Curriculum Change Proposal Form

1) Unit proposing the change: Department of Mathematics & Computer Science
2) Please check all appropriate items:

<table>
<thead>
<tr>
<th>New Course:</th>
<th>Course Change:</th>
<th>Course Deletion:</th>
<th>Program Changes:</th>
<th>New Programs:</th>
</tr>
</thead>
</table>
| ☐ New Course Creation²  
(include title, credits, description, etc.) | ☐ Number (within level), title, description, pre-req change¹ | ☐ Remove a Course² | ☐ Change to Major¹ | ☐ New Degree⁷ |
| ☐ Course to be Cross Listed¹ | ☐ Add to LAE³ | ☐ Remove a course that is currently in the LAE⁴ | ☐ Change to Minor¹ | ☐ New Program in principle⁴ |
| ☐ Course to be included in LAE³⁴ | ☐ Remove from LAE³ | ☐ Change to LAE (change to the LAE itself)⁴ | ☐ New Program with curriculum⁵ |
| ☐ Course Included in Major/Minor Requirements¹ | ☐ Change in Cross-List Status² | ☐ Add a Minor | | |
| ☐ Special Course or non-credit workshop⁵ | | | | |
| | | | | |

¹ Curriculum Committee receive & report to faculty  
² 30 day faculty review required  
³ LAE assessment plan with assessment committee review required prior to CC consideration  
⁴ Full faculty approval required  
⁵ Curriculum Committee for action, approval published to faculty

3. Proposed term of initial offering or implementation date: Fall 2013

4. Please provide the following information here or attached:
   a. recommended level: [PR] SO JR SR
   b. credit hours: 3
   c. title: Introduction to Computing (CPSC 100)
   d. requirements it will satisfy: (major, minor, LAE, licensure): Major, Minor, LAE
   e. prerequisites or other special conditions: 
   f. description of change:  
      Title Changes to: Introduction to Computer Science
   g. proposed catalog description:  
      See attached sheet
   h. justification for change:  
      See attached sheet
   i. staffing considerations:  
      (1) can be taught by present staff X  
      (2) will require additional staff
   j. anticipated frequency of offering:  
      (1) every semester X  
      (2) once a year  
      (3) alternate years
   k. resources (facilities, equipment, supplies, library materials, etc.) See attached sheet
CPSC 100 - Introduction To Computer Science

Course Description: Presents an overview of fundamental computer science topics and an introduction to computer programming. Overview topics include an introduction to computer science and its history, computer hardware, operating systems, digitization of data, computer networks, Internet and the Web, security, privacy, AI, and databases. This course also covers variables, operators, while loops, for loops, if statements, top down design (functional decomposition), use of an IDE, debugging, and arrays.

Prerequisites: None

Rationale: The Computer Science role in the LAE was previously served by CPSC 110, Introduction to Software Development, and CPSC 100, Introduction to Computing. Neither class provided what we felt an LAE class should provide, which was a true introduction to the major for non-majors. We also had a significant amount of relevant material in CPSC 100 that our majors were not being exposed to. By creating a single class that is taken by both majors and non-majors, we’re able to provide a true introduction to Computer Science for both audiences, and ensure that our majors have the general background we’d like.

Required for Major, Minor, serves as our LAE course

Frequency of offering: every semester

Learning Outcomes:

- Design and write HTML/CSS for a website
- Describe the threats to privacy and security as related to computers and computer networks.
- Design and implement a Python based solution to a problem
- Describe the Turing Test and explain the differences between computer reasoning and human reasoning
- Describe the role of an Operating System
- Describe the role of databases in computer applications
- Design a simple database to solve a problem
- Explain how different sorts of information are digitized
- Convert between binary, decimal, and hexadecimal
- Describe and use arrays in a program
- Describe and use control structures in a program: if, while, for
5. Signatures:

Department Chair: Dr. Richard D'Aguiar

(please attach department discussion summary)

Date: 10/12/2022
Department Vote:
in favor 6 opposed 0 abstentions 0

Vice-President of Graduate and Continuing Studies (MAP): (if applicable)

In favor or opposed or abstain (circle one)
Please attach comments.
Date: __/__/____

Teacher Preparations Programs [Initial Licensure]: (if applicable)

In favor or opposed or abstain (circle one)
Please attach comments.
Date: __/__/____

