Curriculum Subcommittee Agenda
2 February 2017

A meeting of the Curriculum Subcommittee of the Educational Policies Committee will be held on 2 February 2017 at 2:00 pm in Old Main 136 (Champ Hall Conference Room).

1. Approval of 12 January 2017 Minutes (link)

2. Program Proposals
   Request from the Department of Computer Science in the College of Engineering to offer a Computer Science Teaching Minor. (link)

3. Semester Course Approval Reviews
   https://usu.curriculog.com/

   1. AG - ADVS - 5530
   2. AG - AV - 3280
   3. BU - ACCT - 2010
   4. BU - ACCT - 3110
   3. ED - ELED - 3000
   4. ED - ELED - 5050
   5. EN - BENG - 4880
   6. EN - BENG - 5500
   7. EN - BENG - 5850
   8. EN - BENG - 6670
   9. EN - CEE - 3160
   10. EN - MAE - 5360
   11. HS - HIST - 3330
   12. HS - PHIL - 1500
   13. TEE - 1000

College of Agriculture and Applied Sciences
ADVS = 1
APEC =
ASTE = 2
LAEP =
NDFS =
PSC =
Caine College of the Arts
ART =
MUSC =
THEA =

Jon M. Huntsman School of Business
ACCT = 2
BUS =
ECN =
MGT =
MIS =

Emma Eccles Jones College of Education and Human Services
COMD =
EDUC =
FCHD =
KHS =
ITLS =
NURS =
PSY =
SPER =
TEAL = 2

College of Engineering
BENG = 4
CEE = 1
CS =
ECE =
EED =
MAE = 1

College of Humanities and Social Sciences
ENGL =
HIST = 1
JCOM =
LPCS = 1
POLS =
SSWA =

S.J. & Jessie E. Quinney College of Natural Resources
ENVS =
WATS =
WILD =

College of Science
BIOL =
CHEM =
GEOL =
MATH =
PHYS =
USU =
CAS =

4. Other Business
   Curriculog shut down – actions to be taken.

Adjourn:
A meeting of the Curriculum Subcommittee of the Educational Policies Committee was held on 12 January 2017 at 2:00 pm in Old Main 136 (Champ Hall Conference Room).

Present: Vijay Kannan, Chair, Jon M. Huntsman School of Business  
Brian Warnick, College of Agriculture and Applied Sciences  
Scott Hunsaker, Emma Eccles Jones College of Education and Human Services  
Michele Hillard, Secretary  
Cara Allen, Graduate Council  
Richard Mueller, College of Science  
Matt Sanders, College of Humanities and Social Sciences  
Dean Adams, College of Engineering  
Scott Henrie, USU-Eastern  
Barbara Williams, Catalog Editor  
Ryan Bentall, USUSA Executive Vice President  
Nicholas Morrison, Caine College of the Arts  
Ed Reeve, Chair, EPC  
Jessica Hansen, Academic and Instructional Services  
Nathan Straight, Regional Campuses  
Claudia Radel, S.J. & Jessie E. Quinney College of Natural Resources  
Clint Pumphrey, Libraries

Absent: Scott Bates, Chair, Academic Standards  
Ty Aller, Graduate Studies Senator  
Janet Anderson, Office of the Provost  
Heidi Kesler, Registrar’s Office  
Fran Hopkin, Registrar’s Office

Visitors: Erin Brewer, Project Coordinator, Climate Adaptation Sciences  
Nancy Huntly, Director, Ecology Center  
Andy Walker, Department Head, Instructional Technology and Learning Sciences  
Gretchen Peacock, Department Head, Psychology  
Kerry Rood, Animal Dairy and Veterinary Sciences  
Bruce Miller, Department Head, School of Applied Sciences, Technology and Education

1. **Approval of 1 December 2016 Minutes**  
   Motion to approve the minutes of the 1 December 2016 meeting made by Dean Adams. Seconded by Nick Morrison. Minutes approved.

2. **Program Proposals**  
   Request from the Department of Computer Science in the College of Engineering to offer a Master of Science in Data Science.  
   Proposal will be held until February when new/updated proposal will be submitted.
Request from the Department of Computer Science in the College of Engineering to offer a Computer Science Teaching Minor.  
Proposal will be held until February when new/updated proposal will be submitted.

