

- (a) Anatomy and physiology
- (b) Anatomy of teeth
- (c) Chemistry
- (d) Applied physics and study of apparatus

Section II includes oral or written examination in:

- (a) General pathological anatomy and bacteriology
- (b) Pharmacology

Section III includes:

1. Oral or written examination in:
 - (a) Preservation of teeth including prophylaxis and care of children's teeth
 - (b) Orthodontia
 - (c) Prosthetics
 - (d) Dental surgery
2. A written opgave (theme or proposition) on a problem related to one of the subjects included in this section. In writing this opgave it is assumed that the student will apply the information gained in the study of the previous section.
3. Practical clinical examination consisting of examination of a patient, diagnosis of the case, prescribing of treatment, and actual performance of treatments to the extent that the examiners and the director of each department may require in each of the following:
 - (a) Preservation (filling) of teeth
 - (b) Orthodontia
 - (c) Prosthetics
 - (d) Dental surgery

In this section of the examination the student may have 7 hours within which to write his opgave. The remaining work of the section is to be done within 4 hours.

The oral examinations are public while the written examinations are under such supervision as the board of directors may determine.

Medical students who wish to take the dental examination may do so on application accompanied by a certificate of having passed the medical examination and proof of 2 years of successful practical experience in various departments of the Tannlaege Høiskole. Medical students may take all three sections of the examination at the end of their second year at the college. They are exempt from section I (a) and (c), and from section II (a) and (b) of the examination.

In grading the theoretical part of the examination the candidate receives one mark for each of the following:

Section I. (a), (b), (c), (d) (one mark for (c) and (d) combined)

Section II. (a), (b)

Section III. 1. (a), (b), (c), (d)

In the practical part of the examination he receives:

One mark for section II. 2

One mark for section III. 1. (b) combined with section III. 3. (b)

Two marks for each of the following of which one mark is for diagnosis and prescribing and the other for practical work:

Section III. 3. (a), (c), (d)

The marks for the examination run from 1 to 6 with 6 as the highest. Those from 1 to 4 may be expressed with more exactness by the addition of tenths. A student who receives 6 for his examination in a subject in sections I or II will not be allowed to continue his studies at the college unless in a reexamination at the beginning of the third and fifth semesters, respectively, he receives a grade that will average at least 4 with the grade of his first attempt. If the average for the first section of the examination is less than 3 the candidate must be reexamined in the entire section of the examination. If he fails in this attempt no further opportunity to pass the examination will be afforded.

If, in section III, a candidate should receive 6 for a theoretical examination or 4 for an examination in practical work he has failed in the examination. If he has received 6 in one subject only he may at a time set by the board of directors avlaegge kontinuansprøve (take a continuation examination), but in order to pass the examination he must receive a grade which will average at least 4 with the previous grade received in the subject.

The grades for this examination with their numerical equivalents are:

Særdeles tilfredsstillende (superior).....	1. 00 to 1. 50
Meget tilfredsstillende (very satisfactory) ..	1. 51 to 2. 00
Tilfredsstillende (satisfactory).....	2. 01 to 2. 50
Nogenlunde (quite satisfactory).....	2. 51 to 3. 00

When a candidate receives særdeles tilfredsstillende as his average or final grade and 1.00 as the grade for his written theme or proposition (section III. 2) mention of the fact is made to the King.

If the final grade for the examination is 3 the candidate has failed to pass his examination and he may not come up for reexamination before the expiration of 1 semester. When a candidate has failed to pass his examination the directors and censors may require him to perform additional practical work in the various departments of the Tannlaege Høiskole not exceeding 2 semesters.

Universitetets Farmasøitiske Institutt (Pharmaceutical Institute of the University)

General data.—Universitetets Farmasøitiske Institutt at Oslo was founded in 1923, as the Farmasøitiske Institutt (Pharmaceutical Institute) in accordance with a royal regulation of that year providing that pharmaceutical instruction was to be carried on at the university or at an institute connected with the university. At present, in accordance with a royal resolution of 1931, instruction in preparation for section I of the apotekereksamen (druggist examination) in the foundation subjects chemistry and physics is given at the University and the professors of chemistry at the institute are members of the mathematics-science faculty of the university.

Beginning with the fall of 1934, section I of the apotekereksamen (druggist examination) will be taken over entirely by the university and section III of the examination, or professional study proper, will be in charge of the Institute.

Requirements for admission.—The application for admission to the Pharmaceutical Institute must be sent to the secretary of the university before July 10 of the year in which study is to begin. It must be accompanied by a certificate of having passed the eksamen artium, or by a certificate from one of the accredited schools of the kingdom of having passed an optagelseprøve (entrance examination) consisting of a written examination in mathematics and natural science meeting the requirements of the eksamen artium in the language-history line, and an oral examination in French meeting the requirements of the eksamen artium in the real line (see p. 2). One who has not passed the middelskoleeksamen (middle-school examination) must pass an examination meeting the requirements of this examination in German, English, botany, and physics (see p. 2).

The number of students to be admitted each year may be limited by the Department of Church and Education after consultation with the academic council and the Department of Social Affairs either because of lack of accommodation for additional students or because of the danger of an oversupply of graduates in chemistry. Such limitation, however, must be decided on before the end of May preceding the beginning of the academic year affected.

The selection of those to be admitted is made by the academic council on the basis of the grades received in the *eksamen artium* or in the entrance examination. Each applicant is to be informed before August 10 of the year in which he makes his application as to whether or not he has been admitted. Both men and women are admitted to study at institute.

Apotekereksamen (druggist examination).—Pharmaceutical study is divided into three sections each of which ends with an examination. The examinations are given at the close of each semester and are conducted by an examination committee appointed in the same manner as the committees for examinations at the university (see p. 7). Application for permission to take the examination is sent to the examination committee within a period announced by the secretary of the university. The applications for sections I and III must be accompanied by evidence from the instructors concerned that the candidate has in a satisfactory manner attended the lectures and completed the practical work of the section in question.

Section I of the examination requires three semesters of preparation and is confined to the foundation subjects chemistry, botany, and physics, together with a course in pharmaceutics with Latin and reading of prescriptions, and a course in pharmacognosy. The examination consists of:

- (1) Practical examinations in qualitative analysis, quantitative analysis, and synthesis (production of a chemical preparation) each of which is to be accompanied by a written account of the methods used and the results obtained; and
- (2) Oral tests in organic chemistry, inorganic chemistry, botany, and physics.

Section II of the examination requires 1½ years of continuous practical work in a drug store except for vacations

ordinarily granted in a drug store. When applying for the examination of this section the student must produce evidence of having performed the regular work of a drug store in a satisfactory manner. He must produce also a laboratory book signed by the druggist in charge and containing an account of his laboratory work. The examination consists of:

- (1) The following practical examinations in which the student may use the books and means of assistance ordinarily found in drug stores and used by druggists.
 - (a) Laboratory work: The production of two pharmaceutical or Galenic preparations preceded by a brief examination as to methods, the putting together of the preparations, their properties, and preservation.
 - (b) Prescription work: The filling of at least five prescriptions and the evaluation of a number of others preceded by a brief examination in connection with the assignment. The student is to be examined also in his ability to read and translate general prescriptions written in Latin.
- (2) Oral tests in pharmacopœia and pharmaceutical law, and in knowledge of the appearance of officinal drugs.