Division Coordinator: [Signature]

(please attach department and division discussion summaries)

Date: 11/31/2012
Division Vote:
in favor 25 opposed 2 abstentions 0

Committee Chair (VPAA):

Date: __/__/____
Curr Comm vote:
in favor ___ opposed ___ abstentions ___

6. Date of Resolution:
(a) 30-day approval period ends ____________________
(b) date of faculty meeting for consideration ____________________

NOTE: See APAP section 110 for more information regarding changes to curriculum.
Curriculum Change Proposal Form

1) Unit proposing the change: Department of Mathematics & Computer Science
2) Please check all appropriate items:

<table>
<thead>
<tr>
<th>New Course:</th>
<th>Course Change:</th>
<th>Course Deletion:</th>
<th>Program Changes:</th>
<th>New Programs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ New Course Creation</td>
<td>☐ Number (within level), title, description, etc.</td>
<td>☐ Remove a Course</td>
<td>☐ Change to Major</td>
<td>☐ New Degree</td>
</tr>
<tr>
<td>☐ Course to be Cross Listed</td>
<td>☐ Add to LAE</td>
<td>☐ Remove a course that is currently in the LAE</td>
<td>☐ Change to Minor</td>
<td>☐ New Program in principle</td>
</tr>
<tr>
<td>☐ Course to be included in LAE</td>
<td>☐ Remove from LAE</td>
<td>☐ Change to LAE (change to the LAE itself)</td>
<td>☐ Add a Minor</td>
<td></td>
</tr>
<tr>
<td>☐ Course Included in Major/Minor Requirements</td>
<td>☐ Change in Cross-List Status</td>
<td>☐ Delete a Major or Minor</td>
<td>☐ Change to Degree Requirements</td>
<td></td>
</tr>
<tr>
<td>☐ Special Course or non-credit workshop</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td></td>
</tr>
</tbody>
</table>

1 Curriculum Committee receive & report to faculty
2 30 day faculty review required
3 LAE assessment plan with assessment committee review required prior to CC consideration
4 Full faculty approval required
5 Curriculum Committee for action, approval published to faculty

3. Proposed term of initial offering or implementation date: Fall 2013
4. Please provide the following information here or attached:
   a. recommended level: [FR] SO JR SR
   b. credit hours: __3__
   c. title: __Introduction to Software Development (CPSC 110)__
   d. requirements it will satisfy: (major, minor, LAE, licensure): Major, Minor, LAE
   e. prerequisites or other special conditions: ____________
   f. description of change:
      Remove this course from the catalog
   g. proposed catalog description:
   h. justification for change:
      The proposed revisions in CPSC 100 and CPSC 111 will replace this course.
   i. staffing considerations:
      (1) can be taught by present staff __________
      (2) will require additional staff __________
   j. anticipated frequency of offering:
      (1) every semester __________
      (2) once a year __________
      (3) alternate years __________
   k. resources (facilities, equipment, supplies, library materials, etc.) See attached sheet
5. Signatures:

Dr. Richard Daquila

Department Chair: ____________________________
(please attach department discussion summary)
Date: 10/12/2012

Department Vote:
in favor 6 opposed 0 abstentions 0

Vice-President of Graduate and Continuing Studies (MAP): (if applicable) ____________________________
In favor or opposed or abstain (circle one)
Please attach comments.
Date: __/___/____

Teacher Preparations Programs [Initial Licensure]: (if applicable) ____________________________
In favor or opposed or abstain (circle one)
Please attach comments.
Date: __/___/____

Division Coordinator: ____________________________
(please attach department and division discussion summaries)
Date: 11/17/2012
Division Vote:
in favor 45 opposed 2 abstentions 0

Committee Chair (VPAA): ____________________________
Date: __/___/____
Curr Comm vote:
in favor ____ opposed ____ abstentions ____

6. Date of Resolution:
(a) 30-day approval period ends ____________________________
(b) date of faculty meeting for consideration ____________________________

NOTE: See APAP section 110 for more information regarding changes to curriculum.
Curriculum Change Proposal Form

1) Unit proposing the change: Department of Mathematics & Computer Science

2) Please check all appropriate items:

