

## REGISTRAR'S OFFICE

April 20th

19 32

### MEMORANDUM

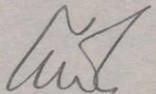
To The Principal

FROM T.H. Matthews

Professor LeMesurier suggested to me a day or so ago that my office and other offices used the title 'Dean' incorrectly, a deanship being an appointment and not a rank. If Jones commands the 3rd Battalion we do not call him Commanding Officer Jones but Colonel Jones, Officer Commanding 3rd Battalion, nor do we speak of Bursar Glassco. According to LeMesurier we should say Professor Eve, Dean of the Faculty of Graduate Studies and Research but never 'Dean' Eve.

~~What is your opinion?~~

I agree with LeMesurier, although as  
great an offender as anyone,

  
\_\_\_\_\_

MEMORANDUM OF AN INFORMAL MEETING

of the

Principal, Sir Arthur Currie,

Dean of the Graduate Faculty, A.S. Eve,

Vice-Chairman of the Graduate Faculty,  
Dean F.M.G. Johnson.

*read up -*  
*to 2/24*  
*copy*  
*A*

IT WAS AGREED THAT:

1. In future, all additions to the Faculty of Graduate Studies should be submitted to the Principal and recommended for appointment by him to the Board of Governors in accordance with Chapter V, Section 7 (c) of the Statutes of the University.
2. Appointments for the session 1930-31 made under Chapter VII, Section 1, shall also be submitted under the aforesaid Statute.
3. All additions to the Faculty for the current session made heretofore shall also be similarly submitted.
4. In the second paragraph, page 14, of the Announcement of the Graduate Faculty, "General Statement", a sentence should be added somewhat as follows:

"Appointments to the Faculty of Graduate Studies and Research are subject to the approval of the Board of Governors on recommendation by the Principal".

*I notified Eve today  
that this memo  
is approved.  
22/2/32*

*A.S. Eve*  

---

*22.2.32*

*A.S.*

McGILL UNIVERSITY

Composition of the Graduate Faculty

Office of the Principal  
and Vice Chancellor.

February 22, 1932.

Lunched with Dr. Eve and Dean Johnson at the former's house today at one o'clock. After lunch discussed whether the policy of the Faculty of Graduate Studies and Research as formulated at their meeting on March 6 1929 and reported to Corporation on March 8, 1929, was ultra vires or not.

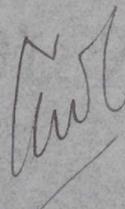
We were all agreed that the membership of the Faculty of Graduate Studies should be as outlined by the Graduate Faculty and also that it was wiser and more prudent to stick to the formality of having all appointments reported to the Board of Governors and confirmed by that body.

Dean Eve will forward to me a list of all who have been appointed since the meeting above mentioned, and I will undertake to have them confirmed by the Board of Governors.

In future all desired appointments to the Faculty will be reported to me for reference to the Board of Governors.

We all agreed that this matter had better not be referred to the Faculty or Corporation for further consideration and that the report really should have been brought to the attention of the Principal or the Board of Governors by the Registrar or by the Acting Principal.

AWC:DM.



February 19th,  
1932.

Dean A. S. Eve,  
Faculty of Graduate Studies and Research,  
McGill University.

Dear Dean Eve,

I note your decision to leave unaltered the statement in the article for the MCGILL NEWS, reading as follows:-

"In December, 1908, a change was made and the Faculty of the Graduate School was instituted, not without discussion."

Concerning the appointment of members of the Graduate Faculty and the extract from the Minutes of the meeting of Corporation on March 8th, 1929, I have this to say:

If the Faculty of Graduate Studies and Research put forward the proposition relative to the composition of the Faculty hereafter, as a recommendation to the Board of Governors, I can see nothing wrong in that act: but if the Faculty assert it as a definite policy they exceed their authority and declare in favour of something which is ultra vires. Neither the Faculty of Graduate Studies and Research nor any other Faculty has any power to determine what its composition shall be. That power or right rests with the Board of Governors, according to the statutes of this University, and the power and right of recommendation to the Board of Governors belongs to the Principal, and to the Principal alone.

Yours faithfully,

Principal.

MCGILL UNIVERSITY

MONTREAL

GRADUATE FACULTY

February 19, 1932.

Sir Arthur Currie,  
Principal and Vice-Chancellor,  
McGill University.

Dear Sir Arthur:

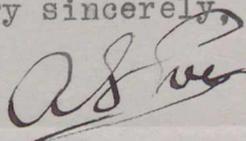
I am venturing to leave the statement "In December, 1908, a change was made and the Faculty of the Graduate School was instituted, not without discussion", unaltered, and the reasons for this are seen on page two of the enclosed.

It is wholly extracted from the Minutes and free from any expression of opinion on my part.

At Toronto there is, I believe, still a Faculty of the Graduate School. For several years I attended meetings of the Faculty of the Graduate School at McGill. You will note on page 2 that Sir W. Peterson signed the minutes, December 20th. 1910, of the regular autumn term meeting of the Faculty of the Graduate School.

The question discussed by Sir W. Peterson, dated about 1911, to which you refer in your letter of February 18th. was whether the Faculty of the Graduate School should consist of a group of professors separate and apart from those who were professors teaching undergraduates in the Faculty of Arts and of Applied Science. This was, fortunately, negatived.

Yours very sincerely,



Dr. A.S. Eve,  
Dean, Graduate Faculty.

Enc.

A SHORT SUMMARY OF THE HISTORY OF THE GRADUATE FACULTY.

Extract from Minutes, June 13, 1906.

"First meeting of the Committee of Graduate Studies of McGill University, appointed by the Principal" (Sir William Peterson), "under the authorization of Corporation".

Committee on Graduate Studies.

Calendar, 1906-07, page XVIII

Professor F.D. Adams, Chairman

Prof. B.J. Harrington  
Prof. Ernest Rutherford  
Prof. C.W. Colby  
Prof. R.J. Durley

Prof. H.M. Tory  
Prof. James Harkness  
Prof. A.E. Taylor  
Prof. W. Scott

( This appears to be the first entry of the kind in the Calendar. )

Minutes, October 4, 1906.

"26 applications for M.A., M. Sc., Ph. D. considered."

Minutes, October 18, 1906.

Printed application forms issued headed "McGill University Graduate School".

Minutes, 1907.

Circular to the Heads of Departments, headed  
"McGill University Graduate School."

April 5, 1907

Corporation approved the following:

"Graduate instruction was, for many years, offered in the various Departments of McGill University without definite organization. The increased demand for such work led the Corporation in 1906 to formally organize and extend the higher teaching work of the University. A Graduate School was, therefore, established, and in it are enrolled all the graduate students in the University who are following advanced courses of study in subjects which in the undergraduate work fall within the scope of the Faculties of Arts and of Applied Science.

April 5, 1907, (Continued).

The Faculty of the Graduate School consists of the professors of the Faculties of Arts and of Applied Science, but the initiative and administration of the School is placed in the hands of a Committee selected from these Faculties and known as the Committee on Graduate Studies. The Chairman of this Committee is the official head of the Graduate School. The advanced courses of study offered in the Graduate School lead to the degrees of Master of Arts, Master of Science and Doctor of Philosophy."

December, 1908.

The minutes record the First Meeting of "The Faculty of the Graduate School". "Present, Dr. Peterson in the Chair, Professors Adams, Walter, McBride, Walker, Caldwell, Dale, Porter, Mackay, Keay and others".

"The Committee of Graduate Studies" shall consist of a Chairman to be appointed by Corporation, and 8 members, 4 to be elected by the Faculty of Arts and 4 by the Faculty of Applied Science" Carried.

~~Minutes of Meetings of Faculty of Graduate School~~ — *see above*

~~December, 1908.~~

~~Present: Dr. Peterson, in the Chair, etc.~~

Meeting of the Faculty of the Graduate School

December 20, 1910.

"The regular autumn-term meeting of the Faculty of the Graduate School was held in the Arts Building on Tuesday, December 20, 1910, at 8 p.m.

Present: Dean Moyses, Dean Adams, Dean Walton, Miss Hurlbatt, Professors Barnes, Durley, Harkness, Ludlow, Stansfield, Walker, Walter, and Dr. Macmillan.

In the absence of Principal Peterson, Dean Moyses occupied the chair."

"(Signed), W. Peterson,  
Chairman."

That the faculty of the Graduate School  
shall consist of

April 11<sup>th</sup> 1906

Committee  
on Graduate  
Studies

1) 9. one chairman  
Chairman appointed by Principal  
other members appointed by Principal

May 18<sup>th</sup> 1906

see minutes by Board of Governors

June 8<sup>th</sup> 1906

The principal announced that he had appointed

MINUTES OF COMMITTEE ON GRADUATE STUDIES, March 1, 1922.

" The report of the Sub-Committee (Dr. A.B. Macallum, Chairman, Dr. Ruttan and Prof. Williams) on the constitution and status of the organization to direct Graduate Studies in McGill was then presented by Dr. Macallum. The recommendations were as follows:-

1. That a School or Faculty of Graduate Studies and Research be established to direct and control all the courses leading to the higher degrees, and to recommend candidates for such degrees.
2. That the members of the Faculty be the heads of Departments and others on the staff of the University, who offer and give bona fide courses of instruction of a graduate character, and who superintend research work for the higher degrees.
3. That the appointment of such members be made in the usual way, by the Board of Governors on the recommendation of the Principal.
4. That other members of the staff, not members of the Faculty, who give graduate courses of instruction of an approved character be listed as Associates of the Faculty, in their respective Departments in every Announcement of this School or Faculty of Graduate Studies and Research.
5. That the functions of the Faculty be inter alia:
  - (a) To approve of the courses submitted by the heads of Departments giving graduate instruction.
  - (b) To lay down conditions in which students may become candidates for higher degrees.
  - (c) To conduct examinations for such degrees.
6. That the routine executive work of the Faculty, such as the acceptance and registration of students, the determination of the courses which they must take, the determination of the students' fulfilment of the requirements, and the making of arrangements for the examinations to be taken by the students, be in charge of an Executive Committee of four or five members of the Faculty, which shall report, at stated intervals, its proceedings to the Faculty as a whole.

Amendments. The following amendments were then made:-

- In (1) The words "School or" were struck out.
- In (2) The word "certain" was inserted before the phrase "others on the staff" and the comma after the word "University" was struck out.
- In (4) The words "School or" were struck out.
- In (6) The words "appointed by" were substituted for the words "of four or five members of".

After these amendments had been made it was moved, seconded and carried that the report as amended should be adopted.

(Signed) Gordon Laing,  
Chairman.

## GRADUATE

MINUTES OF FACULTY MEETING, March 6, 1929.

"The first part of the Announcement of the Graduate Faculty was then read, clause by clause, and the modifications moved and seconded by various members of the Faculty are recorded in the following account:-

### FACULTY OF GRADUATE STUDIES AND RESEARCH

#### GENERAL STATEMENT

The Faculty of Graduate Studies and Research directs and controls all the courses leading to the higher degrees and recommends candidates for these degrees.

The members of the Faculty are the Deans of the other University Faculties and all Professors and Associate Professors who conduct advanced courses of study or who superintend advanced research work offered to students registered for the degrees awarded by the Faculty. Other members of this University may be elected members of the Faculty in full session upon proper notice of the motion.

There shall be an Executive Committee of the Faculty, ...etc.

May 23, 1929.

(Signed) F.C. Harrison,  
Chairman."

EXTRACT FROM THE MINUTES OF  
CORPORATION

Meeting: March 8, 1929.

3. " Dr. F.C. Harrison, Chairman of the Executive Committee of the Faculty of Graduate Studies, reported the decisions of that Faculty with regard to the changes in the organization of that Faculty and in the regulations under which degrees are obtained, the main differences between the new and the old being as follows:-

(1) the composition of the Faculty hereafter will consist of the Deans of the other University Faculties and all Professors and Associate Professors who conduct advanced courses of study or who superintend advanced research work offered to students registered for the degrees awarded by the Faculty. Other members of the University may also be elected members by the Faculty on proper notice of motion. Hitherto the members of the Faculty were appointed by the Board of Governors on the recommendation of the Principal; (2) the abolition of "Associates of the Faculty", who although not members of the Faculty have been giving some advanced instruction to graduate students; (3) the division of the Faculty into two sections to be known as the "Arts Division" and the "Science Division" respectively;

.....etc. See minutes, pg. 134.

The several changes mentioned and the minor changes included in the report as submitted were approved and the whole will appear in the next issue of the Announcement of the Faculty.

(Signed) C.F. Martin,  
Chairman."

*Certified*

*19.2.32*

*AS*

*Dean*

February 18,  
1932.

Dr. A. S. Eve,  
Dean of the Faculty of Graduate Studies and Research,  
McGill University.

Dear Dean Eve,

With reference to the article for the NEWS, and referring particularly to the first paragraph under the heading, "Subsequent History", I cannot see how the sentence

"In December 1909 a change was made and a Faculty of the Graduate School was instituted, not without discussion....."

can be allowed to stand, especially in view of the Memorandum made by Sir William Peterson about 1911, "Arrangements for Post Graduate and Research Studies", wherein he says,

"Another concrete issue is the question whether there should be a separate Faculty for the Graduate School.....There is the alternative, which I may say we have adopted at McGill, of having a Committee on Graduate Studies....."

Whatever confusion may exist in the minds of some people as to the meaning of the word "Faculty", there was evidently none in the mind of Principal Peterson, who himself says that he preferred the looser arrangement under a Committee; and this is the arrangement, he says, which existed at McGill at that time. There was no Faculty until 1922, when graduate work was reorganized and placed under the newly-created "Faculty of Graduate Studies and Research with its own Dean."

Yours faithfully,

Principal.

3564 University. Dr. Eve. 1.00

The Registrar says he made certain that there were no amendments passed which would change the composition of the Graduate Faculty. nor the way in which its members were appointed.

MCGILL UNIVERSITY  
MONTREAL

GRADUATE FACULTY

February 17, 1932.

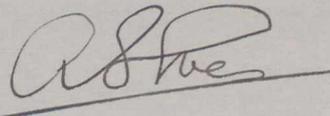
Sir Arthur Currie,  
Principal and Vice-Chancellor,  
McGill University.

Dear Sir Arthur:

In my bound report to the Principal dated April, 1931, I note that on page 4 the heading is quite misleading. It should have been "The Origin of the Faculty", and it was merely an extract from the minutes of March, 1907.

I have been studying your letter and the minutes of the Graduate Faculty and I think that there is great confusion over the use of the word "Faculty", a very common trouble. I am not yet quite ready to send you a report but I hope to do so in a few days, and have a talk at your convenience, over a situation which I inherited on my appointment in October, 1930.

Yours very sincerely,



Dr. A.S. Eve,  
Dean, Graduate Faculty.

1 Adams. v 14/09.

1. 10 h, 2. 10 h, 3. 10 h  
7 h et  
7 h of x

In the  
minutes of  
Corporation  
Apr. 14/09.

"Dr Adams — he  
also submitted  
to Corporation a  
recommendation of  
the Faculty of  
the Graduate School  
that in future the  
Committee of Graduate  
Studies ~~was~~ —"

<sup>this in</sup>  
After 1909, no other reference  
to it as a Faculty; always  
School or Committee in the minutes

Copy sent Dr. Johnson  
As Vice Chairman of the Faculty.

copy H

February 16th, 1932.

Dean A. S. Eve,  
The Faculty of Graduate Studies and Research,  
McGill University.

Dear Dean Eve,

I am returning herewith the article on the Faculty of Graduate Studies and Research which you have prepared for the MCGILL NEWS.

I am afraid we must try to get the history of the Graduate School right.

In this article you say,

"In December 1909 a change was made and a Faculty of the Graduate School was instituted, not without discussion."

"At a later date, 1922, the Faculty acquired a longer, but more descriptive title, - The Faculty of Graduate Studies and Research."

My information, gleaned from the Minutes of Corporation and supported by other evidence which I shall give you is that the School did not become a Faculty until 1922. If you consult the old calendars you will find that in the calendar of 1921-22 it was referred to as "The School of Graduate Studies" and from then on as "The Faculty of Graduate Studies and Research."

I will quote first from a report issued by the late Sir William Peterson, entitled "Inter-University Arrangements for Post-Graduate and Research Students"

and certainly issued at some time prior to 1910, for although it is not dated, it refers to events happening in 1910:-

"Another concrete issue is the question whether there should be a separate Faculty for the Graduate School, or whether the teaching should be distributed among the members of the ordinary staff. I refer to this because I know it is a burning question in some centres. .... There is also the alternative, which I may say we have adopted at McGill, of having a Committee on Graduate Studies, containing representatives of the main departments, especially those which are actually engaged in giving essentially graduate instruction"

Then the Minutes of the Meeting of Corporation held on April 12, 1922, read as follows:-

"Report from the Committee on Graduate Studies. The following Report has been adopted by the Committee on Graduate Studies:

Members of Faculty. That the members of the Faculty be the heads of Departments and certain others on the staff of the University who offer and give bona fide courses of instruction of a graduate character and who superintend research work for the higher degrees.

Appointed by the Board of Governors. That the appointment of such members be made by the Board of Governors on the recommendation of the Principal."

In the Minutes of the Governors' Meeting on May 1, 1922, I find:-

"The following recommendations from the Finance Committee were adopted:

That a Graduate Faculty be established. In connection with this the Principal made the following statement: "There are at present in the University fifty six persons doing graduate work leading to the Master's or Doctor's degree; that whereas this post graduate work has been carried on under the jurisdiction of the Committee on Graduate Studies, there is no doubt that added prestige will accrue to this work if it is administered by a Graduate Faculty. The constitution of this Faculty also will have a most salutary effect upon members of the University staff; it will increase their interest in research work and will doubtless lead to a larger volume of publications by professors than we now have. It is intended that the membership

"of this Faculty will include not only the heads of Departments but all others who are doing genuine graduate work. It is felt that this will be a distinct stimulus to the younger men. The only cost to the University involved would be that of taking care of printing, stationery and secretarial work, amounting to about \$500 per annum."

"The meeting expressed itself as heartily in accord with the establishment of this Faculty, and on the recommendation of the Principal appointed Vice-Principal Adams as its first Dean."

I think the foregoing very effectively disposes of any contention that a Faculty of the Graduate School was instituted in 1909, and confirms my impression that the Faculty was not established as such until 1922.

As I told you the other day, when Dean Laing joined the staff of this University in January, 1922, there were two things concerning which I particularly asked his help. The first was the revision of the curriculum of the Faculty of Arts, and the second was the creation of a Faculty of Graduate Studies. I soon appreciated after I came to the University in 1920 that we could never hope to be a great University as far as undergraduate numbers were concerned, but I always felt and hoped that we could make for ourselves an unrivalled position as a Graduate School. I claim (and I hope I claim with becoming modesty) that I had something to do with the establishment of a Faculty of Graduate Studies and Research in 1922.

I am quoting also from a letter which Dean Laing wrote me under date of March 22nd, 1922, as Chairman of the Committee on Graduate Studies: "The Committee feels that it will not be possible to carry on the work satisfactorily by means of a Committee only. It is the opinion that the organization of a Graduate Faculty is necessary in order to give the work a dignity commensurate with its quality. I am informed that the University of Toronto, which has for some years been conducting graduate work by means of some sort of a Board, is about to organize a Faculty."

I am giving you herewith the complete Report adopted by the Committee on Graduate Studies, a committee of which you were a member:-

- "1. That a Faculty of Graduate Studies and Research be established to direct and control all the courses leading to the higher degrees and to recommend candidates for such degrees.
2. That the members of the Faculty be the heads of departments and certain others on the staff of the University who offer and give bona fide courses of instruction of a graduate character, and who superintend research work for the higher degrees.

"3. That the appointment of such members be made in the usual way, by the Board of Governors on the recommendation of the Principal.

"4. That other members of the staff, not members of the Faculty, who give graduate courses of instruction of an approved character, be listed as Associates of the Faculty in their respective Departments in every announcement of this Faculty of Graduate Studies and Research.

"5. That the Functions of the Faculty be inter alia:-

(a) To approve of the courses submitted by the heads of Departments giving graduate instruction.

(b) To lay down conditions in which students may become candidates for higher degrees.

(c) To conduct examinations for such degrees.

"6. That the routine executive work of the Faculty, such as the acceptance and registration of students, the determination of the courses which they must take, the determination of the students' fulfilment of the requirements, and the making of arrangements for the examinations to be taken by the students, be in charge of an Executive Committee appointed by the Faculty, which shall report, at stated intervals, its proceedings to the Faculty as a whole."

From a study of this report and of the proceedings of Corporation and Board of Governors, it will be seen that "the Faculty will consist of heads of departments and certain others on the staff of the University who offer and give bona fide courses of instruction of a graduate character and superintend research work for the higher degrees;" and that "the appointment of such members be made by the Board of Governors on the recommendation of the Principal".

As far as I know, these regulations have never been changed; certainly no changes have been brought before the Board of Governors for confirmation. Yet it is a fact that in recent years men have been asked to join the Faculty without any reference to me whatever, and certainly many professors now sitting as members of the Faculty of Graduate Studies and Research have never been confirmed in that position in the regular way. It would seem that this loose way of doing things began

in 1928, when I was absent from the University for a year.

If it is considered advisable to change the regulations governing the Faculty, I have no objections; but until the regulations are changed, I think we should carry on in the authorized manner.

Yours faithfully,

Principal.

*copy also*

Governors' Minutes, May 1 meeting. 1922.

*Copy*

The following recommendations from the Finance Committee were adopted.

That a Graduate Faculty be established. In connection with this the Principal made the following statement:

There are at present in the University fifty six persons doing graduate work leading to the Master's or Doctor's degree; that whereas this post graduate work has been carried on under the jurisdiction of the Committee on Graduate Studies, there is no doubt that added prestige will accrue to this work if it were administered by a Graduate Faculty. The constitution of this Faculty also will have a most salutary effect upon members of the University staff, it will increase their interest in research work and will doubtless lead to a larger volume of publications by our Professors than we now have. It is intended that the membership of this Faculty will include not only the Heads of Departments but all others who are doing genuine graduate work. It is felt that this will be a distinct stimulus to the younger men. The only cost to the University involved would be that of taking care of printing, stationery and secretarial work, amounting to about \$500 per annum.

The Meeting expressed itself as heartily in accord with the establishment of this Faculty, and on the recommendation of the Principal appointed Vice-Principal Adams as its first Dean.

April 14, 1909.

Dr. Adams.....submitted to Corporation a recommendation of the Faculty of the Graduate School to the effect that in future the Committee on Graduate Studies shall be annually elected and shall consist of a Chairman and eight other members, of whom four shall be elected by the Faculty of Arts and four by the Faculty of Applied Science. This recommendation was referred to the following committee for report at the next meeting of Corporation.

April 27, 1909.

The opinion of the majority of the committee is to the effect that in regard to the composition of the Graduate Committee the method of election suggested would be less likely to ensure efficiency than the method previously adopted.

copy

April 11, 1906, meeting of Corporation:

The following series of resolutions were moved by  
Dr. F. D. Adams and seconded by Dr. H. T. Bovey:

1. That a Graduate School be established at McGill  
University.

4. That the Faculty of the Graduate School shall  
consist of the members of the Faculties of Arts and  
Applied Science.

5. That the administration of the Graduate School  
shall be placed in the hands of a Committee to be  
known as the Committee on Graduate Studies. ....

6. The Chairman of the Committee on Graduate Studies  
shall be appointed by the Principal and shall hold office  
for a period of five years. The other eight members  
shall also be appointed by the Principal and shall  
hold office for three years.

7. That the statutes of the University be amended so  
as to give the Chairman of the Committee on Graduate  
Studies a seat in Corporation.

5-2  
11-11  
1-2-10  
4-2-11  
6-10-11

EXTRACT FROM THE MINUTES OF A GOVERNORS' MEETING, MAY 18th, 1906.

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" 5. The Principal reported that for some time consideration had been given in the Faculties and by the Corporation of the University to the question of the establishment of a Graduate School, and explained the desirability of instituting one. He submitted resolutions from the Corporation establishing such a Graduate School, and recommending that the Statutes of the University be amended so as to provide for the institution of the degree of Doctor of Philosophy and for amending the requirements for the degrees of M.A. and M.Sc. The resolutions and recommendations of Corporation were approved by the Board."

From the Corporation minutes, April 12th, 1922 (Report from Committee  
on Graduate Studies)

The following Report has been adopted by the Committee on Graduate Studies:

Members of Faculty - That the members of the Faculty be  
the heads of Departments and certain others on the staff of  
the University who offer and give bona fide courses of  
instruction of a graduate character and who superintend  
research work for the higher degrees.

Appointed by Board of Governors - That the appointment of such  
members be made by the Board of Governors on the recommendation  
of the Principal.

MCGILL UNIVERSITY  
MONTREAL

GRADUATE FACULTY

February 12, 1932.

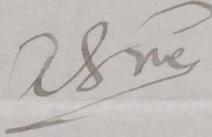
Sir Arthur Currie,  
Principal and Vice-Chancellor,  
McGill University.

Dear Sir Arthur:

I am asking the Editor of the McGill News to submit to you an article on the Graduate Faculty which I wrote for them a few months ago, which is likely to appear in the March issue.

It would be a pleasure to me to modify it in any way that you might suggest, as I am most anxious that this description shall do justice to all concerned.

Very sincerely yours,



Dr. A.S. Eve,  
Dean, Graduate Faculty.

808 DRUMMOND COURT  
DRUMMOND STREET  
MONTREAL

February 15, '32

Dear Sir Arthur,

At the request of Dr.  
Eve, I am forwarding proof of his  
article on the Faculty of Graduate  
Studies and Research for your  
approval. This article is for the  
March issue of "The McGill News"

Faithfully yours,

R. C. Fetherstonhaugh  
Editor "The McGill News"

Sir Arthur W. Currie, G.C.M.G.  
McGill University  
Montreal.

BULLETIN OF THE  
UNIVERSITY OF DENVER  
(Colorado Seminary)

GRADUATE  
SCHOOL

Vol. 35

April 20, 1934

No. 10

# UNIVERSITY of DENVER

(Colorado Seminary)

FREDERICK MAURICE HUNTER, A.M., Ed.D., LL.D., *Chancellor*  
WILBER D. ENGLE, Ph.D., Sc.D., LL.D., *Vice-Chancellor*

## GRADUATE SCHOOL

WILBER D. ENGLE, Ph.D., Sc.D., LL.D., *Dean*  
University of Denver, Denver, Colorado

## COLLEGE OF LIBERAL ARTS

ROLLAND J. WALTERS, A.M., Litt.D., *Dean*  
University of Denver, Denver, Colorado

## SCHOOL OF LAW

ROGER HENRY WOLCOTT, A.B., LL.B., B.C.S., *Dean*  
211 Fifteenth Street, Denver, Colorado

## SCHOOL OF COMMERCE, ACCOUNTS, AND FINANCE

GEORGE A. WARFIELD, LL.B., Ph.D., *Dean*  
2011 Glenarm Place, Denver, Colorado

## SCHOOL OF SCIENCE AND ENGINEERING

WILBER D. ENGLE, Ph.D., Sc.D., LL.D., *Dean*  
REUBEN E. NYSWANDER, Ph.D., *Associate Dean*  
University of Denver, Denver, Colorado

## SCHOOL OF FINE ARTS

(Chappell School of Art)

TURNER B. MESSICK, *Executive Secretary*  
1300 Logan Street, Denver, Colorado

## SCHOOL OF LIBRARIANSHIP

MALCOLM G. WYER, M.Lit., B.L.S., D.L.S., *Dean*  
1511 Cleveland Place, Denver, Colorado

## SUMMER SCHOOL

WILBER D. ENGLE, Ph.D., Sc.D., LL.D., *Director*  
University of Denver, Denver, Colorado

## CITY COLLEGE

ROLLAND J. WALTERS, A.M., Litt.D., *Director*  
University of Denver, Denver, Colorado

## FOUNDATION FOR THE ADVANCEMENT OF THE SOCIAL SCIENCES

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University of Denver, Denver, Colorado

## BUREAU OF BUSINESS AND SOCIAL RESEARCH

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2011 Glenarm Place, Denver, Colorado

## UNIVERSITY CIVIC THEATRE

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University of Denver, Denver, Colorado

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University of Denver, Denver, Colorado

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UNIVERSITY OF DENVER

(Colorado Seminary)

THE GRADUATE SCHOOL

ACADEMIC YEAR

1934-1935

DENVER, COLORADO



UNIVERSITY OF DENVER  
(COLORADO SEMINARY)

THE GRADUATE SCHOOL

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# UNIVERSITY OF DENVER

(COLORADO SEMINARY)

## THE GRADUATE SCHOOL

### HISTORY AND ORGANIZATION

The University of Denver has offered facilities for advanced study and research since 1891. At first the supervision of the work was in the hands of the Dean of the College of Liberal Arts, assisted by a committee appointed by the Chancellor from the Faculty of the College of Liberal Arts. In 1930 the Graduate School was organized as a separate unit, and now has exclusive control of all graduate work carried on in the University. The Graduate Faculty is composed of all members of the University Faculty who teach courses of graduate grade. It determines the educational policy of the Graduate School, and recommends candidates for degrees. The administration of the Graduate School is committed to the Dean and the Graduate Council. They are assisted by group committees representing allied lines of work grouped together for administrative purposes. These divisions are as follows: (1) Social Sciences; (2) Physical Sciences, Mathematics and Engineering; (3) Biological Sciences; (4) Education, Philosophy, Psychology and Religion; (5) Letters; (6) School of Commerce.

### LOCATION

The Graduate School, the College of Liberal Arts, the School of Science and Engineering, and their summer schools are located on the campus at University Park, which is in the southeastern section of the city of Denver and may be reached by the University Park cars, line number eight. Near the campus are found the Chamberlin Astronomical Observatory, the University Stadium, and the fraternity house quadrangle.

The School of Law is located at 211 15th Street. This is in the business section of Denver and is easily accessible from all parts of the city. Satisfactory class and lecture rooms, offices, and a large library are provided. Gifts from the late Mr. and Mrs. Jacob Haish and from other donors are being held as the nucleus of a fund for the erection of a new building for the future housing of the Law School.

The School of Commerce, Accounts, and Finance is housed in its building at the corner of Glenarm Place and Twentieth Avenue. In addition to many class and lecture rooms the building contains business offices, a library, society and club rooms, and a large gymnasium. The location is within a few minutes' walk of the business center of Denver and is also easily reached by street cars. Both day and evening classes in accounting, economics, business administration, statistics, and commercial education are taught.

The School of Fine Arts is located in the Chappell House at 1300 Logan Street. This is the Art Center of Denver. It has its own art collection, and many loan collections are each year exhibited here.

The School of Librarianship is located at 1511 Cleveland Place. This is near the Denver Public Library and the Library in the State Capitol Building. The school has its own library and is well equipped to teach library management.

The City College of the University of Denver was organized to give further opportunity to the citizens of Denver to secure the courses and studies taught in the College of Liberal Arts. The classes are taught in the evenings and on Saturday to accommodate people who are employed during the day. Through the courtesy of the Denver Board of Education these classes meet in the East Denver High School.

### LIBRARIES

The Mary Reed Library was completed during the autumn of 1932 and is now in use. It is a very beautiful building in collegiate Gothic architecture and embodies the best principles in library construction. It has four stories, and a tower which is more than a hundred feet in height. The stack rooms have a capacity of more than 500,000 volumes. There are four large reading rooms—the reserve book room, the reference library and periodical room, the general reading room, and the Renaissance reading room. Many special rooms and seminar rooms afford opportunities for study.

The School of Law, the School of Commerce, the School of Fine Arts, the School of Librarianship, and the Bureau of Business and Social Research have their separate libraries. More than 65,000 bound volumes are available in these libraries. In addition to the bound books there are files of six hundred current periodicals and about 10,000 pamphlets.

Several libraries in Denver are available to the students of the University. They are the Denver Public Library, containing over 300,000 volumes including special collections of art and engineering; the library of the State Historical Society, which preserves all books, periodicals, pamphlets, and manuscripts relating to Colorado; the State Library, with its large collection of documents, and the library of the Supreme Court.

### LABORATORIES AND MUSEUMS

The departments of Botany, Chemistry, Physics, Psychology, and Zoology have excellent laboratories and are well equipped with apparatus and supplies. Good working collections in zoology, botany, mineralogy, and geology are open for the use of the students. A well-equipped statistical laboratory is provided at the School of Commerce for the Bureau of Business and Social Research.

There are several museums in the city of Denver which offer excellent opportunities for study. The museum of the State Historical and Natural History Society of Colorado is located in the State Museum Building. In the State Mining Bureau, on the second floor of the Museum Building, are to be found mineral specimens and ores from all the districts of Colorado. The quality of the exhibits at the Colorado Museum of Natural History at City Park is comparable with that of any other museum in the country. The Art collection in the new City Hall and the collection in the Chappell House with its many art exhibits give students ample material for study.

### THE CHAMBERLIN ASTRONOMICAL OBSERVATORY

The Observatory was the gift of the late Mr. H. B. Chamberlin. It is situated four blocks from the college campus, at University Park. There are two stone buildings; the smaller of these, called The Students' Observatory, shelters a six-inch equatorial refractor made by Grubb of Dublin and a two-inch transit instrument.

The main building is 65 feet long and 50 feet deep and is constructed of red sandstone. It is crowned by an iron dome, the apex of which is more than 50 feet from the ground. The principal rooms in the building are the dome room, transit room, library, computing room, director's office, clock room, janitor's quarters, and photographic room.

The twenty-inch equatorial refractor, which is the principal instrument, has adequately proved its efficiency. The object-glass is from the hands of Alvan G. Clark, and the crown lens is reversible for photography. G. N. Saegmuller of Rochester, New York, was the maker of the mounting, which is of the highest order of mechanical excellence. The telescope is one of the largest and finest in the West, and is regularly employed in original research.

The subsidiary instruments are a four-inch steel meridian circle, a standard mean-time clock, a standard sidereal clock, chronometers, three chronographs, a sextant, and two solar transits. There is an excellent library containing all of the important star catalogues and astronomical periodicals.

### UNIVERSITY CIVIC THEATRE

The University Civic Theatre is located in Margery Reed Mayo Memorial Hall. The auditorium, seating three hundred, with its curtains and draperies, is the gift of Mrs. Verner Z. Reed. The stage and lighting equipment is the gift of Mr. James H. Causey. Dressing rooms are provided under the stage for sixteen people. The equipment includes two studios—one for scene building and painting, and one for costume making.

