ACADEMIC SENATE AGENDA  
August 27, 2012

1. CALL TO ORDER: 3:00 p.m. in CRCC 215

2. MINUTES: May 7, 2012

3. REQUEST FOR NEW BUSINESS:

4. CONSENT CALENDAR
   a. Senate Appointments & Election:
      i. Parliamentarian
         ii. Senate-Institutional Policy Committee Liaison
   b. Appendix I: Resignations, Administrative and Faculty Appointments
   c. Appendix II: Auxiliary and Limited Term Appointments
   d. Appendix III: Emeritus Appointments

5. EXECUTIVE COMMITTEE REPORT:

6. REPORT FROM ADMINISTRATION:

7. REPORT FROM ASUU:

8. NOTICE OF INTENT:
   a. Proposed New Policy 6-407 – University General Student Fee Board

9. DEBATE CALENDAR:
   a. Proposal for new minor in Korean & Korean Studies
   b. Proposal for new degree-- Master of Science for Secondary School Teachers in Earth Science Teaching
   c. Proposal for new Undergraduate Major, B.S. in Multi-Disciplinary Design
   d. Proposal for name change of Minor in Parks, Recreation, and Tourism.

10. INFORMATION CALENDAR:
    a. Rule 5-130B Criminal Background Checks for Staff
    b. Policy 6-404 Undergraduate Admission, revision plan
    c. Graduate Council Review Department of Marketing
    d. Graduate Council Review Department of Materials Science and Engineering
    e. Graduate Council Review School of Architecture
    f. Graduate Council Review Department of Mechanical Engineering

11. NEW BUSINESS:

12. ADJOURNMENT:
Call to Order
The regular meeting of the Academic Senate held on May 7, 2012, was called to order at 3:04 p.m. by Patricia Hanna, Senate President. The meeting was held in room CRCC 115.

Roll:

Student Senators: Bart Blackburn (Business), Josh Johnston (Mines & Earth Science), McKenna Menees (Nursing), Geneva Thompson (ASUU President), Molly Wheeler (Social & Behavioral Sci)

Ex-officio: Robert Flores, Robert Fujinami, Patricia Hanna, Michael Hardman, James Metherall, Paul Mogren, Amy Wildermuth, Shawnee Worsley

Others:

Excused: Vivian Lee, David Pershing

Absent sent Proxy: Kevin DeLuca, Richard Dorsky


Approval of Minutes
The minutes of the Academic Senate meeting on April 2, 2012, were approved following a motion from Jim Anderson (proxy for Kevin DeLuca), and were seconded by Thad Hall.

Special Order of Business
Patricia Hanna discussed Election of Senate President-elect & Election of Senate Executive Committee. A reminder was given to participate in the new electronic voting for all other Senate Committees, an email will be sent with the link for voting. If there are questions please contact the Academic Senate Office.

A brief bio summary was given by President Elect candidates Rachel Nardo & Allyson Mower.

Request for New Business
No New Business

Consent Calendar
The resignations, retirements, faculty appointments, auxiliary and limited term appointments, appearing in the Appendices dated May 7, 2012, received approval to forward to the Board of Trustees as moved by Todd Kramer and seconded by Rachel Nardo.

Executive Committee Report
Robert Fujinami provided a summary of the Executive Committee meetings held on April 23, 2012

Report from Administration
Michael Hardman, Interim Senior VP, reported to the Senate filling in for President Pershing. Michael expressed his thanks, along with President Pershing, to all the senators who have been actively involved. Appreciation was also expressed to Pat Hanna for her hard work and can do attitude, and for the hard work of the Senate administration that helped make this a successful year for the Senate. Commencement was held on Friday, May 4th. If you were unable to attend you may watch the video online at commencement.utah.edu.

President Pershing will be touring the state during the summer, dubbed “The Great Red Road Trip.” The search for the Senior VP for Academic Affairs is underway and it is hoped to have a replacement by January 1, 2013.

Report from ASUU
The newly elected ASUU President Geneva Thompson was introduced to the Academic Senate. The new executive cabinet has been appointed and the budget approved and looking forward to the next year.

Notice of Intent
Laura Snow, Secretary of the Board of Trustees, presented the proposal for new Policy 2-001 (& to delete existing Policies 2-100 to 2-105) Authority of the University. This new Policy will be combining the contents of the old Policies and making information more available, to include websites and reference links. The motion to move to the Debate Calendar for immediate voting was made by Bradley Katz and seconded by Jim Anderson (proxy for Kevin DeLuca). Jim Anderson then moved to approve the proposal, seconded by Jim Metherall. The motion passed unanimously.
The proposal for revised Policy 1-006 & New Rules 1-006A&B Conflict of Interest, was presented by Jahn Barlow (UU Conflict of Interest Officer) and Bruce Gale (Chair of the Conflict of Interest Committee). This policy has been under revision for a couple of years and the changes will bring the University into compliance with a number of very important grant agencies’ requirements. In general, the revised policy, rules and procedures apply the same requirements for the whole University community regardless of the source of funding. This helps protect the researcher and to reduce research bias. The motion to move to the Debate Calendar for immediate voting was made by Bradley Katz and seconded by Rachel Nardo. The motion unanimously passed. Discussion was then had on senators’ concerns about the specific membership of the Conflict of Interest Committee, which is to be governed by new Rule 1-006A. Steve Adler then made the motion to approve the proposal as initially presented, but with the understanding that a revised version of the Rule addressing those concerns about committee membership will be brought to the Senate for approval within the 2012-2013 year. The motion was seconded by Jim Anderson (proxy for Kevin DeLuca), and the motion passed.

**Debate Calendar**
The proposal for a Center for Communication and Community was presented by Jim Anderson. The Department of Communication seeks to establish the Center for Communication and Community to provide the administrative means for enlisting communication scholarship into the service of community needs. The Center would be based on a micro-economics, technology-transfer, and community engaged scholarship model to create reciprocal benefits for community groups and communication faculty and students. The motion to approve the proposal and forward the proposal to the Board of Trustees was made by Marianna DiPaolo and seconded by Eric Hutton. The motion passed unanimously.

Holly Godsey and Nalini Nadkarni presented the proposal for a new Center for Science and Mathematics Education (CSME). This is a center that sits between the College of Education and the College of Science. It is addressing five issues that Dr. David Pershing put forward in the 2009. The first was to increase student retention in the sciences and math. Second was to produce more teachers and better quality teachers for k-12 education statewide, thirdly to enhance public and community engagement, fourth to gain diversity and the fifth to make all these activities active in research and evaluation. The CSME embraces a multidisciplinary, multi-department and multi-institutional approach to science and math education. The motion to approve the proposal and forward the proposal to the Board of Trustees was made by Rachel Nardo and seconded by Andrea Rorrer. The motion passed unanimously.

The proposal for a name change for the existing Adult-Gerontology Acute Care Nurse Practitioner Program, Graduate Emphasis was presented by Blaine Winters. This change in program name is being done in order to allow students who will graduate beginning in 2014 to be eligible to take the AG-ACNP certification exam. This will have no impact on the College of Nursing or the University of Utah. The motion to approve the proposal and forward the proposal to the Board of Trustees was made by Mardie Clayton and seconded by Patricia Murphy. The motion passed unanimously.
The proposal for a new Graduate Certificate in Patient Centered Outcomes Research/Comparative Effectiveness Research was presented by Amyanne Wuthrich. This proposal requests creation of a 15-credit Graduate Certificate Program. This certificate will be offered to doctoral-level graduate students across disciplines and will involve faculty interested in advancing the field of patient centered outcomes research. The purpose of this certificate is to provide focused training and credentialing for faculty at all levels and students in an emergent area of health services research. Discussion was had about revising the proposal documents to show the number of credit hours as 15 rather than 12. The motion to approve the proposal with the amendment for 15 credit hours, and forward the proposal to the Board of Trustees was made by Jim Anderson and seconded by Stephen Alder. The motion passed unanimously.

Information Calendar
The information calendar items, including the Academic Policy Advisory Committee Report and the Ad hoc Closure Committee Report were accepted without opposition or discussion.

New Business
Greg Hatch, chair of the Personnel & Elections Committee, gave the results for the voting on the President-elect and Executive Committee of the Senate. Allyson Mower, Marriott Library, was elected President-elect. The ten members elected to the Executive Committee are: Steve Alder, Kathy Chapman, Leslie Francis, Mike Gardner, Charles Grissom, Howard Horwitz, William Johnson, Anthea Letsou, V. Kim Martinez and Sonia Salari.

Respectfully submitted,
Shawnee Worsley

Appointments of Senate Parliamentarian, and Senate Liaison to Institutional Policy Committee.

(i) Pursuant to Policy 6-002, a Senate Parliamentarian is annually appointed by the Senate President, subject to approval of the Senate. For 2012-2013, the Senate President with concurrence of the Executive Committee proposes to appoint Paul Mogren (Marriott Library) as Parliamentarian. Paul has served as parliamentarian for many years, and is a past president of the Senate.

(ii) Pursuant to Policy and Rule 1-001, a Liaison from the Senate to the Institutional Policy Committee is appointed by the Senate President subject to approval of the Senate. The Liaison advises and assists in developing proposals for revising University Regulations and bringing them forward to the Senate, and represents the Senate in the various activities of the IPC. For 2012-2013 the Senate President with concurrence of the Executive Committee proposes to appoint Bob Flores (College of Law) as Senate-IPC Liaison. Bob has served in this role since the Policy Committee was established, and is a past president and past parliamentarian of the Senate.
Proposal for addition/revision of University Regulation.

1. Regulation(s) involved (type, number, subject): Student Fee Board Policy 6-407

2. Responsible Policy Officer (name & title): Michael Hardman, Interim Sr. V.P. Academic Affairs

3. Contact person(s) for questions & comments (name, email, phone#: Cathy Anderson

cathy.anderson@utah.edu; 801.581.6940

4. Presenter to Senate Exec (if different from contact person. name, phone#):

5. Approvals & consultation status.
   a. Administrative Officers who have approved (VP/President, name & date): David Pershing, President
   b. Committees/Councils/other Officers consulted: Academic Leadership Team, Institutional Policy Committee, Council of Academic Deans, President’s Cabinet, ASUU President, Faculty Executive Committee

6. Check YES or NA (not applicable) of documents submitted— (In digital form. Preferred file format MS Word doc. Special exception allowed for PDF format if previously arranged.)
   
   Yes Explanatory memorandum (key points of proposal, rationale).
   Yes VP/Presidential approval signatures (separate sheet, or affixed to memo cover).
   Yes Text of proposed Regulation addition/revision.
   
   (If revision of existing Regulation) text changes are clearly marked, using permanent font markings (not MS Word ‘Track’ Changes non-permanent markings).

Date submitted to Senate Office: 

After presentation to the Executive Committee, the Committee will consider whether the proposal is ready for the full Senate, and if so will schedule it for presentation at a subsequent Senate meeting either as i) a matter of academic significance— set on the “Intent” & “Debate” Calendars over two monthly meetings with final “approval” voting at the second, or ii) not academically significant—set on the “Information” Calendar for a single monthly meeting, with opportunity for questions and recommendations to the presenter. See Policy 1-001 http://www.regulations.utah.edu/general/1-001.html; Rule 1-001 http://www.regulations.utah.edu/general/rules/R1-001.html; Senate procedures http://www.admin.utah.edu/asenate/index.html. Further information-- Senate Office: Shawnee Worsley 581-5203 shawnee.worsley@utah.edu
MEMORANDUM

To: President David Pershing

From: Michael Hardman
     Interim Senior Vice President, Academic Affairs
     Cathy Anderson
     Associate Vice President, Budget and Planning

Date: August 7, 2012

Subject: Proposed New Policy - University General Student Fee Policy 6-407

This is a proposed new University Policy. The purpose of the policy is to formalize procedures for general student fees that have existed but have not been in writing. In October 2011, The Legislative Auditor General issued “A Performance Audit of Mandatory Student Fees at the University of Utah”. This report emphasized the need for the University to have written policies guiding the student fee process with which we agreed. The Utah System of Higher Education amended their policy, R510, Tuition and Fees, to include section 5.2 General Student Fee Policy to require each USHE institution to develop a student fee policy to include an advisory board.

A working committee was established to draft this new policy. This included representatives from ASUU, Student Affairs, Administrative Services, Budget and Planning and Internal Audit. The proposed policy creates the University General Student Fee board to act in an advisory capacity to the University President concerning student fees. The board consists of a total of 9 members: 5 students and representatives from academic affairs, student affairs, and administrative services.

If you approve of the proposal, please indicate at the top of this memo. Subsequently, this will be submitted for approval of the Academic Senate and the Board of Trustees.

It is recommended that the effective date of this policy be immediately upon approval by the Trustees.

Please contact me at 801.581.6940 if you have any questions. Thank you.
New Policy 6-407: University General Student Fee Board (Revision 0).
Effective date upon final approval

I. Purpose and Scope
A. The purpose of this Policy, in accord with Utah Board of Regents Rule R510-5 (General Fees Other Than Tuition) is to establish the University General Student Fee Board as a permanent board to act in an advisory capacity to the University President. The Board is responsible to accomplish the following objectives:
1. Provide a means for students to have input into decisions regarding student fees.
2. Evaluate proposed new student fees and changes to existing student fees.
3. Maintain a consistent process for documenting intended and allowable uses of student fees.
4. Promote ongoing accountability and control over expenditures of student fee revenues.
B. This Policy applies for general student fees, as defined here. See Policy 6-406 regarding special fees and the Special Fee Review Committee.

II. Definitions
For the limited purposes of this Policy, “general student fee” is any campus-wide fee assessed to all students, such that the fee revenue helps to pay for facilities and services available to students but the fee is not based on any individual student’s use of the facilities or services.

III. Policy
A. Establishment and Structure of the Board
The University General Student Fee Board is established. The Board consists of the following members:
   a. The Associate Vice President for Budget and Planning, (who shall be Chairperson of the Board)
   b. One member appointed by the Senior Vice President for Academic Affairs
   c. One member appointed by the Vice President for Student Affairs
   d. One member appointed by the Vice President for Administrative Services
   e. The ASUU student President
   f. One student member appointed by the ASUU Assembly.
   g. One student member appointed by the ASUU Senate.
   h. Two student members-at-large appointed by the ASUU Executive Committee.

B. Duties and Authority of Board
1. The University General Student Fee Board analyzes, coordinates, and recommends appropriate action on all requests for new, modified and existing general student fees and
ensures there is adequate documentation for fee calculations and residual balances. The Board reports its recommendations in writing to the University President at least annually. The Board is authorized to advise concerning general student fees assessed to all University students. Tuition, course fees, and special fees for particular groups shall not be subject to review by the Board. (See Policy 6-406 regarding special fees).

2. The University General Student Fee Board is authorized to take the following actions with respect to general student fees:
   a. Establish forms and procedures for requesting new student fees or changes to existing student fees.
   b. Receive requests for new student fees or changes to existing student fees, and provide recommendations to the University President.
   c. Establish evaluation criteria for the fees.
   d. Review criteria for student fees to advise the President in determining if expenditures are consistent with each fee's purpose and its original intent.
   e. Obtain budgets for the student fee expenditures and, as determined appropriate by the University President, make them available to students and the campus community.

IV. Rules, Procedures, Guidelines, Forms and other related resources
   A. Rules
   B. Procedures [reserved]
   C. Guidelines
      [See attached example of General Student Fee Review Guidelines]
   D. Forms [reserved]
   E. Other related resource materials [reserved]

V. References
   University Policy 6-406 Special Student Course Fees and Other Assessments. {add link}
   Utah Board of Regents Rule R510-5 (General Fees Other Than Tuition) {add link http://higheredutah.org/sbr/policy/pdf/R510.pdf}

VI. Contacts
   A. Policy Owner – Associate Vice President for Budget and Planning
   B. Policy Officer – Senior Vice President for Academic Affairs

VII. History
[Example of guidelines which the Board may adopt and from time to time revise, for carrying out its responsibilities under new Policy 6-407.]

Guideline: General Student Fee Review Process--- University General Student Fee Board.

Pursuant to the duties of the General Student Fee Board under University Policy 6-407, the fee board will meet at the beginning of Fall Semester for orientation and to set up the series of fee board meetings. The board will need to meet as many times as necessary for complete review of current fees, recommendations for new fees or changes to existing fees. The schedule should allow time for recommendations to be presented to the President and Cabinet for their consideration in advance of the February Board of Trustees meeting.

The fee board review format will be as follows:

a. First meeting - Orientation for board members regarding the entire fee process as constituted.
   a. History of the fee structure shared with the board.
   b. Set up meeting schedule for fee users to report fee usage and request for upcoming year.

b. Review of Fee Criteria and purpose of fee.

   The purpose of the student fees is to help to pay for facilities and services available to students.

c. Funding request should identify the services they will be providing. This can be done by asking the questions below.

   1. Whom do we serve and what do they need to do?
   2. What services do we provide so they can do what they need to do?
   3. How do we know we are doing a great job?

   • Impact on students
   • Budget impact and cost drivers
   • Feasibility
   • Cost to administer
   • Complete justification including income and expense budget
   • Residual balances from prior collections
   • Other as determined

d. Regular Board meeting format. Each fee user will have 20 minutes to make a presentation to the fee board. The presentation agenda will include:

   a. Present financial data as requested and according to template enclosed
   b. Present and demonstrate how the fee received was used in the prior year
c. Present request for new year – remain the same, decrease or increase fee

d. Answer questions for the board

e. Final Board meeting(s) format. Each student fee and subsequent information provided will be discussed. Additional information may be requested as needed. The board will review, discuss and propose acceptance or denial of fee requests with rationale. A final vote will be taken by the members of the board on each fee request proposed. Five board members with at least one student must be present for a quorum. This information in the form of a written report will be presented to the President for his/her consideration. Consensus of board is preferred but not necessary for submittal to the President.
Student Fee
20xx-xx Projected Fee Expenditures SAMPLE
(Sample Only -- Other formats may be used)

Student Fee: ____________
Current Fee amount: $___

Please select the appropriate box:
☐ The current fee amount is adequate to cover our needs

Or
☐ We are proposing an increase of $___ per semester to our existing fee. For a total fee of $___
(Must be in increments of $.25)

| Projected Revenue for next year, 20xx-xx (based on XXXXXX FTE - $1.00 = $XX,000) <= replace with current u of u # | $0.00 |
| Projected Expenditures (include projected Salary increase & medical/dental) | |
| Salary (plus benefits) as applicable | $0.00 |
| Position, title, etc. | |
| | |
| | |
| Hourly (+ benefits) as applicable | $0.00 |
| | |
| | |
| | |
| | |
| Current Expense as applicable | $0.00 |
| Maintenance Agreements | |
| Equipment | |
| Copying/Printing/Mailing | |
| Office Supplies | |
| Travel as applicable | $0.00 |
| Destination, group, etc. | |
| Other as applicable | $0.00 |
| Add categories as needed | |

Narrative/Rationale: Please present to the Board how the fee is used

Total of Estimated Expenditures $0.00
August 6, 2012

TO: Michael Hardman
   Interim Senior Vice President for Academic Affairs

FR: Ann L. Darling
   Chair, Undergraduate Council

RE: Proposal for a Korean Minor

At its meeting on Tuesday, April 17, 2012, the Undergraduate Council voted to approve a proposal from the College of Humanities for a new undergraduate minor in Korean. The proposal is attached.

We ask that, if you also approve of the proposal, that you send it on to the Executive Committee of the Academic Senate for their consideration.
Institution Submitting Request: University of Utah
Proposed Title: Minor in Korean and Korean Studies
Currently Approved Title: N/A
School or Division or Location: College of Humanities
Department(s) or Area(s) Location: Department of Languages and Literature
Recommended Classification of Instructional Programs (CIP) Code¹ (for new programs): 05.0128
Current Classification of Instructional Programs (CIP) Code (for existing programs): N/A
Proposed Beginning Date (for new programs): 01/07/2013
Institutional Board of Trustees’ Approval Date: MM/DD/YEAR

Proposal Type (check all that apply):

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<th>R401-5</th>
<th>R401-6</th>
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<td>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents’ agenda.</td>
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<td>4.1.5.2</td>
<td>☑ Minor*</td>
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<td>5.1.1.1</td>
<td>☑ New Emphasis on an Existing Degree*</td>
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<td>5.1.2</td>
<td>☐ Certificate of Proficiency Not Eligible for Financial Aid</td>
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<td>5.1.3</td>
<td>☐ Out-of-Service Area Delivery of Programs</td>
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<td>☐ Name Change of Existing Programs</td>
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<td>☐ Program Transfer</td>
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<td>☐ New Bureau</td>
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<td>☐ Graduate Certificate</td>
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¹ CIP codes must be recommended by the submitting institution. For CIP code classifications, please see http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=53.

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

Signature: ___________________________ Date: MM/DD/YEAR

Printed Name: Name of CAO or Designee
Program Request - Abbreviated Template  
University of Utah  
Minor in Korean and Korean Studies  
04/05/2012  

Section I: Request

The Languages and Literature Department at the University of Utah requests approval to offer a minor in Korean and Korean Studies effective Fall 2012. With the recent hire in 2011 of a full-time assistant professor/lecturer in Korean Language, Literature and Culture in the Department of Languages and Literature, the University of Utah is now in a position to create a formal minor in Korean and Korean Studies to begin to meet labor market, State Department, and student demand. The new minor would build on and integrate courses in Korean currently offered at the University of Utah to provide students with a cohesive program of study that demonstrates language and cultural competencies.