Section III of the examination requires three semesters of preparation and includes the special pharmaceutical subjects:

Pharmaceutical chemistry	Biological chemistry
Pharmacy and pharmaceutical law	Toxicology
Commerce and bookkeeping	Bacteriology and hygiene
Pharmacognosy	Chemistry of foodstuffs
Pharmacology	

- (1) A written examination in one of the subjects included in the oral examination.
- (2) The following practical examinations each of which is to be accompanied by a written explanation:
 - (a) Microscopic investigation of drugs or of mixtures of findable drugs.
 - (b) Production of a pharmaceutical chemical compound.
 - (c) Qualitative or quantitative investigation of at least one officinal drug and of two pharmaceutical chemical compounds.
- (3) Oral tests in:
 - Pharmaceutical chemistry
 - Pharmacognosy and pharmacology
 - Pharmacy and commerce with bookkeeping
 - Hygiene, chemistry of foodstuffs, and bacteriology

A candidate may have 6 hours for the written examination, 8 hours for the examination in qualitative analysis, and a suitable period of time decided on by the examination committee for the remaining practical examinations. The written and practical examination in a subject must be passed before the candidate may present himself for the oral test and the latter is not to exceed 1 hour for each subject.

A candidate may not come up for examination in the same subject more than three times, and not more than 3 years may elapse between the second and third section of the examination. In case of reexamination the final mark for a subject is the average of the marks received in the two tests in the subject.

The marks used in grading range from 1 to 6 with 1 as the highest. To pass a section of the examination the candidate cannot receive a mark of less than 4 in a written prøve (test), nor less than 4.5 in a practical or oral test, and the average or final mark for the section must be at least 3.25. The final grade for the apotekereksamen is the average of the marks received for each of the three sections of the examination. It is expressed on the basis of its numerical value in one of the following terms:

Utmerket godt (exceptionally good).....	1.00 to 1.50
Meget godt (very good).....	1.51 to 2.50
Godt (good).....	2.51 to 3.25

When the three sections of the apotekereksamen have been passed the candidate is informed of his grade and is given his certificate for the examination in a manner decided by the faculty. At the time of receiving his certificate the candidate must promise to perform his pharmaceutical work in accordance with the dictates of honor and conscience.

Success in the apotekereksamen entitles the candidate to the degree of graduate in pharmacy. As such he may be a drug clerk. After 5 years of service in this capacity he may obtain a license from the Department of Social Affairs to conduct a pharmacy of his own.

Det Pedagogiske Seminar (Pedagogical Seminary)

General data.—The Pedagogiske Seminar at Oslo which was founded in 1907, marked the culmination of an agitation begun in the 1830's for the educational and practical training

of teachers. This agitation was based on an increasing appreciation of the advantages to successful teaching of scientific educational training in addition to the scientific training in subject matter offered at the university.

The seminary is under the direction of a board composed of two university professors selected by the faculty council from the faculties of history-philosophy and mathematics-science, respectively, two schoolmen selected by the Department of Church and Education from among the public secondary teaching staff of Norway, and the director of the seminary who is appointed by the King.

The training offered by the seminary consists of a 1-semester course in theoretical and practical pedagogics which closes with the pedagogiske eksamen (pedagogical examination). This examination must be taken by a candidate who has passed the adjunkteksamen or the lektoreksamen either in the history-philosophy or mathematics-science faculty at the university before he is eligible for appointment as adjunkt, lektor, or rektor at a national or communal institution or as principal of an accredited private school (see pp. 10, 16). It must be passed also by a candidate in theology who wishes to prepare himself for teaching. Exemption from these requirements may be granted by the King or his authorized representative in the case of adjunkts and principals of private schools, and under special circumstances, in the case of principals and lektors of the middleskole (middle school).

Ordinarily the theoretical and practical study are carried on simultaneously, but special permission may be obtained for the separate study of each. If circumstances warrant it a candidate may be excused from taking the theoretical work and a candidate who can present a certificate from the director of an accredited school showing that he has held a position as a regular teacher for some time may be excused from practice teaching except for a number of prøvetimer (examination or test hours) in his subjects.

The academic year consists of a spring semester lasting from January 15 to the middle of June and a fall semester lasting from September 1 to December 20.

Pedagogiske eksamen (pedagogical examination).—The pedagogiske eksamen is offered at the end of each semester. Application for this examination is made to the director of the

seminary within a specified time and must be accompanied by evidence of having completed the theoretical and practical courses offered by the seminary, a certificate of having passed the language-history, the mathematics-science, or the theological professional examination (see pp. 10, 16, 30) and by an examination fee of 10 kroner. On request the Department of Church and Education may grant permission for the pedagogiske eksamen to be taken before the completion of one of the above examinations as in the case of the adjunkteksamen.

The subjects included in the examination are—

- (a) The main trends in the history of recent pedagogics
- (b) Development and present status of the school system of Norway with particular attention to the secondary schools
- (c) General study of instruction
- (d) Professional methods
- (e) Psychology
- (f) School hygiene

The written part of the examination consists of answering two opgaver (themes or propositions) for the preparation of each of which the candidate may have 6 hours. One opgave which is the same for all candidates is selected from among the subjects (a), (b), and (c); the other is in professional methods and is based on material covered in lectures, in weekly conferences, or on material assigned to the candidate for independent study.

The oral part of the examination includes all of the subjects mentioned above and as a rule is not to last more than 1 day for each candidate.

In grading, the student receives a separate mark for the written and oral parts of the examination and also for his practical work or practice teaching performed at an accredited secondary school in Oslo to which he was assigned during the semester. The final grade is affected also by the candidate's use of the mother tongue and by his ability to guide and direct pupils in its correct and careful use. The system of grading is the same as that used for the teaching examinations at the university (see pp. 12-13, 19). To pass his examination the candidate must receive a grade of at least 4 in each of the three parts of the examination. Failure to receive this grade in any one part of the examination necessitates taking the entire examination over again.

After passing this examination⁹ the candidate is given a certificate signed by the director.

Laererskoler for Laerere i Folkeskolen (Schools for the Training of Teachers in the Folk School)

General data.—Norway has 7 national and 3 private schools receiving national aid for the training of teachers in the folk schools. The national schools are:

Hamar Laererskole	Levanger Laererskole
Kristiansand Laererskole	Nesna Laererskole
Stord Laererskole	Tromsø Laererskole
Volda Laererskole	

The three private laererskoler at Elverum, Notodden, and Oslo are governed by the same regulations as the national schools.

The national schools are under the supervision of the Department of Church and Education. All decisions concerning their organization and activities, especially as to the number of classes at each school, the maximum number of pupils in each class, plan of instruction, and discipline, are made by the department subject to the control of Parliament.

The Department of Church and Education is assisted in its supervision of the training schools by a laererskoleråd (council for the teacher training schools) appointed by the King and consisting of three members including a chairman.

Each school is under the immediate supervision of a rector who is also appointed by the King and of a skoleråd (faculty council) composed of the permanently appointed instructors at the school with the rector as chairman.

According to regulations of June 6, 1930, these schools may offer a 4-year course and a 2-year course. The academic year consists of about 40 weeks and a pupil may remain for 2 years in each of the classes of the school.