By the initiative of the University and under its management, the University Civic Theatre was organized during the fall of 1929, and gave its first production in December of that year. Its purpose is to offer the theater-loving audience of Denver the enjoyment of worth-while plays well performed. The University Civic Theatre also desires to offer all citizens of Denver actively interested in the drama the opportunity of participating in the numerous functions connected with stage productions.

The Drama Club and the Department of Speech and Dramatic Arts present their productions in this theatre.

### CHARACTER OF GRADUATE WORK

The principal aim of graduate work is the development of initiative, the power of independent work, and the promotion of the spirit of research. No graduate student should expect to get from formal courses, or laboratory work, all of the knowledge and training necessary to meet the requirements for his degree. A candidate for a degree must give evidence of a wide knowledge of his subject and of related fields of study. The performance of scholarly work of the highest rank on the part of the student is

encouraged, and every graduate student should be desirous of achieving work in his special field which will be highly creditable in the eyes of those best qualified to judge of its merits. The degree, when granted, should be evidence that such work has been successfully accomplished, and that the student has demonstrated his capacity for independent and original scholarship.

### ADMISSION

Graduates of the University of Denver, and graduates of institutions whose requirements for the bachelor's degree are substantially equivalent to those of the University of Denver, may apply for registration in the Graduate School. In all cases application for registration must be made to the Dean of the Graduate School, and must be approved by the Graduate Council. In the case of graduates of other colleges and universities, the application must be accompanied by an official transcript of the student's academic record. Admission to graduate courses may be granted only to those who have had the requisite undergraduate work in those departments. It must be remembered that admission to the Graduate School does not imply admission to candidacy for a degree. A graduate student who wishes to become a candidate for a degree must make special application after he has earned at least three courses of credit in the Graduate School. This application must be on a blank form obtained from the Dean. It must be signed by the Chairman of the Division of the major field, certifying that the applicant's work is satisfactory, and must be approved by the Graduate Council.

### TUITION AND FEES

#### *Matriculation Fee:*

A matriculation fee of \$5.00 is charged each new student on entrance and is not refundable. Students who have matriculated in one school of the University do not pay a second matriculation fee upon entering another school or department.

#### *Tuition per quarter:*

	Cash	Deferred Payments
One-sixth course .....	\$ 5.00	\$ 6.00
One-third course .....	10.00	11.00
One-half course .....	15.00	17.00
One course .....	30.00	33.00
One and one-half course.....	45.00	50.00
Two courses .....	55.00	60.00
Two and one-half courses.....	65.00	70.00
Three courses .....	75.00	80.00
Three and one-half courses.....	85.00	90.00

More than three courses may not be taken without special permission of the Dean.

Registration cards must be filed in the Registrar's Office before the expiration of the time designated in the schedule of classes for each quarter or a penalty of \$2.00 will be assessed. Three days will be allowed at

the opening of each quarter for payment of fees at the Business Office. The final date for payment of fees will be printed in the schedule of classes for each quarter, and a penalty of \$3.00 additional will be assessed all who do not pay fees or make necessary arrangements at the Business Office before the date set. No reduction of tuition is made for late registration. No registrations are accepted after the first two weeks of each quarter.

For changes in schedule made within the first week of a quarter, a full refund of tuition and laboratory fees will be allowed for the courses which are dropped. If, after the first week, a change of schedule involving registration for a new course is made, a fee of \$1.00 will be charged.

No refunds will be made on courses dropped after the first week, except that, in cases of students dropping all of their studies and leaving school during the second week of the quarter, 50% of the tuition and laboratory fees will be refunded. Any student withdrawing during the third week may have a refund of 25%. No refunds will be made after the third week. In special cases with the approval of the Administrative Committee credit for a part of the unused tuition may be carried over to the next quarter. All requests for adjustment must be filed in the office of the Registrar in writing, and all refunds will be computed from the day on which the Registrar receives the written notice from the student.

*Laboratory Fee:*

Laboratory fees are charged to cover the cost of materials used, and are due at the opening of the quarter. For the amount of the laboratory fees see the descriptions of the different courses.

*Diploma Fees:*

For the degree of Master of Arts, Master of Science, Doctor of Philosophy, or Doctor of Education, the fee for diploma and rent of hood is \$15.00. If this fee is paid on or before May 10th and the hood is returned in good condition within three days after Commencement, a refund of \$3.00 will be made. Students receiving their degrees at times other than the June Commencement will not use hoods. Such students will pay a diploma fee of \$12.00 with no refund.

### School of Law

*Tuition and Fees:*

The tuition fee for the law course is \$180.00 a year, payable \$60.00 in each of the three school quarters, in advance. The alternative is offered of \$63.00 per quarter, payable in installments. No separate matriculation fee is charged, this fee being included in the tuition payment, but matriculation in the Law School does not excuse from payment of matriculation for work later taken in other departments.

Part-time students not completing the law course in nine quarters, and taking fewer than ten class sessions per week, are charged \$6.00 per quarter hour for the courses taken; but such students, if taking in excess of ten quarter hours during a particular quarter, will not be charged in excess of the tuition charged full-time students for that quarter.

*Diploma Fee:* See above.

**School of Commerce, Accounts, and Finance**

*Matriculation Fee:* See page 9.

*Tuition:*

*Day Students*

Part-time

Per quarter hour .....\$ 6.00

Full-time

10 quarter hours ..... 55.00

11 quarter hours ..... 60.00

12 quarter hours ..... 65.00

13 quarter hours ..... 70.00

14 or 15 quarter hours..... 75.00

16 quarter hours ..... 80.00

Over 16, each additional hour..... 6.00

*Evening Students*

One two-hour subject .....\$12.00

Two to four subjects ..... 10.00 each

More than four subjects charged at day school rates.

Above rates are for cash in advance. Students who cannot pay cash may arrange for payment of tuition on an installment basis. The charge for this privilege is 50 cents a quarter hour, with a maximum charge of \$6.00. Promissory notes must be signed for these deferred payments. Minors are required to have notes signed by parents, guardian, or other responsible person.

After the first week no refund of tuition or fees will be made for courses which may be dropped, but a fee of \$1.00 will be charged for each change in schedule involving registration for a new course.

Tuition is not refunded. Under rules adopted by the Executive Committee, however, to cover cases of withdrawal occasioned by illness or other unavoidable cause, some portion of tuition paid in full on date of entrance may be returned, or credit for unused portion may be carried over to the next term. No adjustment is allowed after the fourth week of the term.

All requests for adjustment of tuition must be referred to the Executive Committee *in writing*. A student who fails to fill out the usual drop cards or to present his case in writing to the Executive Committee within four weeks from the date of the opening of the quarter forfeits all claim to any adjustment.

*Library Fee:*

An annual library fee of \$1.50 is required of each full-time student on date of registration.

*Late Fee:*

For penalty for late filing of cards or late payment of tuition and fees, consult calendar.

*Diploma Fee:* See page 10.

### Summer Quarter

#### *Tuition and Fees:*

A *matriculation fee* of \$5.00 is charged each new student on entrance. Students in the Summer Quarter of the College of Liberal Arts and Graduate School who are not candidates for degrees, and who expect to be in attendance only one or two terms, are not required to matriculate, but may pay an enrollment fee of \$1.00. Such students may at any time matriculate and become candidates for degrees.

In the Summer Quarter of the *College of Liberal Arts* and the *Graduate School* the tuition charge is \$10.00 for each subject taken during either term. Such classes give one-half course of academic credit, which is equivalent to two and one-half quarter hours. For the Course in Student Teaching, No. 110S, giving one and one-half courses credit, the charge is \$30.00. Student Teaching, No. 111S, has a tuition charge of \$20.00 and gives one course credit. Laboratory fees are charged in the science courses involving laboratory work and are stated under the descriptions of such courses. Fees are due and payable at the opening of the term. For delay in payment of fees a charge of \$1.00 is made.

Students wishing to attend a given course without receiving credit may secure this privilege by the payment of a \$5.00 fee. For such students attendance at class is optional. Students wishing to visit different classes may secure this privilege by the payment of a \$10.00 fee. Academic credit cannot be secured under these privileges.

In the Summer Quarter of the *School of Commerce, Accounts, and Finance* the fees are as follows:

Matriculation (new students only).....	\$ 5.00
Library fee .....	1.00
Tuition full summer program (3 courses for 11 weeks) if paid on or before June 15.....	72.00
Tuition partial program (one or more courses either term), per course .....	14.00

#### City College

A matriculation fee of \$5.00 is charged each new student. Students in City College who are not candidates for degrees are not required to matriculate, but may pay an enrollment fee of \$1.00. Such students may at any time matriculate and become candidates for degrees.

The tuition for each study is \$10.00 per quarter, and is payable at the time of registration. Such a class has eleven meetings, each 120 minutes in length, and when satisfactorily completed will give one-half course of credit towards a degree. This is equivalent to two and one-half quarter hours of credit. Fees are due and payable not later than the second meeting of the class. Extension of time in the payment of fees beyond this date entails a charge of \$1.00 per class.

A fee of \$2.00 will be charged for late registration—that is, registration after the second meeting of the class.

Students wishing to attend certain courses without receiving credit may register as auditors on payment of a nominal fee.

## DEGREES

The degrees which may be earned in the Graduate School are Master of Arts, Master of Science, Master of Science in Commerce, Doctor of Philosophy, and Doctor of Education.

The Master's degree conferred depends upon the nature and character of the course. A graduate student may become a candidate for either degree, Master of Arts or Master of Science, depending upon whether he has emphasized the purely scientific aspects of his work, or its applied aspects. Where the work has been done in the field of Applied Science, Engineering, Commerce, etc., the degree shall be Master of Science. The degree to be awarded will be decided by the Graduate Council, on application by the candidate and recommendation by the head of the department in which the major is taken.

In view of the increased equipment and library facilities and enlarged faculty, the University is now prepared to accept candidates for the doctorate. These degrees will be offered in the departments of Education and Psychology and certain other departments to be announced later.

## REQUIREMENTS

Candidates for the degrees of Master of Arts or Master of Science are required to complete work equivalent to nine courses and to present a thesis. A major of at least six courses of the nine must be in one department or in closely allied departments. The other three courses must be in related subjects and should be determined in consultation with the head of the department in which the major work is taken and the Dean of the Graduate School.

A knowledge of foreign languages, as may be deemed necessary by the department in charge of the major subject, is required of the candidate.

The requirements for the doctorate conform to the standards of the larger universities of America. The degrees will be awarded on a basis of achievement in the field of the major interest rather than on the number of courses completed or the amount of time involved. However, the minimum time requirement will be three full years of graduate work, of which one, preferably the last, must be in the University of Denver.

A reading knowledge of French and German, or such other foreign languages as may be approved by the Department, will be required. For the Doctor of Education, in lieu of one of these languages, and on approval of the Graduate Council, there may be substituted evidence of proficiency in another research tool, such as statistics.

Two-thirds of the work for this degree must be in the major field. The remainder of the work may be in one or two minor fields.

## THESIS

An acceptable thesis or dissertation, showing independent scholarship in the field of the major subject, must be submitted. The dissertation for the doctor's degree must show the results of much research work and must be a definite contribution to the knowledge of the subject. Such research

with the writing of the dissertation should take not less than a year of full-time study.

A candidate who expects to receive his degree at the regular Commencement in June must present to the Dean of the Graduate School, not later than the beginning of the Winter Quarter of that college year, a written statement from the Chairman of the Group Committee or from the head of the department in which the thesis is to be written, that the thesis subject has been accepted by the department concerned. The completed manuscript must be submitted to the professor who has directed the work, not later than four weeks before Commencement Day. A candidate who expects to receive his degree at the end of a Summer Quarter must present to the Dean of the Graduate School, not later than the beginning of the Summer Quarter, a written statement from the Chairman of the Division, or from the head of the department in which the thesis is to be written, that the thesis subject has been accepted by the department concerned. He must submit the completed manuscript to the professor who has directed the work, not later than three weeks before the end of the Summer Quarter. Before the candidate will be permitted to present himself for the final examination, the thesis must be approved by the head of the division or the head of the department in which the major is taken. If the thesis is accepted, three typewritten copies, properly bound, together with a certificate of acceptance by the professor in charge, and the head of the division or head of the department in which the work was done, shall be deposited with the Dean of the Graduate School at least one week before the candidate expects to receive his degree. The thesis must be prepared in accordance with instructions to be obtained from the office of the Dean of the Graduate School.

### EXAMINATION

The final examination for either the master's or doctor's degree will be oral and public. It will be given in the presence of the professors under whom the studies for the major subject have been pursued, and such other professors and students as desire to attend. A member of the Graduate Council, appointed by the Dean of the Graduate School, will act as Chairman. In the examination the candidate must give evidence that he has a satisfactory knowledge of the subject in which his major is taken.

### RESIDENCE

The University requires that candidates for the degree of Master of Arts or Master of Science must be in residence for at least one year. For the degree of Doctor of Philosophy or Doctor of Education, one full year, preferably the last, must be in residence at the University. Summer Quarters may be included in this residence requirement.

Graduate students in the Summer Quarter are subject to the same scholastic requirements as those in the regular university year. Attendance during the Summer Quarters in three different years is considered the equivalent of one year in residence.

## GRADUATE WORK IN THE SUMMER QUARTER AND IN THE CITY COLLEGE

Graduate work may be obtained in nearly all of the Departments in the Summer Quarter and in the City College. A student who is a graduate of an acceptable college or university, and who desires to take graduate work, must make application for admission to the Graduate School at the time of his first registration. Admission to the Graduate School does not imply admission to candidacy for a degree. A graduate student in the Summer Quarter or in the City College, expecting to earn a graduate degree, must make special application for admission to candidacy for the degree. This must be done after the student has earned the equivalent of three full courses of graduate credit. This application must be on a blank form obtained from the Dean, must be signed by the Chairman of the division of the major field, certifying that the work is satisfactory, and must be approved by the Graduate Council.

### GRADUATE COURSES IN SOCIAL WORK

With the exception of two introductory courses offered in the Senior College, all of the courses in the Department of Social Work are of graduate grade. Students who have a Bachelor's degree from an accredited college, and who have a satisfactory background of undergraduate work in Psychology, Physiology, Hygiene, and the Social Sciences, may become candidates for a graduate degree in this field. Application for graduate work must be made to the Dean of the Graduate School, and after a student has been in attendance one quarter or more and has earned the equivalent of three full courses of credit he may, on approval of the Group Committee of the major field and of the Graduate Council, be enrolled as a candidate for a Master's degree. In addition to completing the courses prescribed, each candidate for the degree is required to prepare a thesis bearing on the technic or the problems of the particular field in which he is working. The number of full-time students who can be taken care of in this field is quite limited. Those desiring to enter it should make application early in the year in which they desire to begin their graduate work.

### \*GRADUATE WORK IN COMMERCE, ACCOUNTS, AND FINANCE

Graduate work leading to the degree of Master of Science in Commerce is offered primarily in five fields of study: accounting, business organization and administration, economics, statistics, and education.

Preparation for the more desirable positions in commercial education increasingly will be made on a graduate level. Graduates of liberal arts colleges, teachers' colleges and collegiate schools of commerce, together with teachers in active service, are invited to consider the advantages at the University of Denver for graduate work in the fields of commerce, general education, commercial education, and research. Programs are adjusted to the needs of the individual under the direction of the Graduate Committee.

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\*In their relation to the work of the Graduate School the professional schools rank as departments.

Candidates who have a Bachelor's degree in Commerce, or whose work for the Bachelor's degree included a major in economics and business subjects, may meet the requirements for the Master's degree through one full year's residence. Graduates of a college of liberal arts who lack the preliminary training in economic branches generally require two years for the degree of Master of Science in Commerce.

Candidates who desire a Master of Arts degree with a major in Commercial Education may earn it without meeting the full specific requirements for the degree of Master of Science in Commerce.

Candidates for the Master's degree are required to complete a minimum of nine full courses, or forty-five quarter hours of graduate work, with a high grade, present an acceptable thesis on a subject related to the major field, and pass the final oral examination on the major field of work.

The School of Commerce houses a general library of economics, the books and documents of the Accountancy Library Association, a regional depository of the United States Department of Commerce, the University of Denver Bureau of Business and Social Research, and the University of Denver Business Review.

The Bureau of Business and Social Research, founded in 1924, is recognized as the laboratory for the practical study of economic and social problems. Its objectives are threefold: first, training of students in the field of business and social research; second, dissemination of information concerning economic, business, and social conditions in the Rocky Mountain region; third, collection of data pertaining to given industries of the region which will throw light upon the management problems of business.

Through the facilities of the Bureau the advanced student of statistics and business research may obtain practical experience in research work. One or more competitive Fellowships in Statistical Research are offered annually to qualified Graduate Students.

#### **\*GRADUATE WORK IN LAW, IN LIBRARIANSHIP, AND IN THEOLOGY**

Under certain conditions graduate students may offer for an advanced degree courses taken in the School of Law, in the School of Librarianship, or in the Iliff School of Theology. Arrangement to take such courses must be made in advance with the Dean of the Graduate School.

By special arrangement with the Iliff School of Theology (whose campus adjoins that of the University at University Park), graduate students desiring to major in Religious Education are permitted to take, in that institution, courses in Religious Education which will be accepted towards their Master's degree. The program of study is made out by the Dean of the Graduate School, in consultation with the professor in charge of the courses in the Iliff School of Theology.

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\*In their relation to the work of the Graduate School the professional schools rank as departments.

### GENERAL REGULATIONS

The unit of work is the course, by which is meant a class meeting five times a week throughout a quarter. Half courses are also offered. In some courses, open only to graduate students, such as the seminars and research courses, the formal class exercises are modified. But all such work is credited in terms of courses and half courses.

Students are ordinarily expected to register for three courses. But two half-courses may be substituted for a full course. Not more than three courses, or fifteen hours of class attendance, may be taken, without special permission of the Dean.

Work done in absentia or by correspondence will not be counted for graduate credit, except that in certain cases, approved by the Dean and the Graduate Council, work may be taken at another university.

The grading system involves two passing grades: "H" Passed with distinction; "P" Passed; a grade of "F" is a failure, and credit for the course can be received only by repeating the work. The following letters have special significance as follows: "I" (incomplete), "W" (withdrawn from the course with permission).

No credit earned during the undergraduate course may be transferred for graduate credit unless such credit was earned in the senior year and in courses of senior rank. If at the end of the Autumn and Winter Quarters of his senior year a student has so far completed his work for the Bachelor's degree that his program for the remainder of the year is not full, he may elect one or more graduate courses, but such election must be approved by the Dean of the Graduate School at the time of registration.

### PROGRAM OF STUDY

In order to determine what prerequisites, if any, are necessary for a candidate to do adequately the work of the major field, special attention is given to the undergraduate work of the candidate, conferences are held with the head of the department of the major subject and the Dean of the Graduate School, and programs of work are outlined for the guidance of the candidate.

### GRADUATE ASSISTANTSHIPS

A limited number of graduate assistantships have been established by the University. The stipends range from a minimum of \$200 to a maximum of \$600. Each holder of an assistantship must pay the matriculation fee of five dollars (unless he has already matriculated), the tuition, and other regular fees.

Candidates for graduate assistantships must be graduates of the University of Denver, or of colleges or universities having equivalent requirements for bachelors' degrees.

Application must be made on blanks to be obtained from the Dean of the Graduate School. These applications should be sent to the Dean of the Graduate School not later than March 15. The applications will be passed upon about April first.

Nominations to assistantships are made on the ground of character, scholastic attainments, and special knowledge in the field in which the candidate desires to be appointed an assistant. The holder of an assistantship shall give a maximum of half his time to assisting in the laboratories, reading papers, conducting quizzes, and such other work as may be assigned by the head of the department.

#### RE-REGISTRATION

The Graduate School reserves the right to require, at two-year intervals, re-registration of any candidate for a master's degree and at four-year intervals for candidates for the doctor's degree. This includes the right of the department concerned to restate the candidate's requirements for graduation.

Each department shall require sufficient campus residence or sufficient work with resident (regular) members of the Faculty to provide adequate supervision.

## COURSES OF STUDY

1934-1935

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Courses numbered 1 to 99 are Junior College courses and do not give graduate credit. Students interested in these elementary courses should consult the Yearbook of the University. Courses numbered 100 to 199 are Senior College courses, but, by special arrangement with the instructor and approval of the Dean of the Graduate School, may give graduate credit. Courses numbered 200 and above are graduate courses, but may be taken by selected seniors.

It is expected that courses here listed will be taught as scheduled, but the University reserves the right to make necessary changes.

Each class carries one course credit (2½ quarter hours) unless otherwise stated.

### ACCOUNTING

#### School of Commerce, Accounts, and Finance

A-101, 102. ACCOUNTING SYSTEMS. Installation and Operation. Prerequisite: A-51, 52, 53. Ten hours credit.

A-106. MINE ACCOUNTING. Prerequisite: A-1, 2. Three hours credit.

A-151, 152. AUDITING AND REPORTS. Prerequisite: A-51, 52, 53. Seven hours credit.

A-153, 154. COST ACCOUNTING. Prerequisite: A-51, 52, 53. Eight hours credit.

A-155. ANALYSIS OF FINANCIAL STATEMENTS. Case illustrations. Prerequisite: A-1, 2. Three credit hours.

A-201, 202. C.P.A. REVIEW. Prerequisites: A-101, 2; A-151, 2; A-153, 4; L-1, 2; L-51; L-101; L-151. Eight hours credit.

#### Summer Quarter, School of Commerce

A-101. ACCOUNTING SYSTEMS. Three hours credit. First Term. 11:00. Professor Lindsay.

A-102. SPECIALIZED ACCOUNTING. Three hours credit. Second Term. 11:00. Professor Lindsay.

A-155. ANALYSIS OF FINANCIAL STATEMENTS. Three hours credit. Second Term. 10:00. Professor Lindsay.

### ANTHROPOLOGY

103. MEASUREMENTS OF BONES. One-half course credit. Second half Spring. 10:40. Professor Renaud.

105. PREHISTORIC MAN. Outside readings and report. Winter. 10:40. Professor Renaud.

108 and 110. PEOPLES OF ASIA AND AFRICA. Outside readings and reports. Autumn. 10:40. Professor Renaud.

121. THE MOUND BUILDERS. Outside readings and report. One-half course credit. Second half Spring. 10:40. Professor Renaud.

215. RACES AND LANGUAGES. One-half course credit. First half Spring. 10:40. Professor Renaud.

241, 242, and 243. RESEARCH. One-half course credit each quarter. Autumn, Winter, and Spring. 1:30. Professor Renaud.

#### City College

113. EGYPTIAN ART AND CIVILIZATION. One-half course credit. Winter. Thursday. 7:00 P. M. Chappell School. Professor Renaud.

129. PREHISTORIC EUROPEAN ART. One-half course credit. Autumn. Thursday. 7:00 P. M. Chappell School. Professor Renaud.

139. CERAMICS OF MEXICO AND CENTRAL AMERICA. One-half course credit. Spring. Thursday. 7:00 P. M. Chappell School. Professor Renaud.

### ASTRONOMY

102. ADVANCED DESCRIPTIVE ASTRONOMY. Prerequisite: Plane Trigonometry. Winter. 11:40. Professor Recht.

103. PRACTICAL ASTRONOMY. Prerequisite: Plane Trigonometry. Spring. 11:40. Professor Recht.

#### City College

103a. PRACTICAL ASTRONOMY. Prerequisite: Plane Trigonometry. One-half course credit. Spring. Wednesday. 6:45 P. M. Professor Recht.

### BOTANY

GEOGRAPHY OF PLANTS. (Geography 102) Winter. 8:00. Professor Zobel.

102. PLANT GENETICS AND EVOLUTION. Prerequisite: General Botany or Botany 6. Autumn. 8:00. Professor Holch.

106, 107, and 108. PLANT ECOLOGY. Prerequisite: General Botany. Courses 106 and 108 are given in 1934-35. Course 107 is given in 1935-36. Winter and Spring. Lectures. 11:40. Laboratory arranged. Fee \$3.00. Professor Holch.

Note: Courses 106, 107, and 108 may be taken in any order. Together they constitute a thorough introduction to plant ecology and prepare the student for independent research.

109. PLANT PHYSIOLOGY. Prerequisite: General Botany. Autumn. Lectures. 11:40. Laboratory. 10:40-12:30. Fee \$3.00. Not offered in 1934-35.

110. FLOWERING PLANTS OF COLORADO. Prerequisite: General Botany. Spring. Lectures. 10:40. Laboratory to be arranged. Fee \$3.00. Professor Zobel.

111. HISTORY OF BOTANY. Prerequisite: General Botany. Spring. 9:00. Professor Holch.

121. HISTOLOGICAL TECHNIQUE. Prerequisite: General Botany. Autumn. Lectures. 2:30. Laboratory. 1:30-3:30. Fee \$3.00. Professor Zobel.

123. CYTOLOGY. Prerequisites: General Botany and Botany 121. Winter. Lectures. 2:30. Laboratory. 1:30-3:30. Fee \$3.00. Professor Zobel.

152. BACTERIOLOGY. Winter. 9:00. Fee \$5.00. Professor Zobel.

231. SEMINAR. One-half course if taken three quarters. Autumn, Winter, and Spring. 1:30. Professors Holch and Zobel.

232, 233, and 234. RESEARCH. Graduate students register for this course in connection with their thesis work. Autumn, Winter, and Spring. Time to be arranged. Professors Holch and Zobel.

#### City College

100a and 100b. ECONOMIC BOTANY. One-half course credit each quarter. Autumn and Winter. Saturday. 8:30. Professor Zobel.

105. BACTERIOLOGY, SCHOOL AND PUBLIC HEALTH AND THEIR CONTROL. One-half course credit. Spring. Saturday. 8:30. Professor Zobel.

#### Summer School

##### *First Term*

##### Offered at Camp Olympus

103S. BOTANY OF THE ROCKY MOUNTAINS. One-half course credit.

106S. ECOLOGY OF THE ROCKY MOUNTAIN REGION. One-half course credit.

110S. CLASSIFICATION OF ROCKY MOUNTAIN PLANTS. One-half course credit.

232S. RESEARCH IN TAXONOMY. One-half, one, or one and a half courses credit.

233S. RESEARCH IN ECOLOGY. One-half, one, or one and a half courses credit.

##### *Second Term*

113S. MORPHOLOGY OF FUNGI. Laboratory work to be arranged. One-half course credit. 10:00. Professor Zobel.

121S. HISTOLOGICAL TECHNIQUE. Laboratory work to be arranged. One-half course credit. 11:00. Professor Zobel.

#### CHEMISTRY

108 and 109. INDUSTRIAL CHEMISTRY. Prerequisite: College General Chemistry and at least registration in Organic Chemistry. One course credit, Winter Quarter; one-half course credit, Spring Quarter. 1:30. Professor Nelson.

112. QUANTITATIVE ANALYSIS. Prerequisite: General Chemistry (College). Sophomore. Autumn. 1:30. Laboratory time to be arranged. Fee \$5.00. Professor Knudson.

113. FOOD ANALYSIS. Prerequisites: Chemistry 112 and 121. Spring. 10:40. Fee \$5.00. Mrs. Cohn.

114. ADVANCED QUALITATIVE ANALYSIS. Prerequisite: College General Chemistry which includes elementary qualitative analysis. Winter. Lectures. 1:30. Laboratory time to be arranged. Fee \$5.00. Professor Knudson.

115. ADVANCED QUANTITATIVE ANALYSIS. Prerequisites: Chemistry 112 and 114. Spring. Lectures. 1:30. Laboratory time to be arranged. Fee \$5.00. Professor Knudson.

121, 122, and 123. ORGANIC CHEMISTRY. Autumn and Winter, given as a full course. Spring. Monday, Wednesday, Friday, one-half course. 11:40. Three hours laboratory work per week. Fee \$5.00. Professor Gustavson and Mrs. Cohn.

132, 133, and 134. PHYSICAL CHEMISTRY. Autumn, Winter, and Spring. Lectures. 10:40. Laboratory work to be arranged. Fee \$3.00 for each course. Professors Earl A. Engle and Knudson.

143. CHEMICAL ENGINEERING. Autumn. 9:00. Professor Knudson.

144 and 145. CHEMICAL ENGINEERING. Winter and Spring. 9:00. Professor Knudson.

151 and 152. BIOCHEMISTRY. Prerequisite: Courses 12 and 122 and a knowledge of physiology. Autumn and Winter. 8:00. Fee \$5.00. Professor Gustavson.

164. METALLURGY. May be taken for one or one-half course credit. Spring. 9:00. Professor Earl A. Engle.

171. MAGAZINE SEMINAR. Sections limited to twelve students. One-half course credit on completion of a year's work. Autumn, Winter, and Spring. Wednesday. 2:30. Professor W. D. Engle and Staff.

215. ORGANIC QUALITATIVE ANALYSIS. May be taken either as one or one-half course. Spring. 11:40. Fee \$5.00 for full course or \$3.00 for half course. Professor Gustavson and assistants.

223, 224, and 225. ADVANCED ORGANIC CHEMISTRY. Prerequisite: Chemistry 123. One-half course credit each quarter. Autumn, Winter, and Spring. Wednesday and Friday. 1:30. Professor Gustavson.

227. ORGANIC PREPARATIONS. Prerequisite: Chemistry 121 and 122. May be taken either as one or one-half course. Spring. 1:30. Fee \$5.00 for full course or \$3.00 for half course. Mrs. Cohn.

231, 232, and 233. ADVANCED PHYSICAL CHEMISTRY. Prerequisite: Chemistry 133. Autumn, Winter, and Spring. Monday and Wednesday. One-half course credit each quarter. 11:40. Professor Knudson.

271, 272, and 273. RESEARCH. Credit to be arranged. Autumn, Winter, and Spring. 3:30. Fee \$5.00 per course. Professors W. D. Engle, Gustavson, Earl A. Engle, Knudson, and Mrs. Cohn.

275. GRADUATE SEMINAR. Required of all candidates for the Master's degree. One course credit given for the work throughout the entire year. Tuesday. 3:30. Professor W. D. Engle and staff.

### Summer School

#### *First Term*

151(a)S. BIOCHEMISTRY. General Chemistry and Organic Chemistry are prerequisites. Students are advised to take course 151(b)S for laboratory work to accompany this course. One-half course credit. 8:00. Professor Gustavson.

151(b)S. BIOCHEMISTRY. Laboratory work. This class should be taken with Chemistry 151(a)S. One-half course credit. 9:00. Laboratory fee \$3.00. Professor Gustavson.

173S. SEMINAR IN THE TEACHING OF ELEMENTARY CHEMISTRY. One-half course credit. 11:40. Professor Gustavson.

271S. RESEARCH. Time and credit to be arranged. Laboratory fee \$5.00 per course credit. Professors Gustavson and Earl A. Engle.

275S. GRADUATE SEMINAR. Required of all candidates for the Master's degree. Graduates. Wednesday. 3:00-5:00. Professor W. D. Engle.

#### *Second Term*

111S. SPECIAL METHODS IN ANALYTICAL CHEMISTRY. One-half course credit. 9:00. Laboratory fee \$3.00. Professor Knudson

236S. COLLOID CHEMISTRY. One-half course credit. 11:00. Professor Knudson.

#### CLASSICS

107. OVID. Winter. 10:40. Professor Cressman.

113. LIVY. Spring. 10:40. Professor Cressman.

114. LATIN COMPOSITION. Spring. 11:40. Professor Cressman.

130. HOMER'S ILIAD AND ODYSSEY IN ENGLISH. Open to all students. Autumn. 9:00. Professor Cressman.

131. GREEK TRAGEDY IN ENGLISH. Open to all students. Winter. 9:00. Professor Cressman.

132. LATIN LITERATURE IN ENGLISH. Spring. 9:00. Professor Cressman.

#### ECONOMICS

101. PRINCIPLES OF ECONOMICS. Winter.

102. HISTORY OF ECONOMIC THOUGHT. Autumn. Professor Warfield.

146. PUBLIC FINANCE. Winter. 11:40.

147. BUSINESS FINANCE. Prerequisite: Economics 52. Spring. Professor Warfield.

151. AMERICAN ECONOMIC PROBLEMS. Spring.

156. LABOR PROBLEMS.

170. TRANSPORTATION. Autumn.

193. ECONOMICS AND CITIZENSHIP. One-half course credit. Spring. Monday, Wednesday, Friday. 8:00. Professor Zelliott.

251. ECONOMICS OF INTERNATIONAL RELATIONS (Seminar). Autumn. Professor Kaplan.

252. AMERICAN ECONOMIC THOUGHT (Seminar). Winter. Professor Kaplan.

253. BUSINESS CYCLE THEORY (Seminar). Spring. Professor Kaplan.

290. PUBLIC FINANCE. One-half course. Autumn.

**Summer School**

101(a)S. FUNDAMENTALS OF ECONOMICS. One-half course credit. First Term. 10:40. Professor Kaplan.

156(a)S. PRESENT DAY LABOR PROBLEMS. One-half course credit. First Term. 8:00. Professor McWilliams.

101(b)S. FUNDAMENTALS OF ECONOMICS. A continuation of course 101(a)S. One-half course credit. Second Term. 10:00. Professor Sikes.

156(b)S. PRESENT DAY LABOR PROBLEMS. A continuation of course 156(a)S. One-half course credit. Second Term. 8:00. Professor Sikes.

**School of Commerce, Accounts, and Finance**

Ec-101. TRANSPORTATION. Three hours credit.

Ec-151. BUSINESS ETHICS. Prerequisites: Ec-51, 52. Three hours credit.

Ec-152. ECONOMIC THEORY. Prerequisites: Ec-51, 52. Three hours credit.

Ec-153. LATIN-AMERICAN TRADE RESOURCES. Three hours credit.

Ec-154. ECONOMICS OF INTERNATIONAL RELATIONS. Prerequisite: Ec-51, 52. Three hours credit.

Ec-155. ECONOMICS OF AMERICAN FOREIGN POLICY. Prerequisite: Ec-51, 52. Three hours credit.

Ec-156. LABOR PROBLEMS. Prerequisite: Ec-51, 52. Five hours credit.

Ec-201, 202, 203. ECONOMIC SEMINAR.

**Summer Quarter, School of Commerce**

Ec-201. ECONOMIC SEMINAR (Money and Prices). First Term. Three hours credit. 8:00. Professor Kaplan.

Ec-203. AMERICAN ECONOMIC DOCTRINES. Three hours credit. First Term. 9:00. Professor Kaplan.

Ec-202. ECONOMIC SEMINAR (Economics of Consumption). Three hours credit. Second Term. 9:00. Mr. Dunphy.