Section II: Need

A minor in Korean and Korean Studies is long overdue at the University of Utah. South Korea is Utah’s tenth largest trading partner. Korean is also a highly sought after language for federal jobs in security and foreign affairs fields in Utah and elsewhere. South Korea is one of the top eight sources of international tourists in Utah according to the Utah Office of Tourism. Proficiency in Korean is thus important for the Utah labor market in many sectors. According to the Modern Language Association’s report, “Enrollments in Languages other than English in United States Institutions of Higher Education,” published in December of 2010, Korean was ranked as the 14th most popular foreign language on college campuses in the United States in 2009. Furthermore, enrollments in Korean that year had the second highest increase after Arabic, exceeding the enrollment increases of both Chinese and Japanese (Arabic, 46.3%; Korean, 19.1%; Chinese, 18.2%; Japanese, 10.3%). The University currently offers academic degrees in the 13 most popular languages. Considering the growth of Korean and the increased presence of the language in our state, it makes sense to add Korean to the list of languages in which University of Utah students can obtain a degree.

Enrollment patterns in upper-division Korean courses taught since Fall 2001 demonstrate consistent and growing student demand. Student advisors in Asian Studies, which has a Korean Studies track, the Languages advisor, and the Korean instructors in the Department of Languages and Literature also report that students express a strong interest in a minor in Korean. Korea is one of the largest LDS mission fields outside of the United States. Returned missionaries often seek formal coursework or degree programs related to this formative experience, creating significant demand for Korean language and Korean Studies courses at the University of Utah. The University’s Asian Studies major allows students to pursue a Korean Studies track including both language and area studies courses. Additionally, the International Studies (IS) major gives the students the opportunity to choose an emphasis on Asian Studies as their Area Studies emphasis, which requires twelve area credits at the 3000
level. The minor in Korean and Korean Studies would be an attractive addition for those students who choose Korea as their main Asian focus in either of these programs, many of whose students have been requesting a Korean minor. The Korean minor proposed here most closely parallels the one at Brigham Young University, which requires 16 credit hours; a third-year language course; two core courses (Selected Readings of Modern Korean; Korean Literature to 1900); and either an additional upper-level language course (Third-Year Conversation) or Business Korean. Enrollments in Korean at Brigham Young University offer some indication of potential demand for the minor: about 330 students enroll in Korean at BYU each year at all levels and there are on average 35 minors and 10 majors in their Korean program each year.

Section III: Institutional Impact

The new Korean minor will be housed in the Department of Languages and Literature in the College of Humanities. It entails the packaging of existing courses, mostly in that department, but with a few electives from other departments, into a coherent program to ensure that students have the opportunity to pursue studies in Korean in a structured way. The Department of Languages and Literature currently has two assistant professor-lecturers whose course load is all Korean language and regularly employs one graduate student assistant to staff a conversation course. In addition, there is one full professor in History and one associate professor in Communication who routinely offer courses that focus entirely on Korea. These faculty members are already planning to add several new courses over the next two years, as detailed below. Many other courses on comparative or global topics across various disciplines contain substantial Korean content as well. The proposed minor will likely attract new students into Korean language courses, especially at the advanced level since it will incentivize them to pursue Korean beyond the second year level required for a BA degree. However, the minor does not require the addition of new courses, additional faculty, new space, new equipment, or additional library resources.

The Department of Languages and Literature teaches 20 languages. Students can currently pursue Bachelor of Arts degrees in 8 of them plus interdisciplinary BAs in 4 more. The department offers stand-alone minors in three additional languages: Portuguese, Italian, and Hebrew. The proposed minor in Korean would follow the same structure as our current minors and would, therefore, be seamlessly integrated into the existing curricular and administrative structures of the department and would only require small adjustments to our current advising systems.

The university already has the technology resources necessary to deliver this program. The Department operates the DiBona Center for Educational Technology (DCET). The DCET is an open lab for university-wide users but more specifically serves the needs of the departments housed within the College of Humanities and particularly the Department of Languages and Literature. The DCET has a technical specialist whose main role is to strengthen the Center’s mission to facilitate technology-enhanced language learning and assist the Department in identifying cutting-edge technology methods to enhance curriculum delivery.

In addition to the institutional supports in place on campus, the University of Utah maintains its own student exchange programs for language study and other disciplines.
with 8 universities in South Korea, including Seoul National University, Yonsei University, Ajou University, Chonnam National University, Ewha Women's University, Hanyang University, and University of Incheon.

Section IV: Finances

The proposed creation of a minor will generate an increase in enrollments for the Department of Languages and Literature thereby increasing SCH and productivity funds. We can only estimate enrollments at this time but believe there would be between 30 and 35 minors before the fifth year after the program is approved. Creation of this minor will also greatly enhance the prospects of procuring external funding for the Department of Languages and Literature and the Asia Center which houses the Asian Studies program and holds a prestigious Title VI National Resource Center grant for Asian Studies that already provides scholarships for students studying Korean. With a formalized Korean minor, the department and the Asia Center will be well positioned for their planned pursuit of private foundation grants and donor funds from Korea for further program development.

Section VI: Program Curriculum

***THIS SECTION OF THE ABBREVIATED TEMPLATE REQUIRED FOR EMPHASES AND MINORS ONLY.***

All Program Courses

<table>
<thead>
<tr>
<th>Course Prefix &amp; Number</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Required Courses</td>
<td>KOREA 3060 Third-year Grammar</td>
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<td></td>
<td>KOREA 3100 Korean Culture through Literature and Film</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>KOREA 4900 Advanced Reading</td>
<td>3</td>
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### Elective Courses

<table>
<thead>
<tr>
<th>Course Prefix &amp; Number</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>At least two from the following:</td>
<td>All 3 (x2)</td>
</tr>
<tr>
<td></td>
<td>ARTH 2500 Introduction to East Asian Art and Visual Culture</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ARTH 3060 Visual and Material Cultures of Buddhism</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMM 5620 International Communication: War and Memories</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ES 3880 Asian Pacific American Women</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ES 4600 Asian Pacific American History</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST 3570 History of Korea</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST 4780 The Korean War</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST 4865 Gender, Race, and Empire in Asia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>POLS 3510 Politics and Governments of the Pacific Rim Nations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST 4510 Asia in the World</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST 4530 Women in Asia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HIST 4560 Asian American History</td>
<td></td>
</tr>
</tbody>
</table>

#### Sub-Total 6

**Total Number of Credits 15**

### New Courses to Be Added in the Next Five Years

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course Prefix and Number</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>(List courses –)</td>
<td>Korea</td>
<td>Business Korean</td>
</tr>
</tbody>
</table>
Program Schedule

PHASE I (2 courses)

Core Courses:

- KOREA 3060 Third-year Grammar \(3 \text{ credits}\)
- KOREA 3100 Korean Culture through Literature and Film \(3 \text{ credits}\)

Sub Total \(6 \text{ credits}\)

PHASE II (3 courses)

Required course:

- KOREA 4900 Advanced Reading \((3 \text{ credits})\)

Electives: Students will complete the required minimum 15 credit hours by taking at least two courses from the following list (at least one course must be at the 4000/5000 level).

- ARTH 2500 Introduction to East Asian Art and Visual Culture
- ARTH 3060 Visual and Material Cultures of Buddhism
- COMM 5620 International Communication: War and Memories
- ES 3880 Asian Pacific American Women
- ES 4600 Asian Pacific American History
- HIST 3570 History of Korea
- HIST 4780 The Korean War
- HIST 4865 Gender, Race, and Empire in Asia
- POLS 3510 Politics and Governments of the Pacific Rim Nations
- HIST 4510 Asia in the World
- HIST 4530 Women in Asia

Continue with Semesters for Entire Program

<table>
<thead>
<tr>
<th>Semester 2</th>
<th>4510</th>
</tr>
</thead>
<tbody>
<tr>
<td>(List courses – use one row per course)</td>
<td>Comm 3000 Korean Media and Culture</td>
</tr>
</tbody>
</table>
HIST 4560 Asian American History

Sub-Total 9 credits

Total Number of Credits 15 credits

Suggested Schedule I: For Students Entering at the Beginning Language Stage

Semester 1: KOR 1010 (4); Suggested supplement: KOR 2600 (1)*
Semester 2: KOR 1020 (4); Suggested supplement: KOR 2600 (1)
Semester 3: KOR 2010 (4)
Semester 4: KOR 2020 (4)
Semester 5: KOR 3060 (3) and KOR 3100 (3)
Semester 6: KOR 4900 (3)
Semester 7: 1 or 2 Electives (3-6)
Semester 8: Elective (3)

Suggested Schedule II: For Students Entering at the Intermediate Language Stage (RMs, etc.)

Semester 1: KOR 3060 (3) or KOR 3100 (3)
Semester 2: KOR 3060 (3) or KOR 3100 (3)
Semester 3: KOR 4900 (3)
Semester 4: 1 or 2 Electives (3-6)
Semester 5: 1 Elective (3)

*KOR 2600 is a 1-credit conversation course for students who need extra exposure and practice.
April 4, 2012

To: University of Utah Undergraduate Council

From: Robert Newman, Dean, College of Humanities

Re: Support for Korean Minor

As Dean of the College of Humanities, I wholeheartedly support the creation of a new minor in Korean and Korean Studies housed in the Department of Languages and Literature. Our Asian Studies Program, housed in the College's Asia Center, has expanded dramatically in the last few years, exemplified by Asia Center's procurement of a prestigious Title VI National Resource Center grant for Asian Studies. Korean Studies is one of the largest and fastest growing of the sectors within Asian Studies. Total Korean language course enrollments have increased by over 50% in the last three years as the Department of Languages and Literature, with funding support from the Asia Center, has expanded its course offerings. Annual enrollments in language courses alone are now over 90. Recognizing the importance of Korean for careers in government work and business, increasing numbers of students have inquired about a Korean minor. From the standpoint of granting agencies, including the Title VI program, Korea is a critical component of East Asian Studies so this minor will complement our current degree tracks in Chinese and Japanese to give us comprehensive coverage of this region. The new minor will be comprised of existing courses and thus will require no new funding from the university. However, as the University of Utah expands its presence in Korea through its participation in the new international university at Songdo in South Korea, there will be many new opportunities for development of Korean Studies and the existence of a formalized degree in Korean and Korean Studies will be a great asset in procuring funding for further expansion. In short, there is ample need for this new minor and it will provide significant benefits for students and for program building in the Department of Languages and Literature and in Asian Studies.

Thank you for your attention.
30 April 2012

Michael Hardman
Interim Senior Vice President for Academic Affairs
205 Park
Campus

Dear Interim Vice President Hardman,

Enclosed is proposal for a Master of Science for Secondary School Teachers in Earth Science Teaching Degree; which was approved by the Graduate Council on April 30, 2012. Included in this proposal packet are the signature page, executive summary, proposal, and letter of support.

Please forward this proposal to the Academic Senate to be placed on the information calendar for the next meeting of the Senate.

Sincerely,

Charles A. Wight
Dean, The Graduate School
Cover Page

Institution Submitting Request: University of Utah
Proposed Title: Masters of Science for Secondary School Teachers in Earth Science (Teaching)
School or Division or Location: College of Mines and Earth Science
Department(s) or Area(s) Location: Department of Geology and Geophysics
Recommended Classification of Instructional Programs (CIP) Code: 13.1337
Proposed Beginning Date: 09/20/2012
Institutional Board of Trustees' Approval Date:

Proposal Type (check all that apply):

R401-4

Items submitted will be reviewed by the Office of the Commissioner of Higher Education (CCHE), then forwarded to the Chief Academic Officers (CAO) and Program Review Committee (PRC) before being presented to the Regents. K-12 Personnel Programs are also reviewed by appropriate officials and faculty of the schools and colleges of education. See R401-4.2.2 for all programs requiring specialized reviews.

<table>
<thead>
<tr>
<th>4.1.1</th>
<th>Non-Credit Certificate of Proficiency for Financial Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.2</td>
<td>Credit Certificate of Proficiency Eligible for Financial Aid</td>
</tr>
<tr>
<td>4.1.3</td>
<td>Credit Certificate of Completion</td>
</tr>
<tr>
<td>4.1.9</td>
<td>Fast-Track Certificate</td>
</tr>
<tr>
<td>4.1.10</td>
<td>Associate of Applied Science Degree</td>
</tr>
<tr>
<td>4.1.12</td>
<td>Associate of Science Degree</td>
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<tr>
<td>4.1.14</td>
<td>Associate of Arts Degree</td>
</tr>
<tr>
<td>4.1.16</td>
<td>Bachelor's Degree</td>
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<tr>
<td>4.1.17</td>
<td>Master's Degree</td>
</tr>
<tr>
<td>4.1.18</td>
<td>Doctoral Degree</td>
</tr>
</tbody>
</table>

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

Signature  

Date: 6/5/12

Printed Name: Michael Hardman

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1 CIP codes must be recommended by the submitting institution. For CIP code classifications, please see http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55.
Executive Summary

University of Utah
Masters of Science Degree for Secondary School Teachers in Earth Science (Teaching)
03/28/2012

Program Description
The Masters of Science for Secondary School Teachers (MSSST) program was established by the College of Science in 1972 and offers degrees for secondary school teachers in Chemistry, Physics, Biology and Math (Teaching). The MSSST degree program is available to certified middle and high school teachers who have been teaching for a minimum of three years as a way to provide advanced training and fulfill Utah State Office of Education (USOE) endorsement requirements for science and mathematics. The proposed MSSST Earth Science (Teaching) degree will be offered in the Department of Geology and Geophysics, which is part of the College of Mines and Earth Science. The program consists of 34 hours of study: 23 hours are in core Geology, Physics and Chemistry courses, 5 hours are in science-based pedagogical courses, and 6 hours are for completion of a Master's project. The program meets the USOE requirements for endorsements in Earth Science and Physical Science for teachers who have the prerequisites of 1 year each of Chemistry and Physics. The program will be offered to cohorts of up to 25 teachers and will be designed to take into account USOE Science Core Curriculum concepts and content-based pedagogical methods. Courses will be given in the evenings during the academic year, and during the mid-summer months (mid-June to mid-August) to accommodate K-12 teaching schedules.

Role and Mission Fit
The MSSST Earth Science (Teaching) program will help the University of Utah fulfill its mission to serve the people of Utah through the dissemination of knowledge by teaching and community engagement. The MSSST program facilitates this goal both by providing instruction to secondary teachers and through the instruction that these teachers will, in turn, provide their students. In its role as teaching institution, the University commits itself to providing challenging instruction for all its students and encourages interdisciplinary work and the integration of instruction and research opportunities. It expects and rewards superior teaching and academic excellence among its faculty. The MSSST Earth Science (Teaching) program will facilitate this goal through the very nature of the program content. Also, it is likely that the teaching skills of the science faculty will be improved by working with professional teachers in addition to improving the science content knowledge of the teachers. In its role as contributor to public life, the University's faculty, staff, and students are encouraged to contribute time and expertise to community and professional service. The MSSST Earth Science (Teaching) program allows for faculty to engage in K-12 education in a very meaningful and lasting way. Finally, the President of the University has explicitly stated that the University should make it a priority to reclaim its place in the state of producing the highest quality teachers of science in numbers that are significant. Prior to the MSSST cohort program, approximately two teachers a year were graduating with a higher-level degree in the sciences. With this program, we can significantly and positively impact those numbers.

Faculty
Because this is an interdisciplinary program, faculty will be drawn from multiple departments including Geology & Geophysics, Chemistry, Physics, Atmospheric Sciences, Mining Engineering, Metallurgical Engineering and the Urban Institute of Teacher Education within the College of Education. The main focus of the program, however, is Earth Science so faculty headcounts are included for the Department of Geology & Geophysics below. When feasible (and desirable), teachers will be taking regularly scheduled courses that are offered to the general population at the University. However, several of the necessary courses are not offered at a time teachers can take them (either after 4:00 pm during the school year or from mid-June to early August during the summer). Therefore, faculty will be recruited to teach special sections of the courses and will be compensated accordingly. As these courses will be offered through Academic Outreach and Continuing Education (AOCE), compensation will come directly from tuition. Since this amounts to an additional course per academic year semester, and two during the summer sessions, there
is little impact on the participating department. Instructors have already been arranged for the majority of the courses.

**Market Demand**
Earth Science, Geology, Middle Level Science, and Physics range from 3.2 to 3.6 (the highest current ranking is 4.0 (Special Education)) on the Teaching Field Index of Criticality. This implies that demand for teachers that are qualified to teach these subjects is high and job placement should not be a problem. Additionally, with the changes in the USOE Core Curriculum to develop a new Earth Science course and move it to a more experience-based science, the demand for such courses will grow and therefore so will the need for more teachers.

**Student Demand**
When the program was announced by the USOE for feedback from teachers, over 40 responded that they would be interested in participating.

**Statement of Financial Support.**
- Appropriated Fund ...........................................□
- Special Legislative Appropriation ...................□
- Grants and Contracts........................................□
- Special Fees/Differential Tuition .....................x
- Other (please describe) ....................................□

**Similar Programs Already Offered in the USHE**
To our knowledge, no other USHE institution offers a MS degree in Earth Science for practicing teachers. There are programs for pre-service (undergraduate) teachers and MEd or MAT degrees offered by colleges of education but none require the rigor of a science-based master’s project and advanced scientific coursework. Our hypothesis is that by engaging teaching in authentic research activities with their master’s project, they will be better prepared to teach scientific process to their students. We will also provide courses that tie the content and the pedagogy together and will require an aspect of classroom translation in the master’s project.
Program Description

University of Utah
Masters of Science for Secondary School Teachers in Earth Science (Teaching)
03/28/2012

Section I: The Request

The University of Utah requests approval to extend the disciplinary tracks of the existing Masters of Science for Secondary School Teachers (MSSST) degree to include a MSSST degree in Earth Science (Teaching) effective for students beginning in Fall 2012.

Section II: Program Description

Complete Program Description

The Masters of Science for Secondary School Teachers (MSSST) program was established by the College of Science in 1972 and offers degrees for secondary school teachers in Chemistry, Physics, Biology and Math (Teaching). The MSSST degree program is available to certified middle and high school teachers who have been teaching for a minimum of three years as a way to provide advanced training and fulfill Utah State Office of Education (USOE) endorsement requirements for science and mathematics.

The proposed MSSST Earth Science (Teaching) degree will be offered in the Department of Geology and Geophysics, which is part of the College of Mines and Earth Science. The program consists of 34 hours of study: 23 hours are in core Geology, Physics and Chemistry courses, 5 hours are in science-based pedagogical courses, and 6 hours are for completion of a Master's project. The program meets the USOE requirements for endorsements in Earth Science and Physical Science for teachers who have the prerequisites of 1 year each of Chemistry and Physics. The program will be offered to cohorts of up to 25 teachers and will be designed to take into account USOE Science Core Curriculum concepts and content-based pedagogical methods. Courses will be given in the evenings during the academic year, and during the mid-summer months (mid-June to mid-August) to accommodate K-12 teaching schedules.

Purpose of Degree

The purpose of the MSSST in Earth Science (Teaching) program is to: (1) provide teachers with advanced training in Earth and physical science concepts and methods, and (2) increase the number of highly qualified teachers teaching Earth Science, Physics and Chemistry. Currently, there is no other MS degree program that meets the USOE requirements for endorsements in Earth and physical science. Therefore, many teachers only take a minimum number of courses in these content areas in order to be endorsed. This program will provide teachers with a thorough grounding in the Earth and physical sciences through coursework and content-based pedagogical seminars, while affording them the benefits of completing a MS degree. Teachers will also engage in a scientific research experience that will serve as the foundation of their Master’s project.

Institutional Readiness

Currently, the MSSST degree is being administered by the College of Science MSSST Steering Committee and managed through a partnership with the Center for Science and Mathematics Education (CSME). The traditional MSSST program allows teachers to design their own plan of study and independent research project. Difficulties with conflicting University and K-12 teaching schedules and the lack of a readily available support network resulted in only 97 applicants and 52 graduates during a 37-year period. In 2009, the Center for Science and Mathematics Education (CSME) developed cohort programs for MSSST degrees in Mathematics, Biology, and Chemistry. It graduated 17 teachers in Math (Teaching) in 2011, and is on track to graduate 26 teachers in Biology and Chemistry (Teaching) this fall. Another group of 25 teachers enrolled in the CSME MSSST Math cohort program this year and will graduate in 2013.
Due to the success of the cohort model and the management resources provided by the Center for Science and Mathematics Education, the College of Mines and Earth Science and Department of Geology and Geophysics have agreed to support the creation of the new MSSST degree in Earth Science (Teaching) by providing coursework, instructors, supervisory committee members and a presence on the MSSST Steering Committee. The MSSST Steering Committee has agreed to administer the program through its partnership with the Center for Science and Mathematics Education. The CSME will recruit participants, arrange the program of study, facilitate the creation of supervisory committees, track progress toward graduation, and provide general graduate advising. It is a practical arrangement considering that the CSME is already managing the other MSSST cohort programs.

The only potential impact on any undergraduate programs is a positive one in that courses offered to the MSSST Earth Science (Teaching) cohort in the Department of Geology and Geophysics will also be made available to pre-service teachers in the Earth Science Teaching Composite undergraduate program.