Requirements for admission.—For admission to the 4-year course the candidate must be at least 17 years of age before July 1 of the year in which he wishes to be admitted and he must have educational qualifications equivalent to those of one who has graduated from a folkeskole (folk school) and

⁹ An interesting account of the Pedagogical Seminary, including the examination given in 1927, may be found in *Secondary Education in Norway*, by Gabriel E. Loftfield, pp. 86-89. (U.S. Office of Education, Bulletin 1930, No. 17.)

either from a 6-month continuation school or from an ungdomsskole (young people's school).

Admission to the 2-year course requires that the applicant be at least 19 years of age before July 1 of the year in which he wishes to be admitted and that he possess a certificate of having passed either the eksamen artium or the leaving examination from the Agricultural University of Norway, in either case with a good grade.

The application for entrance examination to the 4-year course or that for admission to the 2-year course must be sent before July 1 to the school to which the applicant wishes to be admitted. It should indicate whether or not he wishes to be admitted to another school in case there is no room at the school of his first choice and it must be accompanied by:

- (a) An age certificate and information as to residence and place of birth.
- (b) Evidence of good character.
- (c) A health certificate showing that the applicant has no physical defect that will interfere with teaching.
- (d) A certificate showing the instruction already received and the applicant's scholastic status.

The applicants to be admitted are limited in number and are selected by the faculty council from among those whose applications have been approved by the school physician. The entrance examinations mentioned above are held during the last half of August.

Fir-årige lærerutdannelse (4-year teacher-training course).—
The subjects of instruction in the 4-year course are:

Christianity	Drawing
Norwegian	Song and music
English and, on occasion, German	Physical culture
History	Handwork
Geography	Pedagogics
Natural science	Practice teaching
Arithmetic and geometry	Library methods
Writing	Gardening and tree planting

For women there is also instruction in house management.

Pupils who do not belong to the state church may be excused from part or all of the instruction in Christianity. Those who have physical defects which prevent them from doing handwork, drawing, or physical culture may be excused in whole or in part from instruction in these subjects.

Those entirely lacking in musical ability may be excused from song and music in the two upper classes. One who can show that he already in some other way has acquired the information which a course aims to give may be excused from attending classes in that course.

An opflytningsprøve (promotion examination) is given at the end of the first year after which the faculty council decides as to whether or not the pupil has the degree of maturity and skill in elementary subjects requisite for continuation in preparation for teaching.

The course ends with an avgangsprøve (leaving examination) or lærerprøven (teaching examinations or tests) which are held under the direction and supervision of the council for the teacher-training schools. The examination in geography is given at the end of the second year; the examinations in physics, chemistry, arithmetic, and geometry at the close of the third year. For regular students there is no examination in practice teaching.

The written part of the leaving examination lasts 5 days during each of which one opgave (theme or proposition) is to be answered. The student may have 5 hours for each theme or proposition with one half hour off for lunch. The propositions are made out by the council for the teacher-training schools with the assistance of recommendations from the various rectors. They are the same for all schools. A copy of each proposition is sent to each school under separate cover, stamped with the seal of the council, and marked as to the day and hour when it is to be opened for answering.

The examination papers are sent to the council for the teacher-training schools where they are graded by a member of the council and by two appointed censors. A separate mark is given for each of the Norwegian language forms Riksmål or official speech and Landsmål or country speech. Only one mark is given for the subjects in mathematics.

At the close of the second and third years, respectively, there is an oral examination in at least one of the subjects or part of a subject which, according to the plan of instruction, has been completed during the year. At the close of the fourth year there is an oral examination in at least three of the subjects or parts of subjects completed during that year. The subject or subjects in which examination is to be given

at each school each year is decided by the lærerskoleråd council for the teacher-training schools. For their oral examination the students are divided into groups of six or seven.

The marks used in grading the leaving examination have no numerical equivalent. They are:

- Særdeles godt (superior).
- Meget godt (very good)
- Godt (good)
- Godkjendt (passed)
- Ikke godkjendt (failed)

The leaving examination has been passed when the candidate has received no mark of less than godkjendt.

A candidate who has received ikke godkjendt in one of the subjects of his oral examination may receive a certificate of having passed the leaving examination by passing a reexamination in the subject before the end of the calendar year, but one who has failed in the written examination in a subject is not entitled to reexamination.

The certificate of having passed the leaving examination is made out by the rector of the school and the marks received in the various subjects included in the examination are entered on the certificate.

The fee for this examination is 40 kroner. In special cases this may be reduced or a student may be freed entirely from payment by the Department of Church and Education.

2-årige lærerutdannelse (2-year teacher-training course).— Provision for this course was made by statute in 1930. Its plan of instruction was approved by the Department of Church and Education during the latter part of 1932, but so far (1932-33) no classes have been organized. Since the course is planned for students who have passed the eksamen artium or who have passed the avgangseksamen (leaving examination) from the Agricultural College of Norway the work is to be more advanced than that of the 4-year course. However, the training is to be quite adjustable to the later professional needs of the student and regulations of the 4-year course governing instruction, examinations, and the granting of the certificate of having passed the avgangsprøve or lærerprøven (leaving examination) are to be applicable as far as

possible. The subjects of instruction with the total number of credit hours for each included in the course are:

Christianity.....	8
Norwegian.....	3
Foreign language.....	4
History and geography.....	2
Natural science.....	6
Arithmetic.....	2
Drawing.....	7
Manual training.....	6
Writing.....	1
Music and singing.....	7
Gymnastics.....	8
Pedagogics.....	7
Practice teaching.....	13

The laererprøven in the 2-year course include a written theme or proposition in Norwegian. If the student used both language forms in his eksamen artium he may write this opgave in whichever language form he may choose, but if he used only one language form in his eksamen artium he must write the opgave in the other.

Norges Laererhøiskole (Teachers College of Norway)

Norges Laererhøiskole (Teachers College of Norway) at Trondheim was opened October 2, 1922. It is a national institution under the general supervision of the Department of Church and Education. Its immediate direction is in the hands of its rector and faculty council. It offers a 2-semester course planned especially for the teachers of the folkeskoler (folk schools) and ungdomsskoler (young people's schools) who have graduated from one of the laererskoler (see p. 70) and desire additional training. Among the subjects offered are pedagogics, Norwegian, history, physics, chemistry, zoology, and botany. All of these are optional except pedagogics which must be taken by all students.

The present status of the school is somewhat uncertain owing to the fact that since its establishment the period of training in the laererskoler has been extended from 3 years to 4 years. Suggestions regarding its future have varied in range from its entire elimination to changing it to an institution to which the 2-year student courses from the laererskoler may be removed and perhaps changing its location to Bergen, where it may become a part of the contemplated university.

Det Praktisk Teologiske Seminar (The Practical Theological Seminary)

General data.—Before a candidate in theology may be ordained or receive a church appointment in Norway he must pass the praktisk teologiske eksamen (practical theological examination) either at the Praktisk Teologiske Seminar (Practical Theological Seminary) or at the Teologiske Menighets Fakultet (Theological Congregational Faculty). (See p. 77.)

The beginning of the Practical Theological Seminary may be traced to a royal resolution of 1834, which authorized a 2-year appropriation for an institution for the practical training of theologians. Appropriations for this purpose were continued until 1848, when a resolution was passed providing for the establishment of a practical theological seminary at Oslo.