**EDUCATION**

102. HISTORY OF EDUCATION. Autumn. 9:00. Professor Joyal.

106. INTRODUCTION TO TEACHING. Prerequisite: Psychology 4. Autumn and Winter. Conferences. Monday, Wednesday, Friday. 8:00. Observations. Monday. 2:30 to 4:00. Professor Willey.

108. THE NEW EDUCATION IN RUSSIA, GERMANY, ITALY, AND MEXICO: COMPARATIVE EDUCATION. Spring. 11:40. Professor Cherrington. (May be credited in Department of Education or Department of International Relations.)

109. COMPARATIVE STUDY OF CITIZENSHIP EDUCATION. Not offered in 1934-35. Professor Cherrington.

110. STUDENT TEACHING. Prerequisite: Education 106. One and one-half courses credit. Autumn, Winter, and Spring. Two hours teaching daily.

Hours to be arranged. Group conferences. Tuesday and Thursday. 8:00. Laboratory fee \$3.00. Professor Willey.

111. STUDENT TEACHING (Advanced). Autumn, Winter, Spring. Two hours teaching daily. Hours to be arranged. Professor Willey.

113. PRINCIPLES OF EDUCATION. Prerequisite: Psychology 4. Winter. 11:40. Spring. 9:00. Professor Maxwell.

118a. CURRENT EDUCATIONAL LITERATURE. One-half course credit. Winter. Monday, Wednesday, Friday. 8:00. Professor Walters.

PSYCHOLOGY OF SCHOOL SUBJECTS (Psychology 104). Spring. Professor Miller.

THE PSYCHOLOGY OF CHILD DEVELOPMENT (Psychology 102). Winter. Professor Grigsby.

125. STATISTICAL METHODS IN EDUCATION AND PSYCHOLOGY. Prerequisite: Psychology 4. Professor Miller. Offered at City College 1934-35.

126. MENTAL MEASUREMENTS. Prerequisite: Psychology 4. Professor Garth. Offered at City College 1934-35.

128. EDUCATIONAL TESTS AND MEASUREMENTS. Prerequisite: Psychology 4. Spring. 1:30. Professor Miller.

143. EDUCATION IN THE SECONDARY SCHOOL. Winter. 10:40. Professor Joyal.

150. PRESCHOOL EDUCATION. Spring. Conferences and teaching hours to be arranged. Professor Willey.

171. GUIDANCE AND COUNSELING OF SCHOOL CHILDREN. Field trips, observations, and class work. Autumn. 10:40. Professor Maxwell.

172. METHODS IN CHARACTER EDUCATION. Offered at City College in 1934-35.

MORAL PRINCIPLES IN EDUCATION. (Philosophy 171.) Spring. 10:40. Professor Dickinson.

180. THE TEACHER AND SUPERVISION. Winter. 9:00. Professor Joyal.

185. SCHOOL ADMINISTRATION. Autumn. 11:40. Professor Joyal.

186. PUBLIC SCHOOL FINANCE. Spring. 9:00. Professor Joyal.

187. PUBLIC EDUCATION IN COLORADO. Spring. 11:40. Professor Joyal.

194. RURAL LIFE AND EDUCATION. One-half course credit. Spring. Monday, Wednesday, Friday. 8:00. Professor Willey.

296. METHODS IN RESEARCH. Required of all students who are candidates for the Master of Arts degree in Education. One-half course credit. Autumn, Winter, Spring. Seminar Meeting: Wednesday, 6:45 P. M. Professor Joyal.

299. EDUCATIONAL RESEARCH AND THESIS WRITING. At least one quarter is required of all candidates for the Master of Arts degree in Education. Prerequisite: Education 296. Credit to be arranged. Autumn, Winter, Spring. Monday, 6:45 P. M. Conference hours to be arranged. Staff members.

**City College**

109a. ADAPTING INSTRUCTION TO LARGE CLASSES. One-half course credit. Autumn. Tuesday. 6:45 P. M. Mr. Fox.

109b. PROBLEMS OF THE TEACHER AS A PERSONNEL WORKER. One-half course credit. Winter. Tuesday. 6:45 P. M. Mr. Fox.

109c. TEACHING SLOW AND FAST-LEARNING PUPILS. One-half course credit. Spring. Tuesday. 6:45 P. M. Mr. Fox.

113a and 113b. PRINCIPLES OF EDUCATION. One-half course credit each quarter. Autumn and Winter. Professor Maxwell.

125a and 125b. STATISTICAL METHODS IN EDUCATION AND PSYCHOLOGY. One-half course credit each quarter. Autumn and Winter. Monday. 6:45 P. M. Professor Miller.

126a and 126b. MENTAL MEASUREMENTS. One-half course credit each quarter. Winter and Spring. Wednesday. 6:45 P. M. Professor Garth.

134. ACTIVITY PROGRAM IN ELEMENTARY SCHOOLS. One-half course credit. Autumn. Friday. 4:00. Miss Hampel.

135b. READING IN THE ELEMENTARY SCHOOLS. One-half course credit. Winter. Friday. 4:00.

172a and 172b. EDUCATION FOR CHARACTER AND CITIZENSHIP. One-half course credit each quarter. Autumn and Winter. Professor Maxwell.

192. SEMINAR IN ADULT EDUCATION. One-half course credit. Autumn. Friday. 4:15 to 6:00. Professor Cherrington and Staff.

296. RESEARCH METHODS. Required of all candidates for advanced degrees in Education. One-half course credit each quarter. Autumn, Winter, and Spring. Wednesday. 6:45 P. M. Professor Joyal.

299. EDUCATIONAL RESEARCH AND THESIS WRITING. At least one quarter required of all candidates for advanced degrees. Credit to be arranged. Autumn, Winter, and Spring. Monday. 6:45 P. M. Professor Joyal and Staff.

**Summer School***First Term*

106S. INTRODUCTION TO TEACHING. Required for students planning to take Student Teaching. One-half course credit. 8:00. Professor Willey.

110S. STUDENT TEACHING. An eight-week course beginning June 11 and ending August 3. One and one-half course credit. Laboratory fee, \$3.00. 8:00-10:00 or 10:00-12:00 and 1:00-2:00 daily. Professor Willey.

111S. STUDENT TEACHING (Continued). Eight-week course, beginning June 11. One course credit. 8:00-10:00 or 10:00-12:00. Professor Willey.

113S. PRINCIPLES OF EDUCATION. One-half course credit. 11:40. Professor Maxwell.

125(a)S. STATISTICS FOR TEACHERS. One-half course credit. 8:00 Professor Miller.

134(a)S. COMMUNICATING IDEAS IN KINDERGARTEN-PRIMARY GRADES. One-half course credit. 9:00. Professor Helen Laurie.

135(a)S. INVESTIGATIONS IN READING IN KINDERGARTEN-PRIMARY GRADES. One-half course credit. 8:00. Professor Helen Laurie.

136(a)S. THE SOCIAL STUDIES IN KINDERGARTEN-PRIMARY GRADES. One-half course credit. 11:40. Professor Helen Laurie.

141S. SECONDARY SCHOOL PROBLEMS. One-half course credit. 10:40. Professor Hamilton.

145S. THE JUNIOR HIGH SCHOOL. One-half course credit. 8:00. Professor Hamilton.

146S. ACTIVITIES IN THE SECONDARY SCHOOL. One-half course credit. 8:00. Professor Hamilton.

160S. HEALTH OF SCHOOL CHILDREN. One-half course credit. 8:00. Professor Beagler.

171S. GUIDANCE AND COUNSELING OF SCHOOL CHILDREN. One-half course credit. 10:40. Professor Maxwell.

172S. EDUCATION FOR CHARACTER AND CITIZENSHIP. One-half course credit. 8:00. Professor Maxwell.

183S. CURRENT CRITICISM OF EDUCATION. One-half course credit. 8:00. Professor Greene.

184S. BUSINESS ADMINISTRATION AND PUBLIC SCHOOL FINANCE. One-half course credit. 8:00. Professor Joyal.

187S. THE ADMINISTRATION OF PUBLIC EDUCATION IN COLORADO. One-half course credit. 9:00. Professor Joyal.

190S. EDUCATIONAL SOCIOLOGY. One-half course credit. 9:00. Professor Corning.

194S. RURAL LIFE AND EDUCATION. One-half course credit. 11:40. Professor W. F. Templin.

280S. THE TEACHER AND THE SOCIAL SCENE. One-half course credit. 9:00. Chancellor Hunter.

281S. PRACTICUM FOR PRINCIPALS AND SUPERINTENDENTS. The class enrollment will be limited to 30. One course credit. 10:40-12:30. Professor Corning.

282S. PRACTICUM FOR PRINCIPALS AND SUPERINTENDENTS (Continued). One course credit. 10:40-12:30. Professor Corning.

296. METHODS IN RESEARCH. Required of all candidates for Master of Arts degrees in Education. One-half course credit. Tuesday and Thursday. 6:45-8:45 P. M. Professor Joyal.

299. EDUCATIONAL RESEARCH AND THESIS WRITING. Prerequisite: Education 296. Credit to be arranged. Monday and Wednesday. 6:45-8:45 P. M. Professor Joyal and Staff.

#### *Second Term*

115S. NEW SOCIAL ECONOMIC GOALS IN EDUCATION. One-half course credit. 8:00. Professor Walters.

128S. EDUCATIONAL MEASUREMENT. One-half course credit. 9:00. Professor Fox.

133(b)S. THE ACTIVITY PROGRAM IN THE INTERMEDIATE GRADES. One-half course credit. 8:00. Professor Allphin.

135(b)S. ENGLISH EXPRESSION AND READING IN THE INTERMEDIATE GRADES. One-half course credit. 10:00. Professor Allphin.

137(b)S. ELEMENTARY SCIENCE IN THE INTERMEDIATE GRADES. One-half course credit. 9:00. Professor Allphin.

143S. CURRENT TRENDS IN SECONDARY EDUCATION. One-half course credit. 9:00. Professor Walters.

173(a)S. TREATMENT AND PREVENTION OF PUPIL FAILURES. One-half course credit. 11:00. Professor Fox.

176(a)S. TEACHING UNITS—THEIR CONSTRUCTION AND USE. One-half course credit. 10:00. Professor Fox.

299S. RESEARCH AND THESIS WRITING. Time and credit to be arranged. Professor Walters.

#### School of Commerce, Accounts, and Finance

Ed-101. PRINCIPLES AND PROBLEMS OF EDUCATION. Prerequisite: General Psychology. Five hours credit.

Ed-102. BUSINESS EDUCATION PRINCIPLES. Prerequisite: Ed-101 or equivalent. Three hours credit.

Ed-103. THE HIGH SCHOOL BUSINESS CURRICULUM. Prerequisite: Ed-102. Three hours credit.

Ed-104. JUNIOR BUSINESS EDUCATION. Prerequisite: Ed-102. Three hours credit.

Ed-151. TEACHING SOCIAL-BUSINESS SUBJECTS. Prerequisite: Ed-102. Three hours credit.

Ed-152. TEACHING SECRETARIAL TRAINING. Prerequisites: Ed-102, S-53, S-151. Three hours credit.

Ed-153. TEACHING ACCOUNTING AND RELATED SUBJECTS. Prerequisite: A1, 2; Ed-102. Three hours credit.

Ed-154. PRACTICE TEACHING. Prerequisite: Senior standing and satisfactory credits. Laboratory fee, \$3.00. Six hours credit.

Ed-155. ADVANCED PRACTICE TEACHING. Prerequisite: Ed-154. One or two hours daily. Three to five hours credit.

Ed-156. TESTS AND MEASUREMENTS IN COMMERCIAL EDUCATION. Prerequisite: Ed-102. Three hours credit.

Ed-201. ORGANIZATION AND SUPERVISION OF COMMERCIAL EDUCATION. Prerequisite: Ed-103 or teaching experience. Three hours credit.

Ed-202. FIELD STUDIES IN COMMERCIAL EDUCATION. Three to five hours credit.

Ed-203. A REVIEW OF RESEARCH STUDIES IN COMMERCIAL EDUCATION. Admittance subject to approval of instructor. Three hours credit.

**Summer Quarter, School of Commerce**

Ed-152. TEACHING SECRETARIAL TRAINING. Three hours credit. First Term. 10:00. Professor Kotz.

Ed-103. HIGH SCHOOL BUSINESS CURRICULUM. Three hours credit. Second Term. 8:00. Professor Zelliot.

Ed-104. JUNIOR BUSINESS EDUCATION. Three hours credit. 10:00. Professor Zelliot.

**ENGLISH LANGUAGE**

103. PROBLEMS IN ENGLISH LANGUAGE. Winter. 9:00. Professor Luebke.

117. ENGLISH PHONETICS. Offered in alternate years. Not offered in 1934-35.

118. WORD STUDY. Autumn. 10:40. Professor Luebke.

121. ANGLO-SAXON. Not offered in 1934-35.

122. BEOWULF. Not offered in 1934-35.

145. CHAUCER. Winter. 11:40. Professor Luebke.

215. ENGLISH LANGUAGE RESEARCH. Hours to be arranged. Professor Luebke.

**City College**

115a. ADVANCED ENGLISH GRAMMAR. One-half course credit. Autumn. Saturday. 10:30. Mrs. Schuman.

118a. WORD STUDY. One-half course credit. Winter. Saturday. 10:30. Mrs. Schuman.

119a. HISTORY OF THE ENGLISH LANGUAGE. One-half course credit. Spring. Saturday. 10:30. Professor Luebke.

**Summer School**

119(a)S. HISTORY OF THE ENGLISH LANGUAGE. One-half course credit. Second Term. 10:00. Professor Luebke.

**School of Commerce, Accounts, and Finance**

E-101. EXPOSITORY WRITING. Prerequisite: E-51. Three hours credit.

E-107, 108, 109. WORKING PRINCIPLES OF RHETORIC. Prerequisite: E-2. Six hours credit.

E-104. SHORT STORY WRITING. Two hours credit.

E-105. SHORT STORY WRITING. Prerequisite: E-104. Two hours credit.

E-154. SHORT STORY WRITING. Prerequisite: E-105. Two hours credit.

E-201. SHORT STORY WRITING. Prerequisite: E-154. One hour credit.

**ENGLISH LITERATURE**

143. SHAKESPEARE. Autumn. 11:40. Professor McFarlane.

161. THE AGE OF DRYDEN. Autumn. 9:00. Professor Wecter.

162. THE GREAT EPICS. Offered in alternate years. Not offered in 1934-35.

164. ENGLISH LITERATURE OF THE EIGHTEENTH CENTURY. Winter. 9:00. Professor Wecter.
165. ENGLISH LITERATURE OF THE ROMANTIC PERIOD. (1798-1832). Winter. 1:30. Professor Davidson.
170. ENGLISH LITERATURE OF THE VICTORIAN PERIOD. Spring. 10:40. Professor Davidson.
179. MODERN FICTION. Spring. 1:30. Professor McFarlane.
182. THE DEVELOPMENT OF THE DRAMA. Spring. 11:40. Professor Davidson.
183. IRISH LITERATURE. Winter. 10:40. Professor McFarlane.
186. MODERN SCANDINAVIAN LITERATURE. Autumn. 1:30. Professor McFarlane.
191. PROBLEMS IN ENGLISH LITERATURE. Spring. 9:00. Professor McFarlane.
192. PROBLEMS IN LITERARY CRITICISM. Autumn. 9:00. Professor Davidson.
- 231, 232, and 233. ENGLISH RESEARCH AND INDEPENDENT STUDY. One-half course credit. Hours to be arranged. Winter. Professor McFarlane. Autumn and Spring. Professor Davidson.

#### City College

- 140a. THE ELIZABETHAN DRAMA. Winter. Tuesday, 7:00 P. M. Professor Wecter.
- 144a. SHAKESPEARE. One-half course credit. Winter. Saturday, 8:30. Professor McFarlane.
- 160a. SEVENTEENTH CENTURY PROSE AND POETRY. One-half course credit. Autumn. Tuesday, 7:00 P. M. Professor Wecter.
- 165a. ENGLISH LITERATURE OF THE ROMANTIC PERIOD (1798-1832). One-half course credit. Autumn. Saturday, 8:30. Professor Davidson.
- 185a. AMERICAN LITERARY FORCES. One-half course credit. Spring. Saturday, 8:30. Professor Davidson.
- 196a. STUDIES IN ENGLISH PROSE STYLE. One-half course credit. Spring. Tuesday, 7:00 P. M. Professor Wecter.

#### Summer School

##### *First Term*

- 142(a)S. SHAKESPEARE. One-half course credit. 9:00. Professor Lough.
- 161(a)S. SEMINAR IN SEVENTEENTH AND EIGHTEENTH CENTURY STUDIES. One-half course credit. 10:40. Professor Wecter.
- 180(b)S. MODERN AMERICAN LITERATURE. One-half course credit. 8:00. Professor Davidson.

##### *Second Term*

- 105S. TENNYSON AND BROWNING. One-half course credit. 8:00. Professor Cressman.
- 108S. GREEK LITERATURE IN ENGLISH. One-half course credit. 10:00. Professor Cressman.

**School of Commerce, Accounts, and Finance**

- E-102. AMERICAN LITERATURE. Two hours credit.  
 E-103. ENGLISH LITERATURE. Two hours credit.  
 E-151. LITERATURE OF BUSINESS. Prerequisite: E-51. Three hours credit.

**FINANCE****School of Commerce, Accounts, and Finance**

- F-101. BUSINESS FINANCE. Prerequisite: F-51. Five hours credit.  
 F-102. THE FEDERAL RESERVE SYSTEM. Prerequisite: F-51. Two hours credit.  
 F-103. CREDIT MANAGEMENT. Four hours credit.  
 F-151. PUBLIC FINANCE. Prerequisite: F-51. Three hours credit.  
 F-152. INVESTMENTS. Prerequisite: F-51. Three hours credit.  
 F-153. BANKING SYSTEMS. Prerequisite: F-51. Two hours credit.  
 F-154, 155. ANALYSIS OF SECURITIES. Prerequisite F-152. Four hours credit.

**Summer Quarter, School of Commerce**

- F-101. BUSINESS FINANCE. Three hours credit. First Term. 9:00.  
 Professor Conner.  
 F-153. BANKING SYSTEMS. Three hours credit. First Term. 9:00.  
 Professor Conner.

**FRENCH**

101, 102, and 103. ADVANCED FRENCH READING. One-half course credit each quarter. Autumn. 11:40. Winter and Spring. 1:30. Professor Werling.

105, 106, and 107. ADVANCED FRENCH CONVERSATION AND COMPOSITION. Autumn, Winter, and Spring. 9:00. Professor Werling.

164. FRENCH LITERATURE, FINE ARTS AND MUSIC OF THE SEVENTEENTH CENTURY. Winter. 11:40. Professor Werling.

165. FRENCH LITERATURE, FINE ARTS AND MUSIC OF THE EIGHTEENTH CENTURY. Spring. 11:40. Professor Werling.

200. RESEARCH AND INDEPENDENT STUDY. Hours to be arranged. Professor Werling.

**City College**

111, 112, and 113. ADVANCED FRENCH. One-half course credit each quarter. Autumn, Winter, and Spring. Saturday, 10:30. Professor Werling.

Under the auspices of the City College Madame Chincholle will continue classes in Elementary and Intermediate French with a class in "Reading of French Plays" in the Spring Quarter. For detailed information see class schedules.

**Summer School**

172(a)S. CONTEMPORARY FRENCH NOVEL. One-half course credit. First Term. 10:40. Miss Winterbotham.

172(b)S. READINGS IN CONTEMPORARY FRENCH NOVEL. May be taken as a continuation of course 172(a)S or independently. One-half course credit. Second Term. 11:00. Professor Werling.

**GEOGRAPHY**

101. GEOGRAPHY. Autumn. 8:00. Professor Zobel.

102. GEOGRAPHY OF PLANTS. Winter. 8:00. Professor Zobel.

**Summer School**

105S. WORLD GEOGRAPHY. One-half course credit. 11:40. Professor Cutler.

**GERMAN**

111, 112, and 113. SCIENTIFIC GERMAN. Prerequisite: German 1, 2, and 3. Autumn, Winter, and Spring. Time to be arranged. Mrs. Moore and Mr. Kleist.

ADVANCED GERMAN. Classes arranged according to demand.

**Summer School**

106S. A COURSE IN THE READING OF GERMAN. One-half course credit. First Term. 10:40. Mrs. Moore.

**HISTORY**

113. THE CLOSE OF THE MIDDLE AGES. Autumn. 10:40. Professor Scofield.

114. THE AGE OF THE REFORMATION. Winter. 10:40. Professor Scofield.

115. REVOLUTIONARY ERA IN EUROPE. Spring. 10:40. Professor Scofield.

117. EUROPE 1878-1914. Given in alternate years. Not offered in 1934-35.

118. EUROPE SINCE 1914. Given in alternate years. Not offered in 1934-35.

119. THE FAR EAST. Spring. 1:30. Professor Scofield.

120. THE NEAR EAST. Not offered in 1934-35.

135. LATIN AMERICAN HISTORY. Autumn. 11:40. Professor Mayo.

137. LATIN AMERICA AND WORLD POLITICS. Winter. 11:40. Professor Mayo.

138. MEXICO AND THE UNITED STATES. Spring. 11:40. Professor Mayo and Staff.

155. DEVELOPMENT OF THE BRITISH EMPIRE. Winter. 1:30. Professor Scofield.

161. COLONIAL NORTH AMERICA, 1492-1783. Not offered in 1934-35.

162. UNITED STATES, 1783-1850. Not offered in 1934-35.

163. UNITED STATES SINCE 1850. Not offered in 1934-35.

165. HISTORY OF THE AMERICAN FRONTIER, 1763-1893. Autumn. 1:30. Professor Scofield.

271. EARLY CHURCH HISTORY. Autumn. 8:00. Professor Duncan. (Given at the Iliff School of Theology.)

272. MEDIAEVAL CHURCH HISTORY. Winter. 8:00. Professor Duncan. (Given at the Iliff School of Theology.)

275. A HISTORY OF METHODISM. Spring. 8:00. Professor Duncan. (Given at the Iliff School of Theology.)

#### City College

115, 117, and 118. MODERN EUROPE. One-half course credit each quarter. Friday, 4:00. Mr. Van Hook.

119a and 119b. FAR EASTERN RELATIONS. One-half course credit each quarter. Autumn and Winter. Friday, 6:45 P. M. Mr. Van Hook.

139. UNITED STATES AND LATIN AMERICA. One-half course credit. Spring. Friday, 6:45 P. M. Mr. Van Hook.

161, 162, and 163. AMERICAN HISTORY. One-half course credit each quarter. Autumn, Winter, and Spring. Saturday, 8:30. Mr. Van Hook.

171a. HISTORY OF THE AMERICAN FRONTIER, TO 1763. One-half course credit. Autumn. Tuesday, 6:45 P. M. Professor Hafen.

171b. HISTORY OF THE AMERICAN FRONTIER, 1763-1825. One-half course credit. Winter. Tuesday, 6:45 P. M. Professor Hafen.

171c. HISTORY OF THE AMERICAN FRONTIER (1825 to disappearance of the frontier). One-half course credit. Spring. Tuesday, 6:45 P. M. Professor Hafen.

#### Summer School

117S. BEGINNINGS OF THE TWENTIETH CENTURY. One-half course credit. First Term. 8:00. Professor Duncan.

118S. EUROPE SINCE THE WORLD WAR. One-half course credit. Second Term. 8:00. Professor Scofield.

161S. COLONIAL NORTH AMERICA, 1492-1783. One-half course credit. Second Term. 11:00. Professor Scofield.

#### School of Commerce, Accounts, and Finance

H-101. POLITICAL AND SOCIAL HISTORY OF THE UNITED STATES. Five hours credit.

H-201. READINGS IN AMERICAN ECONOMIC HISTORY. Prerequisite: H-51, 52. Three hours credit.

#### Summer Quarter, School of Commerce

H-201. READINGS IN AMERICAN ECONOMIC HISTORY. Three hours credit. Second Term. 11:00. Mr. Dunphy.

### HISTORY OF ART

117. EARLY CHRISTIAN AND BYZANTINE ART. Autumn. 9:00. Mrs. Milligan.
118. ROMANESQUE AND GOTHIC ARCHITECTURE AND SCULPTURE. Winter. 9:00. Mrs. Milligan.
123. SPANISH-AMERICAN, OR "MISSION" ARCHITECTURE. Spring. 9:00. Mrs. Milligan.
124. CHINESE CULTURE. Spring. 10:40. Mrs. Milligan.

### INSURANCE

#### School of Commerce; Accounts, and Finance

- I-101. PRINCIPLES OF LIFE INSURANCE. Three hours credit.
- I-102. FUNCTIONS OF LIFE INSURANCE. Three hours credit.
- I-103. ECONOMICS OF LIFE INSURANCE. Three hours credit.
- I-151. LIFE INSURANCE SALESMANSHIP. Three hours credit.

### INTERNATIONAL RELATIONS

(Under the Foundation for the Advancement of the Social Sciences)

101. INTRODUCTORY SEMINAR IN INTERNATIONAL RELATIONS. Two-hour seminar period, one group conference, and one individual conference each week. Autumn and Spring. Time to be arranged. Professor Fackt.

102. WOMEN IN WORLD AFFAIRS. Spring. 9:30. Professor Fackt.

105. NATIONALISM AND THE MODERN WORLD. Autumn. 11:40. Professor Fackt.

THE NEW EDUCATION IN RUSSIA, GERMANY, ITALY, AND MEXICO: COMPARATIVE EDUCATION. See announcement under Department of Education. This course may be credited in either the Department of Education or the Department of International Relations. Spring. 11:40. Professor Cherrington.

110. COMPARATIVE LABOR MOVEMENTS. Spring. 10:40. Professor Cherrington.

116. DEMOCRACY AND ITS COMPETITORS. Autumn. 10:40. Professor Cherrington.

204, 205, and 206. INTERNATIONAL RELATIONS SEMINAR. Autumn, Winter, and Spring. Tuesday evening, 6:00 to 8:00. Professors Cherrington and Fackt.

220. PROBLEMS OF CITIZENSHIP IN THE NEW WORLD POWER. Given in alternate years. Not offered in 1934-35. Professor Cherrington.

222. INTERNATIONAL MOVEMENTS FOR THE IMPROVEMENT OF LABOR. Given in alternate years. Not offered in 1934-35. Professor Cherrington.

INTERNATIONAL ORGANIZATION. See announcement under Political Science. This course may be credited in either the Department of Political Science or the Department of International Relations. Winter. 10:40. Professor Cherrington.

**City College**

SEMINAR IN ADULT EDUCATION. See announcement under Department of Education. This course may be credited in either the Department of Education or the Department of International Relations. Autumn. Friday. 4:15 to 6:00 P. M. Professor Cherrington and Staff.

**JOURNALISM**

- 111. FEATURE WRITING. Autumn. 10:40. Professor Wecter.
- 112. EDITORIAL AND CRITICAL WRITING. Winter. 10:40. Professor Wecter.
- 113. THE LITERARY MAGAZINE. Spring. 10:40. Professor Wecter.

**School of Commerce, Accounts, and Finance**

- E-152a, 152b. FUNDAMENTALS OF JOURNALISM. Four hours credit.
- E-153a, 153b. SPECIAL FEATURE WRITING. Four hours credit.
- E-155. EDITORIAL WRITING. Two hours credit.

**LAW****School of Commerce, Accounts, and Finance**

- L-101. CORPORATIONS. Prerequisite: L-1, 2. Three hours credit.
- L-102. WILLS, TRUSTS, AND GENERAL PROPERTY LAW. Prerequisite: L-1, 2. Two hours credit.
- L-151, 152. INCOME TAX. Prerequisite: L-1, 2. Four hours credit.
- L-153. CONSTITUTIONAL LAW. Prerequisite: L-1, 2. Three hours credit.
- L-154. INTERNATIONAL LAW. Prerequisite: L-1, 2. Three hours credit.

**Summer Quarter, School of Commerce**

- L-101. LAW OF CORPORATIONS. Three hours credit. First Term. 8:00. Professor Wood.
- L-153. CONSTITUTIONAL LAW. Three hours credit. First Term. 11:00. Professor Wolcott.
- L-102. WILLS, TRUSTS, AND GENERAL PROPERTY LAW. Three hours credit. Second Term. 8:00. Professor Wood.

**LIBRARIANSHIP**

- 101, 102. THE BOOK ARTS. One and one-half course credit. Autumn. 8:00. One course credit. Winter. 8:00. Professor Butler.
- 103. THE BOOK ARTS. One and one-half course credit. Spring. 8:00. Professors Butler and Wyer.
- 121. CATALOGING AND CLASSIFICATION. One course credit. Autumn. 10:00. Professor Hansen.
- 122. CATALOGING AND CLASSIFICATION. One and one-half course credit. Winter. 10:00. Professor Hansen.
- 141. LIBRARY ADMINISTRATION. One course credit. Autumn. 11:00. Professors Wyer and Howe.

142. LIBRARY ADMINISTRATION. One course credit. Winter. 11:00. Professors Wyer and Howe.

143. LIBRARY ADMINISTRATION. One course credit. Spring. 11:00. Professors Wyer, Howe, Hansen and others.

### LIBRARY

103. LIBRARY PROCEDURE AND PERSONAL READING. Not offered 1934-35.

151. PERSONAL READING. One-half course credit. Spring. 10:40. Miss Young.

### MANAGEMENT, MARKETING, AND ADVERTISING

#### School of Commerce, Accounts, and Finance

MA-101. OFFICE MANAGEMENT. Two hours credit.

MA-102. TECHNIQUE OF EXECUTIVE CONTROL. Prerequisites: P-51 and Ec-51, 52. Three hours credit.

MA-103. PERSONNEL MANAGEMENT. Prerequisites: P-51, Ec-51, 52; and MA-102. Three hours credit.

MA-105. PRINCIPLES OF ADVERTISING. Three hours credit.

MA-106. ADVERTISING COPY WRITING. Two hours credit.

MA-107. ADVERTISING CAMPAIGNS. Three hours credit.

MA-110. PRINCIPLES OF RETAIL ADVERTISING. Three hours credit.

MA-111. RETAIL ADVERTISING COPY. Two hours credit.

MA-113. RETAIL STORE SERVICE. Two hours credit.

MA-115. N.R.A.—APPLICATIONS AND PROBLEMS. Two hours credit.

MA-152. MARKETING MANAGEMENT. Prerequisite: P-51, MA-51, 52. Three hours credit.

MA-153. FOREIGN TRADE. Prerequisites: Ec-51, 52; MA-52. Two hours credit.

MA-201. SEMINAR. Hours to be arranged.

#### Summer Quarter, School of Commerce

MA-101. OFFICE MANAGEMENT. Three hours credit. First Term. 10:00. Professor Lindsay.

MA-130. MARKETING PROBLEMS. Three hours credit. Second Term. 9:00. Professor Zelliot.

### MATHEMATICS

109 and 110. ADVANCED MATHEMATICAL ANALYSIS. Prerequisite: Course 14. Winter and Spring. 11:40. Professor Lewis.

111, 112, and 113. CALCULUS. Autumn and Winter. 8:00. Professor Stearns. 10:40. Professor Lewis. Spring. 10:40. Professor Lewis.

113A. CALCULUS. Spring. 8:00. Professor Stearns.

115. DIFFERENTIAL EQUATIONS. Autumn. 10:40. Professor Gorrell.

116. THEORY OF EQUATIONS. Winter. 10:40. Professor Gorrell.

118. PROJECTIVE GEOMETRY. Spring. 10:40. Professor Gorrell.

120. HISTORY OF MATHEMATICS. One-half course credit. Autumn. Monday, Wednesday, Friday. 10:40. Professor Recht.

204. THEORY OF NUMBERS. Winter. 1:30. Professor Lewis.

205. HYPERBOLIC FUNCTIONS. Autumn. 1:30. Professor Gorrell.

206. CALCULUS OF VARIATIONS. Spring. 1:30. Professor Lewis.

### Summer School

#### *First Term*

116(a)S. THEORY OF EQUATIONS. Calculus is a prerequisite. One-half course credit. 9:00. Professor Gorrell.

205S. HYPERBOLIC FUNCTIONS. Calculus is a prerequisite. The subject will be completed in the first term and those registering for it are expected to take but one other subject. One course credit. Tuition \$20.00. 10:40. Professor Gorrell.

#### *Second Term*

116(b)S. THEORY OF EQUATIONS. A continuation of 116(a)S. One-half course credit. 9:00. Professor Lewis.

117S. MODERN GEOMETRY. One-half course credit. 10:00. Professor Lewis.

### School of Commerce, Accounts, and Finance

M-101. MATHEMATICAL THEORY OF INVESTMENT. Prerequisite: M-1. Three hours credit.

### MECHANICS

101. ANALYTICAL MECHANICS. Statics. Prerequisite: General Physics, Integral Calculus or registration in same. Autumn. 8:00. Professor Hyslop.

102. ANALYTICAL MECHANICS. Kinematics and kinetics. Prerequisite: General Physics, Integral Calculus. Winter. 8:00. Professor Hyslop.

103. STRENGTH OF MATERIALS. Prerequisite: General Physics, Integral Calculus. Spring. 8:00. Professor Hyslop.

### PHILOSOPHY

102. REFLECTIVE THINKING. Spring. 9:00. Mr. Sampson.

109. AESTHETICS. Winter. 1:30. Professor Dickinson.

120. DEVELOPMENT OF PHILOSOPHICAL THOUGHT. Autumn. 9:00. Mr. Sampson.

130. MODERN MIND. Spring. 8:00. Professor Dickinson.

163. SOCIAL ETHICS. Autumn. 1:30. Professor Dickinson.

171. MORAL PRINCIPLES IN EDUCATION. Spring. 10:40. Professor Dickinson.

175. ETHICS IN LITERATURE. Spring. 11:40. Professor Lough.

201. METAPHYSICS. Winter. 10:40. Professor Dickinson.

**City College**

104a. AMERICAN THOUGHT. One-half course credit. Winter. Monday. 6:45 P. M. Mr. Sampson.

204a. CONTEMPORARY PHILOSOPHERS. One-half course credit. Spring. Monday. 6:45 P. M. Mr. Sampson.

**Summer School**

163S. SOCIAL ETHICS. One-half course credit. First Term. 10:40. Professor Lough.

171S. MORALS AND THE NEW EDUCATION. One-half course credit. Second Term. 9:00. Professor Dickinson.