Request from the School Applied Sciences, Technology and Education in the College of Agriculture and Applied Sciences to offer a Bachelor of Science in Technology Systems.  
Remove CMST 3250 and replace with CMST 2110.  Motion to approve the proposal pending revision made by Brian Warnick.  Seconded by Nick Morrison.  Proposal approved.

Request from the Department of Animal, Dairy and Veterinary Science in the College of Agriculture and Applied Sciences to offer a Minor in Equine Assisted Activities and Therapies.  
Revise certification language.  Third paragraph should say students.  Motion to approve the proposal pending revisions made by Brian Warnick.  Seconded by Nick Morrison.  Proposal approved.

Request from the Department of Instructional Technology and Learning Sciences in the Emma Eccles Jones College of Education and Human Services to change the name of the Master of Learning Technology and Instructional Design to Master of Arts in Instruction Technology and Learning.  
Motion to approve the proposal made by Ryan Bentall.  Seconded by Matt Sanders.  Proposal approved.

Request from the Department of Psychology in the Emma Eccles Jones College of Education and Human Services to restructure the EAPS specialization into four new specializations: Behavior Analysis, Brain and Cognition, Quantitative Psychology and Sociobehavioral Epidemiology.  
Include definition of EAPS and number of students.  Motion to approve the proposal pending revisions made by Scott Hunsaker.  Seconded by Nick Morrison.  Proposal approved.

Request from the Department of Mathematics and Statistics in the College of Science to offer a Master’s Degree in Data Analytics.  
Ensure consistency of acronym of MDA.  Motion to approve the proposal pending revision made by Dick Mueller.  Seconded by Nick Morrison.  Proposal approved.

3. Semester Course Approval Reviews  
https://usu.curriculog.com/

College of Agriculture and Applied Sciences  
Motion to approve the business of the College of Agriculture and Applied Sciences made by Brian Warnick.  Seconded by Dick Mueller.  Business approved.

ADVS =
APEC = 1
ASTE = 7
LAEP =
NDFS =
PSC = 1
Caine College of the Arts
Motion to approve the business of the Caine College of the Arts made by Nick Morrison. Seconded by Dick Mueller. Business approved.

ART = 5
MUSC =
THEA =

Jon M. Huntsman School of Business
Motion to approve the business of the Jon M. Huntsman School of Business made by Dick Mueller. Seconded by Dean Adams. Business approved.
ACCT =
BUS =
ECN = 1
MGT =
MIS =

Emma Eccles Jones College of Education and Human Services
Motion to approve the business of the Emma Eccles Jones College of Education and Human Services made by Scott Hunsaker. Seconded by Nick Morrison. Business approved.

COMD = 2 (COMD 7930 apostrophe after students)
EDUC =
FCHD =
KHS =
ITLS =
NURS =
PSY = 1
SPER =
TEAL =

College of Engineering
Motion to approve the business of the College of Engineering made by Dean Adams. Seconded by Dick Mueller. Business approved.

BENG =
CEE =
CS = 3 (CS 1400 & 1405 wait listing is not available)
ECE =
EED = 2
MAE = 1

College of Humanities and Social Sciences
Motion to approve the business of the College of Humanities and Social Sciences made by Matt Sanders. Seconded by Ryan Bentall. Business approved.

ENGL =
HIST =
JCOM =
LPCS = 2
POLS =
SSWA =

S.J. & Jessie E. Quinney College of Natural Resources
Motion to approve the business of the S.J. & Jessie E. Quinney College of Natural Resources made by Claudia Radel. Seconded by Nick Morrison. Business approved.

ENVS =
WATS = 2
WILD =

College of Science
Motion to approve the business of the College of Science made by Dick Mueller. Seconded by Dean Adams. Business approved.

BIOL = 1
CHEM =
GEOL =
MATH =
PHYS =

Motion to approve the USU and CAS business made by Nick Morrison. Seconded by Dean Adams. Business approved.

USU = 1
CAS = 5

4. Other Business

Adjourn: 2:55 pm
Utah System of Higher Education
New Academic Program Proposal
Cover/Signature Page - Abbreviated Template

Institution Submitting Request: Utah State University
Proposed or Current Program Title: Computer Science Teaching Minor
Sponsoring School, College, or Division: College of Engineering
Sponsoring Academic Department(s) or Unit(s): Computer Science
Classification of Instructional Program Code¹: 11.07
Min/Max Credit Hours Required of Full Program: 16 / 18
Proposed Beginning Term²: Spring 2018
Institutional Board of Trustees’ Approval Date:

☐ Certificate of Proficiency ☐ Entry-level CTE CP ☐ Mid-level CP
☐ Certificate of Completion
☒ Minor
☐ Graduate Certificate
☐ K-12 Endorsement Program
☐ NEW Emphasis for Regent-Approved Program
☐ Out of Service Area Delivery Program

Chief Academic Officer (or Designee) Signature:
I, the Chief Academic Officer or Designee, certify that all required institutional approvals have been obtained prior to submitting this request to the Office of the Commissioner.