The Practical Theological Seminary is under the direction of the Bishop of Oslo, the members of the theological faculty at the university, and the instructor of practical theology at the seminary. It offers a 2-semester theoretical and practical course closing with a leaving examination called the praktisk teologiske eksamen (practical theological examination). The dates bounding its academic year are the same as those for the university.

Admission to the seminary is open to a candidate who has passed the teologiske embedseksamen (professional examination in theology) or an examination which the faculty may consider equivalent to the teologiske embedseksamen, and who in addition has a certificate of having completed one semester of practical work in song and mass while preparing for the professional examination.

Praktisk teologisk eksamen (practical theological examination).—The subjects of instruction offered in preparation for this examination are:

Pastoral work and home missions	Church law
Homiletics	Missionary work
Liturgy	Church song and mass
Catechetics	Public speaking
Evangelical-Christian pedagogics	

The praktisk teologiske eksamen is offered twice a year at times decided on by the board of directors. When applying for permission to take this examination the candidate must produce a statement from each of his instructors showing

that he has completed one semester of practical work in each of the following subjects; and if, for special reason, he has been excused from any part of it he must produce evidence of such exemption:

Homiletics

Pastoral work such as sick calls and delivering sermons in church
Conducting of church services

Catechetics, including the established practices in religious instruction in the church and schools of Norway

Church music, mass, and oral discourse

The written part of the examination includes an opgave (theme or proposition) in each of the subjects pastoral work, homiletics, and catechetics or pedagogics. The candidate may have 10 hours for the preparation of each opgave and the use of any material that is permitted to be used in the professional examination in theology at the university. This part of the examination also includes a homiletical and catechetical prøve (test), a completely prepared sermon, and a catechesis which must be handed in within an announced period before the time of the written examination.

The oral part of the examination includes the subjects not included in the written part of the examination but the candidate is examined in only two of them, which are selected by the board of directors. The candidate is informed of the subjects selected upon the completion of his written examination.

The instructor in practical theology participates as censor for all subjects included in the examination. For subjects which the instructor himself offers, a censor is appointed by the ecclesiastical department on the recommendation of the board of directors. The latter also may invite the instructors in theology at the university and active ministers of the church of Norway to attend the examinations and to participate in censoring them.

In grading, a separate mark is given for the written and oral examination in a subject, but only the final grade for the entire examination is recorded on the examination certificate and is indicated by one of the following grades:

Laudabilis prae ceteris	1
Laudabilis	2
Haud illaudabilis	3
Non contemnendus	4

A grade of less than 4 is called immaturus. With immaturus in either a written or oral test this examination cannot be passed.

In order to receive *laudabilis prae ceteris* as final grade a student cannot receive less than *laudabilis* for any subject included in the examination, and the numerical average for the examination must be at least 1.50.

To receive *laudabilis* as final grade for his examination a student must receive *laudabilis* in at least 4 subjects of which 3 must be major subjects and the numerical average for the examination cannot be less than 3.50. The major subjects are those which require a written examination.

Det Teologiske Menighets Fakultet (The Theological Congregational Faculty)

General data.—The appointment of a professor of decidedly liberal views to the theological faculty of the university at Oslo in 1906, created considerable apprehension and unrest among the orthodox element of the population of Norway and led to the movement for the establishment of an institution for more orthodox training of ministers than the university was considered to offer. As a result the *Teologiske Menighets Fakultet* at Oslo was founded on October 16, 1907, through privately collected funds and opened on September 3, 1908.

Beginning with 1913, this faculty has been authorized for 5 years at a time to give the *teologiske embedseksamen* (professional examination in theology) on condition that it fulfill the following requirements:

- (1) That the faculty present to the King for approval all decisions concerning the appointment of new members to the faculty. The report of the decision is to be accompanied by evidence showing that the scholastic requirements of the position have been fulfilled.
- (2) That the studie og undervisningsplan (plan of study and instruction) of the faculty be approved by the Department of Church and Education.
- (3) That the *teologiske embedseksamen* offered by the *Menighets Fakultet* represent the same standard of achievement as to subjects and requirements within each subject as the *teologiske embedseksamen* at the university.
- (4) That regulations made from time to time for the *teologiske embedseksamen* at the university apply as far as practicable to the same examination at the *Menighets Fakultet* unless otherwise specifically provided.

- (5) That examiners and censors for the embedseksamen (professional examination) who are not members of the faculty be appointed by the King and that there be at least one censor from outside of the faculty at each examination or evaluation of written work.
- (6) That the organization and activities of the Menighets Fakultet be found in every respect on a secure footing.

In 1925, it was provided further that as long as the Menighets Fakultet has the right of examination it must send to the Department of Church and Education an annual report of its activities including a list of its students for each semester and a record of the examinations given.

Teologiske embedseksamen (professional examination in theology).—The teologiske embedseksamen at the Menighets Fakultet is open only to academic citizens (see p. 4) who at the university have bestått (passed) forberedende prøver (preliminary examinations) for students in theology (see p. 7) and who have been registered as students at the Menighets Fakultet for at least 1 year before applying for the teologiske embedseksamen.

The examination is given at the end of each semester and a written application must be submitted personally by the candidate to the secretary of the lærerråd (faculty council) within an announced period of time. The application must be accompanied by a brief sketch of the applicant's life and academic preparation, by certificates of having passed the eksamen artium and the forberedende prøver and by a receipt from the treasurer of the Menighets Fakultet showing that the examination fee of 40 kroner has been paid.

The professional examination in theology given by the Menighets Fakultet is practically the same as that given by the university. It is identical as to the subjects included and as to the assignment of the 4 opgaver (themes or propositions) in section A of the written part including the time within which each is to be prepared (see p. 30). For this part of his examination the student is permitted the use of the Old and New Testament in the original language, the Old Testament in Greek translation, and for the proposition on the Old Testament he may have the use also of a Hebrew lexicon.

A candidate who wishes may write, in addition, a special theme assigned on some phase of a subject selected by him-

self, or he may produce a thesis based on the scientific investigation of a self-chosen subject.

Application for the special theme should be made to the chairman of the faculty council not later than the beginning of the semester in which the examination is to be taken. The theme must be completed within 6 weeks and accompanied by a bibliography of the material used.

When a dissertation is written, the dissertation with a bibliography must be in the hands of the chairman of the faculty council before the beginning of the semester in which the examination is to be taken.

The subjects of the oral examination are the same as those for the written examination. However, the oral examination in the Old Testament and systematic theology includes only such parts as have not been included in the written examination.

The professional examination in theology may be taken in 2 parts with not more than 2 semesters intervening. When it is taken in 2 parts, section I includes the Old Testament and ecclesiastical history and section II the New Testament and systematic theology. In case there is a dissertation, that must be handed in before the beginning of the semester in which the examination is to be completed.

A separate mark ranging from 1 to 12 with 12 as the highest is given in the written and oral examinations of each subject. If the candidate has written a theme or produced a thesis he receives a separate grade for that. The endelig karakter (final grade) for the entire examination including the opgave or thesis is expressed by one of the following terms:

Laudabilis med indstilling (laudabilis with recommendation for meritorious passing).—To receive this the numerical grade for each written and oral examination must be at least 9 or above; but on the whole, the grade is given on the general recommendation of all who have participated in the candidate's examination.

Laudabilis.—To receive this the average mark for the examinations must not be less than 8.5.