217S. MAN AND HIS UNIVERSE. One-half course credit. Second Term. 8:00. Professor Dickinson.

**PHYSICS AND ELECTRICAL ENGINEERING**

101. THEORY OF LIGHT. Autumn. 10:40. Professor Nyswander.

102. ELECTRICITY AND MAGNETISM. Winter. 11:40. Professor Nyswander.

103. ELECTRICAL MEASUREMENTS. Prerequisite: General Physics. One-half course credit. Autumn. Time to be arranged. Fee \$2.50. Professor Hyslop.

104. ELECTRICAL MEASUREMENTS. A continuation of Physics 103. One-half course credit. Winter. Time to be arranged. Fee \$2.50. Professor Hyslop.

105. PRINCIPLES OF ELECTRICAL ENGINEERING. Prerequisite: General Physics. Autumn. 9:00. Professor Cohn.

106. PRINCIPLES OF ELECTRICAL ENGINEERING. Winter. 9:00. Professor Cohn.

107. PRINCIPLES OF ELECTRICAL ENGINEERING. A continuation of Physics 106. Spring. 9:00. Professor Cohn.

108. DYNAMO LABORATORY. Prerequisite: General Physics. One-half course credit. Autumn. 1:30. Fee \$5.00. Professor Cohn.

109. DYNAMO LABORATORY. A continuation of course 108. One-half course credit. Winter. 1:30. Fee \$5.00. Professor Cohn.

109A. DYNAMO LABORATORY. A continuation of course 109. One-half course credit. Spring. 1:30. Fee \$5.00. Professor Nyswander.

110. ILLUMINATION AND PHOTOMETRY. One-half course credit. Autumn. 1:30. Professor Nyswander.

112. ELECTRICAL TRANSMISSION. Autumn. 11:40. Professor Hyslop.

115. ELECTRICAL DESIGN. Winter. 11:40. Professor Hyslop.

117. HEAT AND KINETIC THEORY. Spring. 11:40. Professor Cohn.

118. ACOUSTICS. One-half course credit. Spring. 11:40. Professor Hyslop.

119. ELECTRONICS. One-half course credit. Spring. Time to be arranged. Professor Hyslop.

121. JOURNAL READING. Class meets once a week throughout year. One-half course credit if taken throughout the year. Time to be arranged. Physics staff.

130. X-RAYS. Given in alternate years. Professor Stearns.
135. MODERN PHYSICS. Spring. 10:40. Professor Nyswander.
213. ADVANCED ELECTRICITY AND MAGNETISM. Prerequisite: General Physics and Calculus. One-half course credit. Autumn. 2:30. Professor Hyslop.
214. ADVANCED ELECTRICITY AND MAGNETISM. A continuation of Course 213. Prerequisite: General Physics and Calculus. One-half course credit. Winter. 2:30. Professor Hyslop.
215. THERMODYNAMICS. Spring. 10:40. Professor Hyslop.
218. EXPERIMENTS IN MODERN PHYSICS. One-half course credit. Professor Stearns.
219. INTERPRETATION OF EXPERIMENTAL DATA. Prerequisite: Calculus. Not offered in 1934-35.
220. ENGINEERING MATHEMATICS. Winter. 11:40. Professor Stearns.
- 234, 235, and 236. RESEARCH AND THESIS. One-half course credit each quarter. Autumn, Winter, and Spring. Hours to be arranged. Professor Nyswander.
237. RADIOACTIVITY. One-half course credit. Winter. 1:30. Professor Nyswander.

#### Summer School

- 234S. RESEARCH AND THESIS. One-half course credit. First term. 8:00. Professor Nyswander.
- 103S. PHYSICS. Electrical Measurements. Laboratory fee \$2.50. This course will be offered if there is sufficient demand. One-half course credit. Second Term. Time to be arranged. Professor Hyslop.

#### POLITICAL SCIENCE

101. STATE AND LOCAL GOVERNMENT IN THE UNITED STATES. Autumn. 11:40. Professor Duncan.
102. PUBLIC ADMINISTRATION IN THE UNITED STATES. Spring. 11:40. Professor Duncan.
121. GOVERNMENT OF EUROPEAN CITIES. Winter. 11:40. Professor Duncan.
122. GOVERNMENT OF AMERICAN CITIES. Given in alternate years. Not offered in 1934-35.
141. ENGLISH CONSTITUTIONAL HISTORY. Given in alternate years. Not offered in 1934-35.
142. AMERICAN CONSTITUTIONAL LAW. Given in alternate years. Not offered in 1934-35.
143. POLITICAL PARTIES IN THE UNITED STATES. Given in alternate years. Not offered in 1934-35.
230. INTERNATIONAL POLITICS. Autumn. 9:00. Professor Duncan.
231. INTERNATIONAL LAW. Winter. 9:00. Professor Duncan.
232. AMERICAN DIPLOMACY. Spring. 9:00. Professor Duncan.

233. INTERNATIONAL ORGANIZATION. Autumn. 10:40. Professor Cherrington.

261. POLITICAL PHILOSOPHY. Given in alternate years. Not offered in 1934-35.

262. AMERICAN POLITICAL IDEAS. Given in alternate years. Not offered in 1934-35.

263. SEMINAR IN POLITICAL SCIENCE. Given in alternate years. Not offered in 1934-35.

#### City College

106a and 106b. AMERICAN GOVERNMENT AND POLITICS. Autumn and Winter. Friday. 4:00. Mr. Laird.

101. STATE AND LOCAL GOVERNMENT IN THE UNITED STATES. Spring. Friday. 4:00. Mr. Laird.

#### Summer School

142S. THE CONSTITUTION. One-half course credit. First term. 9:00. Professor Duncan.

262S. AMERICA'S POLITICAL PROBLEMS. One-half course credit. First term. 10:40. Professor Duncan.

101S. STATE AND LOCAL GOVERNMENT IN THE UNITED STATES. One-half course credit. Second Term. 9:00. Professor Scofield.

#### School of Commerce, Accounts, and Finance

O-101. POLITICAL SCIENCE. Five hours credit.

O-102. AMERICAN POLITICS. Two hours credit.

O-103. MUNICIPAL GOVERNMENT. Three hours credit.

O-104. AMERICAN STATE AND LOCAL GOVERNMENT. Two hours credit.

O-153. GOVERNMENT AND BUSINESS. Five hours credit.

#### Summer Quarter, School of Commerce

O-153. GOVERNMENT AND BUSINESS. Three hours credit. Second Term. 11:00. Professor Warfield.

### PSYCHOLOGY

102. CHILD PSYCHOLOGY. Winter. 11:40. Professor Grigsby.

103. EXPERIMENTAL CHILD PSYCHOLOGY. Spring. 9:00. Fee \$2.00. Professor Grigsby.

104. PSYCHOLOGY OF SCHOOL SUBJECTS. Prerequisite: Psychology 4 Spring. 11:40. Professor Miller.

109, 110. EXPERIMENTAL PSYCHOLOGY. Prerequisite: Two courses in Psychology. Autumn and Winter. 10:40. Laboratory hours arranged. Fee \$3.00 each course. Professor Garth.

120. PSYCHOLOGY OF MENTAL HEALTH AND ABNORMALITY. Prerequisite: General Psychology. Autumn. 11:40. Professor Grigsby.

121. SOCIAL PSYCHOLOGY. Not offered in 1934-35.

125 and 126. HISTORICAL INTRODUCTION TO MODERN PSYCHOLOGY. Autumn and Winter. 9:00. Professor Grigsby.

STATISTICAL METHODS IN PSYCHOLOGY AND EDUCATION. (Education 125.) Professor Miller. Offered in City College, 1934-35.

MENTAL MEASUREMENTS. (Education 126.) Professor Garth. Offered in City College, 1934-35.

EDUCATIONAL TESTS AND MEASUREMENTS. (Education 128.) Spring. 1:30. Professor Miller.

131. RACIAL PSYCHOLOGY. Prerequisite: Psychology 1. Spring. 10:40. Professor Garth.

150. PSYCHOLOGY OF PERSONALITY. Prerequisite: Psychology 1 and Psychology 2 or 4. Autumn. 11:40. Professor Miller.

201, 202, 203. INDIVIDUAL INSTRUCTION AND RESEARCH. One-half or one course credit. Autumn, Winter, and Spring.

#### City College

STATISTICAL METHODS IN EDUCATION AND PSYCHOLOGY. (Education 125.) Autumn and Winter.

MENTAL MEASUREMENTS. (Education 126.) Winter and Spring.

#### Summer School

##### *First Term*

111(a)S. EXPERIMENTAL PSYCHOLOGY. Two lecture and three laboratory periods a week. Prerequisite: Psychology 1. One-half course credit. 11:40. Professor Garth.

120(b)S. MENTAL HYGIENE. One-half course credit. 11:40. Three days a week; at Psychopathic Hospital. 3:00-5:00. Friday. Dr. Ebaugh.

Education 125(a)S. STATISTICS FOR TEACHERS. One-half course credit. 8:00. Professor Miller.

131(a)S. RACIAL PSYCHOLOGY. Prerequisite: Psychology 1. One-half course credit. 10:40. Professor Garth.

200(a)S. PROBLEMS IN PSYCHOLOGY. Prerequisite: Permission of instructor. One-half course credit. Time to be arranged. Professor Miller.

##### *Second Term*

102(a)S. THE PSYCHOLOGY OF CHILD DEVELOPMENT. One-half course credit. 9:00. Professor Grigsby.

#### School of Commerce, Accounts, and Finance

P-101. PERSONALITY IN BUSINESS. Two hours credit.

#### RADIO

#### School of Commerce, Accounts, and Finance

R-101. RADIO CONTINUITY WRITING. Two hours credit.

R-102. RADIO CONTINUITY WRITING. Two hours credit.

- R-103. RADIO DRAMA WRITING. Prerequisite: R-102. Two hours credit.  
 R-151. PRINCIPLES OF RADIO BROADCASTING. Two hours credit.  
 R-152. RADIO BROADCASTING METHODS. Two hours credit.  
 R-153. RADIO PLAY PRODUCTION. Prerequisite: R-152. Two hours credit.

### RELIGION

101, 102. HISTORY OF RELIGIONS. Winter and Spring. 8:00. Professor Maxwell.

112. SOCIAL INSTITUTIONS AND IDEALS OF THE BIBLE. Spring. 9:00. Professor Lough.

121. PSYCHOLOGY OF RELIGION. Autumn. 11:40. Professor Lough.

141, 142. PHILOSOPHY OF RELIGION. Autumn and Winter. 9:00. Professor Lough.

151, 152. THE BIBLE AS LITERATURE. Winter. 11:40. Professor Lough. 152 not offered in 1935.

ETHICS IN LITERATURE. (Philosophy 175.) Spring. 11:40. Professor Lough.

201, 202, and 203. PROBLEMS OF RELIGION. Prerequisite: Religion 101, 102, 141, and 142, or equivalents. Autumn, Winter, and Spring. Professor Lough.

#### City College

142a. RELIGION TODAY. One-half course credit. Autumn. Monday. 6:45 P. M. Mr. Sampson.

#### Summer School

112S. SOCIAL TEACHINGS OF THE BIBLE. One-half course credit. First Term. 10:40. Professor Lough.

141S. RELIGION IN RECONSTRUCTION. One-half course credit. Second Term. 10:00. Professor Dickinson.

### SOCIAL WORK

185. INTRODUCTION TO THE FIELD OF SOCIAL WORK. One course credit. Winter. 10:40. Professor Kimble.

Certain courses in other departments may be credited toward social work. See Bulletin of the Department of Social Work.

221. SOCIAL CASE WORK. One course credit. Autumn. Monday and Friday. 1:30-3:30. Winter. Monday and Friday. 4:00-6:00. Spring. Monday and Wednesday. 7:30-9:30. Professor Kimble.

222. ADVANCED SOCIAL CASE WORK. Prerequisite: Course 221. One course credit. Winter. Monday and Friday. 4:00-6:00. Mrs. Sinnock.

223. CHILD WELFARE CASE STUDIES. Prerequisites: Courses 221 and 241. One or one-half course credit. Autumn. Wednesday. 1:30-3:30. Miss Ball.

224. MEDICAL SOCIAL CASE WORK. Prerequisites: Courses 221 and 265. Winter. Monday. 1:30-3:30. Miss Ball.

225. FIELD WORK I. FAMILY WELFARE WORK. Course 221 must precede or accompany this course. One course credit. Autumn, Winter, and Spring. Hours to be arranged. Mrs. Sinnock. Miss Ball. Mr. Jaffary.

226. FIELD WORK II. ADVANCED FAMILY WELFARE WORK. Prerequisites: Courses 221 and 225. Course 222 must precede or accompany this course. One course credit. Autumn, Winter, and Spring. Hours to be arranged. Mrs. Sinnock. Miss Ball. Mr. Jaffary.

227. FIELD WORK III. CHILDREN'S CASE WORK. Prerequisites: Courses 221, 222, 225, and 226. One course credit. Autumn, Winter and Spring. Hours to be arranged. Miss Ball.

228. FIELD WORK IV. MEDICAL SOCIAL WORK. Prerequisites: Courses 221, 222, 225, 226, and 265. One course credit. Autumn and Winter. Hours to be arranged. Miss Ball.

229. FIELD WORK V. PSYCHIATRIC SOCIAL WORK. Prerequisites: Courses 221, 222, 225, 226, 231, and 232. One course credit. Autumn, Winter, and Spring. Hours to be arranged. Mrs. Sinnock. Mr. Jaffary.

230. FIELD WORK VI. RURAL SOCIAL WORK. Prerequisites: Courses 221, 222, 225, and 226. One course credit. Spring. Hours to be arranged. Mrs. Sinnock.

231. DYNAMICS OF HUMAN BEHAVIOR. One-half course credit. Autumn. Wednesday. 4:00-6:00. Dr. Rymer.

232. PSYCHOPATHOLOGY. Prerequisite: Course 231. One-half course credit. Winter. Wednesday. 4:00-6:00. Dr. Rymer.

233. BEHAVIOR PROBLEMS OF CHILDREN. Prerequisites: Courses 221 and 231. One-half course credit. Winter. Friday. 1:30-3:30. Mrs. Sinnock.

241. CHILD WELFARE PROBLEMS. One or one-half course credit. Spring. Wednesday. 1:30-3:30. Miss Ball.

256. ADMINISTRATION OF SOCIAL AGENCIES. One-half course credit. Autumn. Wednesday. 7:30-9:30. Professor Kimble.

257. PUBLIC WELFARE ADMINISTRATION. One course credit. Spring. Monday and Friday. 4:00-6:00. Professor Kimble.

262. HISTORY OF SOCIAL WORK. One course credit. Spring. Monday and Friday. 10:40-12:30. Professor Kimble.

265. ESSENTIALS OF MEDICINE FOR SOCIAL WORKERS. One course credit. Autumn. Monday and Friday. 4:00-6:00. Dr. Forbes.

268. THE LAW AND SOCIAL WORK. One course credit. Winter. Monday and Friday. 7:30-9:30. Professor Gorsuch.

269. SOCIAL INSURANCE. One course credit. Autumn. Monday and Friday. 7:30-9:30. Mr. Jaffary.

271. SOCIAL PHILOSOPHY AND SOCIAL WORK. One-half course credit. Spring.

290. METHODS OF SOCIAL INVESTIGATION. One-half course credit. Winter. Wednesday. 1:30-3:30. Professor Kimble.

291. INDIVIDUAL RESEARCH. Autumn, Winter, Spring. Hours to be arranged. Professor Kimble.

## Summer School

*First Term*

185. INTRODUCTION TO SOCIAL WORK. One-half course credit. 8:00. Professor Kimble.

221A. SOCIAL CASE WORK. One course credit only if 221B is completed. 10:40. Mrs. Sinnock.

225A. FIELD WORK I. FAMILY WELFARE WORK. Course 221 must precede or accompany this course. One course credit only if 225B is completed. 1:00-5:00. Mrs. Sinnock. Miss Ball.

226A. FIELD WORK II. ADVANCED FAMILY WELFARE WORK. Prerequisites: Courses 221 and 225. One course credit only if 226B is completed. 1:00-5:00. Mrs. Sinnock.

227A. FIELD WORK III. CHILDREN'S CASE WORK. Prerequisites: Courses 221 and 225. Course 241 should precede or accompany this course. One course credit only if 227B is completed. 1:00-5:00. Miss Ball.

241A. CHILD WELFARE PROBLEMS. One-half course credit. 9:00. Miss Ball.

291. INDIVIDUAL RESEARCH. Hours and credit to be arranged. Professor Kimble.

*Second Term*

221B. SOCIAL CASE WORK. Continuation of 221A, which is prerequisite. 10:40. Mrs. Sinnock.

225B. FIELD WORK I. FAMILY WELFARE WORK. Continuation of 225A, which is prerequisite. 1:00-5:00. Mrs. Sinnock.

226B. FIELD WORK II. ADVANCED FAMILY WELFARE WORK. Continuation of 226A, which is prerequisite. 1:00-5:00. Mrs. Sinnock.

227B. FIELD WORK III. CHILDREN'S CASE WORK. Continuation of 227A, which is prerequisite. 1:00-5:00. Mrs. Sinnock.

251. COMMUNITY ORGANIZATION. One-half course credit. 8:00.

258. ADMINISTRATION OF PUBLIC WELFARE AGENCIES IN A PERIOD OF DEPRESSION. One-half course credit. 11:40.

292. STATISTICS IN SOCIAL WORK. One-half course credit. 9:00.

## SOCIOLOGY

101. PRINCIPLES OF SOCIOLOGY. Autumn. 10:40. Professor McWilliams.

102. THE STUDY OF MODERN SOCIAL PROBLEMS. Given in alternate years. Not offered in 1934-35.

104. SOCIAL ORIGINS. Spring. 11:40. Professor Sikes.

111. CRIME AND ITS SOCIAL TREATMENT. Autumn. 9:00. Professor McWilliams.

121. THE FAMILY. Winter. 10:40. Professor McWilliams.

123. CHILD WELFARE. Given in alternate years. Not offered in 1934-35.

152. SOCIAL CONTROL. Given in alternate years. Not offered in 1934-35.

282. HISTORY OF SOCIAL THOUGHT. Given in alternate years. Spring. 9:00. Professor McWilliams.

294. SOCIAL INVESTIGATION. Professor McWilliams.

#### City College

121a and 121b. THE FAMILY One-half course credit each quarter. Autumn and Winter. Friday. 6:45 P. M. Professor McWilliams.

101a and 101b. PRINCIPLES OF SOCIOLOGY. One-half course credit each quarter. Autumn and Winter. Friday. 4:00. Professor McWilliams.

#### Summer School

101(a)S. PRINCIPLES OF SOCIOLOGY. One-half course credit. First Term. 9:00. Professor McWilliams.

112(a)S. DELINQUENCY AND EDUCATION. One-half course credit. First Term. 11:40. Professor McWilliams.

101(b)S. PRINCIPLES OF SOCIOLOGY. A continuation of Course 101(a)S. One-half course credit. Second Term. 11:00. Professor Sikes.

#### School of Commerce, Accounts, and Finance

O-151. SOCIOLOGY. Three hours credit.

O-152. SOCIAL PROBLEMS. Prerequisite: O-151. Two hours credit.

#### Summer Quarter, School of Commerce

O-151. SOCIOLOGY. Second Term. 9:00. Professor Warfield.

### SPANISH

105, 106, and 107. ADVANCED SPANISH CONVERSATION AND COMPOSITION. Autumn, Winter, and Spring. 10:40. Professor Batione.

165. CONTEMPORARY SPANISH LITERATURE. Autumn. 9:00. Professor Batione.

283. DON QUIJOTE DE LA MANCHA. Spring. 9:00. Professor Batione.

#### City College

105a, 105b, and 106a. INTERMEDIATE AND ADVANCED SPANISH. One-half course credit each quarter. Autumn, Winter, and Spring. Saturday. 10:30. Professor Batione.

#### Summer School

103S. CONVERSATION AND COMPOSITION. One-half course credit. First Term. 11:40. Professor Batione.

165(a)S. CONTEMPORARY SPANISH LITERATURE. One-half course credit. First Term. 9:00. Professor Batione.

### SPEECH AND DRAMATIC ARTS

100. VOICE, DICTION, AND ACTION. Autumn. 10:40. Fee \$1.00. Professor Murray.

110. BUSINESS AND PROFESSIONAL SPEAKING. Spring. 10:40. Professor Murray.

115. TECHNIQUES OF PUBLIC DISCUSSION. Autumn. 9:00. Professor Murray.
- 121 and 122. DEBATE. One-half course each quarter. Autumn. Monday, Wednesday, Friday. 1:30. Winter. Tuesday, Thursday. 1:30. Professor Murray.
124. BRITISH AND AMERICAN ELOQUENCE. Alternates with Speech 211. Not given in 1934-35.
135. SPEECH METHODS FOR TEACHERS. Alternates with Speech 240. Spring. 1:30. Professor Murray.
141. STORY TELLING. Autumn. 10:40. Mrs. Robinson.
151. ORAL INTERPRETATION OF LITERATURE. Winter. 10:40. Mrs. Robinson.
152. READING OF POETRY. Prerequisite: Course 151. Spring. 10:40. Mrs. Robinson.
162. HISTORY OF THE THEATRE. Winter. 9:00. Mrs. Robinson.
171. THE STAGING OF PLAYS. Offered in alternate years. Not offered in 1934-35.
172. THE DIRECTION OF PLAYS. Prerequisite: Speech 171. Offered in alternate years. Not offered in 1934-35.
- 181, 182, and 183. SCENIC DESIGN AND STAGECRAFT. Autumn, Winter, and Spring. Hours to be arranged. Fee \$3.00. Professor Sinclair.
- 191, 192, and 193. PLAY PRODUCTION. One course each quarter. Autumn, Winter, and Spring. 1:30. Fee \$2.00. Mrs. Robinson.
211. CLASSICAL ORATORY AND RHETORIC. Winter. Monday, Wednesday, Friday. 1:30. Professor Murray.
240. SPEECH PATHOLOGY. Offered in alternate years. Not offered in 1934-35.
- 241, 242, and 243. SPEECH CLINIC. One-half course each quarter. Autumn, Winter, and Spring. Professor Murray and Mrs. Robinson.
251. CRITICAL AND EXPERIMENTAL STUDIES IN SPEECH. Required of graduate majors. One-half course credit. Autumn. Monday, Wednesday, Friday. 1:30. Professor Murray.
263. EXPERIMENTAL DRAMA. Spring. 9:00. Mrs. Robinson.

### Summer School

#### *First Term*

- 100S. SPEECH PERSONALITY DEVELOPMENT. Laboratory fee \$1.00. One-half course credit. 9:00. Professor Murray.
- 115S. TECHNIQUES OF PUBLIC DISCUSSION. One-half course credit. 8:00. Professor Murray.
- 137S. ACTION AND PANTOMIME. One-half course credit. 11:40. Mrs. Robinson.
- 141S. STORY TELLING. One-half course credit. 10:40. Mrs. Robinson.
- 170S. PRODUCING THE SCHOOL PLAY. One-half course credit. 9:00. Mrs. Robinson.
- 241S. SPEECH CLINIC. One-half course credit. 9:00. Professor Murray.

*Second Term*

110S. BUSINESS AND PROFESSIONAL SPEAKING. One-half course credit. 8:00. Professor Murray.

136S. VOICE AND DICTION. One-half course credit. 9:00. Professor Murray.

253S. THESIS AND RESEARCH. One-half course credit. Time to be arranged. Professor Murray.

**School of Commerce, Accounts, and Finance**

Sp 110. BUSINESS AND PROFESSIONAL SPEAKING. Three hours credit.

Sp 151. ORAL INTERPRETATION. Two hours credit.

**STATISTICS AND RESEARCH****School of Commerce, Accounts, and Finance**

SR 101. INTRODUCTION TO BUSINESS STATISTICS. Prerequisite: M 1. Three hours credit.

SR 102. BUSINESS STATISTICS, ADVANCED. Prerequisite: SR 101. Three hours credit.

SR 103. STATISTICS (Case Studies). Prerequisite: SR 101, 102. Three hours credit.

SR 104. STATISTICS LABORATORY. Two and one-half hours of laboratory work per week for each credit hour. Prerequisite: SR 101.

SR 105. SOCIAL STATISTICS. Three hours credit.

SR 151. BUSINESS FORECASTING. Prerequisite: SR 101. Two hours credit.

SR 152. RESEARCH METHOD. Prerequisites: SR 101, 102. Three hours credit.

**Summer Quarter, School of Commerce**

SR 101, 102. STATISTICS. Three hours credit. First and Second Terms. 10:00. Professor Carmichael.

SR 152. RESEARCH METHOD. Three hours credit. Second Term. 10:00. Professor Carmichael.

SR 104. STATISTICS LABORATORY. Three hours credit. Hours to be arranged. Professor Carmichael.

**ZOOLOGY**

103. COMPARATIVE ANATOMY. Prerequisite: Zoology 1, 2, and 3, or their equivalent. Autumn. Lectures. Tuesday and Thursday. 1:30. Laboratory. Monday, Wednesday, Friday. 1:30 to 3:30. Fee \$4.00. Professor Owen.

104. MAMMALIAN ANATOMY. Prerequisite: Zoology 1, 2, and 3, or their equivalent. Winter. Lectures. Tuesday and Thursday. 1:30. Laboratory. Monday, Wednesday, Friday. 1:30 to 3:30. Fee \$4.00. Professor Owen.

105. EMBRYOLOGY. Prerequisite: Zoology, 1, 2, and 3, or their equivalent. Spring. Lectures. Tuesday and Thursday. 1:30. Laboratory. Monday, Wednesday, Friday. 1:30 to 3:30. Fee \$4.00. Professor Owen.

109. HISTOLOGY. Prerequisite: Zoology 1, 2, and 3. Spring. 9:00. Fee \$5.00. Professor D'Amour.

120 and 121. ADVANCED PHYSIOLOGY. Prerequisite: Zoology 40 and 41, and Organic Chemistry. Autumn and Winter. Lectures. 9:00. Laboratory to be arranged. Fee \$5.00. Professor D'Amour.

140. PARASITOLOGY. Prerequisite: Zoology 1 and 2 or their equivalent. Autumn. Lectures. Monday, Wednesday, Friday. 10:40. Laboratory. Tuesday and Thursday. 10:40 to 12:30. Fee \$4.00. Professor Owen.

150. HEREDITY AND EVOLUTION. Prerequisite: Zoology 10 or Zoology 1 and 2. Spring. 10:40. Professor Owen.

214. GLANDS OF INTERNAL SECRETION. Prerequisites: Zoology 40, 41, and Organic Chemistry. Spring. Lectures. Monday, Wednesday, Friday. 10:40. Laboratory to be arranged. Fee \$5.00. Professor D'Amour.

250, 251, and 252. RESEARCH. Time and credit to be arranged. Autumn, Winter, and Spring. Fee \$5.00 per course credit. Professors Cutler, Owen, and D'Amour.

#### City College

160a. GENETICS AND EUGENICS. One-half course credit. Spring. Professor Cutler.

190a. ZOOGEOGRAPHY. One-half course credit. Winter. Professor Cutler.

#### Summer School

##### *First Term*

103(a)S. COMPARATIVE ANATOMY. One-half course credit. 11:40. Laboratory fee \$2.00. Professor Owen.

140(a)S. PARASITOLOGY. One-half course credit. 8:00. Laboratory fee \$2.00. Professor Owen.

150S. HEREDITY AND EVOLUTION. One-half course credit. 10:40. Professor Owen.

170S. ECONOMIC ZOOLOGY. One-half course credit. 9:00. Professor Cutler.

##### *Second Term*

120S. ADVANCED PHYSIOLOGY. Prerequisites: Elementary Physiology and Organic Chemistry. One-half course credit. Lectures. Monday, Wednesday, and Friday. 10:00. Laboratory. Tuesday and Thursday. 10:00. Laboratory fee \$3.00. Professor D'Amour.

Graduate School

## INTER-UNIVERSITY ARRANGEMENTS FOR POST-GRADUATE AND RESEARCH STUDENTS

Including the questions of  
Reciprocal Recognition of Courses for Post-Graduate  
Degrees; Co-operation in Post-Graduate Courses, and  
Specialisation in Post-Graduate Courses along special lines  
among Universities.

THE title of this paper is a comprehensive, even a formidable one. Any adequate treatment of the topics prescribed would require a whole volume. The invitation to deal with them may have been addressed to me because it was assumed that I might have some knowledge of what is going on on both sides of the Atlantic. In any case, in my treatment of the subject I want to include the universities of the United States: if they are not imperial they are, at least, English-speaking. And we have much to learn from each other. My connection with the Carnegie Foundation in New York has given me access to many valuable sources of information, more especially as some of the most distinguished Presidents of the American universities serve with me as Trustees on that Board. I know something also of the conditions which obtain in the newer universities on this side, and have been at pains to consult the most recent Blue Book containing the Report of the Parliamentary Committee appointed to inspect the Universities and University Colleges of Great Britain which participate in the Parliamentary grant. Lastly, I can speak of Oxford as a grateful alumnus, and of Cambridge, though it is a peculiarity of the British system that for information about these venerable institutions one must go elsewhere than to such a publication as the Blue Book just referred to.

It seems important first to ascertain what is actually going on at present under the head of graduate and research work in the universities on both continents. When that has been set forth we may proceed to consider the possibility or the expediency of

instituting and developing reciprocal arrangements and providing for specialisation along certain lines of work. Perhaps I may be permitted to remark incidentally that this struck me as one of the most fruitful of the suggestions made at the first Imperial University Conference, held in London in 1903.

If I begin by referring to the preliminary difficulty of nomenclature, it will not be merely for the purpose of indicating a personal aversion to the somewhat amorphous term "post-graduate." There is a great lack of uniformity in regard to the whole matter. What is called at Harvard a "School" is elsewhere termed a "Faculty"—as, for example, in the University of Toronto, Faculty of Education, Faculty of Applied Science, Faculty of Forestry, Faculty of Medicine, though the provisions of the University Act of Toronto permit the Board of Governors to establish other organisations, or a like organisation with another name, such as "Board," "School," or "Department." At Columbia the term "Graduate Faculties" is used only as a convenience, and the official title of the department in which graduate work is done is "Faculties of Political Science, Philosophy and Pure Science." At Harvard the term "School" is used not only for graduate work but also in Medicine and Law. At most centres it is recognised in practice that the presence of a few graduate students in undergraduate courses does not greatly affect the character of the instruction given. But where the bachelor's degree is a pre-requisite, it is obvious that the School of Medicine or the School of Law may be as much a Graduate School as the Graduate School of Arts or Sciences. And there is apt to be some further confusion when in a Medical Faculty like Johns Hopkins, which rigidly excludes those who have not already taken a previous degree, there is a body of students in attendance on the regular classes who have already taken the degree of M.D. in addition. These are doubly entitled to be designated graduate students in Medicine.

What then do we mean by what I shall call generally graduate work? First, it is the further study or research which follows on the ordinary undergraduate curriculum in the liberal arts and sciences, both theoretical and practical. The considerations which make all higher education centre round the courses of study in the Faculty of Arts and Sciences are valid also in regard to this type of graduate work, and one of the indispensable duties of the university is to preserve and develop that ideal of knowledge for its own sake, and also for the sake of all other kinds of knowledge—professional, technical, and the public service

generally—which is the soundest and surest basis of all academic aspiration. Next comes the various professional schools, including technological, commercial, and even industrial branches. If the foundation on which the superstructure of such studies is raised sometimes appears rather meagre, it ought to be remembered that the endeavour throughout is to inspire the teaching with the idea of research—a word that is often misused, though the thing itself ought always to have a place in any scheme of higher education. We speak too much of research as though it were only a means of advancing knowledge, instead of furnishing, at the same time, an instrument of training. The researcher is always adding to his own knowledge, even though he may not at the same time be increasing the world's store. In practically all the American universities the major stress is placed upon this element of research (sometimes, it must be admitted, along lines so narrowly laid down as to suggest pedantry rather than true scholarship), and in the case of candidates for the Ph.D. degree, evidence of competence in this direction must be furnished by the production of a dissertation presumed to contain some addition to existing knowledge in the field to which it belongs.

In any case, graduate work is obviously the crown and coping-stone of the whole university curriculum. It is a stimulus and an inspiration alike for teachers and taught, and perhaps it is not too much to say that the aims and efficiency of a university can be most readily tested by the degree of prominence which it gives to this department. Nothing should help so much to confer distinction on the curriculum and to prevent the otherwise possible absorption of the whole activities of a teaching staff in the service of the ordinary pass-man. The Master of Christ's College, Cambridge, has made it lately something of a reflection on the activities of American universities that they are so much taken up with training crowds of ordinary students that they do not discover and develop the highest forms of intellect and ability, and consequently fail to produce leadership. Many students in America take the Arts course, just as they resort to Oxford or Cambridge, because they want, or their fathers want them, "to go to the university." If Mr. Shipley's criticism is to be more effectively met in the coming time, it will be, in my judgment, through the growing activities of the graduate schools. There are certainly many men in the United States who have the right point of view. Take what Dean West puts forward as his ideal for the Graduate College of Princeton, of which he may be said to be the intellectual founder:—

"The character of the graduate student must then be a profoundly regulative factor in the life of the graduate school. All those and only those who show capacity and desire for high intellectual effort should be encouraged to enter. It is no place for either shallow dabbling, narrow intensity, dull mediocrity, or unsocial isolation. Young men, young in spirit, rich in intellectual and moral worth, responsive to scholarly impulses, eager to seek and find, able to perceive, take, and use the more valuable as distinguished from the less valuable material of knowledge, willing to do all and dare all to make themselves master-students, open-eyed to ideas in their relevancy, worth and beauty, pulsing with energy, inventiveness and fantasy, men companionable, magnanimous and unselfish—such are the students to be longed for and prized supremely. These are the sons of knowledge who are best fitted to live, not for themselves alone, nor by themselves alone, but first in the household of knowledge and then in the larger society of the world."

The growth during recent years in the number of graduate students is one of the most remarkable phenomena in the history of higher education in the United States. They have increased 50 per cent. in the last decade and tenfold in the last thirty years. In the session 1909-10 there were registered 8,776 resident graduate students, as compared with 5,831 in 1899-1900. The number of Ph.D. degrees conferred in 1899-1900 was 125: in 1909-10 there were 437, an increase of 250 per cent. in ten years.

