Requirements for the 5-yr BS/MS Degree with a Major in Applied Mathematics

STUDENT NAME:__________________________________________________
STUDENT ID#:_____________________________________________________

Undergraduate Level Course Requirements
At least 40 credit hours in the department including:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3450:221</td>
<td>Analytic Geometry-Calculus I</td>
<td>4.0</td>
</tr>
<tr>
<td>3450:222</td>
<td>Analytic Geometry-Calculus II</td>
<td>4.0</td>
</tr>
<tr>
<td>3450:223</td>
<td>Analytic Geometry-Calculus III</td>
<td>4.0</td>
</tr>
<tr>
<td>3450:312</td>
<td>Linear Algebra</td>
<td>3.0</td>
</tr>
<tr>
<td>3450:335</td>
<td>Introduction to Ordinary Differential Equations</td>
<td>3.0</td>
</tr>
<tr>
<td>*3460:209</td>
<td>Introduction to Computer Science</td>
<td>4.0</td>
</tr>
<tr>
<td>3450:427</td>
<td>Applied Numerical Methods I</td>
<td>3.0</td>
</tr>
<tr>
<td>3450:428</td>
<td>Applied Numerical Methods II</td>
<td>3.0</td>
</tr>
<tr>
<td>3450:436</td>
<td>Mathematical Models</td>
<td>3.0</td>
</tr>
<tr>
<td>3450:539</td>
<td>Advanced Engineering Mathematics II</td>
<td>3.0</td>
</tr>
<tr>
<td>3470:461</td>
<td>Applied Statistics I</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Undergraduate Electives
Fifteen hours of 300/400 level electives of which at least six-credits are at the 300/400 level in some approved applied area such as Chemistry, Computer Science, Physics, Economics, Engineering, etc.

<table>
<thead>
<tr>
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<th>Credits</th>
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<tbody>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>3.0</td>
</tr>
<tr>
<td></td>
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<td>3.0</td>
</tr>
</tbody>
</table>

**Other electives (Some of these courses are possibly graduate level courses to be applied toward the elective requirement of the bachelor’s degree):**

<table>
<thead>
<tr>
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<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>3.0</td>
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<tr>
<td></td>
<td></td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.0</td>
</tr>
</tbody>
</table>

Foreign Language: 101 102

Sign Language: 201 202 222

Foreign Language has four specific courses and Sign Language has five specific courses. Both options total 14 credits for the language requirement.

General Education Requirements: www.uakron.edu/academics_majors/ub/general-education

NOTES:
1. The courses 3450:100, 140, 135, 145, 149, and 401 do not meet major requirements.
2. The student is required to take 40 hours of 300/400 level courses not including general education courses and workshops.
3. The student must achieve an overall GPA of 2.0 for all courses taken and a 2.0 GPA for courses in the major in order to graduate.
4. This program of study and the general education evaluation are effective for 5 years from date of signature. If there is a change in a major or a transfer to another college, a new program of study must be drawn up. A minimum of 120 earned, approved semester credit hours are needed for graduation.

*This course will count towards the requirement of 40 credits of 300/400 level courses.

**Subject to approval by the Dean, up to six credits of courses prerequisite to those taken at the 300/400 level will count towards the 40-hour requirement in Note 2. These approved courses count as 300/400 level electives.

Graduate Level Course Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>3450:621</td>
<td>Real Analysis</td>
<td>3.0</td>
</tr>
<tr>
<td>3450:627</td>
<td>Advanced Numerical Analysis I</td>
<td>3.0</td>
</tr>
<tr>
<td>3450:633</td>
<td>Methods of Applied Mathematics I</td>
<td>3.0</td>
</tr>
<tr>
<td>3450:692</td>
<td>Seminar in Mathematics</td>
<td>3.0</td>
</tr>
<tr>
<td>3450:699</td>
<td>Masters Thesis</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Group 1. At least one course from this list must be taken:
- 3450:625 Analytic Function Theory
- 3450:628 Advanced Numerical Analysis II
- 3450:632 Advanced Partial Differential Equations

Group 2. At least two courses from this list must be taken:
- 3450:634 Methods of Applied Mathematics II
- 3450:635 Optimization
- 3450:730 Advanced Numerical Solution of Partial Differential Equations

Courses marked with *** are to be applied to the requirements of both the bachelor’s and master’s degree.

COMMENTS_________________________________________________________

March 15, 2018-blue
General Education Requirement

1. English Composition (7 credits)
   3300:111 ___________ _cr._
   3300:112 ___________ _cr._

2. Mathematics (3 credits)
   3450: ___________ _cr._
   or
   3470: ___________ _cr._

3. Natural Science (8 credits)
   (Minimum of 2 courses, one of which has a lab component, selected from two different departments)
   Biology ___________ _cr._
   or
   Chemistry ___________ _cr._
   or
   Geology ___________ _cr._
   or
   Physics ___________ _cr._

4. Oral Communication (3 credits)
   7600:105 ___________ _cr._
   or
   7600:106 ___________ _cr._

5. Physical Education/Wellness (1 credit)
   5540: ___________ _cr._
   5540: ___________ _cr._

6. Social Sciences (6 credits)
   (Courses selected from two different sets)
   Economics ___________ _cr._
   Geography ___________ _cr._
   US Govt/Politics ___________ _cr._
   Psychology ___________ _cr._
   Sociology/Anthropology ___________ _cr._
   United States History ___________ _cr._
   Social Science/Technology ___________ _cr._
   /Society

7. Humanities (10 credits – 3 courses)
   3400:210 ___________ _cr._
   and
   2 courses selected from two different departments
   Fine Arts ___________ _cr._
   or
   Philosophy/Classics ___________ _cr._
   or
   Literature ___________ _cr._
   or
   3400:211 ___________ _cr._

8. Area Studies and Diversity (4 credits – 2 courses)
   ___________ _cr._
   ___________ _cr._

September 10, 2008-blue