Faculty
Because this is an interdisciplinary program, faculty will be drawn from multiple departments including Geology & Geophysics, Chemistry, Physics, Atmospheric Sciences, and the Urban Institute of Teacher Education within the College of Education. The main focus of the program, however, is Earth Science so faculty headcounts are included for the Department of Geology & Geophysics below. When feasible (and desirable), teachers will be taking regularly scheduled courses that are offered to the general population at the University. However, several of the necessary courses are not offered at a time teachers can take them (either after 4:00 pm during the school year or from mid-June to early August during the summer). Therefore, faculty will be recruited to teach special sections of the courses and will be compensated accordingly. As these courses will be offered through Academic Outreach and Continuing Education (AOCE), compensation will come directly from tuition. Since this amounts to an additional course per academic year semester, and two during the summer sessions, there is little impact on the participating department. Instructors have already been arranged for the majority of the courses.

<table>
<thead>
<tr>
<th>Faculty Category</th>
<th>Faculty Headcount – Prior to Program Implementation</th>
<th>Faculty Additions to Support Program</th>
<th>Faculty Headcount at Full Program Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>With Doctoral Degrees (Including MFA and other terminal degrees, as specified by the institution)</td>
<td></td>
<td></td>
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<tr>
<td>Full-time Tenured</td>
<td>23</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>Full-time Non-Tenured</td>
<td>7</td>
<td>0</td>
<td>7</td>
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<tr>
<td>Part-time Tenured</td>
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<tr>
<td>Part-time Non-Tenured</td>
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<tr>
<td>With Master’s Degrees</td>
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<tr>
<td>Full-time Tenured</td>
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<tr>
<td>Full-time Non-Tenured</td>
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<td></td>
<td></td>
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<tr>
<td>Part-time Tenured</td>
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<tr>
<td>Part-time Non-Tenured</td>
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<tr>
<td>With Bachelor’s Degrees</td>
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<td>Other</td>
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<td>Full-time Non-Tenured</td>
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<tr>
<td>Part-time Tenured</td>
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<tr>
<td>Part-time Non-Tenured</td>
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<tr>
<td>Total Headcount Faculty</td>
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<td>---------------------------------------------</td>
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<tr>
<td>Full-time Tenured</td>
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<td>23</td>
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<tr>
<td>Full-time Non-Tenured</td>
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<td>7</td>
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<tr>
<td>Part-time Tenured</td>
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<td></td>
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</tr>
<tr>
<td>Part-time Non-Tenured</td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Department Faculty FTE (As reported in the most recent A-1/S-11 Institutional Cost Study for “prior to program implementation” and using the A-1/S-11 Cost Study Definition for the projected “at full program implementation.”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
</tr>
</tbody>
</table>

Staff
The Center for Science and Mathematics Education will provide the necessary staff for the MSSST Earth Science (Teaching) program as part of its role in supporting the MSSST program:

- Dr. Holly Godsey, CSME Formal Science Education Manager and Assistant Professor (Lecturer) in the Dept. of Geology and Geophysics (effective July 1, 2012) will serve as the program manager including developing the plan of study, coordinating with faculty advisors, communicating with the program evaluator, and teaching select courses.
- Dr. Louisa Stark, Faculty Associate of the CSME, Clinical Professor in the College of Education, and Director of the Genetic Science Learning Center, will provide pedagogical training, conduct seminars, coordinate with faculty from the College of Education and consult on program design and progress.
- Gwen Allen, CSME Accountant, will manage all of the financial aspects of the program including collecting tuition, coordinating with the USOE on state funding, and paying instructors.
- Shelly DeWitt, MSSST Program Coordinator, will oversee the admissions process, track graduate student progress, communicate with participants regarding forms, policies and procedures, assist in setting up courses, and serve as the liaison to the Graduate School.
- Oversight will be provided by the Dept. of Geology & Geophysics and the MSSST Steering Committee.

Library and Information Resources
No special resources are needed.

Admission Requirements
The admission requirements for the MSSST Earth Science program are:

- A BS degree from a regionally accredited college or university.
- A minimum 3.00 undergraduate weighted mean GPA.
- Must have been teaching in a scientific discipline for at least three years in a secondary school.
- Recommendation from their school principal.
- Additional suggested prerequisites: 1 year of Chemistry and 1 year of Physics.

Student Advisement
As this is a cohort program, all of the students will follow the same plan of study designed by the program personnel (see section VI below). Academic progress will be tracked by the MSSST Program Coordinator and the Program Manager will advise in the case of inadequate performance. Students will be assigned advisors from the Department of Geology and Geophysics to guide them through their Master’s projects. Supervisory committees will consist of at least one tenure-track faculty member from the Department of Geology and Geophysics, and two additional members from the College of Mines and Earth Science, the College of Science, or the College of Education. Information on classes, University requirements, master’s project expectations and other issues will be
given at monthly cohort meetings that will serve as an informal means of advising and supporting the teachers. Cohort meetings have been an integral part of the success of the current MSSST Biology and Chemistry program and also serve as a professional learning community for the teachers where scientific topics, pedagogy and other classroom issues are discussed.

Justification for Graduation Standards and Number of Credits

The program consists of 34 hours of study: 23 hours are core Geology, Physics and Chemistry courses, 5 hours are science-based pedagogical courses, and 6 hours are required for completion of a Master’s project. The program also meets the USOE requirements for endorsements in Earth Science and Physical Science for teachers who have the prerequisites of 1 year each of Chemistry and Physics. The program also meets the requirements for an endorsement in Physics for those students who have already taken calculus. In order to graduate, teachers must have satisfactory performance as defined by the Graduate School in 30-36 credits of courses approved by the supervisory committee. Six credits must be for original work in the form of a project.

External Review and Accreditation

Dr. Mary Burbank, Director of the Urban Institute for Teacher Education, and Dr. Margarita Cummings from the Jordan School District (currently with the CMSE) were involved in the conception of the MSSST cohort program. Dr. Melissa Goldsmith from the College of Education, served as an evaluator for both the MSSST Math and MSSST Biology/Chemistry cohort programs and her data were used in designing the MSSST Earth Science (Teaching) program. Shannon Buchanan, Science Education Specialist for the Utah State Office of Education was also highly involved in establishing the area of need (Earth and physical science teachers). The CSME will work with the USOE to ensure that endorsement criteria are met using the processes that are in place for the MSSST Math and MSSST Biology/Chemistry programs.

Projected Program Enrollment and Graduates; Projected Departmental Faculty/Students:

<table>
<thead>
<tr>
<th>Data Category</th>
<th>Current – Prior to New Program Implementation</th>
<th>Projected Year 1</th>
<th>Projected Year 2</th>
<th>Projected Year 3</th>
<th>Projected Year 4</th>
<th>Projected Year 5</th>
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<tbody>
<tr>
<td><strong>Data for Proposed Program</strong></td>
<td>X</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Number of Graduates in Proposed Program</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total # of Declared Majors in Proposed Program</td>
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<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td><strong>Departmental Data – For All Programs Within the Department</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Department Faculty FTE (as reported in Faculty table above)</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Total Department Student FTE (Based on Fall Third Week)</td>
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<td>201</td>
<td>201</td>
<td>201</td>
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<td>201</td>
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<tr>
<td>Student FTE per Faculty FTE (ratio of Total Department Faculty FTE and Total Department Student FTE above)</td>
<td>6.2</td>
<td>6.7</td>
<td>6.7</td>
<td>6.7</td>
<td>6.7</td>
<td>6.7</td>
</tr>
<tr>
<td><strong>Program accreditation-required ratio of Student</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Expansion of Existing Program

The MSSST Earth Science (Teaching) program is an additional disciplinary track of the existing MSSST degree program. Enrollment statistics are as follows:

<table>
<thead>
<tr>
<th>Program</th>
<th>Years</th>
<th>Discipline</th>
<th>Enrolled (projected)</th>
<th>Graduated (projected)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSSST Program (Independent)</td>
<td>1972-2009</td>
<td>All available (Physics, Chemistry, Biology, Math)</td>
<td>97</td>
<td>52</td>
</tr>
<tr>
<td>MSSST Program (Independent)</td>
<td>2009-present</td>
<td>All available (Physics, Chemistry, Biology, Math)</td>
<td>6</td>
<td>(6)</td>
</tr>
<tr>
<td>MSSST Cohort Program</td>
<td>2009-2011</td>
<td>Math</td>
<td>19</td>
<td>17</td>
</tr>
<tr>
<td>MSSST Cohort Program</td>
<td>2010-2012</td>
<td>Biology and Chemistry</td>
<td>27</td>
<td>(26)</td>
</tr>
<tr>
<td>MSSST Cohort Program</td>
<td>2011-2013</td>
<td>Math</td>
<td>24</td>
<td>(24)</td>
</tr>
<tr>
<td>MSSST Cohort Program</td>
<td>2012-2014</td>
<td>Earth and Physical Science</td>
<td>(16)</td>
<td>(16)</td>
</tr>
</tbody>
</table>

Section III: Need

Program Need

In 2011, the Utah State Office of Education (USOE) identified a pressing need to increase the number of teachers qualified to teach Earth and Physical Sciences. In addition, the USOE is in the process of revising the Earth Systems Core Curriculum into an Earth Science curriculum. The goal is to move from a descriptive format to one based on scientific inquiry and integration of the various scientific disciplines that contribute to the field of Earth Science. These higher-level concepts will require a deeper understanding in order to be taught effectively. Currently, the majority of teachers teaching Earth Systems have endorsements in Environmental Science, which only requires a single course in geology. Further, most Earth Systems teachers have an undergraduate degree in Biology, General Science or Science Education. These teachers will need much deeper content development to be successful with an enhanced Earth Science curriculum. A true understanding of the Earth and its systems requires a much more rigorous background in geologic and physical processes. For these reasons, we are proposing to add an Earth Science (Teaching) track to the existing Masters of Science program for Secondary School Teachers that will provide a solid grounding in geology while also integrating physics, chemistry and biology.

Labor Market Demand

Earth Science, Geology, Middle Level Science, and Physics range from 3.2 to 3.6 (the highest current ranking is 4.0 (Special Education)) on the Teaching Field Index of Criticality. This implies that demand for teachers that are qualified to teach these subjects is high and job placement should not be a problem. Additionally, with the changes in the USOE Core Curriculum to develop a new Earth Science course and move it to a more experience-based science, the demand for such courses will grow and therefore so will the need for more teachers.
Student Demand
When the program was announced by the USOE for feedback from teachers, over 40 responded that they would be interested in participating.

Similar Programs
To our knowledge, no other USHE institution offers a MS degree in Earth Science for practicing teachers. There are programs for pre-service (undergraduate) teachers and MEd or MAT degrees offered by colleges of education but none require the rigor of a science-based master’s project and advanced scientific coursework. Our hypothesis is that by engaging teaching in authentic research activities with their master’s project, they will be better prepared to teach scientific process to their students. We will also provide courses that tie the content and the pedagogy together and will require an aspect of classroom translation in the master’s project.

Collaboration with and Impact on Other USHE Institutions
While we have no plans to collaborate as this time with other institutions, there may be opportunities to do so based on experiences with the current MSSST program. For example, the MSSST Biology/Chemistry cohort needed to take a Cell Biology course with a laboratory component that was not available at the University of Utah. Therefore, we contracted with an instructor at Salt Lake Community College for the course. Also, one of the MSSST Chemistry teachers will be working with a professor at BYU for her master’s project, an arrangement that will benefit all involved parties. We also foresee opportunities for combined professional development workshops with other local institutions.

Benefits
The University of Utah will benefit from this program by having the opportunity to train the teachers who will directly influence the pipeline of students that the University hopes to attract. Better science teaching in the schools by teachers who have had positive experiences at the University of Utah will lead to more students pursuing STEM disciplines at the U and elsewhere. The University is deeply committed to STEM education and has demonstrated this commitment by supporting the creation of the Center for Science and Mathematics Education (CSME), a joint effort by the College of Science and the College of Education. The mission of the CSME is to build programs, provide resources, and foster partnerships between academia and the community at large that promote understanding and enthusiasm for science and mathematics. The CSME provides exemplary teacher education programs based on research on best practices and develops programs in science and mathematics that aim to increase the recruitment and retention of students in STEM areas. The University will also benefit by engaging its science faculty with professional teachers who have experience with pedagogical methods and who are constantly thinking of ways to communicate effectively with students.

Consistency with Institutional Mission
The MSSST Earth Science (Teaching) program will help the University of Utah fulfill its mission to serve the people of Utah through the dissemination of knowledge by teaching and community engagement. The MSSST program facilitates this goal both by providing instruction to secondary teachers and through the instruction that these teachers will, in turn, provide their students. In its role as teaching institution, the University commits itself to providing challenging instruction for all its students and encourages interdisciplinary work and the integration of instruction and research opportunities. It expects and rewards superior teaching and academic excellence among its faculty. The MSSST Earth Science (Teaching) program will facilitate this goal through the very nature of the program content. Also, it is likely that the teaching skills of the science faculty will be improved by working with professional teachers in addition to improving the science content knowledge of the teachers. In its role as contributor to public life, the University’s faculty, staff, and students are encouraged to contribute time and expertise to community and professional service. The MSSST Earth Science (Teaching) program allows for faculty to engage in K-12 education in a very meaningful and lasting way.

Finally, the President of the University has explicitly stated that that the University should make it a priority to reclaim its place in the state of producing the highest quality teachers of science in numbers that are significant.
Prior to the MSSST cohort program, approximately two teachers a year were graduating with a higher-level degree in the sciences. With this program, we can significantly and positively impact those numbers.

Section IV: Program and Student Assessment

Program Assessment

The goals of the MSSST Earth Science Program are:

- To enhance and deepen the content knowledge of practicing Earth and physical science teachers in a manner that recognizes the professional goals of the teachers and is relevant to the USOE Core Curriculum Standards.
- To increase the number of teachers qualified to teach Earth and physical science courses.
- To provide meaningful instruction to teachers while simultaneously providing the benefits of a graduate degree and USOE-accredited endorsements.
- To support a professional learning community of Earth and physical science teachers who work and learn together while sharing ideas and best practices.
- To provide opportunities for professional development through seminars, workshops, interactions with faculty, and lab and field experiences.

Expected Standards of Performance

By the time teachers complete this program they should:

- Understand scientific concepts in a way that enables effective teaching of those concepts.
- Understand the interdisciplinary nature of science.
- Develop an appreciation for how we know what we know in science.
- Be able to engage in independent inquiry and project development that will be translated into their classroom environments.

Standards and competencies where chosen in part from the National Science Education Standards for Earth, Physical and Space Science².

Means of Assessment:

- Teachers will take the Praxis II Test 0571 - Earth and Space Science: Content Knowledge at the beginning and end of the program as a measure of change in content knowledge.
- Course evaluations will be gathered and summarized for each of the program courses with particular attention paid to the special topics courses.
- Student grades will be evaluated to determine if students are making adequate progress and if the courses are at the appropriate level for the participants.
- Surveys of participants’ teaching confidence levels, approaches, and attitudes will be given throughout the program.
- Mid-course reflection sessions will be held once per semester during the monthly cohort meetings to evaluate program effectiveness, progress toward goals, attitudes of participants, etc.
- An annual report will be produced in August 2013 and distributed to all stakeholders including the College of Science, College of Mines and Earth Science, College of Education, Department of Physics, Department of Geology & Geophysics, the USOE, and the USHE.
- A final report will be produced at the completion of the program (Fall 2014) and similarly distributed.

Both formative and summative assessment criteria will be designed in collaboration with our program evaluator from the College of Education.
### Section V: Finance

#### Budget

**5-Year Budget Projection**

<table>
<thead>
<tr>
<th>Departmental Data</th>
<th>Current Budget—Prior to New Program Implementation</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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</thead>
<tbody>
<tr>
<td><strong>Personnel Expense</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries &amp; Wages-Instructors&lt;sup&gt;b&lt;/sup&gt;</td>
<td>26,000</td>
<td>30,000</td>
<td>0</td>
<td>26,000</td>
<td>30,000</td>
<td></td>
</tr>
<tr>
<td>Salaries &amp; Wages-Evaluator&lt;sup&gt;c&lt;/sup&gt;</td>
<td>7,000</td>
<td>7,000</td>
<td>15,000</td>
<td>7,000</td>
<td>7,000</td>
<td></td>
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<tr>
<td>Salaries &amp; Wages-CSME Staff Coordinator (0.1 FTE)&lt;sup&gt;d&lt;/sup&gt;</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td>5,000</td>
<td></td>
</tr>
<tr>
<td>Benefits (36%)</td>
<td>13,680</td>
<td>15,120</td>
<td>7,200</td>
<td>13,680</td>
<td>15,120</td>
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<tr>
<td><strong>Total Personnel Expense</strong></td>
<td>51,680</td>
<td>57,120</td>
<td>27,200</td>
<td>51,680</td>
<td>57,120</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>No budget is included here because the Geology & Geophysics department budget will not be impacted.

<sup>b</sup>Instructors are paid $2000 per credit hour for a course.

<sup>c</sup>The Evaluator's duties will be the greatest in year three when coursework is completed.

<sup>d</sup>A CSME staff person will be paid to coordinate the MSSST cohort.

<sup>e</sup>Note that there are no instructor salaries incurred in year 3 because participants will be doing their research internships and registering for project hours only.

<table>
<thead>
<tr>
<th><strong>Non-personnel Expense</strong></th>
<th></th>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Travel</td>
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<td>Capital</td>
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<td>Library</td>
<td></td>
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<tr>
<td>Current Expense</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Other – AOCE course charge</td>
<td>2,560</td>
<td>1,920</td>
<td>640</td>
<td>2,560</td>
<td>1,920</td>
<td></td>
</tr>
<tr>
<td>Other expenses- Workshops, speaker honorariums, refreshments, poster session, supplies</td>
<td>6,000</td>
<td>10,000</td>
<td>500</td>
<td>6,000</td>
<td>10,000</td>
<td></td>
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<tr>
<td><strong>Total Non-personnel Expense</strong></td>
<td>8,560</td>
<td>11,920</td>
<td>1,140</td>
<td>8,560</td>
<td>11,920</td>
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</table>

<table>
<thead>
<tr>
<th><strong>Total Expense</strong> (Personnel + Current)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$60,240</td>
<td>$69,040</td>
<td>$28,340</td>
<td>$60,240</td>
<td>$69,040</td>
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<table>
<thead>
<tr>
<th><strong>Departmental Funding</strong></th>
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</thead>
<tbody>
<tr>
<td>Appropriated Fund</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Legislative Appropriation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants and Contracts</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Special Fees/Differential Tuition</td>
<td>0</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Tuition ($300 per credit hour)</td>
<td>62400</td>
<td>72000</td>
<td>28800</td>
<td>62400</td>
<td>72000</td>
<td></td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td>$62,400</td>
<td>$72,000</td>
<td>$28,800</td>
<td>$62,400</td>
<td>$72,000</td>
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<table>
<thead>
<tr>
<th><strong>Difference</strong></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Revenue - Expense</td>
<td>$2,160</td>
<td>$2,960</td>
<td>$460</td>
<td>$2,160</td>
<td>$2,960</td>
<td></td>
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</tbody>
</table>
Departmental Instructional Cost/Student Credit Hour* (as reported in institutional Cost Study for “current” and using the same Cost Study Definition for “projected”)

<table>
<thead>
<tr>
<th>Course Prefix &amp; Number</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 6920-1*</td>
<td>Global Geophysics for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>GEO 6920-2* or MET E 5015</td>
<td>Earth Materials for Teachers or Global Influence of Metals for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>GEO 6920-3*</td>
<td>Field Geology for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>GEO 6920-4*</td>
<td>Paleobiology for Teachers</td>
<td>2</td>
</tr>
<tr>
<td>GEO 6470</td>
<td>Stable Isotope Ecology</td>
<td>3</td>
</tr>
<tr>
<td>GEO 6970</td>
<td>Thesis hours</td>
<td>6</td>
</tr>
<tr>
<td>ASTRO/PHYS 69XX*</td>
<td>Modern Physics for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>ATMOS 5400</td>
<td>The Climate System</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 5380*</td>
<td>Applied Chemistry for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>EDU 6950-2*</td>
<td>Earth and Physical Science Teaching Seminar</td>
<td>2</td>
</tr>
<tr>
<td>EDU 6950</td>
<td>Multi-cultural Science Education</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Number of Credits 34

*Course will be set up as “Special Topics”

Funding Sources
The primary source of funding for the MSSST Earth Science (Teaching) program is the money generated through tuition.

Reallocation
No funds will be reallocated for this program.

Impact on Existing Budgets
Since the program is entirely funded through tuition, there will be no impact on existing budgets.