Now all this may to some extent be overdone, although it must be remembered that it is paralleled not only by the growth of population but by the huge increase in the number of undergraduates. It is interesting to note that these graduate students may be regarded in great part as candidates for the higher positions in the teaching profession, *e.g.*, college professorships. They are either already teachers, or else are expecting to become teachers, and they need the degree of Ph.D. for their professional advancement. It is obvious that, seeing that this forms the main source of supply for those who are to hold high educational positions, the ideals of scholarship which govern the graduate schools must be regarded as of fundamental importance for the academic future of the country. These schools naturally include a considerable and increasing number of men who look forward to other careers, but even if they did nothing more than train the university staff they would be doing noteworthy work. It is perhaps a result of the German influences that have been at work in the shaping of this department of their activity that while great stress is laid on research, it is sometimes planned, as has been said already, on rather narrow lines. A great deal of the best research in America is carried on apart from graduate

schools altogether. Certainly the enormous growth of graduate schools cannot be interpreted as meaning that, so far as they are concerned, research has gone forward with equal strides. And, after all, the method of conferring the Doctorate of Philosophy is comparatively free from the reproach of excessive mechanism which governs much of the practice in the lower stages of the curriculum. I refer to the American system of counting up courses and accumulating credits, and to the various regulations for "safeguarding the degree," which are in so obvious contrast with British methods of dealing with the whole subject by way of major examinations. In addition to the Doctor's degree there is also the Master's. This being an inheritance from earlier times has been less subject to foreign influence, and there exists in connection with it a wider variety of practice and purpose, so that even within the limits of a single institution it may be regarded either as a stepping-stone to the doctorate or as a thing apart, of minor significance, and to be conferred upon easy terms upon a graduate of one or more years' standing. The M.A. has come to be regarded as an increasingly effective preparation for a teaching career in the secondary schools, rather than as the normal and necessary precursor of the doctorate.<sup>1</sup>

(1) A special committee of the Columbia University Council recently reported that the result of their inquiry as bearing on the question of a national standard for the Master's degree was inconclusive. There is at present no standard and no clear evidence that one is evolving from the varieties of local theory and practice. The nearest approach to a generally valid formulation would be something like the following: The Master's degree, at the greater American universities, now stands for a year of more or less advanced work, following a Bachelor's degree of some kind, done usually in residence, and devoted to one or more subjects chosen under various local restrictions.

The paper discussed the problem of a national standardisation of the Master's degree, and the question was raised as to whether such a thing is desirable. There are possible advantages to be gained. The question, however, should be looked at in a large way, as one of general educational utility. If desirable, it was asked whether a standardisation is possible. The difficulties in the way were concluded not to be insuperable, provided that the idea of a standard be not taken to imply a rigid scheme of any kind, but only an agreement on two fundamental propositions, all minor matters and administrative details being left to local discretion.

Two propositions were submitted as a basis of agreement: (1) The backbone of every curriculum for the Master's degree should consist of intensive work in some one subject, to which the candidate should be required to devote as much as one half, and permitted to devote the whole, of his working time for at least one year; his working time being estimated at from forty to forty-five hours a week, including class-room attendance. (2) Candidacy for the degree should presuppose not only a Bachelor's degree from an institution of reputable standing, but also a specified amount of previous collegiate work in the major subject chosen. This preparatory requirement would have to be fixed with reference to average undergraduate conditions, and might properly be more in some subjects than in others; for example, more in Latin or mathematics than in economics or astronomy. It should be defined in terms of some unit to be agreed on, and should be substantially the same everywhere for each of the subjects that may be offered as a major specialty.

*Columbia University Quarterly*, XIII., 3, pp. 291-2.

In recent years there has grown up through the Association of American Universities a clearing-house for the exchange of opinions relative to graduate work and information as to results obtained. That Association now includes twenty-two members. The effect of its work is shown in a partial standardising of ideals and methods which may be expected to go on progressing in the future. While several larger universities, especially those with over five thousand students, have now passed Johns Hopkins in the race for graduate work, the last-named university should always be mentioned first as the indisputable pioneer. There were enrolled in Johns Hopkins in 1910-11 :—

Graduate Students, excluding candidates for M.D.	...	...	...	...	161
Candidates for M.D. (all graduates)	...	...	...	...	351

and the number of degrees conferred in 1909 and 1910 respectively were—

	1909.	1910.
Ph.D. ... ..	27	25
M.D. ... ..	53	69
M.A. ... ..	4	3
Total ... ..	<u>84</u>	<u>97</u>

In point of numbers, Columbia and Chicago have the most notable record. The latter is largely concerned with post-graduate work. The number of students enrolled in 1909, and the number of degrees conferred in that year, are :—

In the Graduate School of Arts and Literature	...	...	870
"    "    "    Science	...	...	546
Graduate Students in University College	...	...	57
Total number of Graduate Students	...	...	<u>1473</u>
Total enrolment in University	...	...	5659
Bachelor degrees conferred (B.A., B.S., Ph.B.)	...	...	325
Masters'    "    "    (M.A., M.S., Ph.M.)	...	...	75
Doctors of Philosophy	...	...	38
Total number of Post-graduate Degrees	...	...	<u>113</u>

The graduate students thus make up more than one-quarter of the whole enrolment, and more than one-quarter of the degrees conferred were post-graduate degrees.

Among other universities the following may be quoted :—

	Enrolment.		Degrees conferred.		
	Grad. Students.	Total.	Bachelors.	P.G. inc.	Ph.D.
Harvard (1909-10) ...	411 <sup>1</sup>	—	566	160	38
Yale (Dec., 1908) ...	385	3450	722	138	32
Cornell (1909-10) ...	309 <sup>2</sup>	4215	625	82	34
Princeton (1909-10)	134	1400	222	43	4
Michigan (1909-10)...	362 <sup>3</sup>	2469	376	94	13

<sup>1</sup> In Harvard, only candidates for A.B., S.B., A.M., S.M., Ph.D. are included in this table.

<sup>2</sup> Besides 252 graduate students in undergraduate courses. In all cases the number of post-graduate degrees given includes the Ph.D.'s, which are given again in the last column by themselves.

<sup>3</sup> Enrolment in the department of Literature, Science, and the Arts.

Special attention should be directed to the growing activities of the Graduate School at Princeton. The promoters of that school are greatly interested in inter-university arrangements, and are seeking to make clear to all the distinction between graduate work which is in the nature of advanced education, enlightenment, enlargement of knowledge, and the graduate work which is definitely limited specialisation. They believe that the danger to American universities at the present moment is the disappearance of the first factor, although higher intelligence is, after all, the final guarantee of sanity in the most advanced form of university work. This point is strongly brought out in Dean West's recent paper on the "Proposed Graduate College of Princeton: with some reflections on the humanising of learning." Its object, he says, is "to create in America a valuable institution which does not yet exist, a residential college devoted solely to the higher liberal studies—a home of science and philosophy, of literature and history." Princeton evidently means to give more weight to the departments of language and literature and to the physical, natural, and social sciences, than to the professional colleges of medicine, agriculture, engineering, and so on. It does not protest against these being included within the curriculum of graduate work, but it does object to having them magnified and exalted to the prejudice of what seems to it more fundamental.

As to Canada, consideration may practically be limited to Toronto and McGill, both as regards actual conditions and plans for the future.

For McGill, a separate entry regarding the Graduate School is made in the Annual Report to the Visitor, from which it appears that though the school was formally established only in 1906—on the understanding, I am afraid, that it was not to cost anything—its numbers have increased from thirty in the first year to 114 for session 1911-12, when there were twenty-four candi-

dates in course for the Ph.D., forty-seven for the M.A., and forty-three for the M.Sc. The numbers at Toronto seem to be substantially the same—twenty-eight for Ph.D. and eighty-seven for M.A.

Certainly in these two Canadian schools—and probably later on in others—there is the promise of great development as regards inter-university relations. In his opening speech at the conference of 1903, Mr. Bryce indicated the opinion that it would be specially in certain branches of applied science (*e.g.*, mining and forestry) that the oversea universities would prove attractive. There are obvious advantages attaching, say, to the study of Mining at McGill, including the summer tour, and a forward step as regards Forestry could easily be taken if English or Colonial students of that subject could be encouraged to go to a Canadian university for a time and follow a combination course of study, partly under the university and partly in a Government Forestry Department—the conditions to be laid down in the main by the universities which send such students. Even on the side of Arts—though here the flow of students will naturally be, with adequate inducements, from the oversea Dominions to the mother-country—Canada can offer an interesting field in such subjects as history, anthropology, and the like, and also as regards problems in economics, administration, and sociology.

I must avoid the mistake of overloading this paper with statistics, and yet for the sake of completeness it is indispensable to include here a brief reference to what you are more familiar with under the head of Graduate Work in Great Britain. In London, *e.g.*, the Parliamentary Blue Book shows that there were 423 students in post-graduate courses at University College in session 1909–10, divided among thirty-three departments—152 “full-time” and 271 “part-time” students. There is a considerable number of post-graduate Fellowships, Scholarships, and Exhibitions, confined almost entirely to students of the College. The courses at the London School of Economics, which appeal largely to specialist and research students, attracted in 1909–10, among many others, no fewer than 221 graduates; and ninety-five of its students are returned as doing work of post-graduate standard in virtue of some definite piece of research to which they are applying themselves. “The School makes a special feature,” says the Report, “of its provision for specialist and research work done by post-graduate and other advanced students, especially those from other universities in the British Empire and foreign countries.” That struck me, by the way, as an excellent watch-

word for the reorganised University of London. Manchester announces that the degree of Litt.D. and D.Sc. are open, under certain conditions, to graduates of approved foreign and colonial universities. It has 138 students (many science and medical) in attendance on its post-graduate courses—ninety-five “full-time” and forty-three “part-time,” and the Principal’s report recently published shows a marked increase in these numbers. At Liverpool “certain departments are entirely devoted to post-graduate teaching and research work,” and during the session 1909–10 the number of students engaged in work of post-graduate standard was sixty-nine—thirty-nine “full-time” and thirty “part-time.” The case is very much the same at Birmingham, where “all students for higher degrees are required to send in dissertations embodying the results of their researches.” At Leeds, where the number of post-graduate students is thirty-eight, “special laboratories are provided in the various departments of science for the pursuit of research, and in certain cases members of the staff have been appointed to give the whole or the chief part of their time to the conduct and superintendence of the work. Persons desiring to pursue research are admitted to the laboratories on reduced terms, and facilities are given for work during vacations.”

And now what am I to say of Oxford and Cambridge? The Rhodes Scholarship scheme, among other agencies, has enabled us to make some comparison of the output of our English-speaking universities on both sides of the Atlantic, and it may be said as a result of this comparison that, as regards thoroughness and concentration, as well as by virtue of the more adequate previous training of her undergraduates, Oxford has no need to lower her colours to any American college. Indeed, it might be argued that an Oxford first-class man in the Final School of “Greats” or History can be relied on to hold his own—apart from the requirement of a thesis—even with most Ph.D.’s. But the trouble is that Oxford and Cambridge do not seem to get credit for all they do. If universities in America are burdened with too much machinery, they probably have too little. Oxford and Cambridge have not studied the art of putting their wares in the window. A useful little pamphlet, published by Sir Donald Macalister as far back as 1896, showed quite clearly the advantages Cambridge was beginning to offer to the “advanced student,” and since that date Cambridge has been able to boast of a considerable number of graduate students in science who have been attracted to her laboratories from overseas by the fame of her professors and the excellence of the equipment. The 1851 Exhibition Scholarships

have been a great help in this connection. Oxford, too, has deserved well of the other colleges and universities of the Empire by offering privileges in connection with admission to honour schools and special courses. But it was clearly brought out at the preliminary conference held a year ago in Montreal that increased facilities for post-graduate study at the great English universities would be considered of the greatest possible benefit. After all, if a man already possesses a B.A. degree, it is not a great stimulus to him to be admitted to study for another B.A. on a reduced period of residence. The process is apt to make him a little stale. In our oversea universities the degree curriculum is general rather than special, and it will not do to insist that a student who has spent his undergraduate time on several subjects shall, in his selected special subject, go over the old ground and make up all his deficiencies of knowledge in the preliminary parts. It was the realisation of this view, so widely entertained in the colonies, that made it possible for the late Dr. Roberts to report, after our Montreal meeting last summer, as follows—without prejudice, as the lawyers say, to the wider conception that rejoices in the possibility of a larger interchange of students, not among the universities of the Empire only, but throughout the world :—

“It was pointed out by one speaker after another that students who, having taken the initial degree of B.A. in a Canadian University, wished to pursue a post-graduate course and take a higher degree in some other University, were at the present time going chiefly to the American and German universities. It was said by one speaker that 95 per cent. of the Canadian post-graduate students go either to the American or the German universities, and not to the British universities. The reasons given were, in the first place, that the British universities do not furnish full and clear information as to the post-graduate courses that were possible in the way that the American and German universities do. A young professor whom I met afterwards told me that he had been anxious to go to Oxford, and had failed to get from Oxford the information that he wanted, and finally he had obtained it from a pamphlet published in America by American students, prepared by themselves for their own use. In the second place the American universities offer fellowships or studentships to post-graduate students, and often award these on the nomination of the University sending the student. A former professor of Queen's, Kingston, whom I met, told me that whenever he had a good post-graduate student, he could always get for him a studentship at Harvard. The third point was, that the post-graduate students who are hoping eventually to obtain professorships must, as an essential qualification, obtain a Doctor's degree, and they therefore choose universities where it is possible to obtain a Doctorate by post-graduate work within a reasonable time. They said that if a B.A. of a Colonial university went to Oxford or Cambridge and pursued a post-graduate course of study for two years, the only degree he could get would be again the Bachelor's degree, which was of no use to him from the point of view of obtaining an appointment. If it

were possible to obtain a Master's degree it would be a real step forward, although what the student most desired was a Doctor's degree.

"Upon this question the opinion was unanimous that, both from the university and the imperial points of view, it was of supreme importance that something should be done without delay to divert the stream of able Canadian students from America and Germany into the United Kingdom. It was pointed out that with the rapid growth of Canada, and the consequent founding of new universities, there was a large demand for university teachers, and the opinion was strongly expressed that the universities would greatly prefer to have professors who had pursued their post-graduate work in the United Kingdom rather than in the United States."

If one wanted to raise a concrete issue, one might be bold enough to ask why the English universities should not start the Ph.D. degree, mainly in the interest of advanced students from other institutions? It would, of course, have to be differentiated from any degrees that may be given as a reward for a thesis alone, regardless of the elaborate system of concurrent seminar training supplemented by lectures now in vogue in Germany and the other Ph.D. countries. While the D.Litt. and the D.Sc. already exist in the English universities, there does not seem to be any clear recognition of the fundamental difference between them and the Ph.D. degree. Degrees of the former type are not, as a rule, within the reach of the average student, say from an American university, who goes over to Europe to specialise for two or three years at most. Such a man starts, as has been stated already, with a very modest equipment of knowledge in his selected subject after he has taken his B.A. degree. If, however, he has good ability, he can study, in residence, along prescribed lines by taking lectures on various parts of that selected subject, reading extensively at the same time under direction, and still have time to carry out a piece of research work that may fairly claim to be an original contribution to knowledge. When an American student has gone so far at Oxford and Cambridge, he feels aggrieved that he cannot win a Doctor's degree which will show the character of the work he has done. So it may well be that Oxford and Cambridge lose many students by not holding out to men of this type some such reward as the Ph.D.—a degree involving residence for at least three years in one or more graduate schools, attendance at an adequate number of lecture courses, and a thesis. Residence should continue to be an essential condition: there are other types of the Doctor's degree that will meet the aspirations of students who are only loosely connected with the university, and who may carry out research work of excellent quality without facing the requirement of study at the university

seat. Such men ought also to be attracted into our graduate schools, but on another plane. This is especially the case with candidates whose local surroundings furnish facilities for their work comparable with those of university libraries and laboratories.

The one caveat to be uttered in this connection is that we ought not to make a fetish of the Ph.D. degree. Its popularity in the United States is too intimately connected with its financial value. Colleges, and even secondary schools, have shown a disposition to ignore the application of any candidate who cannot boast this particular form of appendage. "During the last twenty-five years," says President Butler, "there has developed among the colleges and schools of the United States a deplorable form of educational snobbery which insists that a candidate for appointment to a teaching position shall have gained the privilege of writing the letters Ph.D. after his name. This fact has given to the degree of Doctor of Philosophy a commercial value which it ought not to have, and it has sent to Columbia University and to all American universities no inconsiderable number of students whose chief aim is not graduate work or training in the methods of research, but simply the acquisition of a higher degree." I cannot help thinking that it would be comparatively easy to provide against this danger at Oxford and Cambridge, which have been so successful in safeguarding undergraduate college education in its present form, and where the interests of truth and knowledge are not likely to be unduly affected by the atmosphere of an employment bureau or an agency for securing teaching appointments.

Another concrete issue is the question whether there should be a separate Faculty for the Graduate School, or whether the teaching should be distributed among the members of the ordinary staff. I refer to this because I know that it is a burning question in some centres. Surely it is one that ought to be settled in conformity with the existing circumstances and potential development of each institution. A Graduate Faculty, with a Dean and Secretary, would be unnecessary, and might be an instance of over-organisation, where genuine graduate and research students are few. It has been too often the case that the premature establishment of graduate schools in general has been prejudicial to the financial interests of the undergraduate department. "In America," says Dr. Pritchett, "the graduate school in nearly all institutions is a parasite, existing on the undergraduate school and generally supported by it, and what-

ever strength and vitality it develops is, in most cases, at the expense of the undergraduate college." If this is true, the argument must tell doubly against separate Faculties, unless special endowments are secured. Moreover, the exaltation of such a separate Faculty might tend to depress the standard of undergraduate teaching, as having about it less dignity and distinction. And in normal cases the attempt to draw a sharp line of division between two classes of teachers may do more harm than good. There may be professors who are fitted only for graduate work, and others who should be confined to undergraduate teaching, because of a special capacity in that field. But there should always be a large part of the staff capable of doing both kinds of work in certain proportions. At Harvard, for instance, by far the greater number of those engaged in graduate instruction also give undergraduate teaching. No one principle should be allowed to dominate in the matter. It is altogether wrong to cut off from research and higher investigation those who are mainly occupied with undergraduate work, or to tie yourself in such a way that you cannot set free for the most advanced instruction those whose time can best be employed for this purpose alone. The teacher who is engaged in undergraduate work is kept more alert and alive if he can do something along new lines in his own subject; otherwise he has to keep to the treadmill of lower standards, in which his teaching from year to year is but a repetition and reiteration of what he has done before. And conversely, the teacher in the graduate school will be all the better for coming into touch from time to time with undergraduate interests. They will remind him of actualities, and keep him perhaps from soaring away from facts and concrete needs into the dim haze of abstract speculation, or from becoming unduly absorbed in a mass of dry detail where everything is microscopic and minute.

This view of the question seems to be correct for normal cases and as a rule. There is also the alternative, which I may say we have adopted at McGill, of having a Committee on Graduate Studies, containing representatives of the main departments, especially those which are actually engaged in giving essentially graduate instruction. Our Committee, I may add, reports separately and not through the Faculties.<sup>1</sup>

Having shown the nature of existing arrangements for graduate

(1) For details as to the methods of organisation in vogue in some of the leading Universities of the United States, see Appendix, page 21.

work, I must now endeavour to deal with the other topics suggested by the title prescribed for my paper. These may perhaps be made to centre round the three words, (1) recognition, (2) co-operation, and (3) specialisation.

Recognition is easy enough. On the American side of the water it is quite common for a man to take one, or even two, of his three years for the Ph.D. away from his own university. The principle of mutual recognition has long been accepted, and is in constant operation. What is needed is perhaps a little more co-ordination. Courses in graduate schools should be so arranged that students shall be increasingly encouraged to plan to take a portion of their course in one university and complete it in another. At McGill, for instance, the ordinary course for the Ph.D. extends over three years, and science candidates who have taken our B.Sc. and an additional year of study leading to the degree of Master of Science are allowed to enter the Graduate School of Yale, the Massachusetts Institute, Harvard and Princeton, and to obtain their Ph.D. with two additional years. This arrangement is largely availed of and seems to work out well in practice. For instance, Dean Adams tells me that he has, or had recently, students going forward to the Ph.D. in Geology under these conditions in each of the above-named institutions. And the department of Geology at McGill contains a distinguished teacher who came in the same way from Yale to take a year at McGill, and decided to remain. Harvard, again, requires only one year's residence as a minimum, and is constantly giving recognition to work done elsewhere, either in the United States or abroad. Dean Haskins writes, however, "Practically the question does not mean very much at Harvard, because our students commonly spend from three to five years in their study for the doctorate, of which at least two years are taken here. The requirement being one of attainment rather than time, the specific question of recognition of the work of other institutions is thus in practice comparatively unimportant at Harvard, although we are very glad to welcome men who have been carrying on advanced studies elsewhere."

Next as regards what I may call, by way of short title, co-operative specialisation. While some universities may be so happily situated that they can undertake practically everything, it will be found expedient as a rule to adopt some limitation of programme. Pure science may well be the speciality of many colleges, applied science of others; literary studies will be more highly developed in another type of institution, while yet an-

other will lay special stress on the study of economic problems in their bearing on commerce and industry. The recognition of these differences of type seems to be a necessary step in any scheme of effective co-operation. It can hardly be said that this step has yet been taken. Almost every university, in America at least, still appears to want to teach practically everything, and it rarely happens that a student of a given subject is referred to an unquestionably superior department elsewhere.

When once it is begun the process of subdivision will go forward in an increasing ratio. In America at present each university is striving to build up its higher departments, but at the same time it sometimes happens even now that when some one university is particularly strong in one phase of a subject, such as botany, a neighbouring institution will refrain from seeking the same development in that special branch. American universities are to-day in a rapidly growing condition, and the relative strength of institutions and departments is changing so steadily that no particular statement will hold good from one period to another. The most that could be done would be to indicate by conference and co-operation what should be developed and what, on the other hand, omitted, especially in institutions which are near neighbours.

Professor Cattell, of Columbia, reported a few years ago that he had found by examining the records of the universities in which the thousand most eminent men of science in America had pursued their studies, that Johns Hopkins had excelled chiefly in chemistry, physics, zoology, and physiology; Harvard in zoology and botany; Columbia in zoology, botany, and mathematics; Cornell in physics and botany; and Michigan in botany and pathology. From this the lesson has been derived that in selecting a place for graduate study the student will do well to look beyond the general reputation of a university and elect a department, and even a particular professor, rather than a place. The teaching activity of Professor Gildersleeve, at Baltimore, to take a prominent instance (and one, by the way, in which limitation of work to graduate students has been of the greatest benefit), has virtually marked an epoch. He has done something in America to revive the days of the great Heyne, who is said to have trained in Germany over one hundred professors of philology. The work of the Association of American Universities (established in 1900) is largely directed, as already stated, to the helpful task of showing how the various institutions compare with each other in this regard. In the first place, this agency

has collected and classified facts bearing on the standing of the B.A. in the various colleges, so that graduate schools have now something to go on in the evaluation of the degree which serves as a standard of entrance. Delegates representing the universities included as members of this body meet annually to discuss topics of mutual interest. The Association was originally organised to "consider primarily matters of common interest relating to graduate study," and, in addition to dealing with entrance qualifications, it has been able to secure an approximation to uniformity in the requirements for higher degrees and the establishment of higher standards. In recognition of the efforts made in this direction, the Universities of Berlin and Leyden shorten the time of residence necessary for the degree of D.Ph. in favour of students who have completed a certain amount of graduate work in an American university which is enrolled as a member of the Association. In the United States, the work of this Association illustrates the cordial relations that exist among institutions which are in some sense rivals, competing for students over a large extent of territory. While each maintains its own academic methods and standards, a free interchange of opinion tends to produce a certain degree of similarity, if not a real equivalence. Moreover, migration from one university to another is facilitated by fellowships open to candidates from any reputable institution, and by a liberal policy of extending academic credit in any one of the universities represented in the Association to work done in another of similar rank. On the whole migration is naturally less common in America than it is in Germany, partly because of disinclination to break away from familiar surroundings, and partly because of an instructor's unwillingness to send on to another his own somewhat immature candidate. Universities are only human, and they tend to encourage migration toward rather than away from themselves. But it is clearly to the interest of the student that he should come under different influences at successive stages of his career, and there is great promise of improvement in the work of the Association just referred to, as well as in that of the National Association of State Universities. Such agencies will inevitably help migration and mutual credit, by bringing into prominence, and, in a sense, advertising, those departments of each university that are especially well developed in their fields of specialisation because of environment or support, as well as by reason of the eminence of its teachers.

Recognition will undoubtedly operate to bring about a larger measure of specialisation. The two will act and react upon each

other. The result of an arrangement by which a certain institution is encouraged by others to pay special attention to the teaching of a certain branch would undoubtedly be that it would in this way be enabled to offer much more thorough courses of instruction in the branch in question. From the economic point of view there is undoubtedly a considerable waste of money. It would be helpful to the cause of higher education if there could be a tacit, or even an explicit, understanding between the leading universities as to the field to be occupied by each. The present system of competition in every domain is becoming more and more expensive. It is impossible for every university in America to keep up every specialised branch of every department to the highest level. Each one can maintain certain departments more easily than others. We have been told of the recent abandonment of one university cost-accounting system because it revealed the great expense of some departments that had very few students. As such accounting becomes more general and more public, it will be found impossible for a half-dozen universities in the same general region to maintain departments of, for example, Oriental Languages for a total number of students that could easily be accommodated in a single institution. The way from competition to co-operation is long, but there is a growing conviction that competition in post-graduate work is at present unduly expensive, sacrifices the student, and hinders scholarship in order to further personal, institutional, and regional emulation. When our graduate students have some accredited method of learning that if they want to study a certain subject they will find that subject best taught in a certain university, we shall be in a much better and more highly organised condition than at present. The problem is not free from difficulties, but it will be found as time goes on that increased co-operation shows the direction in which a solution ought to be sought.

The Carnegie Foundation has promised to undertake a thorough-going study of existing graduate schools and to publish a report. Meanwhile, Dr. Pritchett has put himself on record in no uncertain terms. "The universities themselves," he says in the Sixth Annual Report of the Foundation, "need to examine with conscientious care their own responsibility in the matter of the multiplication of graduate schools. Whatever may be urged in favour of the multiplication of colleges, it is certainly true that we need comparatively few graduate schools. The cost of higher education is already enormous, and is year by year growing greater. University ambition is no excuse for imposing this cost unnecessarily upon the community or upon the student body.

The university must face a little more frankly the question: What is the function of the graduate school? and having determined that, decide what sort of men should be admitted to it."

He speaks also in the same unmeasured terms against the giving of subsidies to attract students. "There are well-known institutions," he says, "in which every graduate student is in some form or another subsidised. For ten years past there has been a strong feeling that any respectable university must have a graduate school, and under this assumption students for the graduate school must be had. If they do not rush of their own volition, they must be subsidised to come. The extent to which this has been carried, and the demoralisation of the graduate school by reason of the material thus brought in, has, I am sure, been far greater than most presidents and teachers have realised." From this statement it would appear that the system of fellowships at present in vogue interferes seriously with healthy migration, is the fruit of excessive competition, and is hampering the best progress of American universities. It is certainly in strong contrast with what was told us at the last London Conference by Sir Henry Roscoe and others as to the working of the system of scholarships instituted, at the instance of the late Lord Playfair, by the Royal Commission of the Exhibition of 1851. In awarding their scholarships, which are given not by examination but by recommendation, the Commissioners have recognised the great principle of freedom of choice on the part of the student as to where he shall continue his studies. Nothing has done so much to promote free interchange among the universities of the Empire, and also with Germany, France, and the United States, as these Exhibition Scholarships, and they might very well form the nucleus of a great system of scholarships and fellowships expressly designed to promote that end. As another instance of what can be done by co-operation, I would refer also to the excellent results produced on academic standards in Scotland by the Inter-University Competition for the Ferguson Scholarship in classics, philosophy, and mathematical science.<sup>1</sup>

(1) I ought not to omit to chronicle one concrete and definite attempt at co-operation between two leading universities in the shape of the Yale-Columbia Consular Course, which combines the resources of the two institutions. My information is, however, that this course has not so far attracted students, possibly because American consuls are not yet appointed on a basis of such training. Again, it has been suggested to me that, just as books are lent by one library to another, so some economies could be effected by the loan of expensive apparatus. We have at McGill, for example, an installation of rock-squeezing machinery which it would probably be unnecessary to duplicate elsewhere in Canada. And a Professor at Princeton told me recently how he managed actually to transport from the University of Wisconsin valuable physical apparatus that has been specially supplied to him during his tenure of office there.

The application to the home universities of the argument I have sought to develop in this paper, and of any new information it may contain, will best be undertaken by those of my colleagues who are most conversant with existing conditions in each university centre. I cannot doubt that the growth of such near neighbours as Manchester and Liverpool, for example, has been and will continue to be conditioned—even without any specific delimitation of territory—by a natural and instinctive wish to differentiate in the field of graduate work and specialised research. And when once the principle has been established in this country, there remains the wider question of the relation of the home universities to the universities oversea. If I have made it plain that we should do well on the American Continent to apply ourselves to the working out of a better organised system of specialisation and the mutual recognition of each other's activities, surely the same thing would be feasible as between Great Britain and her oversea dominions—ultimately perhaps throughout the English-speaking world. I am not going to enlarge here on the far-reaching results that might follow such a system in other than academic relations. McGill has always stood up for the ideal of "federation through education," and believes, moreover, that our universities should have something to say in connection with the Imperial problems that are before us to-day. Nor am I forgetful of the wider view which sees in inter-University co-operation one of the best guarantees of increasing solidarity among the nations of the world at large. Canada in particular owes a great debt of gratitude to the universities of the United States for the hospitality they have extended to her graduate students. But the immediate purpose of this paper will have been attained if I have been able to show that it will be well for us to make arrangements by which, in regard to higher work, the best talent in our own Empire shall be encouraged to select, and to find access to, the best teaching in each branch of study, no matter where that teaching may be offered. In the words used by Mr. Bryce at the opening of the Conference held in 1903, "That which a great university does as the organ of the intellectual life of the nation in each community may, to some extent, be done by a combination of universities for the national life of the whole British world."

W. PETERSON.

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## APPENDIX.<sup>1</sup>

### HARVARD UNIVERSITY.

"The Graduate School of Arts and Sciences came into existence in 1872. Until 1890 it had little formal organisation, and was known as the Graduate Department. In 1890 it was more solidly established under the name of the Graduate School. In 1905 its name was changed to the Graduate School of Arts and Sciences.

The Graduate School of Arts and Sciences is under the charge of the Faculty of Arts and Sciences. It is the business of that Faculty to fix the conditions of admission to the School; to provide courses of instruction for its students; to direct their studies, and examine them in the same; to establish and maintain the requirements for all degrees in Arts, Science, and Philosophy, and make recommendations for these degrees to the President and Fellows; to lay down such regulations as they may deem necessary or expedient for the government of the school, and to exercise a general supervision over all its affairs."

The "Faculty of Arts and Sciences" which thus "lays down" regulations for the Graduate School and "exercises a general supervision over all its affairs," "has immediate charge of Harvard College, the Graduate School of Arts and Sciences, and the Graduate School of Applied Science.

"Harvard College is an undergraduate department in which are enrolled candidates for the degree of A.B. and candidates for the degree of S.B.

"The Graduate School of Arts and Sciences is a School for admission to which a Bachelor's degree is ordinarily required; its students if qualified are admitted to candidacy for the degrees A.M., S.M., Ph.D., and S.D.

"The courses of instruction are provided by the Faculty of Arts and Sciences for all students under its charge." (*Harvard Catalogue*, p. 309.)

(1) This Appendix consists mainly of extracts from the "Catalogues" of some of the leading Universities of the United States. It is included in this paper for the purpose of showing the various methods of organisation which have been adopted in regard to Graduate Schools.

Thus at Harvard post-graduate and undergraduate courses are provided for and are controlled by the same Faculty, which, under the statutes of the University, "is composed of all the Professors, Assistant Professors, and Tutors, and of all the Instructors appointed for a term longer than one year who teach in the departments under the charge of the Faculty" (p. xxxii.).

### YALE UNIVERSITY.

"The Graduate School of Yale University, first fully organised in 1847, is a section of the department of Philosophy and the Arts, and is under the combined Faculty of that department, the other sections of which are Yale College" (wholly undergraduate), "the Sheffield Scientific School, the School of Fine Arts, the Department of Music, and the Forest School." It leads to the degrees of Ph.D., M.A., M.S., Mechanical Engineer and Mining Engineer. (*Bulletin*, p. 312, 1908.)

"Sheffield Scientific School is devoted to instruction and research in the mathematical, physical, and natural sciences. The instruction is intended for two classes of students: (1) graduates, (2) undergraduates." (*Bulletin*, p. 210.)

Here, as at Harvard, undergraduate and graduate work are controlled by the same body.

### CORNELL UNIVERSITY.

"The Board of Trustees, by a statute adopted in April, 1909, directed that after June, 1909, the division of the University formerly known as the Graduate Department should be designated the Graduate School; that its Faculty should consist of those professors and assistant professors who are actively engaged in supervising the work of graduate students as members of the Special Committees in charge of major and minor subjects; and that this Faculty should have exclusive jurisdiction over all graduate work and advanced degrees." (*Register*, p. 70.)

The degrees under the control of this School are "Master of Arts, Master of Civil Engineering, Master of Mechanical Engineering, Master of Science in Agriculture, Master of Science in Architecture, and Doctor of Philosophy." (*Cornell University Register*, 1909-10, p. 71.)

Cornell is the only one of the five universities under review where "exclusive jurisdiction" over graduate work is given to a Graduate School; advanced degrees in medicine and in law are not given by Cornell.

The evolution of the School is sketched in the following passage: "The Graduate School, though not officially known by that title before this year, is nevertheless one of the oldest in the United States. Almost from the opening of the University in 1868 opportunities were presented for pursuing resident graduate study, and the first Doctor of Philosophy received his degree at the fifth annual commencement in 1872. Since that date more than a thousand advanced degrees, over three hundred of them being doctorates, have been conferred by this university.

"For the first twenty years and more the supervision of graduate students lay chiefly with the departments in which they were studying; but the statute which in 1892 separated the University into Colleges assigned the exclusive control of the Graduate Department to the University Faculty, and with that body it remained until 1909" (p. 70).

### PRINCETON UNIVERSITY.

"The affairs of the Graduate School are administered by a Committee of the University Faculty known as the Faculty Graduate School Committee." (*Catalogue*, 1909-10, p. 206.)