______________________________ Date:

☐ I understand that checking this box constitutes my legal signature.

² “Proposed Beginning Term” refers to first term after Regent approval that students may declare this program.
Section I: The Request

Utah State University requests approval to offer the following Minor: Computer Science Teaching Minor effective Spring 2018. This program was approved by the institutional Board of Trustees on .

Section II: Program Proposal/Needs Assessment

Program Description/Rationale

Present a brief program description. Describe the institutional procedures used to arrive at a decision to offer the program. Briefly indicate why such a program should be initiated. State how the institution and the USHE benefit by offering the proposed program. Provide evidence of student interest and demand that supports potential program enrollment.

The minor will be approved at the department and college level.

Many math teaching majors (and to some extent science teaching majors) have asked about a CS teaching credential. This interest has been ongoing for the last ten years. At the most recent majors meeting, this topic received a lot of discussion.

USU has one of the top education programs in the nation. It makes sense to attach a CS teaching credential to our education program. Additionally, there is an increasing need for CS in our state.

Computer Science for All is the President's new initiative to empower all American students from kindergarten through high school to learn computer science and be equipped with the computational thinking skills they need to be creators in the digital economy. Both educators and business leaders are increasingly recognizing that computer science is a “new basic” skill necessary for economic opportunity and social mobility.

Labor Market Demand

Provide local, state, and/or national labor market data that speak to the need for this program. Occupational demand, wage, and number of annual openings information may be found at sources such as Utah DWS Occupation Information Data Viewer (jobs.utah.gov/jsp/wi/utalmis/gotoOccinfo.do) and the Occupation Outlook Handbook (www.bls.gov/oco).

According to the occupation Outlook Handbook, median pay for Career and Technical Education Techers was $53,800 per year in 2015. There were 231,800 jobs in 2014 with a expected 4% growth grade (2014-2024).

According to NCWIT (The National Center for Women and Information Technology), by 2024, 1.1 million computing-related job openings are expected. At the current rate, only 41% of these jobs could be filled by U.S. computing bachelor’s degree recipients. Students need the opportunity to receive this vital training.

In order to produce the needed supply of Computer Science graduates, we need Computer Science instruction in the high schools. Creation of this teaching minor will help to provide Computer Science instruction.

Consistency with Institutional Mission/Impact on Other USHE Institutions

Explain how the program is consistent with the institution's Regents-approved mission, roles, and goals. Institutional mission and roles may be found at higheredutah.org/policies/policyr312/. Indicate if the program will be delivered outside of designated service area; provide justification. Service areas are defined in higheredutah.org/policies/policyr315/.
This program is consistent with the mission of Utah State University as it aids teacher preparation.

Last year, there were more than 600,000 high-paying tech jobs across the United States that were unfilled, and by 2018, 51 percent of all STEM jobs are projected to be in computer science-related fields. Computer science and data science are not only important for the tech sector, but for so many industries, including transportation, healthcare, education, and financial services.

The citizens of Utah need access to this important training.

Other USHE institutions have expressed interest in the program. Currently, there is a Teaching Minor offered at the University of Utah and Weber State. Since the teaching minor is associated with a traditional education degree, it is important for the teaching minor to be available locally.

**Finances**

*What costs or savings are anticipated in implementing the proposed program? If new funds are required, indicate expected sources of funds. Describe any budgetary impact on other programs or units within the institution.*

$6K per year will be required to teach CS4350, the new methods course. Other required classes are currently being taught and require no new funding. Funds will be paid for out of normal departmental budgets.
Section III: Curriculum

Program Curriculum

List all courses, including new courses, to be offered in the proposed program by prefix, number, title, and credit hours (or credit equivalences). Indicate new courses with an X in the appropriate columns. The total number of credit hours should reflect the number of credits required to receive the award. For NEW Emphases, skip to emphases tables below.

