December 14, 1967

Minutes of the second meeting of the Science Faculty Council - Thursday, 14th December 1967 at 3:30 p.m., Room 207, Buller Building.

The following (34) members attended: Chairman, Dean R. D. Connor; Professors: W. G. Barker, P. K. Isaac, B. R. Irvine, F.W.J. Davis, H. E. Welch, R. H. Betts, A. Turnock, H.D.B. Wilson, J. Cherry, R. B. Ferguson, C. D. Anderson, E. Leith, D. H. Hall, F. M. Kelly, S. Standil, M. J. Oretzki, W. Falk, M. E. Kettner, K. W. Armstrong, W. E. Alexander, H. Halvorson, R. Hawirko, T. Dandy, B. G. Hogg, E. Bock, H. Queen, F. J. Ward, H. Lees, A. N. Campbell, G. E. Dunn, E. M. Kartzmark, Nora Losey, and Gerald Losey.

I. On the motion of B. G. Hogg, seconded by H. E. Welch, the minutes of the previous meeting were accepted as circulated - with one correction occurring on page 4, headed "Appendix for Information" - namely, the Zoology requirement should read "Mathematics and Chemistry at either level; Physics at either level is recommended".

II. The Chairman referred to Item 2 of the minutes of the meeting of November 29th and asked for clarification on the meaning of the deletion of the words "and Science" from Item 5 of the Revised Regulations for Entrance into Arts and Science. Specifically, he requested clarification as to meaning - did we mean that the second language was to be optional only at Grades XI and XII, or did we imply that a second language is unnecessary all the way through the school program. He asked if it was the wish to the meeting to add a rider to the motion to the effect that the second language was required up to the end of Grade X.

The ensuing discussion revealed that while no one objected to the teaching of a second language prior to Grade XI, many felt that any recommendation at this stage was outside our province and it was the consensus that the Science Council was not anxious to recommend on this matter, but to leave to the Department of Education the requirements of general education up to the end of Grade X in this respect.

III. Continuing the discussion of the "A" and "O" proposal, the Chairman requested consideration of the three Science courses in the General Program - Mathematics 301; Physical Science 301; and Biology 301; as to their fitness for acceptance as "O" Level entrance subjects.

The discussion tended to center on the acceptability of general courses. Dr. A. N. Campbell said that the Chemists would accept the recommendation of the Mathematicians in relation to the content of Mathematics 301. Dr. G. E. Dunn questioned the necessity to specify anything more than the pre-requisites to the First Year courses numbered 120. The discussion centered on Mathematics as a typical instance - because of the Mathematics Department's requirement for "A" level achievement for Mathematics 120, many other departments are affected by this decision.

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Dr. G. Losey offered two solutions:

(1) An alternative course at the first year which could go on to course 220 in the second.

(2) To offer a half course to bring the inadequately-prepared student up to a satisfactory level from which he could continue into the first-year course.

Dr. Losey also noted a discrepancy in the over-all preparedness of students currently entering from the single high school 300 Mathematics course. The recommendations of the Departments of English and French came in for further examination and comment. Several speakers pointed out that this decision, if agreed to by the Faculty as a whole, would have far-reaching implications. The discussion moved to consider the matter of what was implied when a department said it required an "A" for entry into its course 120. Dr. H. Lees said the only way to get around this point is to say that no department can demand an "A"; that the students come forward with three "A's" and two "O's" and this is sufficient.

The Chairman suggested that there were two interpretations:

(1) That to enter say, Mathematics 120, a student must possess "A" Level standing in the 300 Mathematics course in high school, or

(2) That the "A" Level requirement in Mathematics means that course 120 assumes that the background of entering students is that acquired at "A" Level in the 300 entrance program. That is a standard on which the course is based. Anyone not so prepared may enter, but at their own risk.

Dr. S. Standil said it would be unfair to admit "O" Level students into the 120 courses and then fail them left and right. Dr. F. M. Kelly commented on the reaction of the Administration were failure rates to exceed certain prescribed figures.

Dr. N. Losey advocated placement tests to sort out incoming students. The point was made that if there are two streams in the high school system, there might well be two streams at University. Dr. H. Lees again pointed out that if departments did not demand an "A" the situation was much more flexible.

The Chairman suggested that perhaps no course should bar entry to the University but we should, instead, measure achievement and ability. Perhaps we should admit all who qualify with two "O's" and three "A's". Dr. H. E. Welch said that we need nothing more than achievement at the level of three "A's" and two "O's".

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The following motion was proposed by Dr. R. H. Betts and seconded by Dr. W. G. Barker, "Subject to departmental pre-requisites Mathematics 301, Physical Science 301, and Biology 301 may be used for University entrance at the "0" Level, it being noted that a student may obtain "A" Level standing by writing and passing the appropriate examination, having acquired "0" Level status". Approval for this motion was unanimous. The Chairman then said that he would take up the question of the meaning of "A" Level standing for entry into a 120 course with the Department Heads and would discuss it with the Council on another occasion.

IV. The Chairman then suggested we consider Item 5 on the Agenda, namely, cancelling classes for a day for the Administration, Faculty, and students in Arts and Science to meet together to discuss matters of mutual interest.

Dr. H. E. Welch questioned the wisdom of trying to bring the entire faculty of students and instructors together. This would be an enormous group and so large a group would be a very questionable asset. The Chairman said that it would be his view that the faculty would meet in groups. Probably not all would be involved, but only selected representatives. Dr. A. Turnock suggested that the day would be wasted unless there was some direction to the discussion and to the proceedings. The Chairman indicated that it was his opinion that this would be a properly organized affair.