Section VI: Program Curriculum

This is a sample curriculum for the cohort beginning in 2012. Some courses may vary depending on participants’ background and needs:

New Courses to Be Added in the Next Five Years
Although seven courses will need to be added for this program, all of the new courses will be designed as “special topics” courses for the MSSST Earth Science cohort. All of these courses are based on currently existing courses but their primary purpose will be to enhance the depth of content knowledge of teachers within the context of what they are expected to teach. Additional material will be added to each content-based course that involves
subject-specific teaching methods. Courses will be open to non-cohort members as well and may be of appeal to the pre-service teachers in the Earth Science Teaching Composite (undergraduate) program or any science teacher. Faculty instructors have already been arranged for all but two of the below courses and instructors for those courses will be confirmed by May. The Earth Materials course will be taught in conjunction with faculty from Metallurgical or Mining Engineering and will contain a component of resource sustainability.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Prefix and Number</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 2012</td>
<td>CHEM 5380</td>
<td>Applied Chemistry for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>Spring 2013 and</td>
<td>EDU 6950</td>
<td>Earth and Physical Science Teaching Seminar</td>
<td>2</td>
</tr>
<tr>
<td>Spring 2014</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summer 2012</td>
<td>GEO 6920-1</td>
<td>Global Geophysics for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>Fall 2013</td>
<td>ASTRO/PHYS 69xx</td>
<td>Modern Physics for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>Spring 2013</td>
<td>GEO 6920-2</td>
<td>Earth Materials for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>Summer 2013</td>
<td>GEO 6920-3</td>
<td>Field Geology for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>Spring 2014</td>
<td>GEO 6920-4</td>
<td>Paleobiology for Teachers</td>
<td>3</td>
</tr>
</tbody>
</table>
Program Schedule
Below is a suggested program schedule for the cohort starting in 2012. Alterations and substitutions may be made based on participants’ backgrounds and needs:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Su 2012</td>
<td>CHEM 5380 Applied Chemistry for Teachers</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GEO 6920-1 Geophysics for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>Fall 2012</td>
<td>ATMOS 5400 The Climate System</td>
<td>3</td>
</tr>
<tr>
<td>Sp 2013</td>
<td>GEO 6920-2 Earth Materials for Teachers</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MET E 3015 Global Influence of Metals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EDU 6950 Earth and Physical Science Teaching Seminar 1</td>
<td>1</td>
</tr>
<tr>
<td>Su 2013</td>
<td>GEO 6470 Stable Isotope Ecology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GEO 6920-3 Field and School Yard Geology for Teachers</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>EDU 6950 Multicultural Science Methods</td>
<td>3</td>
</tr>
<tr>
<td>Fall 2013</td>
<td>ASTRO/PHYS 69xx Modern Physics for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>Sp 2014</td>
<td>GEO 6920-4 Paleobiology for Teachers</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>EDU 6950 Earth and Physical Science Teaching Seminar 2</td>
<td>1</td>
</tr>
<tr>
<td>Su 2014</td>
<td>GEO 6970 Master’s Project hours</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>34</strong></td>
</tr>
</tbody>
</table>

Section VII: Faculty

- Charles H. (Butch) Atwood, Ragsdale Professor of Chemical Education, Dept of Chemistry
- Mary Burbank, Director, Urban Institute for Teacher Education
- David S. Chapman, Dean Emeritus of the Graduate School; Distinguished Professor, Dept. of Geology and Geophysics.
- David B. Kieda, Chair and Professor, Dept. of Physics
- Holly S. Godsey, Asst. Professor (Lecturer), Dept. of Geology and Geophysics; Formal Science Education Manager, Center for Science and Mathematics Education
- Michael S. Moats, Assoc. Professor, Dept. of Metallurgical Engineering
- Barbara P. Nash, MSSST Committee Member; Professor of Geology and Geophysics
- Mike Nelsen, Chair and Professor, Dept. of Mining Engineering
- Clayton S. Pierce, Research Asst. Professor, Urban Institute for Teacher Education
- Tom Richmond, MSSST Committee Member; Assoc. Professor of Chemistry
- Jon Seger, MSSST Committee Member; Professor of Biology
• Louisa A. Stark, Clinical Professor, Urban Institute for Teacher Education; Director, Genetic Science Learning Center
• Courtenay Strong, Assistant Professor, Dept. of Atmospheric Sciences
• Peter Trombi, Chair of the MSSST Committee; Professor of Mathematics

References

1Teaching Field Index of Criticality for Utah, T.H. Bell Teaching Incentive Loan Program, 2011.

To: Dr. Francis H. Brown, Dean
   College of Mines and Earth Sciences

From: Dr. Kevin D. Perry, Chair
       CMES Curriculum Committee
       University of Utah

Date: April 24, 2012

Re: CMES Curriculum Committee Approval of the MSST in Earth Science

The College of Mines and Earth Sciences Curriculum Committee has reviewed the attached proposal for a Masters of Sciences for Secondary School Teachers in Earth Science. We enthusiastically endorse the program as we think that it will fill an important need in the K-12 education system of Utah.

Sincerely,

Dr. Kevin D. Perry

Approved.

Dr. H. Brown
1/24/2012
May 29, 2012

Commissioner Sederburg and the Board of Regents
Board of Regents Building, The Gateway
60 South 400 West
Salt Lake City, UT 84101-1284

Dear Commissioner Sederburg and Board of Regents,

The University of Utah Libraries appreciate the opportunity to comment on our role in supporting the new Masters of Science for Secondary School Teachers in Earth Science (Teaching) degree. The libraries are committed to supporting the university and its faculty as they move into new areas of instruction and research.

Most courses that will comprise the MSSST Earth Science (Teaching) program are currently being taught at the university and are therefore covered by our collection development activities. The J. Willard Marriott Library has extensive holdings in the areas of Geology, Physics and Chemistry including a longstanding approval plan for the purchase of English language scholarly books published in the U.S., databases and journals specific to those disciplines. Thanks to state-wide allocations to the Utah Academic Library Consortium and the availability of campus computer surcharge funds, our electronic collection is unusually strong in indexes, abstracts, and full-text online databases used by researchers in the related fields participating in this program.

We encourage faculty to work with subject librarians to build up specific sub-disciplines where our collection needs supplementing. Despite budget constraints, we are usually able to order any resources necessary to directly support classes. We modify our journal subscriptions to reflect current teaching and research. As the scholarly communication landscape evolves, new options may exist beyond traditional print book purchases and conventional subscriptions. We would like to work with faculty to evaluate the most workable.

We offer class presentations and one-to-one consultations with library specialists who will help students find the most relevant works and suggest the most appropriate search strategies.

We look forward to working with the faculty and students in this new program.

Yours truly,

Rick Anderson  
Acting Dean  
J. Willard Marriott Library

Catherine Soehner  
Associate Dean, Research and Learning Services  
J. Willard Marriott Library
June 8, 2012

TO: Michael L. Hardman  
Interim Senior Vice President for Academic Affairs

FR: Ann L. Darling  
Chair, Undergraduate Council

RE: New Undergraduate Major, B.S. in Multi-Disciplinary Design

At its meeting on Tuesday, April 17, the Undergraduate Council voted to approve a proposal from the College of Architecture + Planning for a new Bachelor of Science degree in Multi-Disciplinary Design. The proposal, with supporting materials, is attached.

We ask, if you also approve of the proposal, that it be forwarded on to the Executive Committee of the Academic Senate for their consideration.
Cover/Signature Page

Institution Submitting Request: University of Utah
Proposed Title: Bachelor of Science Multi-Disciplinary Design
School or Division or Location: College of Architecture + Planning
Department(s) or Area(s) Location: School of Architecture
Recommended Classification of Instructional Programs (CIP) Code\(^1\) : 50.0404
Proposed Beginning Date: 08/20/2013
Institutional Board of Trustees' Approval Date:

Proposal Type (check all that apply):

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
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<tbody>
<tr>
<td>4.1.1</td>
<td>Non-Credit Certificate of Proficiency Eligible for Financial Aid</td>
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<tr>
<td>4.1.1</td>
<td>Credit Certificate of Proficiency Eligible for Financial Aid</td>
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<tr>
<td>4.1.1</td>
<td>Non-Credit Certificate of Completion</td>
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</tr>
<tr>
<td>4.1.8</td>
<td>Doctoral Degree</td>
</tr>
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</table>

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

Signature | Date:
Printed Name: Mike Hardman

\(^1\) CIP codes must be recommended by the submitting institution. For CIP code classifications, please see http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=65.
Program Description
The College of Architecture and Planning proposes to introduce a new undergraduate Bachelor of Science in Multi-Disciplinary Design. The course of study will use product design as a vehicle to investigate design research, human centered design principles, interface development, articulation of product forms, materials and digital manufacturing principles. Students will focus on one of two tracks: one that is more related to form giving closely related to Industrial Design and the other that is more digitally related.

Role and Mission Fit
The mission statement of the University of Utah emphasizes the (1) “highest standards of scholarship and professional practice” as well as (2) “the mutual relevance and interdependence of teaching and research.” It seeks to (3) “foster the discovery and humane use of knowledge and artistic creation” and to (4) “facilitate the application of research findings to the health and well-being of Utah’s citizens through programs and services available to the community.” The proposed degree is designed to encourage the highest standard of professional practice and at the same time interject an emphasis on interdisciplinary study and research. It will focus on the Utah community directly, increasing artistic and technology knowledge in the profession and in business. The ultimate mission of the Bachelor of Science in Multi-Disciplinary Design is to allow students to engage, anticipate, and research the profound changes in technology and design, leading to a greater capacity in the future. It fits within the broader mission of the University of Utah to provide excellent multidisciplinary and engaged education.

Faculty.
The design faculty will consist of three full-time regular faculty plus 5 FTE of adjunct professional faculty (six to 10 individuals). Currently there are two dedicated faculty lines for the program. Director Jim Agutter fills one and the other will be filled by a national search later this year. The university administration has committed an additional faculty line the following year. The adjunct faculty are particularly important since the field of design is rapidly evolving and those who practice are often on the forefront on changes in software, tools and processes. In addition, the faculty teaching in the design program will be drawn from several departments and coordinated by the faculty appointed to the Design program of the College of Architecture + Planning. These are experienced faculty who specialize in theory and criticism (Communication), computer applications and computer science (CS), bio-medical engineering (Bio-Med) mechanical engineering (ME), media arts (Art & Art History), marketing and innovation(Business) and human factors (Psych).

Market Demand
As outlined below, there is a significant labor market demand for professionals trained in multi-disciplinary design. There are however, currently no academic programs in Utah that provide this type of training, other than the University of Utah’s Multi-Disciplinary Design Minor, which provides only a limited introduction to the field. Due to the increased awareness of design thinking strategies to solve difficult and complex problems in a variety of fields, there has been an increased demand for individuals who are trained designers. Based upon research conducted for this proposal, it is estimated that multi-disciplinary designers will see job opportunities grow at a rate significantly faster than other fields nationwide over the next 10 years. A recent search on the design specific job board Design Observer (www.designobserver.coroflot.com) indicated several hundred recent job offerings in the area of product design, design management and design research. This trend will also be seen locally with many firms in the area expanding and offering positions in the area of product design and development.
Student Demand
There has been a recent increase in student demand for design related programs throughout the country due to the growth of design related services and businesses. In addition, there has been an acknowledgment in the business community that design thinking is a valuable strategy for solving complex problems. Currently we have a Multi-Disciplinary Design minor offered in the College. In the second year of the program we have seen a dramatic increase in the number of students taking courses. All 3 courses offered in the College for the minor are exceeding capacity and many students are on waiting lists wanting to take the classes. Over 60 students have signed up for the design minor and many more have expressed an interest. Six students are currently pursuing a Bachelor of University Studies degree with a focus on design.

Statement of Financial Support.
The university administration has agreed to support the Multi-Disciplinary Design major through the addition of 2 new faculty lines over the next 2 years. In addition, this program will generate revenue with tuition and grants through funded studios and multi-disciplinary program grants such as the one that is place with Bio-Engineering.

Appropriated und ........................................
Special legislative Appropriation ................
sants and Contracts ...................................
Special fees Differential Tuition .............
Other (please describe) ............................

Similar Programs Already Offered in the USHE
While there are several design related programs already in existence at Utah colleges and universities, the programs tend to focus on individual design fields such as graphic design rather than a holistic “design thinking” and product design based curriculum.

At Utah State University there is a three-faculty graphic design/digital design department, which offers BFA and MFA degrees. Alan Hasimoto has been responsible for the development of the Utah State program and he has been consulted about the development of the new Multi-Disciplinary Design Program at the University of Utah. Utah State has also developed a certificate for undergraduate students focused on “Design Thinking” in collaboration with Art and Business but their enrollment numbers are limited due to the programs structure.

Brigham Young University has a small industrial design program housed in the recently approved Engineering’s School of Technology. This program currently has 4 faculty members and graduates approximately 15 students per year. This is a traditional industrial design program that is not multi-disciplinary in nature. However, BYU does offer a “Design Thinking Bootcamp” that introduces students to a broader set of design issues but this falls outside their traditional course curriculum.

At Weber State University there is the visual communication/design focus in the Visual Art Department. This department has 12 full time faculty members who primarily focus on traditional study of design in art. In addition, they have a strong program in interior design.

Utah Valley University has a BFA program focusing on Graphic Design and some more technical work is begin done in their Engineering program with digital media and serious gaming.

Salt Lake Community College has several degree programs in their Visual Art and Design program. These include animation, graphic design, illustration, photography and electronic publishing. It is anticipated that the Design program at the University of Utah could work with SLCC to prepare students who are interested in this program to transfer academic credits to the University.
Southern Utah University offers two degrees associated with design. One is a Bachelor of Arts in Art History or Studio Arts. The other is a BFA in Graphic Design, Art Education or Studio Arts.

Snow College has a visual arts program and is focused on the creation more traditional art objects through areas of emphasis such as ceramics, graphic design, drawing, painting and printmaking.

Many two-year design programs have recently been developed. These programs such as ITT Technical Institute’s Multimedia Design program and the Art Institutes offerings focus on mastery of software and techniques. They do not include teaching a broad understanding of design thinking and the application to complex problems. Nor do they focus on product development and design.
Program Description

University of Utah
Bachelor of Science Multi-Disciplinary Design Major
4/10/2012

Section I: The Request

University of Utah requests approval to offer a Bachelor of Science in Multi-Disciplinary Design effective Fall Semester 2013. This program has been approved by the institutional Board of Trustees on .

Section II: Program Description

Complete Program Description
The College of Architecture and Planning proposes to introduce a new undergraduate Bachelor of Science in Multi-Disciplinary Design. The course of study will use product design as a vehicle to investigate design research, human centered design principles, interface development, articulation of product forms, materials and digital manufacturing principles. After successfully completing 20 credit hours in specified pre-major courses, students accepted into the major will focus on one of two tracks: one that is more related to form giving closely related to Industrial Design and the other that is more digitally related.

In the modern world the boundaries that exist between applied design disciplines often aren’t as easily defined. The adherence to siloed solutions is breaking down. Bridges are being built between specialties in order to cultivate a shared understanding, synergistic collaboration and a common vocabulary – all of which are essential to solving complex problems. Those versed in the language of design and critical thinking will be essential voices in such dialogues. Therefore, it is absolutely critical that we not only educate our future designers with a strong foundation in the fundamentals of design and design thinking, but to begin cultivating collaborative environments that reflect contemporary paradigms.

This idea of cross-fertilization is not new. It has, perhaps, just been inadvertently forgotten due to the complexities of the university structure. The Bauhaus which operated in Germany from 1919–1933 (and subsequent new Bauhaus at the Illinois Institute of Technology) was/is a model of inter-disciplinary study that purposefully ignored arbitrary and artificial boundaries and provided a common approach to design and art-making across divergent disciplines. This union of art, craft and technology led to innovations in architecture, graphic design, product design, furniture design and materials that continue to reverberate.

In the last number of years many private institutions and design practices have taken up this theme through the linkage between different disciplines through the common language of design. The d.school at Stanford, the New School at Parsons, IIT Institute of Design and MIT Media labs are modern equivalents of the Bauhaus that bring together a diverse set of specialties across the common framework of design and using community based complex problems at their core.

Purpose of Degree
As Buckminster Fuller noted, the designer “is an emerging synthesis of artist, inventor, mechanic, objective economist, and evolutionary strategist.” The discipline of design is very broad including the design of architecture, products, digital media, fashion, crafts, industrial methods, print media, and so on. At this juncture in time, design and design thinking have evolved into a dominant framework for creative and
interdisciplinary problem solving. This new interdisciplinary program will train our students to compete in an ever increasingly complex work environment and a thorough understanding of ethical conduct and social responsibility through these specific concepts:

- inquiry and project-based learning
- critical thinking skills
- experimentation with multiple ways of problem solving
- visual literacy
- innovation and invention
- team building and collaboration
- identifying authentic real-world tasks and challenges
- design research
- human centered design principles

The Multi-disciplinary Bachelor of Science in Design encompasses a curriculum with four substantive areas applicable to all design education: Studio, Technical, History/Theory and Practice. In addition to the classes and faculty from the Design program, the proposed curriculum leverages and has been developed with existing University of Utah faculty and courses from Architecture, Fine Arts, Communication, Business, Bio-Engineering, Mechanical Engineering, Computer Science and Psychology.

This program has at its core the shared fundamental understanding of the language, process and application of design and design thinking. This proposes to use design as a verb for activities rooted in 4 cornerstones: Engagement, Community, Collaboration and Responsibility. This broad perspective allows for students to see the connections between these design specialties and focus on the process of design as a creative idea and development framework. It expands students' horizons by engaging with other design disciplines in strategic and collaborative ways. This approach can lead to exciting new design engagement that can deeply engage the world as it is and as it is becoming.

Practically this program will manifest itself in a problem driven curriculum that merges and unifies the expertise of the College and University as a whole and examines problems at a product scale founded along a human experiential perspective. The curriculum will map design's future through production, research, strategy, entrepreneurship and applied futurism, preparing students to be multi-disciplinary product designers, design researchers, product development experts, directors, practitioners, visionaries and leaders.

Students will be required to have excellent knowledge of computers, computer graphics, and standard software packages. Competencies in design and computer software, as demonstrated through a portfolio will be an admission requirement for the major. Admission will be restricted to qualified applicants in the second half of their sophomore year. The components of the major include 74 credit hours of electives and core requirements, as well as the general education requirements for the university, many of which can be satisfied through the interdisciplinary requirements of the major.

Institutional Readiness
This major builds upon the successful Multi-Disciplinary Minor that is currently being offered by the College of Architecture + Planning. The organizational structure, administrative support and facility considerations
Faculty

The design faculty will consist of three full-time regular faculty plus 5 FTE of adjunct professional faculty (six to 10 individuals). Currently there are two dedicated faculty lines for the program. Director Jim Agutter fills one and the other will be filled by a national search later this year. The university administration has committed an additional faculty line the following year. The adjunct faculty are particularly important since the field of design is rapidly evolving and those who practice are often on the forefront on changes in software, tools and processes. In addition, the faculty teaching in the design program will be drawn from several departments and coordinated by the faculty appointed to the Design program of the College of Architecture + Planning. These are experienced faculty who specialize in theory and criticism (Communication), computer applications and computer science (CS), bio-medical engineering (Bio-Med) mechanical engineering (ME), media arts (Art & Art History), marketing and innovation (Business) and human factors (Psych).

<table>
<thead>
<tr>
<th>Faculty Category</th>
<th>Faculty Headcount – Prior to Program Implementation</th>
<th>Faculty Additions to Support Program</th>
<th>Faculty Headcount at Full Program Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>With Doctoral Degrees (Including MFA and other terminal degrees, as specified by the institution)</td>
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<td></td>
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</tr>
<tr>
<td>Full-time Tenured</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Full-time Non-Tenured</td>
<td>1</td>
<td>3</td>
<td>4</td>
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<tr>
<td>Part-time Tenured</td>
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<tr>
<td>Part-time Non-Tenured</td>
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<tr>
<td>With Master’s Degrees</td>
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<td>Full-time Tenured</td>
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<tr>
<td>Full-time Non-Tenured</td>
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<tr>
<td>Part-time Tenured</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Part-time Non-Tenured</td>
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<td>2</td>
<td>3</td>
</tr>
<tr>
<td>With Bachelor’s Degrees</td>
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<td>Full-time Non-Tenured</td>
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<td></td>
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<tr>
<td>Part-time Tenured</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Part-time Non-Tenured</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
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<tr>
<td>Full-time Non-Tenured</td>
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<tr>
<td>Part-time Tenured</td>
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<td>Part-time Non-Tenured</td>
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<tr>
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<td>3</td>
<td>4</td>
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<tr>
<td>Full-time Non-Tenured</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-time Tenured</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-time Non-Tenured</td>
<td>3</td>
<td>2</td>
<td>5</td>
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Total Department Faculty FTE (As reported in the most recent A-1/S-11 Institutional Cost Study for “prior to program implementation” and using the A-1/S-11 Cost Study Definition for the projected “at full program implementation.”)

<table>
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<tr>
<th>FTE</th>
<th>X</th>
<th>8</th>
</tr>
</thead>
</table>

### Staff
The Design program for the first 5 years will not need any additional staff and will leverage existing resources in the College of Architecture + Planning.

### Library and Information Resources
The institution currently has the needed library resources and support from the library.

### Admission Requirements
Admission applications/review process will be made each Spring and be based on a portfolio of previous design work that applicants have carried out in the pre-admittance course work. These portfolios will be reviewed by at least 3 full and part-time faculty members in the program. They will look for completeness, capability, craftsmanship and aesthetics. In addition, students will be required to have at least a 2.8 GPA. Following the review of the material students will be admitted into the program for the following Fall.

### Student Advisement
The students will be advised by the academic advisor for the College of Architecture + Planning. The College will support this additional activity for this individual.

### Justification for Graduation Standards and Number of Credits
Students will be able to apply for graduation after completing their fall semester of their senior year or after completing or nearly completed all required coursework for the major and for the university requirements.

### External Review and Accreditation
Outside consultants were utilized to help shape the direction and the coursework of the program to ensure that the proposed curriculum meets with the needs of the design profession and other academic units on campus. These outside consultants included professional industrial designers both in state and out of state, professional design engineers, and business leaders. In addition, an interdisciplinary advisory board has been organized to oversee curriculum issues and provide ongoing feedback on trajectory of the program.

