

**University of Windsor
Program Development Committee**

*5.1 **Mathematics and Statistics – Minor Program Changes (Graduate)**

Item for: **Approval**

MOTION: **That the program regulations for the PhD in Mathematics and Statistics (Mathematics Field) be changed according to the submitted PDC program/course change forms.***

**Subject to the approval of expenditures required.*

Rationale/Approvals:

- The proposal has been approved by the AAU Council, Faculty of Science Coordinating Council and the Graduate Studies Council.
- *See attached.*

PROGRAM DEVELOPMENT COMMITTEE

MINOR PROGRAM CHANGES

FORM "C"

TITLE OF PROGRAM/CERTIFICATE: Mathematics and Statistics (PhD) (Mathematics Field)
DEPARTMENT/SCHOOL: Mathematics and Statistics
FACULTY: Faculty of Science
Proposed change(s) effective as of [Fall, Winter, Spring]: Winter 2013 or as soon as possible

A.1 PROGRAM REQUIREMENT CHANGES

Please provide the current program requirements and the proposed new program requirements by cutting and pasting from the current undergraduate or graduate web calendar (www.uwindsor.ca/calendars) and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**.

Example:

Major requirements: 00-100, ~~00-104~~, 00-110, 00-210, 00-310, 00-410, plus three additional courses at the **300-level or 400-level**.

[Insert proposed changes]

Program Requirements for the Ph.D. (Mathematics Field)

1) *Course Work:* Students admitted with a MSc. or equivalent must successfully complete at least two graduate level courses from any of the following areas of mathematics: Algebra, Analysis, and Operational Research. ~~two of the following semester courses: Algebraic Topology, Differential and Algebraic Geometry, Topics in Algebra, and Topics in Analysis.~~

~~Recommended Options: Most doctoral students, after consultation with their supervisor, will take either a two-semester sequence of courses in analysis or a two-semester sequence of courses in algebra.~~ **All course selections require the approval of the student's Doctoral committee, the supervisor, or the departmental graduate committee. The student may be required to take additional courses as stipulated by the student's Doctoral committee.**

Students are required to register in Seminar 62-795. Students must attend no less than 20 seminars. Every doctoral student is required to give a presentation to the department prior to dissertation defense.

2) *Doctoral Committee:* within the student's first term of study at the doctoral level, a doctoral committee will be appointed by the Head of the Department upon the advice of the Graduate Studies Committee. The doctoral committee must be approved by the Executive Committee of the Faculty of Graduate Studies and Research. The doctoral committee shall include the student's advisor as chairperson, at least two other members of the Department, one faculty member from outside the Department, and an external examiner, who shall not be involved in the preparation of the dissertation. The selection of the external examiner is subject to the approval of the Dean of Graduate Studies and Research. Members of other departments may also be invited to join the committee (see section titled, The Degree of Doctor of Philosophy - Program Requirements).

3) *Dissertation:* The dissertation shall be defended at an oral examination.(see section titled, The Degree of Doctor of Philosophy - Program Requirements).

4) *Comprehensive Examinations:* A student must pass a series of three written comprehensive examinations as follows: **two of which must be chosen from the following areas: Algebra, Analysis and Operational Research.**

i. Paper I—Algebra

ii. Paper II—Analysis

iii. Paper III—Specialty Written or Oral Examination to be set up by the student's doctoral supervisor.

The third exam, which may be written or oral, is in the area of specialization to be set by the student's doctoral supervisor and doctoral committee.

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If a student fails an examination, it may be repeated once, but if the examination is failed a second time, the student must withdraw from the program (see section titled, The Degree of Doctor of Philosophy - The Dissertation). In any case, these examinations must be successfully completed within twenty-five months of first registration in the doctoral program. If this deadline is not met, the student must withdraw from the program.

A.2 MINOR COURSE CHANGES REQUIRING ADDITIONAL RESOURCES OR AFFECTING DEGREE REQUIREMENTS

*If this is a minor course and calendar change (usually noted on a Form E) requiring additional resources or affecting degree requirements, please provide the current course information and the proposed new course information by cutting and pasting from the current undergraduate or graduate web calendar and clearly marking deletions with strikethrough (~~strikethrough~~) and additions/new information with **bolding and underlining**.*

*Examples of minor course changes include: deleting courses, course description changes, pre/anti/co-requisite changes, contact hour/lab requirement changes, course title changes, renumbering courses, and/or cross-listing courses. Minor course calendar changes, which do not require additional resources or do not affect degree requirements, should be submitted on a **Form E**.*

[Insert proposed changes]

N/A

B. RATIONALE

Please provide a rationale for the proposed change(s).

The proposed changes spell out clearly the requirements for the PhD program in Mathematics and allow students to work in pure mathematics as well as Operational Research.

C. RESOURCES

C.1 Available Faculty and Staff Resources (QAF sections 2.1.7, 2.1.8, 2.1.9 and 2.1.10)

Describe all faculty and staff resources (e.g., administrative, teaching, supervision) from all affected areas/departments currently available and actively committed to support the program change(s).

Current faculty consists of 13 + 1 AAS.

C.1.1

Provide an assessment of faculty expertise available and committed to actively support the revised program.

Expertise is available to teach existing courses.

C.1.2

Describe the area's expected reliance on, and the role of adjunct, limited-term, and sessional faculty in delivering the revised program.

N/A

C.1.3

***For graduate programs:** Explain how supervisory loads will be distributed, and describe the qualifications and appointment status of faculty who will provide instruction and supervision in the revised program.*

N/A

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C.1.4

For graduate programs: Where appropriate to the revised program, provide evidence that financial assistance for graduate students will be sufficient to ensure adequate quality and numbers of students.

N/A

C.2 Other Available Resources

Provide evidence that there are adequate resources available and committed to the revised program to sustain the quality of scholarship produced by undergraduate students as well as graduate students' scholarship and research activities, including for example:

- *staff support,*
- *library,*
- *teaching and learning support,*
- *student support services,*
- *space,*
- *equipment,*
- *facilities*
- *GA/TA*

No extra resources required.

C.3 Resource Implications for Other Campus Units (MTCU sections 3 and 4)

Describe the reliance of the proposed program revisions on existing resources from other campus units, including for example:

- *existing courses,*
- *equipment or facilities outside the proposer's control,*
- *external resources requiring maintenance or upgrading using external resources*

Provide relevant details.

N/A

C.4 Anticipated New Resources (QAF sections 2.1.7, 2.1.8 and 2.1.9; MTCU section 4)

*List all **anticipated new resources** originating from within the area, department or faculty (external grants, donations, government grants, etc.) and committed to supporting the revisions to this program.*

N/A

C.5 Planned Reallocation of Resources and Cost-Savings (QAF section 2.1.7 and 2.1.9; MTCU section 4)

Identify all opportunities for

- *internal reallocation of resources and*
- *cost savings*

identified and pursued by the area/department in support of the revisions to this program. (e.g., streamlining existing programs and courses, deleting courses, etc.)?

N/A

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C.6 Additional Resources Required – Resources Requested (QAF section 2.1.7 and 2.1.9)

*Describe all **additional faculty, staff and GA/TA resources** (in all affected areas and departments) required to run the revised program.*

Faculty: none

Staff: none

GA/TAs: none

C.6.1

*Describe all **additional institutional resources and services** required by all affected areas or departments to run the revised program, including library, teaching and learning support services, student support services, space and facilities, and equipment and its maintenance.*

Library Resources and Services: n/a

Teaching and Learning Support: n/a

Student Support Services: n/a

Space and Facilities: n/a

Equipment (and Maintenance): n/a