The following motion was carried with three opposing votes: Proposed by F. M. Kelly, seconded by M. E. Kettner "that classes be cancelled for one day so that student, Faculty, and Administration could meet together for forum discussions".

Dr. W. G. Barker requested that this take place in a week already disrupted to avoid cancellation of laboratory sessions. He suggested the week of February 18th when another day was cancelled for the mid-term break.

V. The meeting then proceeded to consider Item 3 on the Agenda. Following a brief discussion, it was agreed that the motion should be amended to read "That the Executive of the Faculty Council of Arts and Science be asked to set up in the immediate future a committee to consider the establishment of a separate Faculty of Science in the University of Manitoba and report to the Faculty Council of Arts and Science by April 30th, 1968".

The motion was approved with no dissenting votes.

VI. It was moved by Dr. E. Leith, seconded by Dr. H.D.F. Wilson that the Executive be asked that the name of the Department of Geology be changed to the Department of Earth Sciences. Drs. Leith and Wilson spoke to the motion, pointing out that the term Geology was now only one part of the training being offered in the present department; that the term "Earth Sciences" is that used by the National Research Council; that the present work of the Department covers three international unions,

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not just the international union concerned with Geology, that Earth Sciences is the name of the third section of the Royal Society. This name is not new to the larger Canadian and American Universities and the Department is, at present, teaching and doing research in four Earth Science fields, only one of which was Geology. Dr. A. Turnock submitted data with respect to the names of three hundred four departments in other Universities in the field. The motion was put and was approved with no dissenting votes.

VII. The motion proposed by Dr. R. H. Betts, seconded by Dr. H. E. Welch "That the Executive Committee of the Faculty of Arts and Science be asked to review present departmental arrangements for the scheduling and supervising term examinations with a view to discovering difficulties, if any, and proposing remedies". Dr. Betts spoke to the motion, pointing out the difficulties of the Department of Chemistry in arranging for the testing of the large numbers of students presently enrolled in this discipline.

Other speakers, from the Departments of Physics and Biology indicated the method they were adopting to meet this difficulty. It was agreed that some cohesion should be sought and the motion to refer the matter to the Executive Committee was carried, with two dissenting votes.

VIII. On the motion of Dr. B. R. Irvine, seconded by Dr. W. G. Barker, the meeting adjourned at 5:50 p.m.

UNIVERSITY ENTRANCE COURSE

GRADE XII:

English 300 ..... 24%

FOUR OF:

Modern History 300	18%
Mathematics 300	18%
Physics 300	18%
Chemistry 300	18%
Biology 300	18%
French 300	18%
Latin 300	18%
German 300	18%
Francais 300	18%
Ukrainian 300	18%
Home Economics 200 or 300	18%
Industrial Arts 200 or 300	18%
Commercial 200 or 300	18%
Art 200 or 300	18%
Music 200 or 300	18%
Human Geography 300	18%
Arithmetic 300	18%

Unassigned 4%

GENERAL COURSE

GRADE XII

A. English 301 (Prose and Comp.) 12%

The Department of Geology has developed to the stage where the name Geology no longer describes the department adequately. This development is parallel to that of many other large Canadian and American Universities. The term geology, although originally meaning the "science of the earth" has developed a much more restricted meaning referring to the disciplines of petrology, structural geology, paleontology, geomorphology, stratigraphy, and their economic applications. Our department teaches these disciplines but in addition covers the fields of geochemistry, crystallography, geophysics, and some of the newer fields of geotechnics. Some department members are non-geological graduates, having graduated in the field of pure physics. It is understandable that such people wish to retain their identity in view of the restricted meaning of geology in current usage, and that the department name should represent these disciplines and indicate that they are taught at Manitoba.

The department has therefore searched for a new name which will describe the department as it is presently constituted and which will conform to Canadian and International usage.

The best usage seems to us to be that used by the National Research Council in classifying the fields of the sciences. These are:

Mathematics
Physics
Earth Sciences
Chemistry
Biological Sciences
Experimental Psychology, Archaeology

In terms of the International Scientific Unions the present Geology Department covers three International Unions; the International Union of Geodesy and Geophysics, the International Union of Geological Sciences, and the International Union of Crystallography. Again it is obvious that

Geology describes only one of these unions which are usually considered the Earth Science group of I.C.U.S.

It seems therefore that the Department of Earth Sciences is the most desirable name and would completely order the natural science group of departments in terms of N.R.C. usage.

The name is not new to larger Canadian and American universities where Geophysics, Geochemistry, Oceanography, etc., have been grouped with Geology. A selection from numerous examples could include:

Massachusetts Institute of Technology
University of Minnesota
Pennsylvania State U.
Stanford
University of California, San Diego.
Dartmouth
Iowa
Pittsburgh

The change of name to the Department of Earth Sciences would help clarify the responsibility and organization of the department within the field of the natural sciences. We are at present teaching and doing research in four Earth Science fields, each field consisting of several disciplines, as follows:

GEOLOGY	MINERALOGY & GEOCHEMISTRY	SOLID EARTH GEOPHYSICS	GEOTECHNICS
Petrology	Mineralogy	Seismology	EngineeringGeol.
Structure	Crystallography	Magnetism	Hydrogeology
Geomorphology			
Photogeology			
Invertebrate Paleontology	Theor. Geochem.	Gravity	Mining Geol.
Stratigraphy	Expl. Geochem.		Mineral Tech.
Economic Geology	Exper. Petrology	Exploration Geophysics	
Petroleum Geology	Age Dating		
Industrial Minerals			

New fields such as Oceanography and Rock Mechanics, and Astrogeology can be added when and if they become appropriate to our needs and resources.