Robert Hitchcock, Ph.D., Assistant Professor Bio-Engineering, Director of Bio-Design
John Langell, M.D., M.P.H, Assistant Professor General Surgery, Director of Bio-Innovate
Carol Sogard, MFA, Associate Professor Graphic Design, Director of Graphic Design
Frank Drews, Ph.D., Associate Professor Psychology, Director of Human Factors Program
Abbie Griffin, Ph.D., Presidential Professor Marketing, Presidential Chair in Marketing
Mark Minor, Ph.D., Associate Professor Mechanical Engineering
Ann Darling, Ph.D., Associate Professor Communication, Senior Associate Dean Undergraduate Studies
Mariah Meyer, Ph.D., Assistant Professor School of Computing
Theodore Espiritu, Visiting Lecturer in Design, Espiritu Design
Randall Smith, Visiting Lecturer in Design, Modern8
Matthew Kressy, Senior Lecturer MIT, Adjunct Faculty RISD, Designturn Inc.
Because this is a hybrid program that merges expertise from across different fields, accreditation will not be sought.

Projected Program Enrollment and Graduates; Projected Departmental Faculty/Students:

<table>
<thead>
<tr>
<th>Data Category</th>
<th>Current – Prior to New Program Implementation</th>
<th>Projected Year 1</th>
<th>Projected Year 2</th>
<th>Projected Year 3</th>
<th>Projected Year 4</th>
<th>Projected Year 5</th>
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<tr>
<td><strong>Data for Proposed Program</strong></td>
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<td>15</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td></td>
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<tr>
<td>Number of Graduates in Proposed Program</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Total # of Declared Majors in Proposed Program</td>
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<td>15</td>
<td>30</td>
<td>60</td>
<td>70</td>
<td>90</td>
</tr>
<tr>
<td><strong>Major Data – For All Programs Within the Major</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Major Faculty FTE (as reported in Faculty table above)</td>
<td>1.5</td>
<td>3.5</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<tr>
<td>Total Major Student FTE (Based on Fall Third Week)</td>
<td>15</td>
<td>30</td>
<td>60</td>
<td>70</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Student FTE per Faculty FTE (ratio of Total Major Faculty FTE and Total Major Student FTE above)</td>
<td>4.28:1</td>
<td>6:1</td>
<td>10:1</td>
<td>10:1</td>
<td>11.24:1</td>
<td></td>
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<tr>
<td>Program accreditation-required ratio of Student FTE/Faculty FTE, if applicable: (Provide ratio here:_______________________)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Expansion of Existing Program
This is an expansion of the existing Multi-Disciplinary Design Minor, which has been in place for 2 academic years. There are currently over 60 students enrolled in the design minor whom come from a variety of departments across campus.

Section III: Need

Program Need
As outlined below, there is a significant labor market demand for professionals trained in multi-disciplinary design. There are however, currently no academic programs in Utah that provide this type of training, other than the University of Utah’s Multi-Disciplinary Design Minor, which provides only a limited introduction to the field.

The multi-disciplinary design major will train students to gain a broad perspective allowing to see the connections between various design specialties and focus on the process of design as a creative idea and development framework. It will expand students’ horizons by engaging with other disciplines in strategic and collaborative ways.
The program will be unique and will collaborate with established programs such as Human Factors, Bio-engineering, Business and Medicine. The program will serve as a creative bridge across these different entities and provide students with a truly remarkable experience. In addition, because of the relationship between these different programs and the focus on product development, it is anticipated that the program will generate intellectual property that could lead to commercialization revenue.

**Labor Market Demand**

Due to the increased awareness of design thinking strategies to solve difficult and complex problems in a variety of fields, there has been an increased demand for individuals who are trained designers. Based upon research conducted for this proposal, it is estimated that multi-disciplinary designers will see job opportunities grow at a rate significantly faster than other fields nationwide over the next 10 years. A recent search on the design specific job board Design Observer ([www.designobserver.coroflot.com](http://www.designobserver.coroflot.com)) indicated several hundred recent job offerings in the area of product design, design management and design research. This trend will also be seen locally with many firms in the area expanding and offering positions in the area of product design and development.

<table>
<thead>
<tr>
<th>Title</th>
<th>2004 Employment</th>
<th>2014 Employment</th>
<th>% Change</th>
<th>Ave. Annual Openings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art directors</td>
<td>560</td>
<td>700</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>Commercial and Indus. Design</td>
<td>840</td>
<td>1090</td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td>Graphic and Communication Designers</td>
<td>3420</td>
<td>4620</td>
<td>34</td>
<td>170</td>
</tr>
<tr>
<td>Multi-media Designers</td>
<td>1130</td>
<td>1480</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>Totals</td>
<td>5950</td>
<td>7890</td>
<td>30</td>
<td>300</td>
</tr>
</tbody>
</table>

*Table 1. Long term employment projections in Utah. Source Utah Labor Market Information System*

At a recent strategic meeting with Utah design business leaders it became apparent that there is a need for individuals with a broad understanding of design thinking strategies as well as specific technical skills. In fact, several design firms have resorted to partnering with out of state universities for internship opportunities due to the lack of local quality students.

**Student Demand**

There has been a recent increase in student demand for design related programs throughout the country due to the growth of design related services and businesses. In addition, there has been an acknowledgment in the business community that design thinking is a valuable strategy for solving complex problems. As a result many new design programs have been established such as the d.School at Stanford and established programs such as the Rhode Island School of Design and Harvard’s Design School have seen significant enrollment increases.

Currently we have a Multi-Disciplinary Design minor offered in the College. In the second year of the program we have seen a dramatic increase in the number of students taking courses. All 3 courses offered in the College for the minor are exceeding capacity and many students are on waiting lists wanting to take
the classes. Over 60 students have signed up for the design minor and many more have expressed an interest. Six students are currently pursuing a Bachelor of University Studies degree with a focus on design. It is estimated that we would have 15 to 20 declared majors enrolled in the first year and subsequently add 30-50 majors each year in the different areas of study. At full enrollment we conservatively estimate that we would have 90 - 150 declared majors.

**Similar Programs**

While there are several design related programs already in existence at Utah colleges and universities, the programs tend to focus on individual design fields such as graphic design rather than a holistic “design thinking” and product design based curriculum.

At Utah State University there is a three-faculty graphic design/digital design department, which offers BFA and MFA degrees. Alan Hasimoto has been responsible for the development of the Utah State program and he has been consulted about the development of the new Multi-Disciplinary Design Program at the University of Utah. Utah State has also developed a certificate for undergraduate students focused on “Design Thinking” in collaboration with Art and Business but their enrollment numbers are limited due to the programs structure.

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Many two-year design programs have recently been developed. These programs such as ITT Technical Institute’s Multimedia Design program and the Art Institutes offerings focus on mastery of software and techniques. They do not include teaching a broad understanding of design thinking and the application to complex problems. Nor do they focus on product development and design.
**Collaboration with and Impact on Other USHE Institutions**

We have a friendly and collegial relationship between the design faculty at the University of Utah, Utah State, UVU, Art Institute and BYU. Faculty members from all the institutions have participated in reviews of students work and have been consulted about the proposed program. It is not anticipated that the new program will have any adverse impact on existing programs. Because of the multi-disciplinary nature of the proposed program it is anticipated that students graduating will fill positions that are different from those filled by graduates of the existing programs. However, a few students' positions may overlap with some of BYU’s students. We will continue to have a relationship with BYU to ensure minimal conflict.

**Benefits**

The University of Utah and existing programs primarily Bio-Engineering, Medicine and Business will benefit from collaborating with students trained in creative product design. These students will work collaboratively with these departments to cross-fertilize expertise. Currently an R-25 grant with NIH has been funded that is a collaboration with Bio-Engineering and Design Students for a summer intensive workshop. We believe that we can expand on these opportunities and obtain additional funding to support the program.

**Consistency with Institutional Mission**

The mission statement of the University of Utah emphasizes the (1) “highest standards of scholarship and professional practice” as well as (2) “the mutual relevance and interdependence of teaching and research.” It seeks to (3) “foster the discovery and humane use of knowledge and artistic creation” and to (4) “facilitate the application of research findings to the health and well-being of Utah’s citizens through programs and services available to the community.” The proposed degree is designed to encourage the highest standard of professional practice and at the same time interject an emphasis on interdisciplinary study and research. It will focus on the Utah community directly, increasing artistic and technology knowledge in the profession and in business. The ultimate mission of the Bachelor of Science in Multi-Disciplinary Design is to allow students to engage, anticipate, and research the profound changes in technology and design, leading to a greater capacity in the future. It fits within the broader mission of the University of Utah to provide excellent multidisciplinary and engaged education.

**Section IV: Program and Student Assessment**

**Program Assessment**

The proposed Design program will combine broader critical thinking skills with specific skills related to the practice of Design. By combining these two broad objectives the programs goals are attempting to ensure that students have a broad perspective and specific knowledge that can be applied in the workplace as well as life. The proposed Design program will utilize the Essential Learning Outcomes that have been adopted by the University of Utah. These outcomes will help drive specific goals within the program. They include:

- **Knowledge of Human Cultures and the Physical and Natural World.**
  - The students will understand through design research and development the understanding of a variety of different cultures. In addition, will be given an understanding of design implications on the natural world.
  - The students will learn intellectual empathy with the ability to put themselves in another’s shoes to understand their needs, wants, beliefs and viewpoints in the effort to genuinely understand them.

- **Intellectual and Practical Skills.**
  - The students will develop specific skills related to intellectual activities such as perseverance, courage and humility.
- Students will learn practical skills associated with the research, design and development of products.

- Personal and Social Responsibility.
  - Students will learn intellectual humility that can be described as the awareness of you’re their biases, prejudices and the limitations and extent of their viewpoints and ignorance.
  - Students will learn how to take responsibility for their actions through independent work projects.

- Integrative and Applied Learning.
  - Students will have the ability to work with others in a synergistic and positive way to accomplish a shared goal.

To measure the effectiveness of the program and to see how well the mission is fitting with the outcomes, members of the interdisciplinary advisory board will selectively meet with students at the end of each year to understand qualitatively what is working and what needs to be refined to ensure maximum learning. In addition, a design program specific survey will be given to each student to gain insight into their perceived performance across a number of dimensions. The results of that survey will be compared to a similar survey given to reviewers of the student projects and the advisory board on their perception of the student’s performance to spot trends and patterns. The department will also utilize the standard university based student feedback surveys administered at the end of each semester to understand how well we are meeting the needs of the students. In addition, the advisory board will review the programs goals and mission three times throughout the year to modify trajectory and course curriculum.

**Expected Standards of Performance**
Specifically each student will be accessed on his or her acquired competencies through course work that is clustered together by year.

Pre-major year 1 and 2 competencies: Basic design capabilities, design process understanding, basic visual communication techniques, theoretical understanding of visual language and an understanding of the profession of design.

Year 3 competencies: More detailed design competency and the ability to move from research to finalized product, the process of design from research to manufacturing, detailed and in-depth digital communication skills, understanding of manufacturing processes and a thorough understanding of design research.

Year 4 competencies: Very detailed design exercises that culminate in real world products, specific understanding of techniques and expertise from different departments, team collaboration, business understanding and knowledge of design practice through internship.

These competencies will be measured through class outcomes and a detailed assessment from the advisory board to see if the finalized projects exhibit the competencies that have been outlined.
## Section V: Finance

### Budget

#### 5-Year Budget Projection

<table>
<thead>
<tr>
<th>Departmental Data</th>
<th>Current Budget—Prior to New Program Implementation</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personnel Expense</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries &amp; Wages</td>
<td>242,000</td>
<td>242,000</td>
<td>342,000</td>
<td>450,000</td>
<td>500,000</td>
<td>530,000</td>
</tr>
<tr>
<td>Benefits</td>
<td>72,600</td>
<td>72,600</td>
<td>102,600</td>
<td>135,000</td>
<td>150,000</td>
<td>159,000</td>
</tr>
<tr>
<td>Total Personnel Expense</td>
<td></td>
<td>314,600</td>
<td>314,600</td>
<td>444,600</td>
<td>585,000</td>
<td>650,000</td>
</tr>
<tr>
<td><strong>Non-personnel Expense</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel</td>
<td>5,000</td>
<td>5,000</td>
<td>9,000</td>
<td>12,000</td>
<td>13,000</td>
<td>14,000</td>
</tr>
<tr>
<td>Capital</td>
<td>2,000</td>
<td>2,000</td>
<td>3,000</td>
<td>4,000</td>
<td>4,000</td>
<td>4,000</td>
</tr>
<tr>
<td>Library</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Current Expense</td>
<td>3,000</td>
<td>3,000</td>
<td>5,000</td>
<td>7,000</td>
<td>7,000</td>
<td>7,000</td>
</tr>
<tr>
<td>Total Non-personnel Expense</td>
<td></td>
<td>10,000</td>
<td>10,000</td>
<td>17,000</td>
<td>23,000</td>
<td>24,000</td>
</tr>
<tr>
<td><strong>Total Expense (Personnel + Current)</strong></td>
<td></td>
<td>$324,600</td>
<td>$324,600</td>
<td>$461,600</td>
<td>$600,800</td>
<td>$674,000</td>
</tr>
<tr>
<td><strong>Departmental Funding</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appropriated Fund</td>
<td>264,600</td>
<td>264,600</td>
<td>394,600</td>
<td>527,000</td>
<td>542,000</td>
<td>551,000</td>
</tr>
<tr>
<td>Other: Special Legislative Appropriation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants and Contracts</td>
<td>50,000</td>
<td>50,000</td>
<td>90,000</td>
<td>100,000</td>
<td>100,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Special Fees/Differential Tuition</td>
<td>780</td>
<td>2,280</td>
<td>3,250</td>
<td>6,725</td>
<td>7,850</td>
<td>11,125</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td>$315,380</td>
<td>$316,880</td>
<td>$487,850</td>
<td>$633,725</td>
<td>$649,850</td>
<td>$662,125</td>
</tr>
<tr>
<td><strong>Difference</strong></td>
<td>$(9,220)</td>
<td>$(7,720)</td>
<td>$26,250</td>
<td>$(32,925)</td>
<td>$(24,150)</td>
<td>$(51,875)</td>
</tr>
</tbody>
</table>

*Project Instructional Cost/Student Credit Hour* data contained in this chart are to be used in the Third-Year Follow-Up Report and Cyclical Reviews required by R411.
Funding Sources
The university administration has agreed to support the Multi-Disciplinary Design major through the addition of 2 new faculty lines over the next 2 years. In addition, this program will generate revenue with tuition and grants through funded studios and multi-disciplinary program grants such as the one that is place with Bio-Engineering.

Reallocation
There will be no reallocation.

Impact on Existing Budgets
There will be no impact on existing budgets.

Section VI: Program Curriculum

All Program Courses

<table>
<thead>
<tr>
<th>Course Prefix and Number</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design 2000</td>
<td>Design Seminar</td>
<td>1</td>
</tr>
<tr>
<td>Design 2615</td>
<td>Introduction to Design Thinking</td>
<td>3</td>
</tr>
<tr>
<td>Design 3000</td>
<td>Visual Communications</td>
<td>3</td>
</tr>
<tr>
<td>Design 3400</td>
<td>Design Research</td>
<td>3</td>
</tr>
<tr>
<td>Design 3600</td>
<td>Design Studio 1</td>
<td>5</td>
</tr>
<tr>
<td>Design 3601</td>
<td>Design Studio 2</td>
<td>5</td>
</tr>
<tr>
<td>Design 3650</td>
<td>Introduction to Typography</td>
<td>3</td>
</tr>
<tr>
<td>Design 4000</td>
<td>History of Design</td>
<td>3</td>
</tr>
<tr>
<td>Design 4600</td>
<td>Design Studio 3</td>
<td>5</td>
</tr>
<tr>
<td>Design 4601</td>
<td>Design Studio 4</td>
<td>5</td>
</tr>
<tr>
<td>Design 4650</td>
<td>Business &amp; Design</td>
<td>3</td>
</tr>
<tr>
<td>Design 4800</td>
<td>Design Internship</td>
<td>1</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td></td>
<td><strong>40</strong></td>
</tr>
<tr>
<td>Core Courses Outside Dept.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physics 2010</td>
<td>Physics 1</td>
<td>4</td>
</tr>
<tr>
<td>Arch 2630</td>
<td>Arch Design Workshop</td>
<td>3</td>
</tr>
<tr>
<td>Arch 2632</td>
<td>Adv Design Workshop</td>
<td>3</td>
</tr>
<tr>
<td>Mktg 4450</td>
<td>Marketing Research</td>
<td>3</td>
</tr>
<tr>
<td>Mktg 4770</td>
<td>Consumer Behavior</td>
<td>3</td>
</tr>
<tr>
<td>Mgt 5770</td>
<td>Fundamentals of Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td></td>
<td><strong>19</strong></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art 1060</td>
<td>Basic Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Arch 1630</td>
<td>Architectural Graphics</td>
<td>3</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>FA 3700</td>
<td>MultiMedia Graphics</td>
<td>4</td>
</tr>
<tr>
<td>*Design 3700</td>
<td>Animation Modeling</td>
<td>3</td>
</tr>
<tr>
<td>*Art 4455</td>
<td>Kinetic Sculpture</td>
<td>3</td>
</tr>
<tr>
<td>+Design 4700</td>
<td>Material and Manufacturing Principles</td>
<td>3</td>
</tr>
<tr>
<td>+Design 5370</td>
<td>Digital Fabrication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Must take 1 class</strong></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td>Comm 3550</td>
<td>Principles of Visual Communication</td>
<td>3</td>
</tr>
<tr>
<td>*Psych 4000</td>
<td>Human Factors and Ergonomics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Must take 1 class</strong></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td>*CS 5650</td>
<td>Perception for Graphics</td>
<td>3</td>
</tr>
<tr>
<td>*Design 4900</td>
<td>Advanced Interaction Design</td>
<td>3</td>
</tr>
<tr>
<td>+ME 5100</td>
<td>Ergonomics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Must take 1 class</strong></td>
<td><strong>3</strong></td>
</tr>
<tr>
<td></td>
<td>* Digital Track</td>
<td><strong>15</strong></td>
</tr>
<tr>
<td>+ Physical/Form Track</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Major Courses</strong></td>
<td><strong>74</strong></td>
</tr>
</tbody>
</table>

**University Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Humanities</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>3</td>
</tr>
<tr>
<td>American Institutions</td>
<td>3</td>
</tr>
<tr>
<td>Writing 2010</td>
<td>3</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>4</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Quantitative Analysis Math</td>
<td>3/4</td>
</tr>
<tr>
<td>Quantitative Reasoning</td>
<td>3/4</td>
</tr>
<tr>
<td>Upper Division University Writings</td>
<td>3</td>
</tr>
<tr>
<td>Diversity Course</td>
<td>3</td>
</tr>
<tr>
<td>Quantitative Intensive</td>
<td>3</td>
</tr>
<tr>
<td>Quantitative Intensive</td>
<td>3</td>
</tr>
<tr>
<td>International</td>
<td>3</td>
</tr>
<tr>
<td><strong>Sub Total</strong></td>
<td><strong>48</strong></td>
</tr>
</tbody>
</table>

**Total Number of Credits** | **122**

**New Courses to Be Added in the Next Five Years**

It is anticipated that no new courses will be added over the next five years. However, based upon feedback from students, faculty and the advisory board this may be adjusted.
**Program Schedule**

Students who are interested in participating in the proposed program will first be required to take a series of Pre-Design courses. These Pre-Design courses are structured to provide an understanding of design principles and build basic skills. These courses will also allow a student to develop a portfolio of design work that will be used to apply for the full program. Once the student has been accepted into the program, they will move through a sequence of courses that allow them to focus on more traditional industrial design track or one that is more focused on digital products. These courses comprise 6 to 9 credit hours of the program and allow a detailed focus on one of the areas. The students will complete their studies with an intensive capstone studio and an internship at area design firms.
### Year 1 and 2

**PRE-DESIGN - Requirements (20 Credits)**

**Goals:** Basic Design competency, design process understanding, basic visual communication skills, theoretical introduction to visual language and exposure to the profession of design.