Haud illaudabilis, 6 to 8.4.

Non contemnendus 5.

Immaturus (grade given for work evaluated at less than 5).—

With *immaturus* in either an oral or written examination in a subject the teologiske embedseksamen cannot be passed.

Vidnesbyrd om bestått eksamen (certificate of having passed the examination) is made out by the faculty council.

Before receiving his certificate the candidate must promise and with a handclasp substantiate the promise to live and teach according to the Scriptures.

If, because of special circumstances, the faculty has given a candidate an examination corresponding to the professional examination in theology the King on the application of the Menighets Fakultet may grant that the examination take the place of the professional examination in theology.

Praktisk teologisk eksamen (practical theological examination).—Since 1925, the Menighets Fakultet has been granted the privilege for 5 years at a time to conduct a praktisk teologisk seminar (practical theological seminary) under the direction of its styre (board of directors), faculty council, and instructor in practical theology. The appointment of the instructor in practical theology must be approved by the King and that of the other instructors at the Seminary must be approved by the Ecclesiastical Department.

The regulations governing Menighetsfakultetets Praktisk Teologiske Seminar (Practical Theological Seminary of the Congregational Faculty) and the praktisk teologiske eksamen (practical theological examination) which it offers are the same as those for the older Praktisk Teologiske Seminar (see pp. 75-77).

Admission to the seminary is dependent on having passed the professional examination in theology either at the university or at the Menighets Fakultet.

Oslo Handelsgymnasium (Commercial Gymnasium at Oslo)

General data.—The Commercial Gymnasium at Oslo was founded May 3, 1875, and opened the following autumn. It is a communal school governed by a board of directors. It is under the immediate supervision of its director who together with the permanently appointed instructors compose the faculty council. The object of the Commercial Gymnasium is to impart to young men and women theoretical instruction in commercial subjects in addition to a general higher education. The courses offered are:

- (1) A 2-year course for both men and women
- (2) A 1-year afternoon course for women
- (3) A 1-year fagkursus (professional) course for students

Pupils are admitted at the opening of the academic year which lasts from about August 24 until about June 24 for forenoon courses and from about January 9 until a few days before Christmas for the afternoon course.

Den to-årige avdeling (2-year department).—This department which has existed since the founding of the school offers a 2-year course. The first year ends with the opflytningseksamen (promotion examination) and the second year with the avgangseksamen (leaving examination).

Admission to the department is dependent on being at least 15 years of age and either to have bestått middelskoleeksamen (passed the middle-school examination) or optagelseprøve (entrance examination) at the Commercial Gymnasium. Admission to the work of the second year is open only to those who have bestått opflytningseksamen (passed the promotion examination) at the close of the first year either at the Commercial Gymnasium or at a commercial school of equal rank.

Det ett-årige eftermiddagskursus for kvinner (1-year afternoon course for women).—This course has been offered since 1879. Its requirements for admission are the same as those for the 2-year course. Instruction is given from 4 until 7 o'clock in the afternoon, making a total of 18 hours of instruction per week.

Det ett-årige fagkursus for studenter (1-year professional course for students).—This course has been offered since 1922. It is open only to students who have bestått eksamen artium (passed the eksamen artium). The requirements for its leaving examination are the same as those for the 2-year course in the subjects which the two courses have in common.

Instruction.—The following is a summary of the instruction offered in each of the three courses as expressed in subjects and hours per week for 1 year of instruction. In the afternoon course for women an hour of instruction is 50 minutes while in each of the other courses an hour of instruction is 45 minutes.

Subject	2-year course		After-noon course for women	1-year course for students
	First year	Second year		
1	2	3	4	5
Study of commerce.....	1	1	2	2
Commercial law.....	2	2	2	2
National economy.....		2		2
Commercial arithmetic.....	4	3	3	6
Bookkeeping.....	4	4	4	5
Commercial correspondence.....	1	2	1	2
Office work ¹			1	
Merchandise and chemistry.....	3	2		12
Geography ²	2	2		12
History.....	2	2		
Norwegian.....	4	2	2	
English.....	3	4	3	4
French.....	4	5	2	4
German.....	4	4	3	4
Physics or Spanish ⁴	2	0-2		
Writing.....	1		1	1
Typewriting.....	1	1	1	1
Stenography.....	2	2	2	12

¹ Combined with commercial correspondence in the 2-year course and with bookkeeping in the professional course for students.

² Subject is optional.

³ In the 1-year course for students there is choice of merchandise, geography, or stenography.

⁴ If physics is selected it is studied during the first year only; if Spanish is selected it is carried through both years of the course.

Success in the avgangseksamen (leaving examination) from one of the above courses entitles the candidate to an avgangstestimonium (leaving certificate).

The grades for this examination with their numerical equivalents are:

Utmerket godt (superior).....	1 and 1.5
Meget godt (very good).....	2 and 2.5
● Godt (good).....	3 and 3.5
Temmelig godt (quite good).....	4 and 4.5
~ Mindre godt (fair).....	5 and 5.5
Slett (poor).....	6

In the 2-year course and the 1-year course for students two grades are given for bookkeeping and one for each of the other subjects. The grades for each of commerce and commercial law, mathematics, bookkeeping, commercial correspondence and office work, merchandise, Norwegian, English, French, and German must not be less than 4, and not less than 5 for each of the remaining subjects. The average of the five grades for commerce and commercial law, mathematics, bookkeeping, and commercial correspondence with office work must not be less than 3.25. To pass the

examination the average of all the grades received in all the required subjects must not be less than 3.25.

For the subjects included in the afternoon course for women the same rules apply except that the grades for bookkeeping and commercial arithmetic must not be less than 3 and that for office work not less than 4.

A candidate whose average grade for the examination is passing but who has failed in one subject only may take a continuation examination at the beginning of the following academic year in the subject of his failure and if he then makes a passing grade he shall be given a certificate of having passed the leaving examination.

Bergens Museum (Museum at Bergen)

Bergens Museum was founded in 1825. It is mainly a scientific institution containing collections open to the public and research laboratories for its scholars. In September 1915 its board of directors made an appeal to the citizens of Bergen for funds for the erection of additional housing accommodations for the collections of the museum and for the establishment of a mathematics-science faculty. Since then local, national, and private funds have been granted for these purposes.

The museum is a national institution. It is not yet a university but through its 10 professors instruction under the same regulations as that at the university at Oslo is offered preparatory to the embedseksamen (professional examination) in zoology, botany, mineralogy, and chemistry. Its students may prepare themselves also for magistergraden (master of arts or master of science) in any one of these subjects or in hydrography, theoretical meteorology, the earth's magnetism and cosmical physics, Norwegian history, or the study of Norwegian dialects.

The museum does not have the right of examination but its students may go to the university at Oslo for examination and if they wish they may be examined by their respective instructors from Bergens Museum. The degrees granted at graduation are cand. mag., cand. philof., and cand. real. (see pp. 10 and 15).

Den Kongelige Norske Krigsskole (Royal Military School of Norway)

General data.—The Kongeligé Norske Krigsskole at Oslo or Krigsskolen (military school) as it is generally called, was founded December 15, 1750, and opened in 1751, as the Frie Matematiske Skole (Free School of Mathematics). In 1798, it became a military institute and in 1820, it received its present name.