"Every candidate for the Master's degree shall announce to the Faculty . . . the subjects which he intends to offer, &c., &c." (p. 207).

### THE UNIVERSITY OF MICHIGAN.

"The Graduate School is organized within the Department of Literature, Science, and the Arts. Its management is entrusted to an Administrative Council consisting of thirteen members of the Faculty of the Literary Department, who are appointed by the President of the University." (*Calendar*, 1909-10, p. 217.)



FACULTY OF GRADUATE STUDIES AND RESEARCH

GENERAL STATEMENT.....

The Faculty of Graduate Studies and Research directs and controls all the courses leading to the higher degrees and recommends candidates for these degrees.

*? proposed*  
*? status.*  
The members of the Faculty are the Deans of the other University Faculties and all Professors and Associate Professors who conduct advanced courses of study or who superintend advanced research work offered to students registered for the degrees awarded by the Faculty. Other persons, whether members of this University or of other universities or institutions of scholarship or research such as the Archives Department, Biological Stations, etc., may be elected members of the Faculty in full session upon proper notice of motion. Members who are not otherwise members of this University shall be designated "Non-resident members".

There shall be two main divisions of the Faculty to be known as "The Arts Division" and "The Science Division" respectively. The Arts Division shall include the following departments of study, viz., Classics, Economics and Political Science, Education, English, Germanic Languages, History, Oriental Languages, Philosophy, Romance Languages, and Sociology. The Science Division shall include all other departments of study represented in the Faculty. The Departments of Mathematics and Psychology shall, however, be members of both Divisions.

These Divisions shall have full power to discuss all matters and to make all rules and regulations affecting the

*al with*  
"There shall be an Executive Committee of the Faculty of not less than four and not more than eight members, including the Dean, and this Committee shall, subject to the direction and approval of the Faculty, have full power over all matters of general policy and over all executive matters as, for example, the annual calendar, the preparation of the annual announcement, finances, fees, registration and all matters of routine".  
of Graduate Studies in Arts" and the other "The Committee of Graduate Studies in Science". These Committees shall, subject to the direction and approval of their proper Divisions, have full power over the academic records of all students, including attendance at lectures, seminars, and all other forms of graduate study. When the Dean of the Faculty has any doubt that a student's qualifications for admission or his subsequent record is in any way deficient, he shall call these cases specially to the attention of the proper committee for its decision. These committees shall also recommend all candidates for degrees to the Faculty in full session.

The Dean shall be a member of and Chairman of both Divisions, and of all general committees of the Faculty, and all meetings thereof shall be called by him or under his direction.

ADMISSION

*presumably at least*  
Advanced courses of instruction are offered to students who are graduates of any university of recognized standing. These students are generally those who have a second class honour standing or the equivalent of second class honours from McGill University in the subject in which they desire to take their major work. Admission to these advanced courses does not in itself imply candidacy for a higher degree. *at least*

REGISTRATION

Application for registration as a graduate student should be made to the Dean of the Faculty of Graduate Studies and Research. The application should be made in triplicate on special printed forms which may be obtained at the Dean's Office. Candidates should, where possible, consult the department or departments in which they intend to study before filling up their application forms. These forms must be signed by the head or heads of these departments and by the professors under

# FACULTY OF GRADUATE STUDIES AND RESEARCH

## GENERAL STATEMENT.....

The Faculty of Graduate Studies and Research directs and controls all the courses leading to the higher degrees and recommends candidates for these degrees.

*? Propriety  
? status.*

The members of the Faculty are the Deans of the other University Faculties and all Professors and Associate Professors who conduct advanced courses of study or who superintend advanced research work offered to students registered for the degrees awarded by the Faculty. Other persons, whether members of this University or of other universities or institutions of scholarship or research such as the Archives Department, Biological Stations, etc., may be elected members of the Faculty in full session upon proper notice of motion. Members who are not otherwise members of this University shall be designated "Non-resident members".

There shall be two main divisions of the Faculty to be known as "The Arts Division" and "The Science Division" respectively. The Arts Division shall include the following departments of study, viz., Classics, Economics and Political Science, Education, English, Germanic Languages, History, Oriental Languages, Philosophy, Romance Languages, and Sociology. The Science Division shall include all other departments of study represented in the Faculty. The Departments of Mathematics and Psychology shall, however, be members of both Divisions.

These Divisions shall have full power to discuss all matters and to make all rules and regulations affecting the admission of students to their departments and the requirements for all degrees awarded for work in these departments. Each Division shall meet at least once annually in the month of April for the election of officers and of committees and for general business.

Each division of the Faculty shall elect annually a Divisional Committee of not less than four, and not more than eight, including the Dean; the one to be called "The Committee of Graduate Studies in Arts"; and the other "The Committee of Graduate Studies in Science". These Committees shall, subject to the direction and approval of their proper Divisions, have full power over the academic records of all students, including attendance at lectures, seminars, and all other forms of graduate study. When the Dean of the Faculty has any doubt that a student's qualifications for admission or his subsequent record is in any way deficient, he shall call these cases specially to the attention of the proper committee for its decision. These committees shall also recommend all candidates for degrees to the Faculty in full session.

The Dean shall be a member of and Chairman of both Divisions, and of all general committees of the Faculty, and all meetings thereof shall be called by him or under his direction.

## ADMISSION

*presumably at least*

Advanced courses of instruction are offered to students who are graduates of any university of recognized standing. These students are generally those who have a second class honour standing or the equivalent of second class honours from McGill University in the subject in which they desire to take their major work. Admission to these advanced courses does not in itself imply candidacy for a higher degree. *at least*

## REGISTRATION

Application for registration as a graduate student should be made to the Dean of the Faculty of Graduate Studies and Research. The application should be made in triplicate on special printed forms which may be obtained at the Dean's Office.

Candidates should, where possible, consult the department or departments in which they intend to study before filling up their application forms. These forms must be signed by the head or heads of these departments and by the professors under

whom the applicant intends to study. The forms, when filled out, will give the necessary information with reference to the degrees held by the candidate, the courses of undergraduate study which he has followed, and the courses of graduate study which he desires to pursue. With the approval of the department a student may register for a half course at the beginning of the second term. All applications for courses of graduate study must be filed with the Dean of this Faculty on or before October 8th of each year. The regular courses of instruction begin on September 30th, 1929. As soon as the candidate's course has been approved by the Executive of the Faculty, he must register without delay at the office of the University Registrar. He will not be given credit for attendance until he does so. Candidates whose courses extend for more than one year must register at the commencement of each year of their course. If not registered at the beginning of the academic year, as provided above, the candidate shall not be eligible for the degree at the following Spring Convocation.

#### DEGREES

Graduate students may proceed to one or other of the following degrees:- Master of Arts, Master of Science, Master of Science in Agriculture, Master of Commerce, Doctor of Philosophy, Doctor of Literature, Doctor of Science, Doctor of Music.

#### RESIDENT GRADUATE STUDY

The instruction given in the Graduate Faculty includes lectures, seminars, colloquia, tutorials, and laboratory, and library research work. Each student, in addition to his thesis requirements, shall complete an adequate amount of course work instruction; the requirements differing with varying departments. The amount of this work will be designated by the major department concerned, with the approval of the Divisional Committee, and if necessary of the Faculty. The student may take any number of years he chooses more than the minimum in order to complete these requirements.

Members of the teaching staff of the University, who are also students in the Graduate Faculty, and who give more than three hours of lectures or six hours of conference work or twelve hours of supervisory work in the laboratory per week, or any student doing the equivalent amount of work inside or outside the University, may not obtain a Master's Degree in one year; and will require at least four years for the Degree of Ph.D.

No full-time student registered in any professional faculty of the University, may register for a Graduate Degree without the special leave of both Faculties (in full session).

#### FEEES

Students taking the advanced summer course in French will be remitted \$20.00 from the fee for M.A., for each summer course.

Graduate fee for M.Com., \$60.00.

#### GENERAL RULES

(1) Candidates for admission for the study of a degree shall hold at least second class honours or the equivalent of second class honours from McGill in the subject or subjects which they propose to study. Candidates who cannot comply with these requirements shall spend at least one preparatory year devoted mainly or wholly to advanced undergraduate study in these subjects at the University.

(2) Candidates for a higher degree, and especially candidates who intend to follow University work after graduation, should, so far as possible, be kept in touch with all the

principle methods of university training, including lectures, seminars, and laboratory and library research.

(3) Candidates should, when possible, be given an opportunity to conduct classes or conferences of their own and the department or departments in which they are working should note their aptitude for this kind of work.

(4) All departments should have full liberty to recommend their students to follow classes in other departments, either as part of the work of their own departments or as additional work. They may also recommend their students to attend classes in other departments, either with or without examination.

(5) All departments should make careful reports from time to time of the work being done by students in their departments as these reports may be of great value to the University and to the student in the future.

*working to do with degree*

*Employment Bureau*

*Free of charge approved grade*

GENERAL REGULATIONS FOR THE DEGREE OF M.A.

Instruction in the Faculty of Graduate Studies and Research leading to the degree of Master of Arts is provided in the following departments of study which rank as "Subjects":-

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| Greek Language and Literature.    | Psychology.                      |
| Latin Language and Literature.    | History.                         |
| Romance Languages and Literature. | Economics and Political Science. |
| Germanic Language and Literature. | Mathematics.                     |
| English Language and Literature.  | Sociology.                       |
| Oriental Languages.               | Chemistry.                       |
| Theological Studies.              | Physics.                         |
| Philosophy.                       | Biology.                         |

*in the major subject of study*

The requirements for the degree are as follows:-

(1) Candidates must hold the degree of B.A. with honours from McGill University, or its equivalent.

(2) One or two subjects may be taken.

(3) Candidates must select one major subject. A minor subject may be selected with the consent and approval of the head of the department in which the major subject is taken, subject to the advice and agreement of the head of the minor department. The amount of time devoted to the minor is at the discretion of the head of the department of the major subject. The candidate shall pass an examination in each of the subjects of his course.

(4) The candidate shall also present a thesis on some topic connected with his major subject. The title of his thesis must have been previously submitted to the head of the department concerned and to the Divisional Committee concerned for their approval in writing. The thesis must be in some measure, a contribution to knowledge and must also be in good literary style.

*Who is examiner?*

The thesis must be in the hands of the Dean of the Faculty of Graduate Studies and Research on or before, April 28th, if the candidate wishes to present himself for the degree at the Convocation in May; and before September 3rd, if the candidate wishes to obtain his degree at the Fall Convocation.

REGULATIONS FOR THE DEGREE OF MASTER OF SCIENCE (M.Sc.).

Instruction in the Faculty of Graduate Studies and Research leading to the degree of Master of Science is provided in the following departments of study which rank as "Subjects":-

- |   |  |
|---|--|
| Mathematics.  | Zoology.                               |
| Physics.  | Entomology.                            |
| Engineering Physics.                                      | Anatomy.                               |
| Chemistry.  | Pathology.                             |
| Agricultural Chemistry.                                   | Bacteriology.                          |
| Biochemistry.   | Physiology.                            |
| Botany.   | Pharmacology.                          |
| Plant Pathology.  | Geology and Mineralogy.                |
| Geodesy.  | Hydrodynamics and Hydraulics.          |
| Thermodynamics and Theory of Heat Engines.                | Electrical Engineering.                |
| Fuel Engineering.   | Theory of Machines and Machine Design. |
| Theory of Elasticity, Strength of Materials and Theory of | Metallurgy.                            |
|   | Mining.                                |

Structures.  
Mechanical Engineering.

Experimental Medicine.  
Highway Engineering.

The requirements for the degree are as follows:-

(1) Candidates must hold the degree of B.Sc., with honours or B.A., M.D., with honours from McGill University, or its equivalent.

(2) The course of study followed by the candidates shall be of an advanced character, being the equivalent of that required for the degree of M.A., and shall lie in the domain of pure or applied science. It may be selected from any one or (at the discretion of the head of the department in which the major subject is) two subjects included in the list given above. This course of study, which must be of a comprehensive character, must have been previously submitted to the head of the department and to the Divisional Committee concerned, and have received their approval in writing. The candidate shall pass an examination in each subject of his course.

(3) The candidate shall also present a thesis on some subject connected with his course of study. The title of the thesis must have been previously submitted to the head of the department and to the Divisional Committee concerned, and have received their approval in writing. The thesis must be in some measure a contribution to knowledge and must also be written in good literary style.

(4) The thesis must be in the hands of the Dean of the Faculty of Graduate Studies and Research, on or before, April 28th, if the candidate wishes to present himself for the degree at the Convocation in May, except in the case of theses involving experimental work, when the time will be extended to May 12th. No thesis received after these dates will be accepted.

Theses for the Fall Convocation must be presented before September 3rd.

REGULATIONS FOR THE DEGREE OF MASTER OF SCIENCE  
IN AGRICULTURE (M.S.A.).

Instruction in the Faculty of Graduate Studies and Research, leading to the degree of M.S.A., is provided in the following departments of study at Macdonald College, (Faculty of Agriculture).

- Agronomy.
- Agricultural Bacteriology.
- Agricultural Chemistry.
- Entomology.
- Plant Pathology.

The requirements for the degree are as follows:-

(1) Candidates for this degree ~~should~~ hold a B.S.A. *must* degree with at least second rank honours from McGill, or its equivalent.

(2) Candidates must take one year of resident graduate study at Macdonald College, Faculty of Agriculture, McGill University.

(3) One or two subjects may be taken.

(4) When two subjects are taken, one of them shall be designated as the major subject and special attention shall be paid to it. It must be a subject which the candidate has already studied in his undergraduate course, and the work required in it will represent an attainment in knowledge far in advance of that required for the B.S.A. degree.

(5) The course of study selected by the student must receive the approval, in writing, of the heads of the departments concerned and also of the Divisional Committee concerned.

(6) The candidate shall also present a thesis on some topic connected with his major subject. The title of his thesis must have been previously submitted to the Divisional Committee concerned, and the head of the department concerned, and have received their approval in writing. The thesis must be a contribution to knowledge and must also be written in good literary style.

The thesis must be in the hands of the Dean of the Faculty of Graduate studies and Research, on or before, April 28th, if the candidate wishes to present himself for the degree at the Convocation in May. If the course involves laboratory work, the thesis must be submitted before May 12th.

(7) Candidates for the M.S.A. degree, who select Agronomy may register in September or January. In the latter case they will be expected to remain in residence until the end of September, and application must be made before February 1st. It is recommended that one summer be spent in the Agronomy Department, before or during the course, to allow for practical, field, laboratory and thesis work during the growing season.

THE DEGREE OF MASTER OF COMMERCE (M.COM.).

This degree shall be granted upon the recommendation of the School of Commerce, and the requirements shall be substantially the same as those for the degree of Master of Arts.

REGULATIONS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY (Ph.D.).

(1) Candidates for the degree of Doctor of Philosophy must hold the degree of B.A. with honours; or B.Sc., with honours, or M.S.A., with honours, or M.D., with honours from McGill University, or its equivalent.

(2) They must follow a course of at least three years' resident study at a university or other institution of higher learning or research. Of these three years, at least one year for graduates of McGill; and two years for candidates who are not graduates of McGill, must be spent at the university, including preferably the final year. The other years may be spent at institutions approved by the Faculty. Special exceptions regarding resident study may be made with the consent of the proper Divisional Committee and the Faculty. The evaluation of work done in other institutions for the degree shall be decided by the proper committee of the Division of the Faculty, and this Committee may require the student to attend before them to report on his work, and may require him to pass a special examination on his work.

(3) They must select one major subject. A minor subject may be selected, with the consent and approval of the head of the department in which the major subject is, subject to the advice and agreement of the head of the minor department. The amount of time devoted to the minor is at the discretion of the head of the department of the major subject.

Courses leading to the degree of Doctor of Philosophy are offered in the following as major subjects:-

Bacteriology.  
Botany.  
Biochemistry.  
Chemistry.  
Economics and Political  
Science.  
Geology.  
Zoology.

Pathology.  
Experimental Medicine.  
Psychology.  
Pharmacology.  
Physics.  
Physiology.  
Plant Pathology.  
Oriental Languages.

In special cases heads of departments may be able to provide courses in other subjects which will lead to this degree. Candidates, therefore, desiring to proceed to the degree of Doctor of Philosophy in other departments than those mentioned above, should make direct application to the Faculty of Graduate Studies and Research, asking whether courses in such subjects can be provided.

(4) The course of study which the candidate desires to follow must, before he enters upon it, have been submitted to the heads of the several departments concerned and to the Divisional Committee concerned, and have received their written approval.

(5) Every candidate must satisfy the Faculty of Graduate Studies and Research, that he has a reading knowledge of French and German.

The examination shall be set by the Department in which the candidate is taking his major; the passages chosen will be typical of the literature of his major subject. The Departments of Romance and Germanic Languages will act as examiners. The departments concerned may conduct the examination if they so desire.

Candidates are advised to take one language at the commencement of their first year, and the other at the commencement of the second year, but both language tests should be

passed not later than one month before the preliminary Ph.D. examination.

(6) The first two years shall include instruction, training and direction in his field of study, with the object of giving the candidate a knowledge of his particular subject and its relation to cognate branches of learning, and of preparing him for independent investigation.

The candidate's preliminary examination shall be held at the end of the second year, or at a time selected by the head of the major department. This examination shall cover all graduate work previously taken by the candidate, including his prescribed reading, and may also include any work fundamental thereto. The candidate must show that he possesses a good general knowledge of the whole science or branch of learning which he has selected as his major subject. The examination shall be both written and oral.

The result of this examination will determine whether the candidate will be allowed to proceed to his degree. The final year is to be devoted chiefly to the preparation of his thesis or dissertation.

After his thesis has been received and approved, a special and more searching oral examination on the subject of his dissertation and subjects more intimately related to it, will constitute his final examination. This will be conducted in the presence of a committee of at least four of the Faculty of Graduate Studies.

(7) The thesis for the Doctor's Degree shall display original scholarship expressed in satisfactory literary form and be a distinct contribution to knowledge. The subject of this thesis must have been approved, in writing, by the head of the department in which the major subject lies, and also by the Faculty of Graduate Studies and Research, at least twelve months before the date of the final examination. If the candidate wishes to present himself for the degree at the Convocation in May, this thesis must be in the hands of the Dean of the Faculty of Graduate Studies and Research, on or before April 28th. No thesis received after this date will be accepted.

Theses for the Fall Convocation must be in the hands of the Dean of the Faculty on, or before, September 3rd.

(8) Three copies of the thesis must be provided by the candidate and delivered to the Dean of the Graduate Faculty at the dates mentioned in the former paragraph.

*includes  
to study  
& dissertation*

## FACULTY OF GRADUATE STUDIES AND RESEARCH

### GENERAL STATEMENT,.....

The Faculty of Graduate Studies and Research directs and controls all the courses leading to the higher degrees and recommends candidates for these degrees.

The members of the Faculty are the Deans of the other University Faculties and all Professors and Associate Professors who conduct advanced courses of study or who superintend advanced research work offered to students registered for the degrees awarded by the Faculty. Other persons, whether members of this University or of other universities or institutions of scholarship or research such as the Archives Department, Biological Stations, etc., may be elected members of the Faculty in full session upon proper notice of motion. Members who are not otherwise members of this University shall be designated "Non-resident members".

There shall be two main divisions of the Faculty to be known as "The Arts Division" and "The Science Division" respectively. The Arts Division shall include the following departments of study, viz., Classics, Economics and Political Science, Education, English, Germanic Languages, History, Oriental Languages, Philosophy, Romance Languages, and Sociology. The Science Division shall include all other departments of study represented in the Faculty. The Departments of Mathematics and Psychology shall, however, be members of both Divisions.

These Divisions shall have full power to discuss all matters and to make all rules and regulations affecting the admission of students to their departments and the requirements for all degrees awarded for work in these departments. Each Division shall meet at least once annually in the month of April for the election of officers and of committees and for general business.

Each division of the Faculty shall elect annually a Divisional Committee of not less than four, and not more than eight, including the Dean; the one to be called "The Committee of Graduate Studies in Arts"; and the other "The Committee of Graduate Studies in Science". These Committees shall, subject to the direction and approval of their proper Divisions, have full power over the academic records of all students, including attendance at lectures, seminars, and all other forms of graduate study. When the Dean of the Faculty has any doubt that a student's qualifications for admission or his subsequent record is in any way deficient, he shall call these cases specially to the attention of the proper committee for its decision. These committees shall also recommend all candidates for degrees to the Faculty in full session.

The Dean shall be a member of and Chairman of both Divisions, and of all general committees of the Faculty, and all meetings thereof shall be called by him or under his direction.

### ADMISSION

Advanced courses of instruction are offered to students who are graduates of any university of recognized standing. These students are generally those who have a second class honour standing or the equivalent of second class honours from McGill University in the subject in which they desire to take their major work. Admission to these advanced courses does not in itself imply candidacy for a higher degree. *at least*

### REGISTRATION

Application for registration as a graduate student should be made to the Dean of the Faculty of Graduate Studies and Research. The application should be made in triplicate on special printed forms which may be obtained at the Dean's Office.

Candidates should, where possible, consult the department or departments in which they intend to study before filling up their application forms. These forms must be signed by the head or heads of these departments and by the professors under

whom the applicant intends to study. The forms, when filled out, will give the necessary information with reference to the courses to be followed by the candidate, the courses of undergraduate study which he has followed; and the courses of graduate study which he desires to pursue. With the approval of the department a student may register for a half course at the beginning of the second term. All applications for courses of graduate study must be filed with the Dean of this Faculty on or before October 8th of each year. The regular courses of instruction begin on September 30th, 1929. As soon as the candidate's course has been approved by the Executive of the Faculty, he must register without delay at the office of the University Registrar. He will not be given credit for attendance until he does so. Candidates whose courses extend for more than one year must register at the commencement of each year of their course. If not registered at the beginning of the academic year, as provided above, the candidate shall not be eligible for the degree at the following Spring Convocation.

#### DEGREES

Graduate students may proceed to one or other of the following degrees:- Master of Arts, Master of Science, Master of Science in Agriculture, Master of Commerce, Doctor of Philosophy, Doctor of Literature, Doctor of Science, Doctor of Music. *Doctor of Civil Law*

#### RESIDENT GRADUATE STUDY

*instructor + receive*  
The instruction given in the Graduate Faculty includes lectures, seminars, colloquia, tutorials, and laboratory, and library research work. Each student, in addition to his thesis requirements, shall complete an adequate amount of course work instruction; the requirements differing with varying departments. The amount of this work will be designated by the major department concerned, with the approval of the Divisional Committee, and if necessary of the Faculty. The student may take any number of years he chooses more than the minimum in order to complete these requirements.

Members of the teaching staff of the University, who are also students in the Graduate Faculty, and who give more than three hours of lectures or six hours of conference work or twelve hours of supervisory work in the laboratory per week, or any student doing the equivalent amount of work inside or outside the University, may not obtain a Master's Degree in one year; and will require at least four years for the Degree of Ph.D.

No full-time student registered in any professional faculty of the University, may register for a Graduate Degree without the special leave of both Faculties in full session.

#### FEEES

Students taking the advanced summer course in French will be remitted \$20.00 from the fee for M.A., for each summer course.

Graduate fee for M.Com., \$60.00.

#### GENERAL RULES

(1) Candidates for admission <sup>to</sup> for the study of a degree shall hold at least second class honours or the equivalent of second class honours from McGill in the subject or subjects which they propose to study. Candidates who cannot comply with these requirements shall spend at least one preparatory year devoted mainly or wholly to advanced undergraduate study in these subjects at the University.

(2) Candidates for a higher degree, and especially candidates who intend to follow University work after graduation, should, so far as possible, be kept in touch with all the *for*

principle methods of university training, including lectures, seminars, and laboratory and library research.

(3) Candidates should, when possible, be given an opportunity to conduct classes or conferences of their own and the department or departments in which they are working should note their aptitude for this kind of work.

(4) All departments should have full liberty to recommend their students to follow classes in other departments, either as part of the work of their own departments or as additional work. They may also recommend their students to attend classes in other departments, either with or without examination.

(5) All departments should make careful reports from time to time of the work being done by students in their departments as these reports may be of great value to the University and to the student in the future.

GENERAL REGULATIONS FOR THE DEGREE OF M.A.

Instruction in the Faculty of Graduate Studies and Research leading to the degree of Master of Arts is provided in the following departments of study which rank as "Subjects":-

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| Greek Language and Literature.    | Psychology.                      |
| Latin Language and Literature.    | History.                         |
| Romance Languages and Literature. | Economics and Political Science. |
| Germanic Language and Literature. | Mathematics.                     |
| English Language and Literature.  | Sociology.                       |
| Oriental Languages.               | Chemistry.                       |
| Theological Studies.              | Physics.                         |
| Philosophy.                       | Biology.                         |

The requirements for the degree are as follows:-

(1) Candidates must hold the degree of B.A. with honours from McGill University, or its equivalent.

(2) One or two subjects may be taken.

(3) Candidates must select one major subject. A minor subject may be selected with the consent and approval of the head of the department in which the major subject is taken, subject to the advice and agreement of the head of the minor department. The amount of time devoted to the minor is at the discretion of the head of the department of the major subject. The candidate shall pass an examination in each of the subjects of his course.

(4) The candidate shall also present a thesis on some topic connected with his major subject. The title of his thesis must have been previously submitted to the head of the department concerned and to the Divisional Committee concerned for their approval in writing. The thesis must be in some measure, a contribution to knowledge and must also be in good literary style.

The thesis must be in the hands of the Dean of the Faculty of Graduate Studies and Research on or before, April 28th, if the candidate wishes to present himself for the degree at the Convocation in May; and before September 3rd, if the candidate wishes to obtain his degree at the Fall Convocation.

REGULATIONS FOR THE DEGREE OF MASTER OF SCIENCE (M.Sc.).

Instruction in the Faculty of Graduate Studies and Research leading to the degree of Master of Science is provided in the following departments of study which rank as "Subjects":-

- |   |  |
|---|--|
| Mathematics.  | Zoology.                               |
| Physics.  | Entomology.                            |
| Engineering Physics.                                      | Anatomy.                               |
| Chemistry.  | Pathology.                             |
| Agricultural Chemistry.                                   | Bacteriology.                          |
| Biochemistry.   | Physiology.                            |
| Botany.   | Pharmacology.                          |
| Plant Pathology.  | Geology and Mineralogy.                |
| Geodesy.  | Hydrodynamics and Hydraulics.          |
| Thermodynamics and Theory of Heat Engines.                | Electrical Engineering.                |
| Fuel Engineering.   | Theory of Machines and Machine Design. |
| Theory of Elasticity, Strength of Materials and Theory of | Metallurgy.                            |
|   | Mining.                                |

*Experiments with many 127.*

Structures.  
Mechanical Engineering.

Experimental Medicine.  
Highway Engineering.

The requirements for the degree are as follows:-

(1) Candidates must hold the degree of B.Sc., with honours or B.A., M.D., with honours from McGill University, or its equivalent.

(2) The course of study followed by the candidates shall be of an advanced character, being the equivalent of that required for the degree of M.A., and shall lie in the domain of pure or applied science. It may be selected from any one or (at the discretion of the head of the department in which the major subject is) two subjects included in the list given above. This course of study, which must be of a comprehensive character, must have been previously submitted to the head of the department and to the Divisional Committee concerned, and have received their approval in writing. The candidate shall pass an examination in each subject of his course.

(3) The candidate shall also present a thesis on some subject connected with his course of study. The title of the thesis must have been previously submitted to the head of the department and to the Divisional Committee concerned, and have received their approval in writing. The thesis must be in some measure a contribution to knowledge and must also be written in good literary style.

(4) The thesis must be in the hands of the Dean of the Faculty of Graduate Studies and Research, on or before, April 28th, if the candidate wishes to present himself for the degree at the Convocation in May, except in the case of theses involving experimental work, when the time will be extended to May 12th. No thesis received after these dates will be accepted.

Theses for the Fall Convocation must be presented before September 3rd.

#### REGULATIONS FOR THE DEGREE OF MASTER OF SCIENCE IN AGRICULTURE (M.S.A.).

Instruction in the Faculty of Graduate Studies and Research, leading to the degree of M.S.A., is provided in the following departments of study at Macdonald College, (Faculty of Agriculture).

Agronomy.  
Agricultural Bacteriology.  
Agricultural Chemistry.  
Entomology.  
Plant Pathology.

The requirements for the degree are as follows:-

(1) Candidates for this degree ~~should~~ <sup>must</sup> hold a B.S.A. degree with at least second rank honours from McGill, or its equivalent.

(2) Candidates must take one year of resident graduate study at Macdonald College, Faculty of Agriculture, McGill University.

(3) One or two subjects may be taken.

(4) When two subjects are taken, one of them shall be designated as the major subject and special attention shall be paid to it. It must be a subject which the candidate has already studied in his undergraduate course, and the work required in it will represent an attainment in knowledge far in advance of that required for the B.S.A. degree.

(5) The course of study selected by the student must receive the approval, in writing, of the heads of the departments concerned and also of the Divisional Committee concerned.

(6) The candidate shall also present a thesis on some topic connected with his major subject. The title of his thesis must have been previously submitted to the Divisional Committee concerned, and the head of the department concerned, and have received their approval in writing. The thesis must be a contribution to knowledge and must also be written in good literary style.

The thesis must be in the hands of the Dean of the Faculty of Graduate studies and Research, on or before, April 28th, if the candidate wishes to present himself for the degree at the Convocation in May. If the course involves laboratory work, the thesis must be submitted before May 12th.

(7) Candidates for the M.S.A. degree, who select Agronomy may register in September or January. In the latter case they will be expected to remain in residence until the end of September, and application must be made before February 1st. It is recommended that one summer be spent in the Agronomy Department, before or during the course, to allow for practical, field, laboratory and thesis work during the growing season.

THE DEGREE OF MASTER OF COMMERCE (M.COM.).

This degree shall be granted upon the recommendation of the School of Commerce, and the requirements shall be substantially the same as those for the degree of Master of Arts.

REGULATIONS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY (Ph.D.).

(1) Candidates for the degree of Doctor of Philosophy must hold the degree of B.A. with honours; or B.Sc., with honours, or ~~M.S.A.~~ M.S.A., with honours, or M.D., with honours from McGill University, or its equivalent.

(2) They must follow a course of at least three years' resident study at a university or other institution of higher learning or research. Of these three years, at least one year for graduates of McGill; and two years for candidates who are not graduates of McGill, must be spent at the university, including preferably the final year. The other years may be spent at institutions approved by the Faculty. Special exceptions regarding resident study may be made with the consent of the proper Divisional Committee and the Faculty. The evaluation of work done in other institutions for the degree shall be decided by the proper committee of the Division of the Faculty, and this Committee may require the student to attend before them to report on his work, and may require him to pass a special examination on his work.

(3) They must select one major subject. A minor subject may be selected, with the consent and approval of the head of the department in which the major subject is, subject to the advice and agreement of the head of the minor department. The amount of time devoted to the minor is at the discretion of the head of the department of the major subject.

Courses leading to the degree of Doctor of Philosophy are offered in the following as major subjects:-

Bacteriology.	Pathology.
Botany.	Experimental Medicine.
Biochemistry.	Psychology.
Chemistry.	Pharmacology.
Economics and Political Science.	Physics.
Geology.	Physiology.
Zoology.	Plant Pathology.
	Oriental Languages.

In special cases heads of departments may be able to provide courses in other subjects which will lead to this degree. Candidates, therefore, desiring to proceed to the degree of Doctor of Philosophy in other departments than those mentioned above, should make direct application to the Faculty of Graduate Studies and Research, asking whether courses in such subjects can be provided.

(4) The course of study which the candidate desires to follow must, before he enters upon it, have been submitted to the heads of the several departments concerned and to the Divisional Committee concerned, and have received their written approval.

(5) Every candidate must satisfy the Faculty of Graduate Studies and Research, that he has a reading knowledge of French and German. *Exceptionally other languages*

The examination shall be set by the Department in which the candidate is taking his major; the passages chosen will be typical of the literature of his major subject. The Departments of Romance and Germanic Languages will act as examiners. The departments concerned may conduct the examination if they so desire.

Candidates are advised to take one language at the commencement of their first year, and the other at the commencement of the second year, but both language tests should be

passed not later than one month before the preliminary Ph.D. examination.

(6) The first two years shall include instruction, training and direction in his field of study, with the object of giving the candidate a knowledge of his particular subject and its relation to cognate branches of learning, and of preparing him for independent investigation.

The candidate's preliminary examination shall be held at the end of the second year, or at a time selected by the head of the major department. This examination shall cover all graduate work previously taken by the candidate, including his prescribed reading, and may also include any work fundamental thereto. The candidate must show that he possesses a good general knowledge of the whole science or branch of learning which he has selected as his major subject. The examination shall be both written and oral.

The result of this examination will determine whether the candidate will be allowed to proceed to his degree. The final year is to be devoted chiefly to the preparation of his thesis or dissertation.

After his thesis has been received and approved, a special and more searching oral examination on the subject of his dissertation and subjects more intimately related to it, will constitute his final examination. This will be conducted in the presence of a committee of at least four of the Faculty of Graduate Studies.

(7) The thesis for the Doctor's Degree shall display original scholarship expressed in satisfactory literary form and be a distinct contribution to knowledge. The subject of this thesis must have been approved, in writing, by the head of the department in which the major subject lies, and also by the Faculty of Graduate Studies and Research, at least twelve months before the date of the final examination. If the candidate wishes to present himself for the degree at the Convocation in May, this thesis must be in the hands of the Dean of the Faculty of Graduate Studies and Research, on or before April 28th. No thesis received after this date will be accepted.

Theses for the Fall Convocation must be in the hands of the Dean of the Faculty on, or before, September 3rd.

(8) Three copies of the thesis must be provided by the candidate and delivered to the Dean of the Graduate Faculty at the dates mentioned in the former paragraph.

*Supplemental  
with list?*

FACULTY OF GRADUATE STUDIES AND RESEARCH

GENERAL STATEMENT

The Faculty of Graduate Studies and Research directs and controls all the courses leading to the higher degrees and recommends candidates for these degrees.

The members of the Faculty are the Deans of the other University Faculties and all Professors, ~~and~~ Associate Professors, ~~who~~ <sup>assist</sup> who conduct advanced courses of study or who superintend advanced research work offered to students registered for the degrees awarded by the Faculty. Other persons, ~~whether members of this university~~ <sup>of other universities or institutions of scholarship or research such as the Archives Department, Biological Stations, etc.,</sup> may be elected members of the Faculty in full session upon proper notice of motion. Members who are not otherwise members of this university shall be designated "Non-resident members".