<table>
<thead>
<tr>
<th>Studio</th>
<th>Arch Design Workshop</th>
<th>Arch 2630 (3 credits)</th>
<th>Fall Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Both workshops are required.</td>
<td>An exploration of the fundamentals of design elements and principles as they relate to design thinking and process. A series of studio exercises will be introduced by employing various physical materials and visual ordering systems. Two dimensional design process and digital tools will be emphasized. (Retooled course)</td>
<td>Faculty</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Advanced Design Workshop</th>
<th>Arch 2632 (3 credits)</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>A continued exploration of the fundamentals of design elements and principles as they relate to design thinking and process. A series of studio exercises will be introduced by employing various physical materials and</td>
<td>Adjunct</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Physics required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 1 Physics 2010 (4 credits)</td>
</tr>
<tr>
<td>Three lectures and two recitations weekly. Mechanics and heat.</td>
</tr>
</tbody>
</table>

| Basic Drawing ART 1060 (3 credits) | Fall/Spring |
| Fundamentals of drawing. Many exercises will engage the student in the various aspects of line as it relates to texture, contour, and form. Design awareness will be developed. | Art |

| Architectural Graphics Arch 1630 (3 credits) | Fall/Spring |
| Fundamentals of 2d and 3d drawing techniques. | Arch |

| Graphics for MultiMedia Fine Arts 3700 (3 credits) | Fall/Spring |
| Explore Introduction to Design Thinking DES 2615 (3 credits) | Fall/Spring |
| An introduction and survey of various facets of the field of design. | Fac |

| Introduction to Typography Book Layout DES 3650 (3 credits) | Fall |
| An introduction to the theory of typography and book layout. | Adjunct |

<table>
<thead>
<tr>
<th>History/Theory Required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Design Thinking DES 2615 (3 credits)</td>
</tr>
<tr>
<td>An introduction and survey of various facets of the field of design.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Practice Seminar required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Seminar DES 2000 (1 credit)</td>
</tr>
<tr>
<td>Current topics of interest in international design. This course is primarily based on a series of guest speakers presenting seminars in their areas of design specialization.</td>
</tr>
</tbody>
</table>
Design Studio I  DES 3600 (5 Credits)  Fall Semester
Design Studio II  DES 3650 (5 Credits)  Spring Semester
Visual Communications  DES 3000 (3 credits)  Fall Semester
*Animation/Modeling  DES 3700 (3 credits)  Fall
+Digital Fabrication  DES 5370 (3 credits)  Fall
+Materials & Manufacturing Principles  DES 4700 (3 credits)  Spring
*Kinetic Sculpture (3 credits)  Spring
Exploration of different materials and manufacturing principles in context of designed artifacts.
Exploration of programming using Processing and developing interactive systems.
**Year 3 cont.**

**DESIGN (Year 3) - Requirements (28 Credits)**

Goals: More specific design competency, practice of design process from research to production, detailed digital communication skills, understanding of manufacturing processes, detailed understanding of design

<table>
<thead>
<tr>
<th>History/Theory</th>
<th>History of Design  DES 4000 (3 Credits)  Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>An introduction to the discipline of design through a selective survey of designs from prehistoric culture to the contemporary society.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>History of Design required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 credits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>One courses from these options.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 credit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Practice</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Both courses required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 credit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>*Human Factors and Ergonomics  PSYCH 4000 (3 Credits)  Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>An introduction to human factors, ergonomics, and engineering psychology. The course examines the history of ergonomics, human-machine relations, displays and controls, human-computer interaction, industrial and aviation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design Research  Des 3400 (3 Credits)  Fall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding of design research practices and human centered design principles.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marketing Research  MKTG 4450 (3 Credits)  Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Different sources of business data will be studied. Skills will be developed to help students design and perform business research leading to solid answers supporting good decision-making.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fac</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Bus</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Comm</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Psych</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Adjunct</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Bus</th>
</tr>
</thead>
</table>
Year 4

DESIGN (Year 3) - Requirements (28 Credits)

Goals: More specific design competency, practice of design process from research to production, detailed
digital communication skills, understanding of manufacturing processes, detailed understanding of design

Studio Design Studio III Design Studio IV are required. (10 credits).

Design Studio III DES 4000 (5 credits) Fall Semester
Design studio projects introducing issues of user need, usability, marketplace, and social interaction as they relate to design process. Attention to analysis, criticism, and communications will be emphasized. Original and individual design projects will be researched, defined, and solutions created addressing design in one or a combination of the following areas of interest centered around product design: package and interface design.

Design Studio IV DES 4010 (5 credits) Spring Semester
Capstone undergraduate studio involving projects that integrate design systems, technological and theoretical issues to create design solutions to more complex design problems. Emphasis on synthesis, process, and intention that results in the development of the students' own methodology. Strong emphasis on interdisciplinary, cooperative working environment.

Technical Two courses from these options. 6 credit minimum.

* Perception for Graphics CS 5650 (3 credits) Spring
This course provides an introduction to human visual perception intended for those studying or working in the fields of computer graphics and visualization.

+ Ergonomics ME 5100 (3 credits) Fall
Introduction to study of humans at work; disability and accident prevention, and productivity improvement. Human musculoskeletal system as a mechanical structure.

* Advanced Interaction Design Design 4000 (3 credits) Fall
Exploration of user interactions with systems, products and environments.

History/Theory Required. 6 credits

Consumer Behavior MKTG 4770 (3 credits) Fall
Study of psychological, sociological, and anthropological bases of behavior as they relate to purchase and consumption of industrial and consumer goods and services.

Fundamentals of Entrepreneurship MGT 5770 (3 credits) Spring
Exploration and discussion of the principles of entrepreneurship.

Practice Business & Design required 3 credits

Business & Design DES 4650 (3 credits) Fall
Intellectual Property, Copyright Laws & Practices (3)

Internship required 1 credit

Design Internship DES 4000 (1 credit) Spring
Required design internship with participating professional, individual, studio, company or corporation.
Section VII: Faculty

James Agutter M. Arch,  
Director, Design Program  
Assistant Professor  
College of Architecture + Planning  
University of Utah

New faculty line hire to be conducted this Fall

Another new faculty line to be hired in Fall 2013.

Keith Findling B.S. in Industrial Design  
Adjunct Assistant Professor

Theodore Espiritu B.S. in Industrial Design  
Visiting Lecturer

David Wolske, MFA in Graphic Design  
Visiting Lecturer  
Creative Director Red Butte Press  
University of Utah

Additional Faculty for Auxiliary positions will be brought in to cover coursework.
Section VIII: Letters of Support
Numerous letters of support have been received. Other letters will be sent upon receipt.
Dean Brenda Scheer
Marriot Library
Frank Drews, Human Factors
Robert Hitchcock, Bio-Engineering
Dean Taylor Randall, Business
Dean Raymond Tymas-Jones, Fine Arts
Kathy Hajeb, Innovation Scholars
Robert Avery, Communication
Dean Richard Brown, Engineering
April 8, 2011

To Whom It May Concern:

I am very pleased to be a part of and support the Interdisciplinary Design major. We have hosted the minor for a little over two years and it has been a very successful program, attracting students from all over campus. The minor has allowed Jim Agutter, director of the Interdisciplinary Design Program, to form alliances with appropriate counterparts in medicine, bioengineering, business, communication, and art. There are few opportunities on this campus that provide a greater likelihood of true interdisciplinary education. This kind of education is in great demand, not only from our students, but from the business world that is seeking problem-solving and creative people.

The College of Architecture + Planning is proud to be the “home” of this major, but I think it is very important to acknowledge that the resources, creativity and teaching will come not only from us, but from multiple units on this campus. Because of this level of cooperation and the support of the Sr. Vice President, we will be adding two new faculty lines to support the program over the next two years. We expect that others will also be working with us to establish joint appointments. We envision a major that will really weave together a talented group of faculty and students.

If you have additional questions or would like more information, please do not hesitate to contact me.

Sincerely

Brenda Scheer
Dean
James Agutter  
Design Program Director  
College of Architecture and Planning  
375 S. 1530 E. RM 235  
University of Utah  

Dear Dr. Agutter:

The University of Utah Libraries appreciate the opportunity to comment on our role in supporting the new Bachelor of Science in Multi-Disciplinary Design which encompasses the disciplines of architecture, art, business, communication, computer science, mechanical engineering, physics, psychology, and design. The libraries are committed to supporting the university and its faculty as they develop programs needed by our students.

Most courses that will comprise the multi-disciplinary design major are currently being taught at the university and are therefore covered by our collection development activities. The Marriott Library’s longstanding approval plan for the purchase of English language scholarly books published in the U.S., provides excellent material for all areas of research. The library maintains subscription to core journals covering the areas underlined in the major and also subscribes to databases such as JSTOR, ARTstor, Art Full-Text, Art Index, Arts & Humanities Citation Index, Avery Index to Architectural Periodicals, Business Source Premier, PsycInfo, ComAbstracts, Computer Source, Compendex, Institute of Physics Journals, Engineering Village, Inspec, Image Quest and others. Our Fine Arts Library and audiovisual materials should satisfy most undergraduate needs.

Our Katherine W. Dumke Fine Arts and Architecture Library is fully committed to support the diverse informational needs of the university students and faculty. Thanks to statewide allocations to the Utah Academic Library Consortium and the availability of campus computer surcharge funds, our electronic collection is strong in indexes, abstracts, and full-text online databases. Our Fine Arts and Architecture Library collection also has artists books, international architecture magazines, boxed sets of Asian art books, catalog raisonnés for visual artists, print collection of current art and architecture journals, graphic novels and other resources for users. The Marriott Library also accepts suggestions for new material to improve and update our research collections.

We encourage faculty to work with liaison librarians to build up specific sub-disciplines where our collection needs supplementing. Despite budget constraints, we are usually able to order any materials necessary to directly support classes. We modify our journal subscriptions to reflect current teaching and research. As the scholarly communication landscape evolves, new options may exist to supplement traditional print book purchases and conventional subscriptions.
We would like to work with faculty to evaluate the formats that work the best for their teaching and research.

We offer library instruction sessions, and one-to-one research consultations with library specialists who will help students find the most relevant works and suggest the most appropriate search strategies. The Knowledge Commons Desk is open for technical and reference questions and we also accept inquiries via email and online reference to help our students and faculty.

We look forward to working with the faculty and students in this new degree.

Yours truly,

Rick Anderson
Acting Dean
J. Willard Marriott Library

Catherine Soehner
Associate Dean, Research and Learning Services
J. Willard Marriott Library
Dear Jim,

It is my great pleasure to express my strongest support for the Bachelor of Science Multi-Disciplinary Design Major. As a Director of the Human Factors Program at the Department of Psychology I see a great need for such innovative program. I am convinced that once in place this program will allow our students to become more competitive in the high-tech job market, but as well help them to prepare more effectively for post graduate studies.

In addition, I see a significant level of synergy between your program and the Human Factors program. I am convinced that because of the similarities, students form the Multi-Disciplinary Design Major program will be able to benefit from some of the classes that are part of the Human Factors curriculum, as well as Human Factors students will benefit from course offerings out of your program.

Again, let me express my strongest support for your proposal. If there are questions, I can be reached at Drews@psych.utah.edu, or at 801-585-1977.
Sincerely,

Frank A. Drews, PhD
Associate Professor Cognitive Psychology, University of Utah.
Director of the Center for Human Factors in Patient Safety at the VAMC Salt Lake City
Director of the Human Factors Certificate Program, University of Utah
Adjunct Assistant Professor, Department of Anesthesiology, University of Utah
Adjunct Assistant Professor, Educational Psychology, University of Utah
Adjunct Assistant Professor, Department of Biomedical Informatics, University of Utah
Adjunct Assistant Professor, Internal Medicine, University of Utah
April 13, 2012

To Whom It May Concern:

I am writing to convey my full support for the Interdisciplinary Design Major being proposed by the College of Architecture + Planning. The development of an Interdisciplinary Design Major is an important step at the University of Utah and acknowledges the importance of design in today’s economy as well as the role that design thinking plays in many disciplines. The proposed program of study for the major builds on a successful pilot program as a minor degree that has already connected many different disciplines including Bioengineering and Medicine.

Jim Agutter has been a tireless champion for the field of design at the University of Utah and his efforts have had a positive effect that reaches across disciplines and connects students, faculty, clinicians and community. The design major will not only train students in the discipline of design but also impact the University community as a whole by percolating design through many of the initiatives and values that we embrace. I applaud this proposal and look forward to further interactions with Jim and the future students of the University of Utah Design Major program.

Very Sincerely,

Robert W. Hitchcock
Assistant Professor
April 13, 2012

Jim Agutter
Assistant Professor
Design Program Director
College of Architecture & Planning
University of Utah

Dear Professor Agutter,

Please accept this letter in support of the Multi-Disciplinary Design Major Initiative. I think this program, created to bring the expertise of several programs across campus together, is an exciting concept that will provide students a truly remarkable educational experience. The Business School sees this as an exciting partnership between colleges and will work with Professor Agutter and the Advisory Board to help identify relevant course work in Business.

I believe that the creative product design focus fills a gap in our current University major offerings and has many synergistic aspects that will tie in with our programs such as Marketing and Entrepreneurship and the Sorenson Innovation Center.

If you have any questions please do not hesitate to contact me.

Sincerely,

[Signature]

Taylor Randall
Dean
David Eccles School of Business
April 13, 2012

To Whom it May Concern:

I am writing to offer my support for the proposed Bachelor of Science in Multi-Disciplinary Design through the College of Architecture + Planning. I have had several conversations with Professor Agutter and believe that this program of study is well conceived and thoroughly developed. It will be a welcome addition to other interdisciplinary degree offerings at the University of Utah.

I am appreciative of the evident interdisciplinary design of the curriculum, which draws on the strengths of multiple units and individual faculty members from across campus. The College of Fine Arts is excited to be an integral part of this new degree. As is cited in the proposal, interdisciplinary learning is a proven model for a more holistic educational experience. I am confident that the students in this program will benefit not only from the expertise of their faculty, but also from the experience of working and learning in an interdisciplinary environment.

In reading the proposal I am impressed with the fundamental elements upon which the degree is fashioned—“understanding of the language, process and application of design and design thinking.” In our contemporary society it is no longer prudent to solely imbue our students with an understanding of specific techniques and skills, but rather to instill in them a desire to continually learn, explore and discover. Interdisciplinary curricula based on creative problem solving that requires the students – and faculty alike – to think outside of their comfort zones and familiar paradigms will better prepare our graduates for the world that awaits them. Such a program also meets the expectations of a Research Extensive University that concurrently holds the distinction of being a Community Engaged Campus.

Again, I offer my full support of the Multi-Disciplinary Design major through the College of Architecture + Planning. I am anxious to see the curriculum realized and faculty in the College of Fine Arts engaged in this process.

Sincerely,

Raymond Tymas-Jones
Dean, College of Fine Arts
Assistant Vice President for the Arts
May 17, 2012

James Agutter  
Assistant Professor  
Design Program Director  
College of Architecture + Planning  
University of Utah  
375 S. 1530 E. Room 235  
Salt Lake City, UT 84112

Dear Professor Agutter:

I am writing to offer my enthusiastic support for the proposed Bachelor of Science Multi-Disciplinary Design Major. The proposal has been carefully reviewed by my Visual Communication colleagues, and they are unanimous in their endorsement.

This is a well-conceived instructional program that maximizes existing academic strengths and provides for the development of new faculty resources. The new major is genuinely interdisciplinary and addresses a definite void in the State’s undergraduate program offerings. The proposal accurately assesses the growing range of career opportunities for future graduates. Indeed, the success of the Multi-Disciplinary Design Minor in attracting students from across campus speaks well for an immediate student clientele who are anxious to broaden their educational experiences.

We concur that the proposed interdisciplinary program will prepare students to compete in an increasingly complex professional work environment that not only requires a high level of technical competence but the ethical standards and critical thinking skills that enable graduates to make thoughtful judgments that are marked by integrity. The program is also consistent with the University’s move toward more community-engaged scholarship that allows students to grapple with real world problems that will generalize to the professional workplace.

The Department of Communication welcomes the opportunity to be directly involved in this educational initiative and we are committed to providing the kind of high quality instruction that the Multi-Disciplinary Design students need and deserve. From our perspective, the time for mounting this important program could not be more fortuitous as the University is well-positioned to make this interdisciplinary effort a model for other institutions to follow.

We wish you and your advisory group every success in establishing the Bachelor of Science Multi-Disciplinary Design Major.

Sincerely,

[Signature]

Robert K. Avery  
Professor and Interim Chair
June 6, 2012

Jim Agutter
Assistant Professor
Design Program Director
College of Architecture + Planning
University of Utah
Salt Lake City, Utah

Dear Prof. Agutter:

I am pleased to write a letter of support for the proposed Bachelor of Science in Multi-Disciplinary Design. I know that you have been running a minor in Multi-Disciplinary Design for a couple of years, which has had a great deal of interest from students, including Engineering students.

This program will be synergistic to the degrees we offer in the College of Engineering. Some courses taught in Engineering could fit comfortably into your program, and many Engineering students will benefit from taking courses taught through the Multi-Disciplinary Design program that cover creative product design, investigate design research, human centered design principles, interface development, articulation of product forms, materials and digital manufacturing principles, innovation and entrepreneurship.

A design degree of this type will fill a need in the University of Utah’s offerings. We have strong Engineering degrees and strong degrees in Architecture and the Arts, but there is a need for something closer to the center of these disciplines, which many places is called Industrial Design. I believe that there will be much interest in the degree, and that graduates of the program will find good job opportunities. BYU has a program in this area, but to my knowledge, none of the state institutes of higher education in Utah have such a program.

In addition to the academic merits of the program, the establishment of this degree program will have the desirable effect of pulling several colleges into a closer collaboration. I am happy to support this proposal and look forward to working with you to make it a strong degree.

Sincerely,

Richard B. Brown
Dean of Engineering
April 11, 2012

James Agutter  
Design Program Director  
College of Architecture + Planning  
375 S. 1530 E. RM 235  
University of Utah

Dear Jim:

Thank you for the opportunity to support the Multi-Disciplinary Design major. Every day as I work with our University Innovation Scholar students, I see the need and expressed desire of these students to work on projects and problems that don’t fall under traditional academic majors at the University. They want to work on better transportation systems, improved health care products and processes, sustainable business practices and many other non-traditional fields of study.

These students are looking to the University and their choice of major to prepare them to solve real interdisciplinary problems in the world. Our students will benefit from the Multi-Disciplinary Design program because it will provide the tools to explore ways to solve these problems. They will be exposed to the human factors as well as the scientific demands and impacts related to their ideas. Equally important, they will be challenged to explore the business and market impacts of their ideas.

We know that great innovation comes from an interdisciplinary approach to problem solving. The Multi-Disciplinary Design major will be a comprehensive study program for many creative and innovative students. I applaud the variety of faculty who will be involved in teaching in the program.

I look forward to continued collaboration with your students and extend my enthusiastic support for the Multi-Disciplinary Design major.

Sincerely,

[Signature]

Kathy Hajeb  
Chief of Staff, Technology Venture Development  
Director, Innovation Scholar program

105 Fort Douglas Blvd. Salt Lake City, Utah 84113 (801) 587-3836 Fax (801) 587-5848
Institution Submitting Request: University of Utah  
Proposed Title: Minor in Parks, Recreation, and Tourism  
Currently Approved Title: Minor in Recreation  
School or Division or Location: College of Health  
Department(s) or Area(s) Location: Department of Parks, Recreation, and Tourism  
Recommended Classification of Instructional Programs (CIP) Code\(^1\) (for new programs):  
Current Classification of Instructional Programs (CIP) Code (for existing programs): 31.0101  
Proposed Beginning Date (for new programs): 08/20/2012  
Institutional Board of Trustees’ Approval Date:  

Proposal Type (check all that apply):  

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<th>Item</th>
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</thead>
<tbody>
<tr>
<td>4.1.5.2</td>
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</tr>
<tr>
<td>5.1.1.1</td>
<td>New Emphasis on an Existing Degree*</td>
</tr>
<tr>
<td>5.1.2</td>
<td>Certificate of Proficiency Not Eligible for Financial Aid</td>
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<tr>
<td>5.1.3</td>
<td>Out-of-Service Area Delivery of Programs</td>
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<td>Name Change of Existing Programs</td>
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<td>Program Transfer</td>
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<tr>
<td>5.1.6</td>
<td>Program Restructure</td>
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<tr>
<td>5.1.7</td>
<td>Program Consolidation</td>
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<tr>
<td>5.1.8</td>
<td>Program Discontinuation</td>
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<td>Program Suspension</td>
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<tr>
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<td>Administrative Unit Creation</td>
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<td>Administrative Unit Transfer</td>
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<td>5.1.12</td>
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<td>5.1.14</td>
<td>New Institute</td>
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<td>5.1.15</td>
<td>New Bureau</td>
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<tr>
<td>5.1.16</td>
<td>Graduate Certificate</td>
</tr>
</tbody>
</table>

*Requires “Section VI: Program Curriculum” of Abbreviated Template  

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

Signature: [Signature]  
Date: 4/19/12  

Printed Name: Michael L. Hardman  

\(^1\) CIP codes must be recommended by the submitting institution. For CIP code classifications, please see http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55.
Program Request - Abbreviated Template
University of Utah
Minor in Parks, Recreation, and Tourism
03/23/2012

Section I: Request

This request is for a name change only of an existing minor. Currently, the name is Minor in Recreation. It is proposed that the name be changed to Minor in Parks, Recreation, and Tourism. The proposed name change may affect enrollments, since the degree will be more clearly communicated, but it will not affect course offerings, other instructional programs, or the existing administrative structure.

Section II: Need

The current name implies that recreation is the only area a student could choose as a minor, when in fact, there are seven emphases from which a student could choose as the focus of his or her minor. It is proposed that the name of the minor reflect the true scope of the degree.

Section III: Institutional Impact

The proposed name change may affect enrollments, since the degree will be more clearly communicated, but it will not affect course offerings, other instructional programs, or the existing administrative structure.

Section IV: Finances

There are no costs or savings anticipated from this change.

Section VI: Program Curriculum

***THIS SECTION OF THE ABBREVIATED TEMPLATE REQUIRED FOR EMPHASES AND MINORS ONLY.***

All Program Courses

<table>
<thead>
<tr>
<th>Course Prefix &amp; Number</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Required Courses (choose 1)</td>
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</tr>
<tr>
<td>PRT 1110 – Leisure in Your Life</td>
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<tr>
<td>PRT 3100-Foundations in PRT</td>
<td></td>
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<td>Sub-Total</td>
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<td>3</td>
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<tr>
<td>Elective Courses (choose 1)</td>
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<td></td>
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<tr>
<td>PRT 3207-Management in PRT</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>PRT 3310-Leisure Behavior &amp; Human Diversity</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>PRT 3320-Programming and Leadership</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Sub-Total</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Emphasis (choose 12 credits from approved courses in ONE emphasis area) | Sub-Total | 12 |
| Total Number of Credits | 18 |
New Courses to Be Added in the Next Five Years

It is not anticipated that any new classes will be offered for the Minor in Parks, Recreation, and Tourism.