The military school has two departments. The lower department offers a 1-year course for the training of officers liable for military duty, or preparatory for the upper department. Instruction in this course is divided between the five lines of infantry, cavalry, field artillery, fortress artillery, and engineering, but only some of these lines are offered in each year. The upper department offers a 2-year course for the training of permanent officers. In this department the instruction is the same for all students.

The school is under the direction of a chief, who has the rank of colonel or lieutenant colonel. The program of instruction and the regulations governing the leaving examination from each of the two departments of the school are established by the department for defense on the recommendation of the faculty of the military school.

The academic year begins October 1 and closes September 15 in the lower department and September 30 in the upper, with a vacation of 2½ weeks at Christmas and about 1 week at Easter.

Requirements for admission to the lower department.—To be eligible for admission to this department the applicant must be less than 24 years of age and must have completed at least 2 months of military practice as a private soldier. In addition:

Admission to the departments of engineering and artillery is dependent on:

- (a) A certificate of having passed the eksamen artium in the real line, or
- (b) A certificate of having passed the eksamen artium in the language-history line, with supplementary examination, or
- (c) A certificate of having passed the leaving examination from the technical school at Oslo, Trondheim, or Bergen.

Admission to the departments of cavalry or infantry is dependent on:

- (a) A certificate of having passed the eksamen artium in any line, or
- (b) A certificate of having passed the leaving examination from the Commercial Gymnasium at Oslo, from Sandefjords Com.munal Commercial Gymnasium, or from some other commercial school of equal rank according to the decisions of the department of defense.

The application for admission must be sent in before the end of March of the year in which the applicant wishes to be admitted. It must name the department in which the applicant wishes to be admitted and it must be accompanied by certificates of good health, of good character, and of having passed the required examination.

Admission to the department is limited and on a competitive basis determined by the final grade for the eksamen artium or other examination required for admission.

Instruction in the lower department.—Instruction in this department is given in the following subjects with the indicated number of hours per week and approximately the indicated number of hours per year:

Subject	Hours per—	
	Week	Year
Tactics and field service:		
Infantry and cavalry	6	150
Field artillery, engineering	4	100
Fortress artillery	2	50
Military administration: All lines	2	50
Military health administration: All lines	1	25
Military administration of justice: All lines	1	25
Subjects in military engineering:		
Engineering	9	225
All other lines	2	50
Artillery:		
Infantry, cavalry, and engineering	2	50
Field artillery, fortress artillery	6	150
Military topography, surveying, and topographic drawing:		
Infantry and cavalry	6	150
All other lines	3	75
Mining: Fortress artillery	4	100
Signal and lighting service: Fortress artillery	4	100
Rules and regulations:		
Infantry	9	225
Cavalry	8	200
Field artillery	7	175
Fortress artillery and engineering	6	150
Composition of official writings, reports, lists, accounts, etc.: All lines	1	25
Gymnastics with military drill:		
Infantry	6	150
All other lines	5	125
Riding: Cavalry, field artillery, and engineering	5	125
Singing, brass band, and dancing ¹		40

Cadets in cavalry, field artillery, and engineering are given a 20-hour veterinary course on horses.

¹ Approximately.

² Optional.

Instruction is both theoretical and practical. Practical work for the infantry includes military drill at the cadet company, surveying, reconnoitering, and fortification work. In the remaining lines there is practical work peculiar to each line, surveying and reconnoitering at the military school, and as far as possible some work at the cadet company.

The marks for the subjects included in the leaving examination with which the course ends are given by the officers and instructors concerned, assisted in some cases by a censor. The marks used and their numerical equivalents are:

Utmerket godt (superior)	1
Meget godt (very good)	2
Godt (good)	3
Nogenlunde (quite good)	4
Maadeligt (passing)	5
Slet (poor)	6

To pass the examination the hovedkarakter (average or final grade) for all the subjects included in the examination must be at least 3.00; the individual mark for each subject must be at least 4.50; and that for each of the following subjects must be at least 3.50:

- (a) All lines: Command, instruction, drill regulations peculiar to each line, and military conduct.
- (b) Infantry: Military art with field service, drill.
- (c) Cavalry: Military art with field service, riding.
- (d) Field artillery: Artillery, riding.
- (e) Fortress artillery: Artillery, mining.
- (f) Engineering: Engineering, riding.

On the certificate of having passed the leaving examination are entered the marks for the various subjects of the examination, the hovedkarakter (average or final grade), and the numerical rank of the cadet in his line beginning with 1. The numerical rank is used in determining seniority of appointment as officer.

A cadet who has not passed the avgangseksamen (leaving examination), or who because of too great competition has not been admitted to the upper department of the Military School may be permitted on the recommendation of the chief to remain in the lower department a second year.

A cadet who has failed to pass the leaving examination and who wishes to leave the school is eligible for appointment as a private in a battalion.

Requirements for admission to the upper department.—For admission to this department the applicant must be less than 25 years of age, and in addition to possessing the scholastic requirements for admission to the lower department (see pp. 84–85) he must have passed either the leaving examination from the lower department of the Military School, or the examination for sergeant at a school for noncommissioned officers.

Admission to the upper department of the Military School is competitive, depending on the arithmetical average of the final grade received in each of the examinations required for admission to the department. The number to be admitted each year is decided by the Department of Defense

Instruction in the upper department.—Instruction in this department is given in the following subjects with the indicated number of hours per week and approximately the indicated number of hours per year:

Subject	Hours per—			
	Week	Year 2	Week	Year 3
1	2	3	4	5
War history and tactics with field service.....	3	77	5	150
Military administration.....	1	25	1	30
Subjects in military engineering.....	2	50	3	90
Artillery.....	3	75	4	120
Military topography and surveying.....	2	50	2	60
Topographical drawing.....	3	75	3	90
Mathematics.....	5	125	2	60
Mechanics.....	2	50	2	60
Physics and chemistry.....	4	100	3	90
French.....	4	100	4	120
Rules and regulations, etc.....	1	25	1	30
Gymnastics and military drill.....	6	150	6	180
Riding (per cadet).....	3	75	3	90
Military administration of justice.....			1	30
Dancing and lessons in department.....		140		
Singing and brass band (optional).....		140		140

1 Approximately.

Practical work in the upper department consists of military drill, instruction, and of work at the cadet company and at the Military School, including each year at least 3 weeks of topography.

The instruction of the first year in this department closes with an opflytningseksamen (promotion examination). If in this examination a cadet should receive a mark in a subject below that required for the leaving examination the

chief after conference with the faculty council decides as to whether or not the cadet shall be promoted.

Instruction in this department closes with a leaving examination at the end of the second year. To pass this examination the hovedkarakter (average or final grade) must be at least 3.00; the individual mark for each subject must be at least 4.00; and that for each of command with instruction, military conduct, and military art with field service must be at least 3.50.

On the testimonium for the avgangseksamen (certificate of having passed the leaving examination) are entered the individual marks received for the examination, the hovedkarakter (average or final grade), and the numerical rank of the cadet.

A cadet who has failed to pass the leaving examination or who because of special circumstances has not taken the leaving examination may be permitted by the commanding general to remain in the highest class of the Military School for another year.

A cadet who leaves the upper department of the Military School without having passed the leaving examination is under obligation to accept appointment as an officer liable for military duty.

