**Course Revision Form**

1. Will this course revision affect a current program?  
   - Yes  
   - No  
   If "yes", has a Program Revision Form been submitted concurrently?  
   - Yes  
   - No

2. Teaching Department:  
   - Mathematics & Statistics

3. Administering Faculty/Unit:  
   - Science

4. Campus  
   - Downtown, Macdonald, Off Campus, Distance Ed, Other – specify
   - Downtown

5. Effective Term of Implementation  
   - Ex. Sept. 2004 = 200409
   - Term: 200509
   - Retirement

6. Responsible Instructor: 

7. Credit Weight  
   (or CEU's for non-credit CE courses):  
   - 4
   - Old Credit Weight or CEU's (if applicable)  
   - 4

8. Course Number(s)  
   - Indicate course number & the number of terms spanned:  
     - Subject/course number: MATH 578
     - Course(s) Span:  
       - 1 term
       - 2 consecutive terms (D1, D2)
       - 3 non-consecutive terms (N1, N2)
       - 3 consecutive terms (J1, J2, J3)

9. Number Change From: 

10. Consolidation of Courses: 

11. Split of Multi-Term Course: 

12. Course Title (Limit 30 char.) - required for all courses.  
   - Numerical Analysis I
   - Old Course Title (if applicable)

13. Course Title to Appear in the Calendar (Optional)  
   (Limit 59 characters):  
   - Note: This can ONLY be an expansion of word(s) abbreviated in the 30 character course title in Box 12.

14. Rationale for revised course
   - These are housekeeping changes taking into account the way in which this course is now given.
   - Comments: Explicit reference to FFT and ODEs are removed. Preconditioning and direct/iterative solvers added. Implicitly, by requiring MATH 387, we are also requiring a background in basic analysis and differential equations as well as a basic course in computer science. It would be nice if we could find a better name.

15. New Course Description  
   (as it will appear in the Calendar [maximum 50 words]):  
   (N.B. Faculty of Medicine must append complete course outline)
   - Development, analysis and effective use of numerical methods to solve problems arising in applications. Topics include direct and iterative methods for the solution of linear equations (including preconditioning), eigenvalue problems, interpolation, approximation, quadrature, solution of nonlinear systems.

16. Old Course Description  
   (may be found in the Calendar or Banner)
   - Development, analysis and effective use of numerical methods to solve problems arising in applications. Topics include linear and nonlinear systems of equations, fast Fourier transform, eigenvalue problems, interpolation, approximation, quadrature, solution of ordinary differential equations.
17. Supplementary information to appear in the Calendar in addition to the course description. Such as: equivalent course(s), contact hours, enrolment limitations, language of instruction etc. Please enter the information as it should appear in the calendar notes.

18. Schedule Types(s):
(Enter all that apply – see course guidelines for a complete list.)

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<th>Hours per Week</th>
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Total Hours per Week: __________
Total Number of Weeks: ________

19. Projected Enrolment:
15

20. Revised Prerequisite(s) (Courses or Tests) (in full)
Specify course number(s) or name(s) of test(s):
MATH 247 or MATH 251; and MATH 387; or permission of the instructor.

If the student does not have a prerequisite should web registration be blocked?
☐ Yes ☐ No

If “Yes” complete A and B:
A. Indicate minimum grade or test score(s) the student must attain in prerequisite course(s) or test(s):

B. Can the prerequisite course(s) or test(s) be taken in the same term as this course?
☐ Yes ☐ No

Old prerequisite course number(s) or test score title(s) (if applicable)
MATH 223 or MATH 247 or MATH 251 or MATH 270: MATH 248 or MATH 265 or MATH 314; MATH 315 or MATH 261 or MATH 325; MATH 317 or MATH 387; or the instructor’s approval.

21. Revised Corequisite(s) Course Number(s) (in full):
Specify course number(s):

If the student does not register for the corequisite in the same term should web registration be blocked?
☐ Yes ☐ No

Old corequisite(s) course numbers (if applicable):

22. Revised Restriction(s):

Old Restriction(s):

23. Additional Course Charges (must be approved by the Fee Policy Committee)
Description of Fee (e.g. screening fee) Amount

24. Requires Teaching, Physical, or Financial Resources
Not Currently Available (attach explanation)
☐ Yes ☐ N/A

25. Consultation Reports Attached
☐ Yes ☐ N/A
### INFORMATION FOR ADMISSIONS, RECRUITMENT & REGISTRAR'S OFFICE

**To be completed by the Faculty**

- **Slot Course:** [ ] Yes  [ ] No
- **CIP Code**

**To be completed by ARR**

- **CE Admin. Unit:**
- **CE Non-Grant Courses:**

**For Continuing Education Use**

- **Flat Rate: Cdn**

**Thesis Component:** [ ] Yes  [ ] No

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<tr>
<th>Routing Sequence</th>
<th>Departmental Meeting</th>
<th>Departmental Chair</th>
<th>Other Faculty</th>
<th>Curric/Academic Committee</th>
<th>Faculty</th>
<th>SCTP</th>
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<tbody>
<tr>
<td>Name</td>
<td>Georg Schmidt</td>
<td>K. Gowri Sankaran</td>
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**Departmental Contact Person**

(name/phone/email)