Program Schedule

It is not anticipated that changes will be made to the program schedule for the Minor in Parks, Recreation, and Tourism.
April 19, 2012

TO: Michael Hardman
Interim Senior Vice President for Academic Affairs

FR: Ann L. Darlings
Chair, Undergraduate Council

RE: Name Change for Minor in Parks, Recreation, and Tourism

At its meeting on Tuesday, April 17, the Undergraduate Council voted to approve a proposal from the Department of Parks, Recreation, and Tourism to change the name of their existing "Minor in Recreation" to "Minor in Parks, Recreation, and Tourism." The proposal is attached.

We ask that, if you also approve of the proposal, you send it on to the Executive Committee of the Academic Senate for their consideration.
Coversheet & Checklist form—for submitting to Academic Senate Executive Committee

Proposal for addition/revision of University Regulation.
(Rev.2011-8) http://www.regulations.utah.edu/info/IPCresources.html

1. Regulation(s) involved (type, number, subject): Rule 5-130B Criminal Background Checks for Staff

2. Responsible Policy Officer (name & title): Loretta F. Harper, Ph.D., Vice President for Human Resources

3. Contact person(s) for questions & comments (name, email, phone#): Andrea D. Brown-Christensen, andrea.d.brown@utah.edu, 801-581-2119

4. Presenter to Senate Exec (if different from contact person. name, phone#): Andrea D. Brown-Christensen

5. Approvals & consultation status.
   a. Administrative Officers who have approved (VP/President, name & date): Vice President
   b. Committees/Councils/other Officers consulted: IPC and Staff

6. Check YES or NA (not applicable) of documents submitted--- (In digital form. Preferred file format MS Word doc. Special exception allowed for PDF format if previously arranged.)

   X Explanatory memorandum (key points of proposal, rationale).

   V VP/Presidential approval signatures (separate sheet, or affixed to memo cover).

   X Text of proposed Regulation addition/revision.

   X (If revision of existing Regulation) text changes are clearly marked, using permanent font markings (not MS Word ‘Track’ Changes non-permanent markings).

Date submitted to Senate Office: 7/11/12

After presentation to the Executive Committee, the Committee will consider whether the proposal is ready for the full Senate, and if so will schedule it for presentation at a subsequent Senate meeting either as i) a matter of academic significance—set on the “Intent” & “Debate” Calendars over two monthly meetings with final “approval” voting at the second, or ii) not academically significant—set on the “Information” Calendar for a single monthly meeting, with opportunity for questions and recommendations to the presenter. See Policy 1-001 http://www.regulations.utah.edu/general/1-001.html; Rule 1-001 http://www.regulations.utah.edu/general/rules/R1-001.html; Senate procedures http://www.admin.utah.edu/asenate/index.html. Further information-- Senate Office: Shawnee Worsley 581-5203 shawnee.worsley@utah.edu
Memorandum

To: Loretta F. Harper, Ph.D.
    Vice President for Human Resources

From: Andrea D. Brown-Christensen
      Director of Employment Services

Date: June 7, 2012

Subject: Executive Summary – Proposed Changes to Rule 5-130B Criminal Background Checks for Campus Staff

This is a proposal to amend University Rule 5-130B regarding Criminal Background Checks for Campus Staff. This rule was effective in May of 2009. After three years of experience with this rule, we have identified a few areas to clarify:

- Add “and Other” to the title.
- Change “campus staff” to “University staff.”
- Clarify and simplify the “Reasonable Cause provision.” The new language was recommended by the Office of General Counsel. The new language protects staff from unreasonable background checks.
- Add the “Excluded Parties List System” as one of the checks.
- Clarify the titles of the Policy Officer and Policy Owner.

The proposed changes will not affect University faculty and academic staff as they are covered by a separate rule, Rule 5-130A. Proposed changes are double-underlined and deletions are marked with a strike-through.

If you approve of the proposal, with your signature of approval it should then be forwarded for the approval and signature of President Pershing, and subsequently submitted for approval of the Academic Senate and Board of Trustees.

It is recommended that the effective date of the amended versions be immediately upon approval by the Trustees.

The rule was already in the correct format, so no changes to format were made.

The Institutional Policy Committee, Hospital Human Resources and University Staff Counsel have been consulted about these proposed revisions.

Please contact me at 801-581-2119 if you have any questions. Thank you.

[Signature]

7-10-2012
University Rule 5-130 B: Criminal and Other Background Checks for Campus University Staff

I. Purpose and Scope
   A. Purpose: To implement University Policy 5-130 (Policy on Criminal and Other Background Checks) for campus University staff by describing the scope of staff positions subject to background checks, the type of criminal and other background checks the University may use, and the related decision making processes.
   B. This Rule applies to campus University staff positions with a hire, rehire, or transfer date on or after May 1, 2009. This Rule does not apply for faculty and academic staff positions, which are regulated by separate rule (Rule 5-130A).

II. Definitions
   A. Definitions of terms provided in University Policy 5-130 apply for purposes of this Rule.
   B. The Human Resources Consultant referred to in this Rule is the Human Resources staff member or designee assigned by HR to the department to provide HR consulting services.

III. Rule
   A. Staff positions requiring a Criminal Background Check (CBC):
      1. Benefited Staff Positions (.50 FTE or greater, Regular).
      2. Non-Benefited Staff Positions including Temporary and Part-Time positions (any FTE) that are classified as:
         a. Security Sensitive as defined by Utah Board of Regents Rule R847-3, 3.9
         b. Involving Significant Contact with minors under 21 as defined by Utah Board of Regents Rule R847-3, 3-10.
      3. Division/Department Designation
         A Division, Department or sub-unit, in consultation with the HR Consultant, may determine that ALL positions require a Criminal Background Check to meet State or Federal Regulations, the provisions of Regents Rule R847, departmental standards, or for other business related reasons. The Division/Department or subunit must uniformly apply all requirements for a CBC.
   B. Staff employment actions which initiate a CBC:
      1. New Hires
         All new hires with a Hire Date of 5-1-09 or later are subject to a pre-employment CBC in accordance with the position requirements as outlined above.
      2. Rehires
         a. All rehires with a Rehire Date of 5-1-09 or later are subject to a pre-employment CBC in accordance with the position requirements as outlined above.
         b. EXCEPTION: If a CBC was conducted by the University of Utah (for example, in connection with previous employment with University Hospital) within the preceding 12 months of the Rehire Date, the CBC requirement is waived.
3. Transfers (Promotion, Lateral, Demotion) including Campus to Campus, Hospital to Campus, and Campus to Hospital. a. Hiring departments are required to initiate a CBC on any employees transferring into positions designated as requiring a CBC, provided the University has not previously completed a CBC on the employee. The promotion, lateral transfer, or demotion to a position requiring a CBC is contingent on satisfactory completion of the CBC.

4. FTE Increases. a. An increase in an employee’s FTE which results in a change from non-benefited to benefited status will require the department to initiate a CBC, provided the University has not previously completed a CBC on the employee. The FTE increase which necessitates a CBC is contingent on satisfactory completion of the CBC.

C. Reasonable Cause provision

4. The University may conduct background checks for existing staff members only if a determination is made that there is reasonable cause to believe the staff member poses a threat or has committed a crime. The scope of this investigation will be determined by the grounds for the reasonable cause, and the nature of such an investigation will be the individual’s continuing suitability for employment.

D. Criminal Background Check (CBC) packages

1. The University’s standard Campus CBC package is a domestic United States search of Credit Bureau and other records to determine counties of residence for the previous seven years. Up to three aliases are checked, and any felony and misdemeanor convictions are reported. The standard Campus CBC package also includes a check of the Sex Offender Registry.

2. As determined by the hiring department in consultation with Human Resources, more extensive CBC packages may be appropriate. Additional elements that may be included in a customized package include: employment, education, or professional license verification; Fraud and Abuse Control Information System (FACIS); Office of Inspector General (OIG) Medicare Fraud Exclusion List, Excluded Parties List System (EPLS), Motor Vehicle Report, Credit Report and/or other elements.

E. Criminal Background Check (CBC) adjudication

1. If a background check reveals a criminal background, which may or may not have been disclosed by the applicant or employee, University Human Resources initiates a consultative process to evaluate and adjudicate the CBC, in accordance with University Policy 5-130 and the Fair Credit Reporting Act.

   An initial review of CBC results is conducted by the Human Resources Consultant or designee to identify any felony or misdemeanor convictions. If the CBC results contain no convictions, with the exception of minor motor vehicle related violations, Human Resources will clear the individual for hire and notify the hiring manager. In the event a CBC report includes felony or misdemeanor convictions which were not self disclosed by the individual, the individual will generally not be cleared for hire due to falsification.

   In the event there is a discrepancy between what the individual self disclosed and what was reported on the CBC, the Human Resources Consultant may confer with the individual and/or the hiring manager as appropriate before
adjudicating the CBC. In the event serious misdemeanor or felony conviction(s) are reported, and a consensus has not been reached in the initial conference with the hiring manager, the Human Resources Consultant may engage a representative of the Office of General Council and/or the department’s Cognizant Vice-President or designee in the evaluation. In a consultative role, the Human Resources Consultant will facilitate an assessment of the overall risk posed to persons and property, and may determine that an individual with a criminal history should be considered eligible to obtain or retain the position, or that additional documentation should be required. The risk assessment will include:

a. the number of crimes committed;
b. the severity of those crimes;
c. the length of time since they were committed;
d. the likelihood of recidivism;
e. the security sensitivity of the position sought by the applicant or held by the existing employee; and
f. other factors that may be relevant.

F. Costs. The University will not require applicants or existing employees to pay the costs of a criminal or other background check as a condition of employment.

IV. References:

A. University Policy 5-130
B. University Rule 5-130A (Faculty and Academic Staff)
C. Utah Board of Regents Rule R847-3, 3.9
E. Excluded Parties List System https://www.epls.gov/

V. Contacts:

Policy officer: For staff employees:
Chief Human Resources Officer  Vice President for Human Resources, 801-581-2119

Policy Owner: For staff employees:
Human Resources, Services Manager (Kristin Jensen)  Director of Employment Services, 801-581-2119, or Greg Hughes, 581-6033

VI. History:

Current version. Revision 0.
Approved by the Chief Human Resources Officer, March 16, 2009.
Presented for the information of the Academic Senate April 6 & April 20, 2009.
Presented for the information of the Board of Trustees April 27, 2009.
Effective date May 1, 2009.

Background information for Revision 0:

2009 Proposal for Criminal Background Checks Regulations
To: Academic Senate

From: Dr. Kevin D. Perry, Chair
Credits and Admissions Committee
University of Utah

Date: August 20, 2012

Re: Background Information for Undergraduate Admissions Philosophy Statement

President Pershing recently announced that improving undergraduate student success at the University of Utah is his administration’s top priority. Toward this end, he has tasked several groups to reevaluate the undergraduate experience from beginning to end (i.e., from recruitment through graduation) to identify existing barriers to student success and to develop institutional strategies to overcome these barriers.

The Credits and Admissions (C&A) Committee, which is empowered by the Academic Senate through Policy 6-404 to “act, except where otherwise provided, on all matters of admission or credit”, spent several months reviewing data from the Office of Budget and Institutional Analysis (OBIA) to determine how well the currently-used admission metrics predict student success. For reference, the current policy dictates that admission decisions are based solely on the admission index score which is calculated from a combination of the unweighted high-school cumulative grade point average and the composite ACT (or SAT) score. Current policy precludes the Office of Admissions from considering other factors such as rigor of coursework, leadership activities, honors/awards, writing skills, extra-curricular activities, etc.

The OBIA analysis indicated that the admission index is only a moderately good predictor of student success as measured by UofU cumulative GPA and 4-, 6-, and 8-year graduation rates. In fact, the OBIA analysis also indicated that the UofU has among the lowest 6-year graduation rates within the Pac-12. A review of admission practices at the other Pac-12 schools revealed that we have some of the lowest admission requirements and that we are the only school that does not utilize some form of a holistic admission process.

The C&A Committee, which is composed of faculty representatives from several colleges and a student representative, has been gradually raising the admission index threshold over the last 7 years. President Pershing has asked us to significantly raise the admission standards effective Fall 2013. However, the C&A Committee is reluctant to make such a recommendation without instituting a holistic review process at the same time. Thus, we propose to make revisions to Policy 6-404 to include provisions for a holistic review process and return it to the Academic Senate for approval. We intend to use the attached philosophy statement as a guide to these policy revisions. Thus, we welcome your comments.

Sincerely,

[Signature]

Dr. Kevin D. Perry, Chair
Credits and Admissions Committee
University of Utah
Philosophy Statement for The University of Utah’s Office of Admissions

(As approved by the Credits and Admissions Committee on 05/03/2012; to be forwarded to the Academic Senate for action in August 2012)

As Utah’s flagship institution of higher education, the University of Utah strives to create a diverse and inclusive environment. Students develop the vision, perspective, skills, and integrity to become influential leaders and professionals in Utah, the United States, and the world. A Research One institution with a nationally renowned scholarly and collaborative environment, the University of Utah generates ideas, interdisciplinary research, creative works, and commercial enterprise. The partnerships among faculty, students, and community strengthen the culture, quality of life, and economic vitality of Utah and the world.

The University seeks to admit undergraduate students from Utah and from other states and countries. Successful applicants demonstrate the following:

• Excellence in academic achievement, intellectual pursuits, and creative endeavors;
• An understanding of and respect for historically underrepresented populations;
• Significant commitment to citizenship through public service, school activities, community engagement, leadership, or familial responsibilities;
• Integrity, personal maturity, motivation, and resilience; and
• The ability to contribute to and benefit from a culturally and intellectually diverse learning community.

The University is committed to providing a transformative learning environment that will promote high levels of student success through inspiring teaching and high impact programs. These programs engage students in the production of new knowledge through undergraduate research, creative endeavors, and cohort learning experiences. The University of Utah graduates future leaders of the state, the region, the nation, and the global community.
July 12, 2012

Michael L. Hardman
Interim Senior Vice President for Academic Affairs
205 Park Bldg.
Campus

RE: Graduate Council Review
Department of Marketing

Dear Vice President Hardman:

Enclosed is the Graduate Council’s review of the Department of Marketing. Included in this review packet are the report prepared by the Graduate Council, the Department Profile, and the Memorandum of Understanding resulting from the review wrap-up meeting.

With approval of the Graduate Council, the 2011-12 review of the DESB was structured such that individual departments within the School were reviewed by one external and one internal reviewer, and the School-wide programs were reviewed by 5-member external and internal review teams.

Please forward this review to President David Pershing for his approval. After approval by President Pershing, the review will be forwarded to the Academic Senate to be placed on the information calendar for the next Senate meeting.

Sincerely,

Charles A. Wight
Dean, The Graduate School

Encl.

XC: Taylor R. Randall, Dean, David Eccles School of Business
    Stephen Carson, Chair, Department of Marketing
April 30, 2012

The Graduate Council has completed its review of the Department of Marketing. The External Review Committee included:

Michael D. Hutt, PhD  
Ford Motor Company Distinguished Professor of Marketing  
W.P. Carey School of Business  
Arizona State University

The Internal Review Committee of the University of Utah included:

Cynthia M. Furse, PhD  
Professor  
Department of Electrical and Computer Engineering
With approval of the Graduate Council, the 2011-12 review of the David Eccles School of Business (DESB) was structured such that individual departments within the School were reviewed by one external and one internal reviewer, and the School-wide programs were reviewed by 5-member external and internal review teams.

This report of the Graduate Council is based on the self-study report submitted by the Department of Marketing, the self-study submitted by the DESB, the findings of the internal and external reviewers, and comments from the department Chair. No letter from the Dean was submitted.

DEPARTMENT PROFILE

Program Overview

The Department of Marketing operates within the DESB and exists as one of the smaller departments. The Department teaching supports the DESB undergraduate program, MBA programs (full-time day, Professional night-time, and Executive) as well as their own PHD program.

Prior to the last review in 2005, the Marketing Department had an international reputation based largely on the work and focus of a single tenured faculty member in the area of interpretive research on consumption. In 2006, this faculty member resigned, followed by three additional tenure-track faculty with complementary interests. The external reviewer emphasized that it was important to understand the current review within this context. Faculty turnover places multiple demands on a department such as meeting course and committee coverage, recruitment of new faculty, continuity for students, and sustained morale and productivity.

Faculty

The Department currently has 4 full professors, 4 associate professors, 1 assistant professor, and 4 lecturers (assistant and associate ranks). Four of the 9 tenure-track faculty have been hired within the last 7 years. Three of the full professors are expected to retire within the next 5-7 years.

At the time of the review, the Department had two female full professors and two female associate professors. There was a discrepancy in the number of non-white faculty reported in the Department. The Department self-study document indicated two non-white faculty and the College self-study document indicated that there were three non-white faculty. The Departmental documents did not devote any discussion to efforts related to recruitment for diversity or gender.
Students, Curriculum and Programs

PhD Program  The Department of Marketing currently has 9 PhD students who are supported by a stipend and tuition waiver for 4 years, and with petition sometimes funding can be found for a fifth year. Graduate students complete first- and second-year research papers, typically targeting a top-tier Marketing journal. These papers constitute a qualifying exam.

MBA Programs  The Marketing Department teaches required courses in the three MBA programs, but only offers a limited set of electives (Professional MBA). Class sizes in these programs are small and there has been minimal student interest in a marketing specialization.

Undergraduate Program  The external reviewer cited a declining number of DESB undergraduate Marketing majors from 120 to currently @ 70-90 students. The reviewer indicated that compared to other schools of a similar size, the number of Marketing majors is relatively small, as is the number of Marketing students entering the Honors program. The self-study and Chair memo attribute the relatively small numbers of Marketing undergraduate majors to three factors: (1) an increase in alternative DESB majors, (2) poor student evaluations of an adjunct faculty member who had been teaching a core course, and (3) the DESB Associate Dean’s plan to decrease the number of Marketing majors to 60/year but increase the quality of students. Recently, a full-time academically-qualified lecturer has been hired as Director of the undergraduate major and is tasked with teaching multiple sections and ensuring standards are upheld across undergraduate courses.

Student Diversity  Although there was general information on student diversity in the College self-study, there was no information on diversity for Marketing students specifically.

Program Effectiveness and Outcomes Assessment

Since the 2005 review, 12 doctorally prepared Marketing majors have assumed positions at colleges and universities across the U.S. (11) and in Europe (1). The majority of undergraduates and MBAs obtain employment in businesses in the western U.S.

Facilities and Resources

The buildings provide excellent student space, good faculty offices, and availability for experimental work. At the time of the review, not all faculty offices were located in the same proximity to each other.
COMMENDATIONS

1. Senior faculty should be commended for their vision in guiding the Department, particularly given the turnover of 4 tenure-track faculty since 2006. Senior faculty provide strong leadership and nurture the development of a diverse research culture while cultivating cohesion and cooperation among faculty and staff. The Department is collegial and positive.

2. The Department has been highly effective in recruiting and mentoring highly qualified and productive Assistant Professors.

3. Research productivity in the Department is high. Many faculty have external funding and consistently publish in top-tier journals.

4. Student morale is high. Students are positive about the opportunities to work with faculty and to publish, with guidance from faculty, in quality journals.

RECOMMENDATIONS

1. Given the relatively low number of DESB Marketing majors, the Department and College should develop a plan to ensure adequate numbers of quality students. Both the internal and external reviewers made suggestions: Marketing executive speaker series; continued support of the AMA Marketing Club; roundtables of Marketing executives to connect students directly to Marketing business practices; carefully chosen speakers in marketing Principles class; and additional support/resources provided to the Director of the undergraduate major to facilitate a planning process.

2. The Department has had to reduce the number of elective courses based on capacity constraints, which is seen as a loss of innovation and opportunities for some faculty. The College and the Department should ensure that there are a sufficient number of electives and that the electives meet the needs of students and of potential employers. Specifically with regard to MBA course electives, the Department should select a small set of courses that align with faculty competencies.

3. The Department should formulate and implement efforts to recruit minority faculty and students to achieve greater diversity. The Office of the Associate Vice President for Equity and Diversity is committed to this goal and may provide useful ideas and strategies in this regard. The use of annual progress reports to the Graduate School should be considered as a way to encourage the Department to work effectively towards this goal.
DEPARTMENT CHAIR RESPONSE AND ACTIONS TAKEN

A response by the Department is summarized in a memo from Professor and Chair Abbie Griffin (March 29, 2012). The following is a summary of the Chair’s responses to the review committees’ reports.

1. The Department is unable to increase the number of undergraduate electives offered because of new DESB policies. The Chair has spoken to the undergraduate advising liaison to advise students in advance about the limited Marketing electives so students can anticipate scheduling challenges.

2. Although the reviewers remarked on the relatively low and declining numbers of undergraduate marketing majors, this is in line with the DESB Associate Dean’s strategy to decrease the number of Marketing majors to 60/year while increasing the quality of students. The Department has requested a full-time undergraduate advisor, but this request has gone unfulfilled, thus the Marketing Chair meets with the undergraduate advisor every other week to ensure clear flow of information. In addition, the Department is currently revising the first core Marketing class for all business students to make it more relevant and impactful. The new Director of the undergraduate major is actively participating in many more undergraduate activities and is active in both recruitment and advising.

3. To better align the offering of electives with departmental strengths, starting in the fall of 2012, the Department is offering an MBA class in New Product Development. They will continue to offer MBA students Consumer Behavior and Marketing through Interactive Media.