Militaere Høiskole (Military College)

The Military College at Oslo was founded February 24, 1825. It offers a 2-year course of higher military training in preparation for entrance to the general staff of the army or for permanent appointment as a higher officer in the artillery or in engineering.

One who has passed the leaving examination from the upper department of the Military School (see p. 87) is eligible for admission to the Military College.

Graduates from Sjøkrigsskolen (Naval Warfare School) who are eligible for appointment as reserve officers in the navy must take the 2-year course at the Military College before they are eligible for appointment as permanent officers in the navy.

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D. GLOSSARY OF TERMS

Institutions

- Bergens Museum—Museum at Bergen
 Folkeskole—folk or primary school
 Folkhøiskole—folk high school
 Fortsaettelseskole—continuation school
 Frie Matematiske Skole—Free School of Mathematics
 Fylkeskole—county school
 Gymnasium—gymnasium
 Hamar Laererskole—Teacher Training School at Hamar
 Hamar offentlige gymnasium—public gymnasium at Hamar
 Handelsgymnasium—Commercial Gymnasium
 Krigsskolen—military school
 Kristiansand Laererskole—Teacher Training School at Kristiansand
 Kommunale Handelsgymnasium—Communal Commercial Gymnasium
 Det Kongelige Frederiks Universitet—The Royal Frederik University
 Den Kongelige Norske Krigsskole—The Royal Military School of
 Norway
 Laererskoler for Laerer i folkeskolen—schools for the training of
 teachers in the folk school
 Landets krigsskoler—military schools of the kingdom
 Landsfolkeskolen—rural folk school
 Levanger Laererskole—Teacher Training School at Levanger
 Middelskole—middle school
 Militaere Høiskole—Military College
 Nesna Laererskole—Teacher Training School at Nesna
 Norges Laererhøiskole—Teachers College of Norway
 Norges Landbrukshøiskole—Agricultural University of Norway
 Norges Tannlaegehøiskole—College of Dentistry of Norway
 Norges Tekniske Høiskole—Technical University of Norway
 Oslo Handelsgymnasium—Commercial Gymnasium at Oslo
 Pedagogiske Seminar—Pedagogical Seminary
 Det Praktisk Teologiske Seminar—Practical Theological Seminary
 Stord Laererskole—Teacher Training School at Stord
 Sjøkrigsskolen (naval warfare school)
 Det Teologiske Menighets Fakultet—The Theological Congregational
 Faculty
 Tromsø Laererskole—Teacher Training School at Tromsø
 To-årige tekniske mellemskole—two-year technical middle school
 Ungdomskole—young people's school
 Universitetets Farmasøitiske Institutt—Pharmaceutical Institute of
 the University
 Veterinaer Høiskole—Veterinary College
 Volda Laererskole—Teacher Training School at Volda

Faculties and Departments

Arkitektur—architecture
 Almindelige afdeling—general department
 Bergfag—mining
 Bygningsingeniørfag—building engineering
 Elektroteknikk—electro-technics
 Hagebruksavdelingen—department of horticulture
 Det historisk-filosofiske fakultet—faculty of history and philosophy
 Jordbruksavdelingen—department of agriculture
 Det juridiske fakultet—faculty of law
 Kjemi—chemistry
 Maskinteknikk og skibsbygning—Mechanical technics and ship building
 Det matematisk-naturvidenskabelige fakultet—faculty of mathematics-science
 Det medisinske fakultet—faculty of medicine
 Meieriavdelingen—department of dairying
 Øverste afdeling—upper department (literally "highest" department or division)
 Skogsbruksavdelingen—department of forestry
 Det teologiske fakultet—faculty of theology
 Utakftningsavdelingen—department of land redistribution

Lines of study

Almindelig kjemisk linje—general chemical line
 Linje for maskiningeniører—line for mechanical engineers
 Linje for teknisk fysikk—technical physical line
 Norrøn—Norse
 Organisk kjemisk linje med næringsmiddelkjemi—organic chemical line with chemistry of nutrition
 Sterkströmlinje—strong current line
 Svakströmlinje—weak current line
 Uorganisk og elektrokjemisk linje—inorganic and electro chemical line

Certificates

Avgangstestimonium—leaving certificate
 Avgangsvidnesbyrd—leaving certificate
 Bevis for bestått forberedende prøver—certificate of having passed the preliminary examinations
 Eksamenstestimonium—examination certificate
 Eksamensvidnesbyrd—examination certificate
 Testimonium for avgangseksamen—certificate of having passed the leaving examination
 Vidnesbyrd—certificate
 Vidnesbyrd om bestått eksamen—certificate of having passed the examination

Degrees

- Aktuar kandidat—actuary candidate, usually written "aktuar. cand."
 Arkitekt—architect
 Bergingeniör—mining engineer
 Bygningsingeniör—building engineer
 Doctor juris—doctor of law, usually written "dr. jur."
 Doctor medicinae—doctor of medicine, usually written "dr. med."
 Doctor philosophiae—doctor of philosophy, usually written "dr. philos."
 Doctor technicae—doctor of technology, usually written "dr. techn."
 Doctor theologiae—doctor of theology, usually written "dr. theol."
 Doktorgraden i landbruksvidenskab—doctor of agricultural science
 Elektroingeniör—electrical engineer
 Filologisk kandidat—candidate in philology, usually written "cand. philol."
 Hagebrukskandidat—candidate in horticulture, "hagebr. kand."
 Kandidat—candidate
 Kandidat juris—candidate in law, usually written "cand. jur."
 Kandidat magister—candidatus magisteriae, usually written "cand. mag."
 Kandidat real—candidatus real, usually written "cand. real."
 Kemiingeniör—chemical engineer
 Landbrukskandidat—candidate in agriculture, usually written "landbr. kand."
 Magister—master of arts or master of science
 Magister artium—master of arts
 Magistergraden—degree of master, master's degree
 Magister scientiarum—master of science, usually written "mag. scient."
 Maskingeniör—mechanical engineer
 Medisinsk kandidat—candidate in medicine, usually written "cand. med."
 Meierikandidat—candidate in dairying, usually written "meierikand."
 Ökonomisk kandidat—candidate in economics, usually written "cand. öecon."
 Skibsiingeniör—naval engineer
 Skogbrukskandidat—candidate in forestry, usually written "skogbr. kand."
 Teologisk kandidat—candidate in theology, usually written "cand. theol."
 Utskiftningskandidat—candidate in land redistribution, usually written "utskiftningskand."