For variable credits, please enter the minimum value in the table below for credit hours. To explain variable credit in detail as well as any additional information, use the narrative box below.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>NEW Course</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>General Education Courses (list specific courses if recommended for this program on Degree Map)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Required Courses</td>
<td></td>
</tr>
<tr>
<td>+ -</td>
<td>CS 1400</td>
<td>Introduction to Computer Science CS1</td>
<td>4</td>
</tr>
<tr>
<td>+ -</td>
<td>CS1410</td>
<td>Introduction to Computer Science CS2</td>
<td>3</td>
</tr>
<tr>
<td>+ -</td>
<td>CS2420</td>
<td>Algorithms and Data Structures CS3</td>
<td>3</td>
</tr>
<tr>
<td>+ -</td>
<td>CS4350</td>
<td>Teaching Methods</td>
<td>3</td>
</tr>
<tr>
<td>+ -</td>
<td>SCED3300</td>
<td>Clinical Experience 1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Required Course Credit Hour Sub-Total</td>
<td>14</td>
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<tr>
<td></td>
<td></td>
<td>Elective Courses</td>
<td></td>
</tr>
<tr>
<td>+ -</td>
<td>CS2410</td>
<td>Introduction to Event Driven Programming and GUI's</td>
<td>3</td>
</tr>
<tr>
<td>+ -</td>
<td>CS2610</td>
<td>Developing Dynamic, Database-Driven, Web Applications</td>
<td>3</td>
</tr>
<tr>
<td>+ -</td>
<td>CS3100</td>
<td>Operating Systems and Concurrency</td>
<td>3</td>
</tr>
<tr>
<td>+ -</td>
<td>CS3200</td>
<td>Mobile Application Development</td>
<td>3</td>
</tr>
<tr>
<td>+ -</td>
<td>CS3430</td>
<td>Scientific Computing with Python</td>
<td>3</td>
</tr>
<tr>
<td>+ -</td>
<td>CS3450</td>
<td>Introduction to Software Engineering (CI)</td>
<td>3</td>
</tr>
<tr>
<td>+ -</td>
<td>CS4700</td>
<td>Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>+ -</td>
<td></td>
<td>Any advisor approved class numbered 5000 or above (3-4 credits)</td>
<td>3</td>
</tr>
<tr>
<td>+ -</td>
<td></td>
<td>(Select two electives)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Elective Credit Hour Sub-Total</td>
<td>6</td>
</tr>
</tbody>
</table>

Core Curriculum Credit Hour Sub-Total | 20

Program Curriculum Narrative

Describe any variable credits. You may also include additional curriculum information, as needed.

The 5000 level courses may be 4 credits.
Degree Map

Degree maps pertain to undergraduate programs ONLY. Provide a degree map for proposed program. Degree Maps were approved by the State Board of Regents on July 17, 2014 as a degree completion measure. Degree maps or graduation plans are a suggested semester-by-semester class schedule that includes prefix, number, title, and semester hours. For more details see [http://higheredutah.org/pdf/agendas/201407/TAB%20A%202014-7-18.pdf](http://higheredutah.org/pdf/agendas/201407/TAB%20A%202014-7-18.pdf) (Item #3).

Please cut-and-paste the degree map or manually enter the degree map in the table below.

<table>
<thead>
<tr>
<th>First Year Fall</th>
<th>Cr. Hr.</th>
<th>First Year Spring</th>
<th>Cr. Hr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 1400: Introduction to Computer Science--CS</td>
<td>4</td>
<td>CS 1410: Introduction to Computer Science--CS</td>
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</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>Total</td>
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<table>
<thead>
<tr>
<th>Second Year Fall</th>
<th>Cr. Hr.</th>
<th>Second Year Spring</th>
<th>Cr. Hr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 2420: Algorithms and Data Structures--CS</td>
<td>3</td>
<td>CS Elective</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>Total</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Third Year Fall</th>
<th>Cr. Hr.</th>
<th>Third Year Spring</th>
<th>Cr. Hr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS Elective</td>
<td>3</td>
<td>CS4350 Computer Science Teaching Methods</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>3</td>
<td>Total</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth Year Fall</th>
<th>Cr. Hr.</th>
<th>Fourth Year Spring</th>
<th>Cr. Hr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCED3300</td>
<td>1</td>
<td></td>
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<tr>
<td>Total</td>
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<td>Total</td>
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