92 There shall be an Executive Committee of the Faculty <sup>consisting</sup> of two members appointed by and from each Divisional Committee, and including the Dean, this Committee shall, subject to the direction and approval of the Faculty, deal with all matters of general policy and over all executive matters as, for example, the annual calendar, the preparation of the annual announcement, finances, fees, registration, and all matters of routine.

There shall be two main divisions of the Faculty to be known as "The Arts Division" and "The Science Division" respectively. The Arts Division shall include the following departments of study, viz., Classics, Economics and Political Science, Education, English, Germanic Languages, History, Oriental languages, Philosophy, Romance Languages, and Sociology. <sup>music</sup> The Science Division shall include all other departments of study represented in the Faculty: The Departments of Mathematics and Psychology shall, however, be members of both Divisions.

These Divisions shall have full power to discuss all matters and to make all rules and regulations affecting the admission of students to their departments and the requirements for all degrees awarded for work in these departments. Each Division shall meet at least once annually in the month of April for the election of officers and of committees and for general business.

Each Division of the Faculty shall elect annually a Divisional Committee of not less than four, and not more than eight, including the Dean; the one to be called "The Committee of Graduate Studies in Arts"; and the other "The Committee of Graduate Studies in Science". These Committees shall, subject <sup>shall examine</sup> to the direction and approval of their proper Divisions, <sup>have supervision</sup> have <sup>the records of</sup> power <sup>upon</sup> over the academic records of all students, including the records of lectures, seminars, and all other forms of graduate study. When the Dean of the Faculty has any doubt that a student's qualifications for admission or his subsequent record is entirely satisfactory, he shall call these cases specially to the attention of the proper committee for its decision. These Committees shall also recommend all candidates for degrees to the Faculty in full session.

The Dean shall be a member of and Chairman of both Divisions, and of all general committees of the Faculty, and all meetings thereof shall be called by him or under his direction.

ADMISSION

At least Advanced courses of instruction are offered to students who are graduates of any university of recognized standing. These students are generally those who have a second class honour standing or the equivalent of at least second class honours from McGill University in the subject in which they desire to take their major work. Admission to these advanced courses does not in itself imply candidacy for a higher degree.

## REGISTRATION

Application for registration as a graduate student should be made to the Dean of the Faculty of Graduate Studies and Research. The application should be made in triplicate on special printed forms which may be obtained at the Dean's Office.

Candidates must consult the department or departments in which they intend to study regarding the course they desire to pursue, in time to attend the regular courses of instruction which begin on September 30th, 1929. Formal application for permission to attend courses must be filled up by the student, and signed by the head or heads of these departments and by the professors under whom the applicant intends to study, and filed with the Dean of the Faculty as early as possible, and at the latest, October 8th.

The applicant will give the necessary information with reference to the courses of undergraduate study which he has followed, his standing in the major subject or subjects, his degrees, and in cases of other than McGill graduates, a registrar's certificate of his academic standing from his college or university. As soon as the candidate's course has been approved by the Division of the Faculty concerned, he must register without delay at the offices of the University Registrar. He will not be given credit for attendance until he does so. Candidates whose courses extend for more than one year must register at the commencement of each year of their course. If not registered at the beginning of the academic year, as provided above, the candidate shall not be eligible for the degree at the following Spring Convocation.

## DEGREES

Graduate-students may proceed to one or other of the following degrees:- Master of Arts, Master of Science, Master of Science in Agriculture, Master of Commerce, Doctor of Philosophy, Doctor of Civil Law, Doctor of Literature, Doctor of Science, Doctor of Music.

## RESIDENT GRADUATE STUDY

The instruction given in the Graduate <sup>Classes</sup> Faculty includes lectures, seminars, colloquia, tutorials, laboratory, and library instruction and research work. Each student, in addition to his thesis requirements, shall receive an adequate amount of course work, laboratory and library instruction; the requirements differing with varying departments. The amount of this work will be designated by the major department concerned, with the approval of the Divisional Committee, and if necessary of the Faculty. The student may take any number of years he chooses more than the minimum in order to complete these requirements.

Members of the teaching staff of the University, who are also students in the Graduate Faculty, and who give more than three hours of lectures or six hours of conference work or twelve hours of supervisory work in the laboratory per week, or any student doing the equivalent amount of work inside or outside the University, may not obtain a master's degree in one year, and will require at least four years for the degree of Ph.D.

No full-time student registered in any professional faculty of the University, may register for a Graduate Degree without the special leave of both Faculties in full session.

## FEES

Students taking the advanced summer course in French will be remitted \$20.00 from the fee for M.A., for each summer course.

Graduate fee for M.Com., \$60.00.

GENERAL RULES

- ✓ (1) Candidates for admission for the study of a degree shall hold at least second class honours or the equivalent of second class honours from McGill in the subject or subjects which they propose to study. Candidates who cannot comply with these requirements shall spend at least one preparatory year devoted mainly or wholly to advanced undergraduate study in these subjects at the University.
- (2) Candidates for a higher degree, and especially candidates who intend to follow University work after graduation, should, so far as possible, be kept in touch with all the principle methods of university training, including lectures, seminars, and laboratory and library research.
- ✓ (3) Candidates should, when possible, be given an opportunity to conduct classes or conferences of their own, and the department or departments in which they are working should note their aptitude for this kind of work.
- ✓ (4) All departments should have full liberty to recommend their students to follow classes in other departments, either as part of the work of their own departments or as additional work. They may also recommend their students to attend classes in other departments, either with or without examination.
- ✓ (5) All departments should make careful reports from time to time of the work being done by students in their departments as these reports may be of great value to the University and to the student in the future. Such reports should be made to the Dean of the Faculty, and kept on file in his office.

GENERAL REGULATIONS FOR THE DEGREE OF M.A.

Instruction in the Faculty of Graduate Studies and Research leading to the degree of Master of Arts is provided in the following departments of study which rank as "Subjects":-

Greek Language and Literature.	<i>Subject</i> Psychology.
Latin Language and Literature.	History.
Romance Languages and Literature.	Economics and Political Science.
Germanic Language and Literature.	Mathematics.
English Language and Literature.	Sociology.
Oriental Languages.	Chemistry.
<del>Theological Studies.</del>	Physics.
Philosophy.	Biology.

*minor and*  
The requirements for the degree are as follows:-

- (1) Candidates must hold the degree of B.A. with at least second class honours from McGill University, or its equivalent.
- (2) One or two subjects may be taken.
- (3) Candidates must select one major subject. A course of study in another subject may be selected with the consent and approval of the head of the department in which the major subject is taken, subject to the advice and agreement of the head of the other department. The candidate shall pass an examination in each of the subjects of his course.
- (4) The candidate shall also present a thesis on some topic connected with his major subject. The title of his thesis must have been previously submitted to the head of the department concerned and to the Divisional Committee concerned, for their approval in writing. The thesis must show a capacity for original research and must also be in good literary style. The thesis must be in the hands of the Dean of the Faculty of Graduate Studies and Research on or before April 28th, if the candidate wishes to present himself for the degree at the Convocation in May; and before September 3rd, if the candidate wishes to obtain his degree at the Fall Convocation.

REGULATIONS FOR THE DEGREE OF MASTER OF SCIENCE (M.Sc.).

Instruction in the Faculty of Graduate Studies and Research leading to the degree of Master of Science is provided in the following departments of study which rank as "Subjects":-

- |   |  |
|---|--|
| Mathematics.  | Plant Pathology.                       |
| Physics.  | Anatomy.                               |
| Engineering Physics.  | Pathology.                             |
| Chemistry.  | Bacteriology.                          |
| Biochemistry.   | Physiology.                            |
| Botany.   | Pharmacology.                          |
| Geodesy.  | Geology and Mineralogy.                |
| Thermodynamics and Theory of Heat Engines.                            | Hydrodynamics and Hydraulics.          |
| Fuel Engineering.   | Electrical Engineering.                |
| Theory of Elasticity, Strength of Materials and Theory of Structures. | Theory of Machines and Machine Design. |
| Mechanical Engineering.   | Metallurgy.                            |
| Highway Engineering.  | Mining.                                |
| Zoology.  | Experimental Medicine.                 |
|   | Entomology.                            |

*Agricultural Chemistry*

The requirements for the degree are as follows:-

- (1) Candidates must hold the degree of B.Sc., with at least second class honours or ~~B.A.~~, M.D., with second class honours from McGill University, or its equivalent.
- (2) The course of study followed by the candidates shall be of an advanced character, being the equivalent of that required for the degree of M.A., and shall lie in the domain of pure or applied science. It may be selected from any one or (at the discretion of the head of the department in which the major subject is) two subjects included in the list given above. This course of study, which must be of a comprehensive character, must have been previously submitted to the head of the department and to the Divisional Committee concerned, and have received their approval in writing. The candidate shall pass an examination in each subject of his course.
- (3) The candidate shall also present a thesis on some subject connected with his course of study. The title of the thesis must have been previously submitted to the head of the department and to the Divisional Committee concerned, and have received their approval in writing. The thesis must show a capacity for original research and must also be written in good literary style.
- (4) The thesis must be in the hands of the Dean of the Faculty of Graduate Studies and Research on or before April 28th, if the candidate wishes to present himself for the degree at the Convocation in May, except in the case of theses involving experimental work, when the time will be extended to May 12th. No thesis will be accepted if received after these dates.

*General -*  
*MD with distinction*  
*in the special*  
*subject he*  
*he intends to*  
*take advanced*  
*work.*  
*in special*  
*cases.*

Theses for the Fall Convocation must be presented before September 3rd.

REGULATIONS FOR THE DEGREE OF MASTER OF SCIENCE IN AGRICULTURE (M.S.A.).

Instruction in the Faculty of Graduate Studies and Research, leading to the degree of M.S.A., is provided in the following departments of study at Macdonald College, (Faculty of Agriculture):-

- Agronomy.
- Agricultural Bacteriology.
- Agricultural Chemistry.
- Entomology.
- Plant Pathology.

The requirements for the degree are as follows:-

(1) Candidates for this degree must hold a B.S.A. degree with at least second rank honours from McGill, or its equivalent.

(2) Candidates must take one year of resident graduate study at Macdonald College, Faculty of Agriculture, McGill University.

(3) One or two subjects may be taken.

(4) Candidates must select one major subject. A course of study in another subject may be selected with the consent and approval of the head of the department in which the major subject is taken, subject to the advice and agreement of the head of the other department. The candidate shall pass an examination in each of the subjects of his course.

(5) The course of study selected by the student must receive the approval, in writing, of the heads of the departments concerned, and also of the Divisional Committee concerned.

(6) The candidate shall also present a thesis on some topic connected with his major subject. The title of his thesis must have been previously submitted to the Divisional Committee concerned, and the head of the department concerned, and have received their approval in writing. The thesis must show a capacity for original research and must also be written in good literary style.

The thesis must be in the hands of the Dean of the Faculty of Graduate Studies and Research, on or before April 28th, if the candidate wishes to present himself for the degree at the Convocation in May. If the course involves laboratory work the thesis must be submitted before May 12th.

#### THE DEGREE OF MASTER OF COMMERCE (M.COM.).

This degree shall be granted upon the recommendation of the School of Commerce, and the requirements shall be substantially the same as those for the degree of Master of Arts.

#### REGULATIONS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY (Ph.D.).

(1) Candidates for the degree of Doctor of Philosophy must hold the degree of B.A., with honours, or B.Sc., with honours, B.S.A., with honours; or M.D., with honours from McGill University, or its equivalent.

(2) They must follow a course of at least three years' resident study at a university or other institution of higher learning or research. Of these three years, at least one year for graduates of McGill, and two years for candidates who are not candidates of McGill, must be spent at this University, including preferably the final year. The other years may be spent at institutions approved by the Faculty. Special exceptions regarding resident study may be made with the consent of the proper Divisional Committee and the Faculty. The evaluation of work done in other institutions for the degree shall be decided by the proper committee of the Division of the Faculty, and this Committee may require the student to attend before them to report on his work, and may require him to pass a special examination on his work.

(3) They must select one major subject. A minor subject may be selected, with the consent and approval of the head of the department in which the major subject is, subject to the advice and agreement of the heads of both departments. The amount of work in the minor must receive the approval of the head of the minor department.

Courses leading to the degree of Doctor of Philosophy are offered in the following as major subjects:-

Bacteriology.	Experimental Medicine.
Botany.	Psychology.
Biochemistry.	Pharmacology.
Chemistry.	Physics.
Economics and Political Science.	Physiology.
Geology.	Plant Pathology.
Zoology.	Oriental Languages.
Pathology.	<i>Histon</i>

In special cases heads of departments may be able to provide courses in other subjects which will lead to this degree. Candidates, therefore, desiring to proceed to the degree of Doctor of Philosophy in other departments than those mentioned above, should make direct application to the Faculty of Graduate Studies and Research, asking whether courses in such subjects can be provided.

(4) The course of study which the candidate desires to follow must, before he enters upon it, have been submitted to the heads of the several departments concerned, and to the Divisional Committee concerned, and have received their written approval.

(5) Every candidate must satisfy the Faculty of Graduate Studies and Research, that he has a reading knowledge of French and German. In certain cases other languages may be substituted at the suggestion of the department concerned.

The examination shall be set by the department in which the candidate is taking his major; the passages chosen will be typical of the literature of his major subject. The Departments of Romance and Germanic Languages will act as examiners. The departments concerned may conduct the examination if they so desire.

Candidates are advised to take one language at the commencement of their first year, and the other at the commencement of the second year, but both language tests should be passed not later than one month before the preliminary Ph.D. examination.

(6) The first two years shall include instruction, training and direction in his field of study, with the object of giving the candidate a knowledge of his particular subject and its relation to cognate branches of learning, and of preparing him for independent investigation.

The candidate's preliminary examination shall be held at the end of the second year, or at a time selected by the head of the major department. This examination shall cover all graduate work previously taken by the candidate, including his prescribed reading, and may also include any work fundamental thereto. The candidate must show that he possesses a good general knowledge of the whole science or branch of learning which he has selected as his major subject. The examination shall be both written and oral.

The result of this examination will determine whether the candidate will be allowed to proceed to his degree. The final year is to be devoted chiefly to the preparation of his thesis or dissertation.

After his thesis has been received and approved by an internal and external examiner, a special and more searching oral examination on the subject of his dissertation and subjects more intimately related to it, will constitute his final examination. This will be conducted in the presence of a committee of at least four of the Faculty of Graduate Studies.

(7) The thesis for the Doctor's Degree shall display original scholarship expressed in satisfactory literary form, and be a distinct contribution to knowledge. The subject of this thesis must have been approved, in writing, by the head of the department in which the major subject lies, and also by the Faculty of Graduate Studies and Research; at least twelve months before the date of the final examination. If the candidate wishes to present himself for the degree at the Convocation in May, this thesis must be in the hands of the Dean of the Faculty of Graduate Studies and Research, on or before April 28th. No thesis received after this date will be accepted.

Theses for the Fall Convocation must be in the hands of the Dean of the Faculty on, or before, September 3rd.

(8) Three copies of the thesis must be provided by the candidate and delivered to the Dean of the Graduate Faculty at the dates mentioned in the former paragraph.

MCGILL UNIVERSITY  
MONTREAL

Agonytwin

Oct. 18<sup>th</sup> 29.

GRADUATE FACULTY

Dear Sir Arthur,

A few years ago you made the suggestion that the heads of certain departments in the University, should be considered as having some jurisdiction over corresponding departments at Macdonald College. I opposed this suggestion at the time, but now wish to modify my former stand.

One of the great difficulties in the administration of the Graduate Faculty, is to keep or maintain a standard between various departments. But when there are two departments in the same subject, this difficulty would be lessened if there was a single head, & I am suggesting that in those subjects leading to advanced degrees, & for the purpose of having a single standard of efficiency, that

1. A single head be acknowledged.
- \* 2. That so far as possible the Examinations for the higher degrees, ~~would~~ be the same, or if not the same, supervised by

MCGILL UNIVERSITY  
MONTREAL

GRADUATE FACULTY

The head of the department, or set by  
a board of examiners.

In no other way can we determine a  
proper standard of comparison.

I believe this could be done in the  
following departments. Chemistry,  
Physics, Botany (but not plant pathology)  
Zoology, + Bacteriology.

Faithfully yours,

J. H. Sturges

Dr Arthur Currie, G. C. U. etc.,

Principal,

Quebec University.

MCGILL UNIVERSITY  
MONTREAL

GRADUATE FACULTY

October 25, 1929.

The Executive Committee of the Graduate Faculty were asked to revise the announcement and look into the regulations regarding higher degrees early in the fall of 1928. Numerous meetings were held, and where necessary conferences with the department concerned. The final draft of the deliberations of the committee were approved by the Graduate Faculty at a meeting held on March 26th, and these regulations published in the present announcement of the Faculty for 1929/30.

Our recommendation to the Faculty was that due sequence of degrees should prevail. A graduate with

B.A.	went forward to the	M.A.,
B.Sc.,	"	" M.Sc.,
B.S.A.	"	" M.S.A.

and provision was made in the list of subjects to make this possible.

The Faculty of Macdonald College objected to this arrangement, as they desired a B.S.A. to proceed to M.Sc., except in the subject Agronomy, and a joint meeting of the Executive, Dean Barton, and a representative of the Faculty of Agriculture was held in Dean Martin's office. The Executive, however, were not convinced by the arguments put forward, and maintained their position with regard to the sequence of the degrees.

The Executive pointed out that B.S.A. students had:

1. A lower matriculation standard;
2. Courses so arranged that there was too great a number and very diversified, so that a student specialising had not as good a foundation as students proceeding to higher degrees from other departments of the University. Thus, in the first year there were 17 subjects for examination; in the second year 17 subjects; in the third year in Chemistry option 10 subjects, and correspondingly large numbers and much diversity in the other options;

and for these reasons the Executive Committee were of the opinion that the B.S.A. degree should be followed by the M.S.A. The Faculty of Agriculture admitted the force of these facts, and subsequently to the action of the Graduate Faculty in revising their courses by:-

1. Changing their matriculation requirements;
2. Reducing the number of subjects and re-arranging their sequence.

This action was given the general approval of Corporation, with the understanding that the Executive of the Graduate Faculty would critically examine the content and extent of such courses to see their adaptability to fitness as a foundation for advanced degrees.

The new courses at Macdonald College, however, will not be operative until four years from now, and the present regulations of the Executive Committee should remain in force at the present time.

Members of the Executive Committee have been examining the present curriculum of the Faculty of Agriculture, and are prepared to express their opinions at this meeting.

FROM THE  
PATHOLOGICAL INSTITUTE  
MCGILL UNIVERSITY  
MONTREAL

Oct. 25<sup>th</sup> 29

Dear Sir Arthur

With reference to the meeting  
in your office on Monday aft. Oct 28<sup>th</sup> at  
4.00 pm. I enclose a short statement, &  
announcement.  
a copy of the Macdonald College, for 1928-9 &  
one for 1929-30.

Faithfully yours,  
J. C. Harrison

Sir Arthur Currie, C.M.G.  
Principal  
McGill University.

McGILL UNIVERSITY  
MONTREAL

DEPARTMENT OF BOTANY

FRANCIS E. LLOYD

Macdonald Professor of Botany

CARRIE M. DERICK

Professor of Morphological Botany

GEORGE W. SCARTH

Associate Professor of Botany

November 28, 1928

Dean C. F. Martin,  
Acting Principal,  
McGill University.

Dear Dr. Martin:-

The individuals named in the enclosed report, having spent some eight hours discussing the list of questions referred to, feel that opinions on which a group of people from so many departments have reached unanimity, may be of some use to the Graduate Faculty.

Acting as Secretary to the group

I am,

Yours respectfully,

GWS/F

Encl.

George W. Scarth

REPORT ON QUESTIONS  
CONCERNING THE FACULTY OF GRADUATE STUDIES.

We, the undermentioned, beg to submit to the Graduate Faculty the following suggestions, arranged according to the list of questions formulated by Dr. A. N. Shaw:-  
J. Beatty, A. S. Eve, F. M. G. Johnson, D. Keys, F. E. Lloyd,  
O. Maass, G. W. Scarth, A. N. Shaw, R. L. Stehle, J. Tait,  
G. S. Whitby.

(I) SPECIFIC QUESTIONS DEMANDING CONSIDERATION NOW.

(1) Greater freedom and less regulation is desirable as to courses and hours of graduate study, the assumption being that each department instead of trying to evade its duties, is ready to do its best for the student with the facilities available. It is suggested that the following regulation is adequate under this head:  
"Each Department will set forth

- (a) The full facilities which it offers for graduate work toward the M.A. or M.Sc. and Ph.D. degrees.
- (b) The minimum examination requirements (i.e. as to subjects covered by examination) for these degrees.
- (c) Such minimum requirements regarding courses as it may see fit to demand".

(It is understood in all cases that the desires of the department shall be submitted for approval to the Faculty. See Section IV, 2).

(2) The evaluation of work done elsewhere by graduate students should be left to the Department, with approval of the Faculty.

(3) Is covered by (1) and later questions.

(4) Regulations as to time of passing examinations should be left to the Head of the Department.

(5) The nature and amount of work required in the "minor" subject, chosen because of its bearing on the "major", should be outlined by the Department in which the major is given, subject to the advice and agreement of the Department in which the minor is taken, rather than the converse as at present. In this connection, if a minor designated by a general title such as

Chemistry or Physics is desired, the requirements of the Department in which the minor is taken must be satisfied. Otherwise the minor work should be made up merely of enumerated courses and should not be designated by a general title which might be expected to imply a broader knowledge of the minor subject than can be obtained appropriately in the time available.

(II) GENERAL QUESTIONS.

(1) It should be a fixed policy of the Faculty to refrain from enacting restrictive regulations about matters with which the individual departments are competent to deal.

(2) The idea of autonomy for the departments in matters pertaining to the curriculum of the graduate work should be adopted - only such regulations being enacted as are essential to protect the general reputation of the graduate school.

(3) It is important that greater details of research and other facilities be outlined in our bulletin with care and consistency.

(4) -----

(5) The Faculty should elect two Executive Committees - one to deal with questions relating to the more purely Arts subjects, and the other to deal with Science subjects - the Dean to be Chairman of each. Each committee may subdivide as required to cover the numerous subjects now involved.

(7) The Executive Committee should be elected according to existing rules as laid down in the bulletin, viz: by the Faculty (a procedure which in the past has not been carried out). The suggestion is made that members of the committee retire in rotation, say half of each committee every year, with eligibility for re-election. It is recommended however that those departments with a large number of graduate students be represented every year. To allow of other departments being adequately represented, each committee should consist of about eight members. In the matter of the appointment of a Dean, it is suggested that it may be better for all concerned if the Faculty have the privilege of making recommendations to the Principal, which may assist him in making the appointment.

(6) That the valuable body of opinion to be found in the associate members of the Faculty may have fuller representation, it is recommended that the following regulation be enacted: "Any associate or assistant professor directing research in the Faculty, is eligible for recommendation to the Faculty, and thereafter to the Principal for appointment"

(III) PROBLEMS INVOLVING FINANCIAL RESOURCES.

(1) It is desirable to emphasize more publicly and frequently the serious limitations imposed on the work of the Graduate Faculty which arise directly or indirectly from the fact that the majority of its activities have been undertaken by a staff and with an equipment previously fully occupied with the regular work of the other faculties. Can we hope to make the Graduate School into one of the most important of McGill activities if it has to be performed in many cases in the spare time and with the surplus energies of a staff primarily associated with other duties, and, in addition, absorbed in individual fields of research?

(2) The efficiency of the Graduate Faculty is impaired by the fact that the majority of the schools of the Province are unable to do more than train for junior matriculation requirements. Unless this can be amended the development of a Preparatory School in connection with McGill should be considered.

(3) The establishment of further valuable scholarships and fellowships would greatly develop the Graduate School. The influence of available fellowships on the growth of the greatest centres of scholarship and research has been second only to the direct influence of the leaders themselves.

(4) A University Press may be developed to become a valuable adjunct to the Graduate Faculty and to the University.

IV. THE GENERAL POLICIES AND DUTIES OF A GRADUATE FACULTY.

It would seem necessary to redefine these along some such lines as the following:-

(1) The Faculty will determine what regulations in regard to length of courses, residence, etc., must remain in common to all departments, in every case striving to keep regulations at a minimum and as elastic as is compatible with consistent administration.

(2) The Faculty will retain the right to approve or veto the general policies of the departments.

(3) The Faculty will require from each department a comprehensive outline of its courses, facilities and policies for clear announcement in the bulletin.

(4) The Faculty will undertake the planning and supervision of such questions as registration, records, examination routine, etc.

(5) The Faculty will maintain traditional policies such as the following:-

- (a) That it recognize the importance of general knowledge and broad mental culture in all its candidates for higher degrees.
- (b) That the M.A. and M.Sc. degrees should be such as to indicate that the candidate has obtained a general knowledge of his subject, with some proficiency in independent scholarship or research.
- (c) That the Ph.D. degree be reserved only for those who demonstrate their capacity to perform original research, i.e., "make a contribution to knowledge", and at the same time show on examination a "specialist" knowledge of their subject, sufficient to qualify them, for example, to hold a university post.
- (d) That all final oral examinations for Ph.D. be attended by a quorum from the Faculty.
- (e) That external examiners be employed whenever possible to take part in reading theses, and in examinations in highly specialised fields of work.

15th November, 1928.

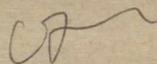
Dr. F. C. Harrison,  
Acting Director,  
Faculty of Graduate Studies,  
Pathological Institute.

Dear Dr. Harrison,

Thanks for your notice, which seems to me excellent and very much to the point.

I am going to send you a draft with some suggestions which Shaw has made, and I have also taken the liberty of sending it around to a few Departments just to read over. They could take the matter up in their own Departments, and then come prepared with some statement to be sent to your own Executive.

Sincerely yours,



Acting Principal.

TO MEMBERS AND ASSOCIATE MEMBERS OF THE GRADUATE FACULTY.

At the last meeting of the Graduate Faculty the Acting Principal, Dr. C.F. Martin, made certain suggestions with regard to the work, problems, and policies of the Graduate Faculty. Members present also brought forward suggestions.

The Acting Principal has strengthened the Executive Committee, and has asked it to collect and study any suggestions, general or special, made by members or associate members of the Faculty.

Bearing in mind the necessity of strengthening in every way the status of all the higher degrees, the Executive Committee would like to obtain any views you may have regarding the general policies of the Faculty, the proportion of course work, the thesis, general supervision of reading, colloquia, societies, etc.

The Committee strongly recommends that meetings of all members of a department be held, so that each department, after discussing its own policy and problems, might make precise recommendations as a unit. Individual statements may be sent in if desired. The Committee suggests that specific recommendations be submitted for each degree: M.A., M.Sc., M.S.A., Ph.D., etc.

It is requested that you give the Committee any opinions you may have whereby the general information of candidates, outside their special subjects, may be enlarged and strengthened.

As the Committee will have to study all reports and recommendations, it is requested that all suggestions be sent not later than the end of November.

*F. C. Starnes*

.....  
CHAIRMAN EXECUTIVE COMMITTEE,  
GRADUATE FACULTY

NOV. 19th, 1928.  
Dr. Martin telephoned.

McGILL UNIVERSITY

FACULTY OF GRADUATE STUDIES  
AND RESEARCH

MEMORANDUM

Nov 16 19 25

TO

FROM

Dear Dr. Martin,

I have Shaos letter & had a long talk with him yesterday - am sending copies of all suggestions, including Shaos letter to all members of Executive.

Do you want copies as well.

Sincerely yours.

H. Harrison

FURTHER SUGGESTIONS IN REGARD TO THE  
GRADUATE FACULTY AMENDMENTS.

*Dr. C. Martin.*

*you asked me to send  
my copy of further  
suggestions - which  
follow below.*

*A. Horn and Shaw*

18/2/29

- OK*
- (1) Minor Subject in Ph. D. A minor subject may be chosen if the permissions of both the major and minor departments are obtained. The amount of work in the minor must receive the approval of the head of the minor department. If it is desired to take isolated courses outside the major department, this may be done merely with the approval of the major department, but in this case the extra work may not be termed a minor.
  - (2) The reasons for giving a degree of M. Com. should be investigated carefully before making this departure. If the candidate is worthy of a higher university degree, he should qualify for an M.A.
  - (3) The reasons for giving an M.S.A. degree are debatable. A universal M. Sc. for all branches of pure and applied science seems more appropriate than singling out one or two for special titles, unless corresponding distinctions are made, such as M. Eng., for the master's degree in Engineering. It is obvious that the suggested rules about the M.S.A. will (rightly or wrongly) appear unfair to the Agricultural School and doubtless stir them to resentment. I would suggest that they should clearly define their desires, before the Faculty revises the rules about their degrees.
  - (4) Three executive committees appear unnecessary; the two divisional committees /

committees should be able to do the work of the executive committee.

- (5) More elaborate provision could appropriately be made for the thorough investigation of the qualifications and the capacity of a given department to take up work in the graduate school, or to extend its graduate work to a higher degree. When a department applies for permission to give graduate work - that is the time to be strict and most careful in the interests of the university; after the work is in procedure it should then be assumed that the department concerned, constitutes the best group in the university qualified to judge about its affairs; if it is not, then a serious mistake has been made at an early stage, either in allowing it to start graduate work, or in <sup>the adjustment of</sup> the time available by its personnel.

- (6) While it may be desirable that there should be some recognized channel for the general supervision of the policies adopted by the various departments in their graduate work, the <sup>wording</sup> ~~wording~~ of the suggested amendments read in Faculty on February 7th. implies that the executive committees would still have a greater burden of duties and greater power than appears necessary. While there is a distinct advance in the direction of what has been called <sup>w</sup> autonomy in graduate policies, the retaining of such phrases as "full power", "control", etc., still places the departments in the position of being very definitely subject to the committees.

I would respectfully suggest that such terms as "deal with", "advise the departments", would be more appropriate.

The faculty as a whole should certainly have the power of veto in /

in regard to the proposed measures of any department, but the committees should merely recommend corrections and make criticisms, and they should do this quite as a customary procedure. If points remain in dispute, they should be a subject of investigation by a special committee appointed to arbitrate the matter. If the matter is grave enough for a department to reject the recommendations of the executive committee, or vice versa, it is grave enough to require full investigation by some specially chosen group thoroughly conversant with the points in question. This should not entail unnecessary outbursts of more committee work, because it should be safe to assume that on only rare occasions would departments and the committees fail to agree. If this assumption is wrong, there must be something radically amiss with the personnel involved in the dispute.

A statement in the calendar calling attention to the official policies in the Graduate School along the lines previously suggested would be valuable; and in it some definite mention should be made <sup>that one</sup> of the guiding principles here is ~~to be~~ "independent development for the departments," limited only by regulations absolutely essential to the protection of the reputation of the work of the University.

(7) No reference at the last Faculty meeting was made to the opinion shared by many, that the Dean of a Faculty, of as high a status as the Graduate Faculty, could be appropriately chosen by the Graduate Faculty itself, or at least as a result of formal recommendations from them.

Obviously this question rests with the Governors, but

I do not see what harm could arise from obtaining an opinion from the Faculty about this matter at the present time. If it is not done now, it would be an embarrassing point to raise when a Dean was appointed.

*Recommends a Small  
Board or Committee to  
run Graduate Studies*

19th November, 1928.

Professor E. R. Adair,  
Department of History,  
McGill University,  
M o n t r e a l.

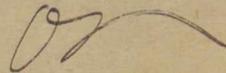
Dear Professor Adair,

So many thanks for your admirable exposé  
of the needs of the Graduate Faculty. I am going  
to have it mimeographed, after a few slight  
alterations, and send it around to the heads of the  
Departments in the University.

In circulating your suggestions, I will not  
mention any names, as I wish to keep all the discussion  
as impersonal as possible. On the other hand, I do not  
intend that you should keep your light under a bushel,  
and want to give you credit for all your suggestions.

Again, my sincere thanks.

Very cordially yours,



McGILL UNIVERSITY  
MONTREAL

FACULTY OF ARTS  
DEPARTMENT OF HISTORY

Nov. 15th. 1928.

Dear Dr. Martin.

I was extremely interested in the discussion of the affairs of the Graduate Faculty at your luncheon party last Tuesday, but I did not take part in it, for, not being a member of the Faculty, I felt I was there almost under false pretences. You said you welcomed suggestions, and I have taken you at your word and jotted down some of the things that have appealed to me in this matter since I came to McGill. My only justification for inflicting these on you must be that I happen to have had a good deal to do with the running of graduate studies in the University of London, where the department of History alone has nearly as many graduate students as the whole Faculty has at McGill. This job I had thrust upon me because I was supposed to be a little of an expert in the organisation and technique of research; that talent has lain pleasantly fallow since I have been at McGill, and I am afraid I rather welcomed the opportunity to cultivate it once more. Please do entirely what you like with these suggestions; put them in the fire or, if they seem to have any practical value, put them forward in whatever form seems best to you.

I must apologise for my enthusiasm in this matter that has led me so to repay a very pleasant luncheon.

Yours sincerely,

E. L. Adams

Nov. 15. When I brought this over to college to that it might be conveyed to you, I found in my pigeon hole Dr Harrison's letter asking for suggestions in regard to graduate studies. I read over these with up - but thought that possibly they might have some value - No doubt the wheels of the department of history will roll round & we shall also produce something on a body. E. L. Adams



PRINCIPAL AND VICE-CHANCELLOR:  
SIR ARTHUR W. CURRIE, G.C.M.G., K.C.B.

FROM

THE PRINCIPAL AND VICE-CHANCELLOR,  
MCGILL UNIVERSITY,  
MONTREAL

November 16th,  
1928

Dear Professor:

The accompanying notes have been submitted to me as suggestions worthy of consideration in any future discussion of prospective changes in the Faculty of Graduate Studies.

Would you be good enough to discuss them with the members of your department, and send any further suggestions to Dr. Harrison for submission to the Executive Committee of the Graduates Faculty.

Sincerely yours,

Acting Principal.

PRELIMINARY SURVEY OF QUESTIONS CONCERNING THE  
FACULTY OF GRADUATE STUDIES

(Notes formulated as a basis for discussion)

The questions may be divided conveniently into four classes dealing with:-

- (I) Specific questions demanding urgent attention and reform under any circumstances whatever.
- (II) Suggestions of a general character, but having an important bearing on administration and curriculum.
- (III) Those policies and problems of the Faculty which are dependent ultimately upon increased financial resources for their fulfilment or solution.
- (IV) The important basic policies applicable to the graduate work of all departments in the university:- A few sound policies which should be maintained as permanent, traditional, and distinctive features of McGill procedure and reputation.