Examinations

- Adjunktksamnen—a lower examination in the faculties of history and philosophy and mathematics science at the University of Oslo
 Akademisk disputation og doktorspromosjoner—academic disputation and promotion to the doctorate
 Aktuareksamen—actuary examination

- Andeneksamen or philosophicum now replaced by forberedende prøver
- Annen årsprøve—examination at the close of the second year
- Apotekereksamen—druggist examination
- Årsprøver—year examinations
- Artiumsprøve—artium examination
- Avgangseksamen—leaving examination
- Avgangsprøve—leaving examination
- Avlægge kontinuansprøve—take a continuation examination
- Bifagseksamen—examination in minor subjects
- Eksamen artium—artium examination
- Eksamen i Lappisk og Kvensk—examination in Lapp and Quainish
- Embedseksamen—professional examination
- Forberedende prøve—preliminary examination
- Forste årsprøve—examination at the close of the first year
- Höiere lærerprøve—higher teaching examination
- Hovedfagseksamen—examination in the major
- Juridisk embedseksamen—professional examination in law
- Lærereksamener—teachers' examinations
- Lærerprøver—examinations for teachers (teaching examinations)
- Lektoreksamen—a higher examination in the faculties of history and philosophy and mathematics science
- Matematisk-naturvidenskabelige embedseksamen—professional examination in mathematics science
- Medisinske embedseksamen—professional examination in medicine
- Middelskoleeksamen—middle school examination
- Opflytningsprøve—promotion examination
- Optagelseprøve—entrance examination
- Pedagogiske eksamen—pedagogical examination
- Praktiske teologiske eksamen—practical theological examination
- Prøve—test or examination
- Prøve forelaesninger—two public lectures delivered by a candidate for the doctorate before he is eligible for the public defense of his thesis
- Sproglig-historisk embedseksamen—professional examination in language and history
- Statsøkonomiskeksamen—examination in national economics
- Tannlaegeeksamen—dental examination
- Teologisk embedseksamen—professional examination in theology
- Tilleggseksamen—supplementary examination
- Tilleggsprøve—supplementary examination
- Tredje årsprøve—examination for the third year
- Videnskabelig afdeling—social section of the aktuareksamen
- Videnskabelig prøve—scientific examination

Terms Used in Grading the Examinations

- Antagelig—acceptable
- Bestått—passed
- Bestått årsprøve—passed the year examination

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Bestått artium—passed the artium examination
Bestått avgangseksamen—passed the leaving examination
Bestått forberedende prøver—passed the preliminary examinations
Bestå prøven—pass the test or examinations
Endelig karakter—final mark
Godkjendt—accepted or passed
Godt—good
Hovedkarakter—average and final mark
Ikke bestått—not passed or failed
Ikke godkjent—not accepted; failed
Maadeligt—passing
Middelkarakteren—average and final grade
Meget godt—very good
Mindre godt—good minus; fair
Nogenlunde—somewhat or pretty good; quite good
Nogenlunde tilfredsstillende—somewhat or quite satisfactory
Slett—poor
Tjemmelig godt—pretty good; quite good
Tilfredsstillende—satisfactory
Umoden—immature
Utmerket godt—superior; excellent

Terms in Latin Used in Grading

Approbatur—with approval
Approbatur cum laude—approval with distinction
Approbatur magna cum laude—approval with great distinction
Laudabilis cum litteris commendatitiis—laudable with letter of commendation
Laudabilis med indstilling—laudable with recommendation for meritorious passing
Laudabilis prae ceteris—laudable beyond others
Laudabilis—laudable
Haud illaudabilis—not without praise
Haud illaudabilis primi gradus—not without praise first degree or rank
Haud illaudabilis secundi gradus—not without praise second degree
Non contemnendus—not bad
Immaturus—immature

Administrative Bodies

Akademiske kollegium—academic council
Eksamensdeputasjon—examination deputation, examination committee
Kirke og Undervisningsdepartementet—department of church and education
Laererskoleråd—council for the teacher training schools
Landbruksdepartementet—department of agriculture
Professorråd—faculty council
Professorutvalg—faculty committee
Skoleråd—faculty council

Storting—parliament
 Styre—board of directors
 Undervisningsråd—national council of education

Miscellaneous Terms

Akademiske borgere—academic citizens
 Akademiske borgerbrev—certificate of academic citizenship
 Ansökere—applicant
 Biopgaver—minor themes or propositions
 Doktoravhandlingen—dissertation for the doctorate
 Eksamensbesvarelse—answer in an examination
 Eksamenssemester—examination semester
 Enkelte fag—single subject
 Fagkursus—professional course
 Fast studerende—regular student
 Forberedelseskurs—preparatory course
 Hospitant—temporary student
 Hovedfag—major subject
 Hovedopgaver—major themes or propositions
 Kontraktutkast—plan or draft for a contract
 Laege—physician
 Landsmaal—country speech
 Opgave—theme or proposition
 Övelsesböcker—exercise or notebooks
 Privatister—private pupils in the sense that they come from schools without the right of examination
 Privatpraeceptor—private preceptor
 Prövetimer—examination or test hours
 Rikshospital—national hospital at Oslo
 Riksmaal—official speech of Norway
 Studie og undervisnings planer—plans of study and instruction
 Studieplan—study plan
 Tannlaege—dentist
 Tilhörende stöttefag—related supporting subjects
 Tilleggskurs—literally "additional course" practically "teachers course"

Phrases

Årsprövenens middelkarakterer—the average and final mark for the examination of each year.
 Den to-årige avdeling—the 2-year department or division.
 Det ett-årige eftermiddagskursus for kvinner—the 1-year afternoon course for women.
 Det ett-årige fagkursus for studenter—the 1-year professional course for students.
 Den 2-årige lærerutdannelse—the 2-year teacher training course.
 Den 4-årige lærerutdannelse—the 4-year teacher training course.

Krigsskolens øverste afdeling—higher department of the Military School (literally "highest" department or division).

Norges Landbrukshøiskoles skogsbruks og utskiftningsafdeling—agricultural and land apportionment division of the Agricultural University of Norway.

Offentlig godkjent almindelig fagskole—accredited public general professional school (a lower professional school).

Praktisk skriftlig opgave—practical written theme.

Sjøkrigsskolens nederste afdeling—lower department of the Naval Warfare School (literally "lowest" department or division).

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DET KONGELIGE FREDERIKS UNIVERSITET (THE ROYAL FREDERIK UNIVERSITY)
 Organization of Instruction

	HISTORISK-FILOSOFISK FAKULTET (HISTORY-PHILOSOPHY FACULTY)	JURIDISK FAKULTET (FACULTY OF LAW)	TEOLOGISK FAKULTET (FACULTY OF THEOLOGY)	MATEMATISK-NATURVIDENSKABELIG FAKULTET (MATHEMATICS-SCIENCE FACULTY)	MEDISINSK FAKULTET (FACULTY OF MEDICINE)
8					
7	Filologisk Kandidat (Candidatus Philologiae) LEKTOREKSAMEN (LEKTOR EXAMINATION)			Magister Scientiarum (Master of Science) VIDENSKABELIG PRØVE	Kandidat Real (Candidatus Reali) LEKTOREKSAMEN
6	Magister Artium (Master of Arts) VIDENSKABELIG PRØVE (SCIENTIFIC EXAMINATION)				
5		Kandidat Juris (Candidate in Law) JURIDISK EMBEDESEKSAMEN (PROFESSIONAL EXAMINATION IN LAW)	Aktuar-Kandidat (Actuary Candidate) AKTUAREKSAMEN (ACTUARY EXAMINATION)		
4			Teologisk Kandidat (Candidate in Theology) TEOLOGISK EMBEDESEKSAMEN (PROFESSIONAL EXAMINATION IN THEOLOGY)		
3		Ökonomisk Kandidat (Candidate in Economics) STATSÖKONOMISK EKSAMEN (NATIONAL ECONOMICS EXAMINATION)			
2					
1	FORBEREDENDE PRØVER (PRELIMINARY EXAMINATIONS)				
0	EKSAMEN ARTIUM	EKSAMEN ARTIUM	EKSAMEN ARTIUM	EKSAMEN ARTIUM	EKSAMEN ARTIUM