<table>
<thead>
<tr>
<th>New Course:</th>
<th>Course Change:</th>
<th>Course Deletion:</th>
<th>Program Changes:</th>
<th>New Programs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ New Course Creation* (include title, credits, description, etc.)</td>
<td>☑ Number (within level), title, description, pre-req change</td>
<td>☐ Remove a Course</td>
<td>☐ Change to Major</td>
<td>☐ New Degree*</td>
</tr>
<tr>
<td>☐ Course to be Cross Listed*</td>
<td>☐ Add to LAE*:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Course to be included in LAE**</td>
<td>☐ Remove from LAE*</td>
<td>☐ Remove a course that is currently in the LAE*</td>
<td>☐ Change to LAE (change to the LAE itself)*</td>
<td></td>
</tr>
<tr>
<td>☐ Course Included in Major/Minor Requirements*</td>
<td>☑ Change in Cross-List Status*</td>
<td></td>
<td>☐ Add a Minor</td>
<td></td>
</tr>
<tr>
<td>☐ Special Course or non-credit workshop*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Curriculum Committee receive & report to faculty
** 30 day faculty review required
* LAE assessment plan with assessment committee review required prior to CC consideration
4 Full faculty approval required
5 Curriculum Committee for action, approval published to faculty

3. Proposed term of initial offering or implementation date: Spring 2014

4. Please provide the following information here or attached:
   a. recommended level: [FR] SO JR SR
   b. credit hours: ___3___
   c. title: ___Computer Science I (CPSC 111)___
   d. requirements it will satisfy (major, minor, LAE, licensure): Major, Minor
   e. prerequisites or other special conditions: CPSC 100
   f. description of change:
      Prerequisite Changes to : Introduction to Computer Science
   g. proposed catalog description:
      See attached sheet
   h. justification for change:
      See attached sheet
   i. staffing considerations:
      (1) can be taught by present staff ___x___
      (2) will require additional staff ____
   j. anticipated frequency of offering:
      (1) every semester ___x___
      (2) once a year ___
      (3) alternate years ____
   k. resources (facilities, equipment, supplies, library materials, etc.) See attached sheet
5. Signatures:

Department Chair: __________________________

(please attach department discussion summary)

Date: 10/12/2012

Department Vote:

in favor 6 opposed 0 abstentions 0

Vice-President of Graduate and Continuing Studies (MAP): (if applicable) __________________________

In favor or opposed or abstain (circle one)

Please attach comments.

Date: __/__/____

Teacher Preparations Programs [Initial Licensure]: (if applicable) __________________________

In favor or opposed or abstain (circle one)

Please attach comments.

Date: __/__/____

Division Coordinator: __________________________

(please attach department and division discussion summaries)

Date: 01/17/2012

Division Vote:

in favor ___ opposed ___ abstentions ___

Committee Chair (VPAA): __________________________

Date: __/__/____

Curr Comm vote:

in favor ___ opposed ___ abstentions ___

6. Date of Resolution:

(a) 30-day approval period ends __________________

(b) date of faculty meeting for consideration ______________

NOTE: See APAP section 110 for more information regarding changes to curriculum.
CPSC 111 - Computer Science I

Course Description: This course provides more in-depth programming, including software engineering topics such as unit testing and the use of version control. Basic data structures covered include arrays, lists, sets, maps. Basic algorithm efficiency concepts are covered along with simple searching and sorting. Other techniques such as graphical user interface programming, exceptions, recursion, designing classes (no inheritance), file input/output. Design techniques such as encapsulation and UML diagramming will be covered. Prerequisites: CPSC 100

Rationale: Given that students taking CPSC 111 are now required to take CPSC 100 first, we can make assumptions about what they bring into CPSC 111. This allows us to get a running start on the material. We’re also working in a significant amount of software engineering practices that will help students to be more successful, both in future coursework and in future careers.

Required for Major, Minor

Frequency of offering: every semester

Learning Outcomes:
- Independently research topics and present on the results
- Trace the execution of a program to understand what happens as it runs, for the purposes of debugging
- Test programs to ensure correct operation using unit testing
- Use version control on a project
- Explain the basic concepts of algorithm efficiency, and estimate the efficiency of an algorithm by visual examination
- Create an algorithm to solve a problem
- Convert an algorithm into working code
- Describe and use in a program the following data structures: arrays, lists, sets, maps
- Design classes to solve a problem and express the design in UML