(I) Specific questions demanding consideration now.

- (1) Greater freedom in regard to lecture and colloquium requirements is recommended by many members of the Faculty.

What is the general opinion in regard to this question?

In what manner should these requirements be covered by regulation?

Is it not true that the present regulations in this matter bear heavily and unfairly upon those departments which require for their graduate studies neither extensive continued training in Mathematics, nor laboratory technique?

Is it not true that some of the departments of Science also view these regulations with marked disfavour?

Should the regulations contain anything beyond the provision that the desires of the department in this matter should be submitted for report to an Executive Committee, and then for approval to the Faculty?

- (2) The evaluation of work done elsewhere by students in connection with the requirements of our Graduate Faculty is considered by many to be primarily a question for the department concerned.

Should the regulations contain... etc., etc. (See Sec. 1).

- (3) Is it not true that the relative importance of theses and other requirements is necessarily different in the several departments?

Should the regulations contain... etc., etc. (See Sec. 1).

(It is assumed that each department will be required to publish in detail, in the Bulletin, its local regulations as approved by the Executive Committee).

- (4) Is it not true that the formal insistence on the conclusion of all general examinations at the end of the Second Year of the Ph.D. work has led to unsatisfactory conditions in some departments? How can this be remedied and yet preserve the necessary emphasis on the research?

Should the regulations contain.... etc., etc. (See Sec. 1).

- (5) Is it not true that the work required in the "Minor" subject, chosen because of its bearing on the "Major", should be outlined by the department in which the major is given, subject to the advice and agreement of the department in which the minor is taken, rather than the converse, as at present?

In this connection, is it not desirable that the "Minor" work should be made up merely of enumerated courses, and that it should not be designated by a general title, such as Chemistry or Physics, which might be expected to imply a broader general knowledge of the minor subject than can be obtained appropriately in the time available?

Should the regulations contain.... etc., etc. (See Sec. 1).

(II) General questions.

- (1) Should it not be a matter of fixed policy to reject all restrictive regulations about matters in which the various departments already have power to exert such restrictions if they desire?

Is it not true that we are burdened with several restrictive regulations designed originally to deal with some special cases, and since leading to restrictions in directions that had not been contemplated?

- (2) Should not the idea of autonomy for the departments in matters pertaining to the curriculum of the graduate work be pursued to the utmost limits, enacting only such regulations as are absolutely essential to protect the general reputation of the graduate school?
- (3) Is it not important that greater details of research and other facilities be outlined in our bulletin with extreme care and consistency?
- (4) Is it not important that all advanced examination papers should be printed and carefully preserved, in view of the common custom of gauging the quality of training in another place partly by a study of its examination papers? (Very few universities find it a safe or a dignified economy to neglect the publishing of its collected examinations on its advanced work. The records and files of the advanced examinations held at McGill have been incomplete for many years, and they have not been printed and bound).
- (5) Should not the Faculty elect two Executive Committees, one to deal with the questions relating to science subjects, and the other to deal with the remaining subjects?
- (6) Is it not important to take greater advantage in all these matters of the valuable body of opinion to be found in the Associate members of

Of this Faculty? Should not the advice and the opinions of such an active body of younger men at least be comparable with that of the senior body? Are occasional general meetings of any value in this connection?

- (7) In view of the special character of the Graduate Faculty, would it not be highly desirable that its Executive Committees, and its Dean, be appointed by the Principal and the Governors, on the advice and recommendation of the Faculty, obtained formally through a nominating committee elected from time to time by the Faculty and the Associate body?

(III) Problems involving financial resources.

- (1) Is it not desirable to emphasize more publicly and frequently the serious limitations imposed on the work of the Graduate Faculty which arise directly or indirectly from the fact that the majority of its activities have been undertaken by a staff and with an equipment previously fully occupied with the regular work of the other faculties?

Can we hope to make the Graduate School into one of the most important of McGill activities, if it has to be performed in many cases in the spare time, and with the surplus energies, of a staff already primarily associated with other duties, and, in addition, absorbed in individual fields of research?

- (2) Is it generally understood to what extent the development of a university preparatory school would affect the quality of the work in our Honours and Graduate School? Should not more active representations be made about this matter?
- (3) Is it generally understood to what extent the existence of further valuable scholarships and fellowships would affect the Graduate School? Is it well known that the influence of available fellowships on the growth of the greatest centres of research has been second only to the direct influence of the leading investigators themselves?
- (4) Is it fully appreciated that the development of a University Press should be considered as an essential adjunct of a Graduate Faculty?

(IV) The General Policies and duties of a Graduate Faculty.

Is it necessary to redefine these along some such lines as the following:

- (1) The Faculty, through its committees, will determine what regulations, in regard to length of courses, residence, etc., must remain in common to all departments, in every case striving to keep such regulations at a minimum and as elastic as is compatible with consistent administration.
- (2) The Faculty, through its executive committees, will retain the right to approve or veto the general policies of the departments.

- (3) The Faculty, through its Executive Committee, will require from each department a comprehensive outline of its courses, facilities and local policies, for clear announcement in the bulletin.
- (4) The Faculty, by means of its committees, will undertake the planning and supervision of such questions as registration, records, examination routine, etc.
- (5) The Faculty will maintain traditional policies such as the following:
  - (a) That it will require evidence of general knowledge and broad mental culture in all its candidates for higher degrees.
  - (b) That the M.A. and M.Sc. degrees should be such as to indicate uniformly that the candidate has obtained a general knowledge of his subject, with some training in investigation, adequate to entitle him to proceed further in guided investigation, or to enter the junior ranks of teaching or professional occupations.
  - (c) That the Ph.D. degree be reserved only for those men who demonstrate their capacity to perform original research, i.e., to "make a contribution to knowledge", and at the same time show on examination a "specialist" knowledge of their subject sufficient to qualify them, for example, to hold a university post, provided they are pedagogically competent.
  - (d) That all oral examinations be attended by a quorum from the Faculty.
  - (e) That external examiners be employed whenever possible, to take part in reading theses, and in examinations in highly specialized fields of work.

DRAFT.

November 19th, 1928.

re Faculty of Graduate Studies.

Dear Professor,

The accompanying additional suggestions have been forwarded to me by a member of the professoriate who has had unusual experience in graduate work and in matters of general education.

The memorandum seems admirable, and I would be glad if you would deal with it when discussing the other memoranda with the members of your Department.

~~The final conclusions at which you or your Department may arrive will, of course, be forwarded to Dr. Harrison and the Executive Committee of the Faculty.~~

Very cordially yours,

Acting Principal.

(20 copies of circular)

		Seas
y <sup>o</sup>	Cyrus Mackellan.	J. H. Mackay
y <sup>c</sup>	W. D. Woodhead	J. Bratt Mackay
y <sup>c</sup>	J. M. Johnson.	Dr. Harrison
	S. Peacock	J. V. Christie
y <sup>c</sup>	R. P. Graham	Collip. V
y <sup>o</sup>	W. T. Waugh.	J. Tait. V
	D. Murray -	<del>Murray</del>
y <sup>c</sup>	H. Walter	Stehle V
y <sup>c</sup>	A. S. Eve.	DuRoi.
y <sup>o</sup>	W. D. Tait.	

## THE FACULTY OF GRADUATE STUDIES.

The only excuse for the existence of a Faculty of Graduate Studies lies in the coordination of the work done for graduate degrees;

1. this is mainly of three types: (1) Preparation of regulations
2. for such degrees, (2) ~~MAINTAIN~~ Maintenance of a proper standard
3. in the selection of subjects to which graduate students shall direct their attention, (3) Maintenance of a proper standard in the examination of such work as is done by graduate students.

It is obvious that the 2nd. and 3rd. of these aims cannot be fulfilled without decentralisation on the part of the graduate faculty. How can a physicist decide on the merits of a subject for a research thesis in History or a classicist estimate the standards for the Ph.D in the department of Chemistry. It is not merely asking of people what they know they are incompetent to perform, it is also a case of attempting to compare incommensurables, for the standards of judgment to be applied to a piece of research in Chemistry are not those suitable to the needs, for instance, of History or Classics.

1. Decentralisation may take one of three roads by putting the questions at issue in the hands of (1) the individual departments,
2. (2) the individual faculties, or (3) some new groups created for
3. this purpose.

(1) If almost complete discretion is allowed to the individual departments, there will be an undoubted danger that a slack or incompetent head of a department, or one preferring quantity to quality in his output of graduate students would lower his standards and so bring the graduate degrees of McGill into discredit. This is no mere fanciful danger, for the temptation to secure graduate students for the department at any cost is a very real

one to a man of a self-advertising turn of mind. Too large discretion in the hands of the individual departments would encourage one of the worst of the evils which the Faculty of Graduate Studies was created to destroy.

(2) If the individual faculty were made the unit, the danger ~~of~~ described under (1) above might be avoided, but the problem would not be solved, at any rate in the case of the Faculty of Arts, and probably in that of others as well. The Faculty of Arts is nearly as heterogeneous a body as the Graduate Faculty itself, and you are merely reviving the old difficulty of the physicist's being asked to judge the research standards of the classicist. You may have reduced the number of the judges but you have not altered the problem that faces them.

(3) A board appointed for the purpose seems the only solution. Just because it was specially appointed ad hoc its membership could be so made up<sup>so</sup> as to meet the needs of the situation and safeguard it from the dangers indicated above. It will be easiest to illustrate this from the Faculty of Arts with which I am most familiar:

(a) The subjects should be arranged in groups so that ones closely related fall in the same group. For instance, the following groups might be suggested:

(a) Classics, Romance Languages, German, English, Oriental and Semitic Languages.

(b) Economics and Political Science, History, Sociology and English

(c) Sociology, Education, Philosophy and Psychology.

(d) Botany, Zoology, Geology, Chemistry, Physics and Mathematics.

It will be noticed that English and Sociology ~~occur~~ come twice over. There seems no real objection to this, and it is the result of the dual character which each of those subjects possesses; English, for instance, on its literary side is

closely related to History, on its philological side to the other language subjects.

*There is, of course, no reason why groups should be chosen within the limits of one Faculty.*

(b) For each group there should be a board composed of all the members of the departments within the group that are concerned with graduate work. The present system of associates is ~~not~~ *with misapprehension*

*I believe* and ~~a sham~~ and should be abolished; if a man is considered competent to direct graduate students' work, he should be given a voice in the management of graduate studies. In addition,

each board should be allowed and encouraged to add members of other departments to their number if they have some special knowledge that would prove valuable to the board: e.g. the group including geology might well desire the professor of metallurgy, while that including History should certainly have a representative from the Faculty of Law.

In this way, in each board you would have a group of men dealing in related subjects, which had, in a general way, the same needs in graduate study, a similar technique and similar standards. They would be able to offer intelligent general criticism of the subjects they had to consider, and to judge fairly adequately the standards maintained.

(c) What would be their functions? To them would be presented for approval the academic record of the proposed graduate student, the subject in which he intends to research, and the courses which he suggests he shall take. They would have power to reject him as being, on his past record, unlikely to attain a satisfactory standard of graduate work - here much more should be insisted on than is sometimes the case at McGill.; the insistence that the student must have a really good record in the subject in which he proposes to do his graduate work, would do a good deal to raise the value of its degrees in the eyes of other universities.

The board might reject or suggest modifications in his proposed

subject of research on the ground (a) that it was a subject unworthy of serious work, or (b) that its possibilities had already been exhausted, or (c) that there was not adequate facilities at the student's disposal for serious work to be done in it; this last ground is worthy of more consideration than it is sometimes given<sup>at</sup> McGill. And they should have a free hand to lay down what courses, if any, the student should be compelled to take: for instance, I could well imagine that they might suggest that a student<sup>n</sup> in the department of classics proposing to work on the subject of Roman legal institutions should be compelled to attend the relevant lectures of the Professor of Roman Law.

(d) They might also lay down the minimum time in which, under the special circumstances of each student, he should be permitted to take his degree.

(e) They should certainly appoint the examiners who are to read the student's thesis, and possibly to examine ~~to examine~~ him by other methods as well. One of these examiners would obviously be the person who is directing the student's work, the other should be someone from outside the university, but if this is not possible, he should be appointed solely on the grounds of his competence in the student's special field of research. The casual way in which the second examiner is at present appointed and the casual way in which he often takes his duties - at any rate in the Faculty of Arts - seems to me an insult to any student who has submitted really serious work. The second examiner should be paid a fee - voluntary work is usually worthless work and if a man is paid, he has some sense of responsibility and is more likely to do his job properly and punctually. The arrangement at present in vogue is, if taken seriously, an unwarrantable levy on the time of the staff. I regard this question of the second examiner as vital to the maintenance of a decent standard of work.

Any publication of the student's work with the approval of the university should be permitted only on the recommendation of both examiners.

(f) If the candidate were proposing to take a major and a minor subject, the board should decide as to whether these were sufficiently related to one another; they might well, except under very special circumstances, refuse to allow minor subjects to be chosen outside the group <sup>as a Board</sup> they represented. Personally I think the whole system of major and minor subjects quite unsound. In graduate work a man should be old enough to specialise on one subject - if cognate studies are necessary he should take them, but ~~if~~ beyond that he should not go. Under the present system there is far too much dispersal of energy and miscellaneous browsing in order to provide him with the required units of lecture attendance.

(g) The boards should consider the courses of graduate study offered by their members, and recommend them to the Graduate Faculty.

(h) To the boards matters of general policy or regulation should be submitted by the Faculty of Graduate Studies for consideration and report. On such report the Graduate Faculty might well find it desirable to make different regulations for different ~~groups~~ ~~of~~ groups of subjects in accordance with their special needs, while maintaining a general parity of standard.

(i) The boards should be a means of greater coordination and cooperation between the different departments represented. At present in graduate work such cooperation seems very slight.

One other point arises ~~in my mind~~ <sup>the</sup> out of ~~Prof. Shaw's~~ comment on the necessity for increasing the staff to cope with the flood of graduate work. This is no doubt necessary, but it seemed to me to be based on an unsound conception that runs through much of the graduate regulations at McGill. It is not sufficiently

realised that graduate work should not only be higher in standard, but different in ~~type~~ character, to that done by undergraduates. This defect with its resulting insistence on units of study and lecture attendance is the cause of the material weakness of a good deal of the graduate study in the United States, and McGill has fallen into the same ditch.

Graduate study should imply the bringing of the student into personal contact with the problems of research, not merely telling him about them, but making him experience them for himself. Lectures may be necessary to fill in gaps in his knowledge, to ~~teach~~ teach him his technique, but they should be looked on as necessary evils and kept down to a minimum. Graduate study should not be a mere extension of undergraduate work, a succession of bigger and better lectures, but the opening up of new intellectual prospects to the students' eyes. The M.A. or the M.Sc. represents of course a smaller achievement than the Ph.D. but it should mean a journey into the same fields, a strengthening of the infant footsteps so that he may learn to walk alone.

Hence a member of the staff who is directing a student's graduate studies should not be expected to deliver lectures to him, nor should he be supervising him at all unless the student is working along somewhat similar lines of research to that in which he himself is interested. Consequently the professor may receive, as well as give, an intellectual stimulus, and the drain both on his time and energies be far less than in the more mechanical routine of lecturing.

This suggestion that the graduate student should be expected to seek knowledge for himself, instead of going on having it pumped into him, really lies at the root of all my suggestions, for they are intended to safeguard his liberty to seek it along the ~~the~~ lines which his abilities dictate, and yet assure the university that that liberty shall not be abused as the result of unintelligent supervision and shoddy research.

*W. R. R. R. R.*

## THE FACULTY OF GRADUATE STUDIES

The only excuse for the existence of a Faculty of Graduate Studies lies in the coordination of the work done for graduate degrees; this is mainly of three types:

1. Preparation of regulations for such degrees;
2. Maintenance of a proper standard in the selection of subjects to which graduates shall direct their attention;
3. Maintenance of a proper standard in the examination of such work as is done by graduate students.

It is obvious that the second and third of these aims cannot be fulfilled without decentralisation on the part of the graduate faculty. How can a physicist decide on the merits of a subject for a research thesis in History, or a classicist estimate the standards of the Ph.D. in the Department of Chemistry. It is not merely asking of people what they know they are incompetent to perform, it is also a case of attempting to compare incommensurables, for the standards of judgment to be applied to a piece of research in Chemistry are not those suitable to the needs, for instance, of History or Classics.

Decentralisation may take one of three roads by putting the questions at issue in the hands of:

1. The individual departments;
2. The individual faculties; or
3. Some new groups created for this purpose.

(1) If almost complete discretion is allowed to the individual departments, there will be an undoubted danger that a slack or incompetent head of a department, or one preferring quantity to quality in his output of graduate students, would lower his standards and so bring the graduate degrees of McGill into discredit. This is no mere fanciful danger, for the temptation to secure graduate students for the department at any cost is a very real one to a man of

a self-advertising turn of mind. Too large discretion in the hands of the individual departments would encourage one of the worst of the evils which the Faculty of Graduate Studies was created to destroy.

(II) If the individual faculty were made the unit, the danger described under (I) above might be avoided, but the problem would not be solved, at any rate in the case of the Faculty of Arts, and probably not in the case of others as well. The Faculty of Arts is nearly as heterogeneous a body as the Graduate Faculty itself, and you are merely reviving the old difficulty of the physicist's being asked to judge the research standards of the classicist. You may have reduced the number of the judges, but you have not altered the problem that faces them.

(III) A board appointed for the purpose seems the only solution. Just because it was specially appointed ad hoc, its membership could be so made up as to meet the needs of the situation and safeguard it from the dangers indicated above. It will be easiest to illustrate this from the Faculty of Arts, with which I am most familiar.

1. The subjects should be arranged in groups so that ones closely related fall in the same group. For instance, the following groups might be suggested:
  - (a) Classics, Romance Languages, German, English, Oriental and Semitic Languages
  - (b) Economics and Political Science, History, Sociology and English
  - (c) Sociology, Education, Philosophy, and Psychology
  - (d) Botany, Zoology, Geology, Chemistry, Physics, and Mathematics.

It will be noticed that English and Sociology come twice over. There seems no real objection to this, and it is the result of the dual character which each of those subjects possesses. English, for instance, on its literary side, is closely related to History, on its philological side, to the other language subjects. There is, of course, no reason why groups should be wholly within the limits of one Faculty.

- Superior
- (2) For each group there should be a board composed of all the members of the departments within the group that are concerned with graduate work. The present system of associates is most unsatisfactory and, I believe, should be abolished. If a man is considered competent to direct graduate students' work, he should be given a vote in the management of graduate studies.

In addition, each board should be allowed and encouraged to add members of other departments to their number if they have some special knowledge that would prove valuable to the board, e.g., the group including geology might well desire the professor of metallurgy, while that including History should certainly have a representative from the Faculty of Law.

In this way, in each board you would have a group of men dealing in related subjects, which had, in a general way, the same needs in graduate study, a similar technique, and similar standards. They would be able to offer intelligent general criticism of the subjects they had to consider, and to judge fairly adequately the standards maintained.

- (3) What would be their functions?

To them would be presented for approval the academic record of the proposed graduate student, the subject in which he intends to research, and the courses which he suggests he shall take. They would have power to reject him as being, on his past record, unlikely to attain a satisfactory standard of graduate work. Here much more should be insisted upon than is sometimes the case at McGill. The insistence that the student must have a really good record in the subject in which he proposes to do his graduate work would do a great deal to raise the value of its degree in the eyes of other universities.

The board might reject or suggest modifications in his proposed subject of research on the ground that

- (a) it was a subject unworthy of serious work,
- (b) Its possibilities had already been exhausted,
- (c) There were not adequate facilities at the student's disposal for serious work to be done in it; this last ground is worthy of more serious consideration than it is sometimes given at McGill.

And they should have a free hand to lay down what courses, if any, the student should be compelled to take. For instance, I could well imagine that they might suggest that a student in the department of classics proposing to work on the subject of Roman legal institutions should be compelled to attend the relevant lectures of the Professor of Roman Law.

- (4) They might also lay down the minimum time in which, under the special circumstances of each student, he should be permitted to take his degree.

- (5) They should certainly appoint the examiners who are to read the student's thesis, and possibly to examine him by other methods as well.

One of these examiners would obviously be the person who is directing the student's work, the other should be someone from outside the university, but if this is not possible, he should be appointed solely on the grounds of his competence in the student's special line of research.

The casual way in which the second examiner is at present appointed, and the casual way in which he often takes his duties (at any rate in the Faculty of Arts) seems to me an insult to any student who has submitted really serious work.

The second examiner should be paid a fee. Voluntary work is usually worthless work, and if a man is paid he has some sense of responsibility, and is more likely to do his job properly and punctually.

The arrangement at present in vogue is, if taken seriously, an unwarrantable levy on the time of the staff.

I regard this question of the second examiner as vital to the maintenance of a decent standard of work.

Any publication of the student's work with the approval of the university should be permitted only on the recommendation of both examiners.

- (6) If the candidate were proposing to take a major and a minor subject, the board should decide as to whether these were sufficiently related to one another. They might well, except under very special circumstances, refuse to allow minor subjects to be chosen outside the group they, as a Board, represented.

Personally, I think the whole system of major and minor subjects to be quite unsound. In graduate work a man should be old enough to specialise on one subject; if cognate subjects are necessary he should take them, but beyond that he should not go. Under the present system there is far too much dispersal of energy and miscellaneous browsing in order to provide him with the required units of lecture attendance.

- (7) The boards should consider the courses of graduate study offered by their members, and recommend them to the Graduate Faculty.
- (8) To the boards matters of general policy or regulation should be submitted by the Faculty of Graduate Studies for consideration and report. On such report the Graduate Faculty might well find it desirable to make different regulations for different groups of subjects in accordance with their special needs, while maintaining a general parity of standard.
- (9) The boards should be a means of greater coordination and cooperation between the different departments represented. At present in graduate work such cooperation seems very slight.

One other point arises out of the comment on the necessity for increasing the staff to cope with the flood of graduate work. This is no doubt necessary, but it seemed to me to be based on an unsound conception that runs through much of the graduate regulations at McGill. It is not sufficiently realized that graduate work should not only be higher in standard, but different in character, to that done by undergraduates. This defect, with its resulting insistence on units of study and lecture attendance, is the cause of material weakness of a good deal of the graduate study in the United States, and McGill has fallen into the same ditch.

Graduate study should imply the bringing of the student into personal contact with the problems of research, not merely telling him about them, but making him experience them for himself. Lectures may be necessary to fill in gaps in his knowledge or to teach him technique, but they should be looked upon as necessary evils, and kept down to a minimum. Graduate study should not be a mere extension of undergraduate work, a succession of bigger and better lectures, but the opening up of new intellectual prospects to the student's eyes. The M.A. or the M.Sc. represents, of course, a smaller achievement than the Ph.D., but it should mean a journey into the same fields, a strengthening of the infant footsteps so that he may learn to walk alone.

Hence, a member of the staff who is directing a student's graduate studies should not be expected to deliver lectures to him, nor should he be supervising him at all unless the student is working along somewhat similar lines of research to those in which he himself is interested. Consequently the professor may receive, as well as give, intellectual stimulus, and the drain on both his time and energies be far less than in the more mechanical routine of lecturing.

This suggestion that the graduate student should be expected to seek knowledge for himself, instead of going on having it pumped into him, really lies at the root of all my suggestions, for they are intended to safeguard his liberty to seek it along the lines which his abilities dictate, and yet assure the university that that liberty shall not be abused as the result of unintelligent supervision and shoddy research.

1/5/28  
A.H.L.

PRELIMINARY SURVEY OF QUESTIONS CONCERNING THE  
FACULTY OF GRADUATE STUDIES.

(Notes formulated as a basis for discussion).

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The questions may be divided conveniently into four classes dealing with:-

- (I) Specific questions demanding urgent attention and reform under any circumstances whatever.
  - (II) Suggestions of a general character, but having an important bearing on administration and curriculum.
  - (III) Those policies and problems of the Faculty which are dependent ultimately upon increased financial resources for their fulfilment or solution.
  - (IV) The important basic policies applicable to the graduate work of all departments in the university:- a few sound policies which should be maintained as permanent, traditional, and distinctive features of McGill procedure and reputation.
- 

(I) Specific questions demanding consideration now.

(1) Greater freedom in regard to lecture and colloquium requirements is recommended by many members of the Faculty. What is the general opinion in regard to this question? In what manner should these requirements be covered by regulation? Is it not true that the present regulations in this matter bear heavily and unfairly upon those departments, which require for their graduate studies, neither extensive continued training in Mathematics, nor laboratory technique? Is it not true that some of the departments of Science also view these regulations with marked disfavour? Should the regulations contain anything beyond the provision that the desires of the department in this matter should be submitted for report to an Executive Committee, and then for approval to the Faculty?

(2) The evaluation of work done elsewhere by students in connection /

connection with the requirements of our Graduate Faculty, is considered by many to be primarily a question for the department concerned. Should the regulations contain anything beyond the provision that the desires of the department in this matter should be submitted for report to an Executive Committee, and then for approval to the Faculty?

(3) Is it not true that the relative importance of theses and other requirements, is necessarily different in the several departments? Should the regulations contain anything beyond the provision that the desires of the department in this matter should be submitted for report to an Executive Committee, and then for approval to the Faculty? (It is assumed that each department will be required to publish in detail in the Bulletin its local regulations as approved by the Executive Committee).

(4) Is it not true that the formal insistence on the conclusion of all general examinations at the end of the Second Year of the Ph. D. work has led to unsatisfactory conditions in some departments? How can this be remedied and yet preserve the necessary emphasis on the research? Should the regulations contain anything beyond the provision that the desires of the department in this matter should be submitted for report to an Executive Committee, and then for approval to the Faculty?

(5) Is it not true that the work required in the "Minor" subject, chosen because of its bearing on the "Major", should be outlined by the department in which the major is given, subject to the advice and agreement of the department in which the minor is taken, rather than the converse as at present? In this connection is it not desirable that the "Minor" work should be made up merely of enumerated courses, and that it should not be designated by a general title, such as Chemistry or Physics, which might be expected to imply a broader general knowledge of the minor subject than can be obtained appropriately in the time available? Should the regulations contain anything beyond the provision that the desires of the department in this matter should be submitted for report to an Executive Committee, and then for approval to the Faculty?

(II) General questions.

(1) Should it not be a matter of fixed policy to reject all restrictive regulations about matters in which the various departments already have power to exert such restrictions if they desire? Is it not true that we are burdened with several restrictive regulations designed originally to deal with some special cases, and since leading to restrictions in directions that had not been contemplated?

(2) Should not the idea of autonomy for the departments in matters pertaining to the curriculum of the graduate work, be pursued to the utmost limits, - enacting only such regulations as /

as are absolutely essential to protect the general reputation of the graduate school?

(3) Is it not important that greater details of research and other facilities, be outlined in our bulletin with extreme care and consistency?

(4) Is it not important that all advanced examination papers should be printed and carefully preserved, in view of the common custom of gauging the quality of training in another place partly by study of its examination papers? (Very few universities find it is a safe, or a dignified economy, to neglect the publishing of its collected examinations on its advanced work. The records and files of the advanced examinations held at McGill have been incomplete for many years, and they have not been printed and bound).

(5) Should not the Faculty elect two Executive Committees - one to deal with the questions relating to science subjects, and the other to deal with the remaining subjects?

(6) Is it not important to take greater advantage in all these matters of the valuable body of opinion to be found in the Associate members of this Faculty? Should not the advice and the opinions of such an active body of younger men at least be comparable with that of the senior body? Are occasional general meetings of any value in this connection?

(7) In view of the special character of the Graduate Faculty, would it not be highly desirable that its Executive Committees, and its Dean, be appointed by the Principal and the Governors, on the advice and recommendation of the Faculty, obtained formally through a nominating Committee elected from time to time by the Faculty and the Associate body?

(III) Problems involving financial resources.

(1) Is it not desirable to emphasize more publicly and frequently the serious limitations imposed on the work of the Graduate Faculty which arise directly or indirectly from the fact that the majority of its activities have been undertaken by a staff and with an equipment previously fully occupied with the regular work of the other faculties? Can we hope to make the Graduate School into one of the most important of McGill activities, if it has to be performed in many cases, in the spare time, and with the surplus energies, of a staff already primarily associated with other duties, and in addition, absorbed in individual fields of research?

(2) Is it generally understood to what extent the development of a University Preparatory School would affect the quality of the work in our Honours and Graduate School? Should not more active representations be made about this matter?

(3) Is /

*Conferences  
Records*

(3) Is it generally understood to what extent the existence of further valuable scholarships and fellowships would affect the Graduate School? Is it well known that the influence of available fellowships on the growth of the greatest centres of research has been second only to the direct influence of the leading investigators themselves?

(4) Is it fully appreciated that the development of a University Press should be considered as an essential adjunct of a Graduate Faculty?

(IV)

The general policies and duties of a Graduate Faculty.

Is it necessary to redefine these along some such lines as the following?:-

(1) The Faculty, through its committees, will determine what regulations, in regard to length of courses, residence, etc., must remain in common to all departments, in every case striving to keep such regulations at a minimum and as elastic as is compatible with consistent administration.

(2) The Faculty, through its executive committees, will retain the right to approve or veto the general policies of the departments.

(3) The Faculty, through its executive committees, will require from each department a comprehensive outline of its courses, facilities and local policies for clear announcement in the bulletin.

(4) The Faculty, by means of its committees, will undertake the planning and supervision, of such questions as registration, records, examination routine, etc.

(5) The Faculty will maintain traditional policies such as the following:-

(a) That it require evidence of general knowledge and broad mental culture in all its candidates for higher degrees.

(b) That the M.A. and M. Sc. degrees should be such as to indicate uniformly that the candidate has obtained a general knowledge of his subject; with some training in investigation, adequate to entitle him to proceed further in guided investigation, or to enter the junior ranks of teaching or professional occupations.

(c) That the Ph. D. degree be reserved only for those men who demonstrate their capacity to perform original research, i.e., "make a contribution to knowledge", and at the same time show on examination, a "specialist" knowledge of their subject, sufficient to qualify them, for example, to hold a university post, provided they are pedagogically competent.

(d) That all oral examinations be attended by a quorum from the /

the Faculty.

(e) That external examiners be employed whenever possible, to take part in reading theses, and in examinations in highly specialised fields of work.

McGILL UNIVERSITY

FACULTY OF GRADUATE STUDIES  
AND RESEARCH

MEMORANDUM

19

TO

FROM

Dear Dr Martin

Reports from the various Depts & Profs are still being sent in. I received one only yesterday hence. I have not called the Executive together but have sent them copies of all communications received.

I am trying to bring together the various matters for presentation to the Committee.

Sorry if the rate of progress is slow, but the material is slow coming in.

Sincerely yours  
F. C. Morrison

18th December, 1928.

Dr. F. C. Harrison,  
Faculty of Graduate Study,  
Pathological Institute,  
McGill University.

Dear Dr. Harrison,

Have you made any progress with the reorganization plans of the Faculty of Graduate Studies? Has your Committee met, and shall we have a report soon?

Sincerely yours



Acting Principal.

McGILL UNIVERSITY  
MONTREAL

FACULTY OF GRADUATE  
STUDIES AND RESEARCH  
R. F. RUTTAN, DEAN  
CHEMISTRY BUILDING

September 19th, 1928.

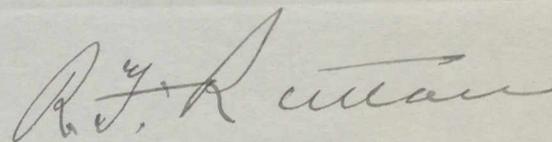
Dr. C. F. Martin,  
Acting Principal,  
McGill University.

Dear Mr. Acting Principal:-

This morning I received your letter in regard to the position of Dr. Harrison in connection with the Faculty of Graduate Studies.

Have you made any arrangements as to where he is to have his office? I think it would be better to have the office in the Pathological Institute, where it would be convenient to his work. He will also require a stenographer unless he has one with extra time available. I am to see him tomorrow morning and will talk matters over. I will, of course, do everything I can to put him in touch with the various phases of the work in connection with the Graduate Faculty. He knows a good deal about it already, having been on the Executive of the Faculty these last three years.

Yours faithfully,



Dean.

17th September, 1928.

Doctor R. F. Ruttan,  
Faculty of Graduate Studies,  
McGill University, Montreal.

Dear Dean Ruttan,

Sir Arthur Currie cables me that he wishes Dr. Harrison to be Chairman of the Executive Committee of the Graduate Faculty, and he will assume his duties forthwith.

Dr. Harrison will call on you, and I know that you will give him everything he requires to carry on the work.

Meanwhile, will you please accept my very sincerest thanks for helping us out during the summer, and I know when Sir Arthur returns, he will express his appreciation of your kindness. I am personally genuinely sorry to realize that you are severing your connection with the University, and I sincerely hope that this will not prevent our meeting frequently together.

With all kind regards and renewed thanks, believe me

Very sincerely yours,

(7m)

17th September, 1928.

Dear Mr. Dean,

At Sir Arthur Currie's request,

Dr. F. C. HARRISON will act as Chairman of the Executive Committee of the Faculty for Graduate Studies, assuming his duties at once.

Candidates and colleagues will find Dr. Harrison in temporary offices at the Pathological Institute, University Street, from 10.00 to 4.30 every day in the week except Saturday.

The Executive Committee of this Faculty for next year has been appointed as follows:-

Dr. F. C. Harrison, Chairman,  
Dean Ira A. Mackay,  
" H. M. Mackay,  
Professor F. M. G. Johnson,  
" J. C. Meakins.

Faithfully yours,

Acting Principal.

Sent to:-

Dean Ira A. Mackay,                      Dean Barton,  
" H. M. Mackay,  
" P. Corbett,  
" H. C. Perrin,  
" Sinclair Laird,  
Mrs. Walter Vaughan,  
Dr. F. C. Harrison.

September 20th, 1928.

Dr. R. F. Ruttan,  
Chemistry Building,  
McGill University.

Dear Dr. Ruttan:-

Many thanks for your letter.

We have already arranged to give Dr. Harrison temporary quarters in the Pathological Institute and he has made arrangements with a stenographer in that building to take charge of the work, so that I hope all will be satisfactory.

With many thanks for your suggestions, I am,

Very sincerely yours,

(7m)

Acting Principal.