Submitted by the Ad Hoc Committee of the Graduate Council

Lee Ellington (Chair), Associate Professor, College of Nursing
Nan Ellin, Professor, Department of City and Metropolitan Planning
## FACULTY AND STAFF

### MARKETING

<table>
<thead>
<tr>
<th>FACULTY</th>
<th>TENURE</th>
<th>CONTRACT</th>
<th>ADJUNCT</th>
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<td>Number of faculty with Master's degrees</td>
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<tr>
<td>Number of faculty with Bachelor's degrees</td>
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<tr>
<td>Other Faculty</td>
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<tr>
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<tr>
<td>Other Staff</td>
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<tr>
<td><strong>TOTAL</strong></td>
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<td>0</td>
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The OBIA tables included with the Graduate Council report are required by the Board of Regents, but do not currently match the University of Utah’s faculty classifications.

### FACULTY AND STAFF NOTES (from Dept. self-study)

- As of June, 2011, the Marketing Department had 8 full-time tenure-track faculty, all of whom had both undergraduate and master's degrees.
- The Department hired a 9th tenure-track faculty, who joined the Department on July 1, 2011. He also has a Ph.D., Master’s degree and undergraduate degree.
- The Department has 4 full-time adjuncts, 1 of whom had a Ph.D., and all of whom have both a Master’s and undergraduate degree.
- As of June 1, 2011, the Department has one full-time Administrative Assistant.
### STUDENTS

NOTE: Faculty FTE has been reduced by the amount of FTE paid for by sponsored research (Fund 5000).

#### MARKETING

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<thead>
<tr>
<th>ACAD YR</th>
<th>Student Annual FTE</th>
<th>Faculty</th>
<th>Student FTE to Faculty FTE</th>
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<tr>
<td></td>
<td>Prof</td>
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<td>Asst</td>
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<tr>
<td></td>
<td>Ugrad</td>
<td>Grad</td>
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<tr>
<td>2010-2011</td>
<td>173.5</td>
<td>108.6</td>
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<td>2009-2010</td>
<td>169.0</td>
<td>97.2</td>
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<td>2008-2009</td>
<td>160.4</td>
<td>102.3</td>
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<tr>
<td>2007-2008</td>
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<td>2006-2007</td>
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<th>ACAD YR</th>
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<td>2010-2011</td>
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<td>2009-2010</td>
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<td>2007-2008</td>
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<td>2006-2007</td>
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**FINANCIAL ANALYSIS**

**MARKETING**

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<td>Instructional Costs</td>
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<td>1,609,826</td>
<td>1,654,294</td>
<td>1,145,834</td>
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<td>Support Costs</td>
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<td>358,710</td>
<td>352,460</td>
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<td>Other Expenses</td>
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<td>172,274</td>
<td>89,362</td>
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<td>Total Expense</td>
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<td>2,140,809</td>
<td>2,096,116</td>
<td>1,461,572</td>
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<td>Legislative Appr. w/EB</td>
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<td>2,136,659</td>
<td>2,049,600</td>
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<td>Tuition to Program</td>
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<tr>
<td>Fees</td>
<td></td>
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<tr>
<td>Total Revenue</td>
<td>2,156,197</td>
<td>2,136,659</td>
<td>2,055,605</td>
<td>1,477,715</td>
<td>1,290,811</td>
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<td>Revenue-Expense</td>
<td>(2,788)</td>
<td>(4,150)</td>
<td>(40,511)</td>
<td>16,143</td>
<td>(20,708)</td>
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**FINANCIAL ANALYSIS NOTES (from Dept. self-study)**

- As of the 2009-2010 academic year, the College instituted a differential tuition increase for its students. Thus, our financials consist of 2 sections: State and differential incomes and outflows. For a total view of the Department, these 2 must be added together.

- Prior to the institution of the differential tuition, the Marketing Department consistently operated in the red, albeit only slightly. We operated in the black in the 2009-2010 academic year, and are back slightly in the red in 2010-2011.

- The Marketing Department has consistently operated in the red for the following structural reasons.
  - At 1, we have fewer required courses for undergraduate majors than any other department.
  - At 1, we have the fewest number of required courses in the MBA program of all of the departments.
  - We have no specialty Master's program.
Memorandum of Understanding
Department of Marketing
Graduate Council Review 2011-12

This memorandum of understanding is a summary of decisions reached at a wrap-up meeting on June 27, 2012, and concludes the Graduate Council Review of the Department of Marketing. Michael L. Hardman, Interim Senior Vice President for Academic Affairs; Taylor R. Randall, Dean of the David Eccles School of Business; William S. Hesterly, Associate Dean of the David Eccles School of Business; Abbie Griffin, Chair of the Department of Marketing; Stephen Carson, Incoming Chair of the Department of Marketing; Charles A. Wight, Dean of the Graduate School; and Donna M. White, Associate Dean of the Graduate School, were present.

The discussion centered on but was not limited to the recommendations contained in the revised Graduate Council review completed on April 30, 2012. At the wrap-up meeting, the working group agreed to endorse the following actions:

Recommendation 1: Given the relatively low number of DESB Marketing majors, the Department and College should develop a plan to ensure adequate numbers of quality students. Both the internal and external reviewer made suggestions: Marketing executive speaker series; continued support of the AMA Marketing Club; roundtables of Marketing executives to connect students directly to Marketing business practices; carefully chosen speakers in Marketing Principles class; and additional support/resources provided to the Director of the undergraduate major to facilitate a planning process.

The Dean, Associate Dean, and incoming Chair are entirely supportive of this recommendation and will work together to implement all of the suggestions made by the reviewers. The former Department Chair was an honorary board member of the Utah AMA (American Marketing Association) professional chapter. The new Chair will also have that title and be involved in the organization and the student chapter that is connected to the national organization. The MBA students have recently formed their own Marketing Club and it is connected to the national organization. The new Chair intends to open events featuring guest speakers to everyone in the DESB, and an adjunct professor who has strong ties to industry will be involved in selecting prestigious speakers from the business community. At the suggestion of the Dean, the new Chair plans to investigate offerings in the Communication Department that might have benefits for Marketing students. It was noted that with the recent hire of an academically-qualified lecturer who is also serving as the Director of the undergraduate Marketing major, this is a very positive move for the quality and future of the undergraduate program.
Recommendation 2: The Department has had to reduce the number of elective courses based on capacity constraints, which is seen as a loss of innovation and opportunities for some faculty. The College and the Department should ensure that there are a sufficient number of electives and that the electives meet the needs of students and of potential employers. Specifically with regard to MBA course electives, the Department should select a small set of courses that align with faculty competencies.

The Dean sees the issue of elective offerings as an issue across the School and acknowledges this recommendation as being accurate but acknowledges the challenges involved. The ability of smaller departments to offer sufficient numbers of electives is constrained by student capacity and faculty resources. The School has implemented a Flex-Core model to try to meet student needs for elective availability and there is a current plan in place, to be implemented in the fall of 2012, to offer a small set of marketing elective courses for the MBA/PMBA students that align with faculty competencies. The new Chair will continue to work with the faculty and the Dean to find positive solutions for the issue of elective offerings in the Department.

Recommendation 3: The Department should formulate and implement efforts to recruit minority faculty and students to achieve greater diversity. The Office of the Associate Vice President for Equity and Diversity is committed to this goal and may provide useful ideas and strategies in this regard. The use of annual progress reports to the Graduate School should be considered as a way to encourage the Department to work effectively towards this goal.

The former Chair cited numerous efforts that were made under her leadership to recruit minority faculty and students. She was actively involved in the PhD Project (an organization that encourages minority students to pursue PhDs in Business), she was instrumental in organizing the Winter Innovation Conference (held in Salt Lake City and key to recruitment), and she serves on the Board for the YWCA (connecting her with many minority leaders in the community). In fact, the Department of Marketing has a high percentage of female faculty and students in comparison to other departments in the School. The Dean and Associate Dean are committed to increasing diversity in the DESB overall and see that initiative as a way of giving this Business School an advantage in the future. The Dean sees increasing the number of traditionally underrepresented students as being “front and center” for the DESB. To support this stance, he has created an Opportunity Scholarship for first generation university students and has hired a staff member at the School level dedicated to the counseling and mentorship of minority students. Additionally, an offer has been extended to an Hispanic advisor. The University Diversity Committee’s report was distributed and the incoming Chair was encouraged to meet with the Associate Vice President for Equity and Diversity to discuss additional strategies to assist the Department of Marketing to recruit and retain diverse faculty and students.
This memorandum of understanding is be followed by annual letters of progress from the chair of the Department of Marketing to the dean of the Graduate School. Letters will be submitted each year until all of the actions described in the preceding paragraphs have been completed.

Michael L. Hardman
Taylor R. Randall
William S. Hesterly
Stephen Carson
Abbie Griffin
Charles A. Wight
Donna M. White

Charles A. Wight
Dean, The Graduate School
July 12, 2012
July 12, 2012

Michael L. Hardman  
Interim Senior Vice President for Academic Affairs  
205 Park Bldg.  
Campus

RE:  Graduate Council Review  
Department of Materials Science and Engineering

Dear Vice President Hardman:

Enclosed is the Graduate Council’s review of the Department of Materials Science and Engineering. Included in this review packet are the report prepared by the Graduate Council, the Department Profile, and the Memorandum of Understanding resulting from the review wrap-up meeting.

Please forward this review to President David Pershing for his approval. After approval by President Pershing, the review will be forwarded to the Academic Senate to be placed on the information calendar for the next Senate meeting.

Sincerely,

Charles A. Wight  
Dean, The Graduate School

Encl.

XC: Richard B. Brown, Dean, College of Engineering  
Feng Liu, Chair, Department of Materials Science and Engineering
The Graduate Council has completed its review of the **Department of Materials Science and Engineering**. The External Review Committee included:

Kenneth Reifsnider, PhD (Committee Chair)
Educational Foundation University Professor of Mechanical Engineering
Director, Solid Oxide Fuel Cell Program
University of South Carolina

Brajendra Mishra, PhD
Professor and Director, Center for Resource Recovery & Recycling
Department of Metallurgical and Materials Engineering
Colorado School of Mines

William Petusky, PhD
Professor and Chair
Department of Chemistry & Biochemistry
Arizona State University

The Internal Review Committee of the University of Utah included:

Aaron Bertram, PhD
Professor
Department of Mathematics

Ravi Chandran, PhD
Professor
Department of Metallurgical Engineering

Kristina Diekmann, PhD
Professor
Department of Marketing
This report of the Graduate Council is based on the self-study report submitted by the Department of Materials Science and Engineering, the findings of the internal, external, and University Diversity committees, and comments from the Department Chair and the Dean of the College of Engineering.

DEPARTMENT PROFILE

Program Overview

Recognized for its outstanding faculty, the Department of Materials Science and Engineering (“DMSE” or “the Department”) is a small but critical component of the University's College of Engineering. Historically, the Department has been strong in three out of four areas typical of materials science engineering departments nationwide—ceramics, polymers, and electronic materials—and excels in ceramics, polymers, fuel cells, photovoltaic, computational materials science, composite mechanics, electrolytes, nano-materials and structures. However, it clearly lacks a strong metals component, the fourth area typical of such departments. Its reduced emphasis in metals is obviously due to the existence of a separate metals program on campus, the Metallurgical Engineering Program in the College of Mines and Earth Sciences.

Both internal and external reviewers question the wisdom of continuing to separate the study of materials sciences engineering from metallurgical engineering at the University of Utah, and recommend that serious consideration be given to merging these programs. In fact, the University of Utah appears to be the last major university in the nation to separate these disciplines.

In a recent NRC Report, the DMSE was ranked highly, gaining praise for its research productivity, scholarship, and relatively low tuition. The DMSE responded to its previous Graduate Council review by increasing ties with other departments through joint appointments and USTAR hires. The Department underwent a successful ABET review in 2009, and promptly took steps to implement recommendations with respect to its undergraduate program. Several significant concerns remain, however, with the graduate program.

Faculty

At the time of the self-study, DMSE full-time faculty consisted of 5 Professors, 3 Associate Professors, and 1 Assistant Professor. Counting additional joint appointments, the faculty FTE was 8.59, a modest increase from the 7.8 FTE in the 2004 evaluation report. Recent joint appointments have increased the interactions between DMSE and other departments. In particular, reviewers applaud the addition of new faculty hired in conjunction with the USTAR program.

The DMSE is small in comparison to other materials science and engineering departments across the nation, which average about 15 faculty members, and can range up to 30. The small size is offset by the service of affiliated faculty who shoulder the burden of teaching critical foundational courses for undergraduate majors. In addition, four research faculty members broaden the Department’s support for graduate research. In addition, the faculty has made significant progress in terms of diversity by hiring two women since the 2004 review, one jointly with the Chemistry Department. Among the male faculty are two Chinese and four East Indian faculty members.
The reviewers note that, despite its small size, the faculty is characterized by high quality and academic achievement in terms of funding, publications, and distinctions. Senior faculty are represented among the members of the National Academy of Engineering; the faculty also has two Distinguished Professors among its ranks. Senior faculty have been particularly successful in attracting funding, but the overall level has declined somewhat over recent years. However, concern was raised that fewer than half the faculty were responsible for the overwhelming percentage of research dollars. Younger faculty are making significant marks in their respective fields of specialization. Some concern was raised about the quality of the mentoring program for young faculty, described as “ad hoc.” In addition, concern was raised about the lack of interdepartmental communication.

The faculty has received awards and recognitions higher than the national average, though publication and citation rates were a bit lower than that average. The Department fares well nationally in terms of its research impact, and the addition of new faculty members should support improved rankings in this respect.

The faculty offers a strong program for undergraduate education. The junior faculty seemed particularly committed to this endeavor, which is also supported by invaluable assistance from adjunct faculty employed outside the university. Reviewers raise several concerns, however, about the program offered to graduate students (discussed below).

Were the DMSE and the Program in Metallurgical Engineering to merge, as proposed by the reviewers, the size of the faculty would double, helping to stabilize and improve instructional programs, and contribute to an increase in national prominence of the University’s offerings in these areas.

**Students**

**Undergraduate Students:**

At the time of the self-study, undergraduate enrollment was approximately 50, with 13 degrees granted in 2010. In general, undergraduate students expressed high satisfaction with the Department. Concern was raised, however, with respect to the need for the DMSE to step up its recruiting of undergraduate majors. The small size of the department was deemed one issue in this regard; students are attracted to larger departments in the College of Engineering. At the same time, the undergraduate SAC was praised for its deep involvement in the effort to recruit high school students into the program. Reviewers recognized much enthusiasm and a supportive sense of community among undergraduates.

Undergraduates pursue a diverse range of career opportunities from typical careers in engineering disciplines to less common options including law and medical school. Students applauded both the formal and informal advising opportunities afforded them by the Department.

At the time of the self-study, 20 percent of the undergraduate population were women and 16 percent were minorities.

**Graduate Students:**

There were 9 students enrolled in the master’s degree program in 2009, a drop from the enrollment of 14-15 in previous years. In 2011, there were 35 PhD candidates enrolled in the DMSE for
the third straight year, a significant rise from previous years. The Department awards approximately 7-10 graduate degrees a year. It produces more PhDs annually than the average number produced by the top 20 programs in the nation. The number of master’s degrees granted is somewhat lower than that average.

In general, graduate students were enthusiastic about the quality of research facilities, the faculty, and research opportunities. Students felt they were well mentored and particularly appreciate opportunities for interaction with industry and national labs. Graduate students were described as articulate and passionate in their commitment to improving the DMSE graduate program. In terms of diversity, at the time of the Department’s self-study, the majority of graduate students were international graduate students from India, China, Taiwan or South Korea.

**Curriculum and Programs of Study**

Reviewers raised concerns about the impact of the University’s SCH funding mechanism on a small department such as the DMSE. That mechanism leads to a proliferation of many small courses that overtax faculty, rather than a focused attempt to offer a core set of courses. This is particularly unfortunate where comparable courses are offered elsewhere on campus.

Further concern was raised that, for a small department, offering four degree programs (BS, MS, ME, and PhD) makes it difficult for the department to specialize without significant collaboration and synergy from other departments across campus. Moreover, reviewers were concerned that very few elective courses are offered. Reviewers suggested that, were the DMSE to lessen the number of courses required in the Department, there would be more opportunity for students to take relevant courses in other departments.

**Undergraduate Program:**

A Bachelor of Science in Materials Science and Engineering requires a minimum of 129.5 credit hours to complete. The typical program of study for the BS includes three semesters of chemistry, in addition to mathematics classes in calculus, linear algebra, ordinary and partial differential equations, as well as courses in physics, chemical, mechanical and electrical engineering and a full slate of MSE courses. This is a very demanding course of study, but not unusual for the College of Engineering.

The small size of the undergraduate program raised a concern with respect to the limited range of course offerings. Strategies proposed to deal with this concern include cross-listing courses with other departments, and extending joint appointments to faculty from other departments to teach courses not previously offered in the DMSE curriculum. Moreover, it was recommended that undergraduates be allowed to take more relevant classes outside the Department.

Overall, the reviewers considered the undergraduate program to be in good health in terms of appropriate scope. Reviewers praised the research experience that the students get in senior design/thesis work. Reviewers expressed a sense that merging the DMSE with the Metallurgy Program would offer a powerful strategy for building the undergraduate program.

**Graduate Program:**

Master’s degree students are required to complete 22 hours of MSE coursework, 2 hours of MSE graduate seminar and a minimum of 6 hours of thesis research. PhD students are required to
complete a minimum of 54 credit hours in level 6000 (or above), which includes 36 hours of coursework (at least 25 of which need to be in MSE), 4 hours of graduate seminar, and a minimum of 14 hours of thesis research. Entering students are required to take the MSE core courses in thermodynamics, kinetics, advanced material techniques and engineering materials.

Concern was raised over the nature of the Qualifying Exam for PhD study. Reviewers noted that the Department’s exam is different from the traditional comprehensive exam required by most universities, and questioned whether its purposes and goals had been carefully considered or explained to incoming students.

Perhaps the reviewers’ greatest concerns related to the graduate curriculum. Specifically, they expressed concern about the limited course selection and whether certain courses cross-listed with the upper level undergraduate curriculum were adequate for graduate level study. A comprehensive review of the graduate curriculum is recommended.

Program Effectiveness-Outcomes Assessment

The undergraduate program was thoroughly assessed by ABET in 2008, and recommendations were promptly addressed by the Department. Concern was raised, however, with the evaluation methodology for the graduate program. A formal program for results assessment has only recently been implemented by the DMSE. Though reviewers applauded the criteria adopted for assessment of both the undergraduate and the graduate programs as well thought out, the effectiveness of this formal assessment program will take time to judge.

Facilities and Resources

Reviewers felt that while the research and educational facilities were adequate, there was a sense that the general facilities were minimally maintained and, as a result, in a state of decline. More specifically, reviewers found the microfabrication facility to be well run and well supported, noting that this facility is critical to many engineering disciplines. In contrast, reviewers raised concerns that the electron microscopy laboratory, which features both secondary electron and transmission electron microscopes, is understaffed, underfacilitated and underfunded compared to comparable facilities at other major U.S. universities.

While the x-ray diffraction laboratory, mechanical testing and teaching laboratories were considered adequate, external reviewers raised concern that there is no thermal analysis facility. They presumed similar facilities are available elsewhere on campus.

Reviewers raised concerns about the general accessibility to both students and faculty of shared facilities—in particular with respect to x-ray diffraction and electron microscopy. These facilities do not seem to be operated during off-hours, a time when significant attention could be devoted to the training of students.

Finally, concern was raised about a seeming attitude in the Department that materials characterization is better done at national laboratories and not on campus. Reviewers suggested that, because travel to national labs is expensive and scheduling a problem, use of such labs is not a substitute for having similar equipment at the university.
COMMENDATIONS

1. Despite various challenges including the SCH method of funding allocation at the University, the DMSE has achieved success in attracting excellent new faculty, graduate students, and undergraduate students to complement its nationally recognized senior faculty.

2. The DMSE is commended for building on its strengths and thereby gaining a respectable national ranking in both research productivity and NRC quality. With the highest number of graduate students in its history, the Department has solidified its focus in nanotechnology, biomaterials, semiconductors, fuel cells, solar cells, semiconductors, magnetic materials, sensors, and bio-fuel cells.

3. The DMSE has provided leadership to form partnerships and collaborative relationships with other units at the University, including its involvement in the USTAR proposal on Alternative Energy. The Department is commended for improving ties with other departments, including its appointing new professors jointly in the recent past, and is encouraged to continue strengthening its interdepartmental connections.

4. The DMSE is commended for its excellent group of adjunct faculty, a number of whom have won awards for both teaching and service.

5. The DMSE is to be commended for its excellent undergraduate program, and for its successfully engaging a group of committed undergraduate students in the effort to recruit both high school and college students into the major. In particular, the Department is to be commended for its responsiveness to previous reviews and to the ABET review by engaging more permanent faculty in undergraduate teaching and making substantial revisions to its undergraduate curriculum.

6. The DMSE is to be commended for aggressively seeking and successfully attracting women faculty, as well as a gender diverse student body.

RECOMMENDATIONS

1. A central priority for the DMSE is to give serious consideration, in conjunction with the University’s central administration, to merging with the Metallurgical Engineering Program in the College of Mines and Earth Sciences. To remain competitive in the national arena, the DMSE needs to adapt its program to new paradigms of materials education. The de-emphasis on this field within the Department’s curriculum obviously is a result of the presence on campus of another department that is devoted to this discipline. Nonetheless, the DMSE’s weak curricular offerings in this area detract from its national reputation. As the last major department in the country not to integrate material sciences with metallurgy, concern is raised about the Department’s future prominence on the national arena. Moreover, the small size of the Department raises serious concerns about its ability to meet curricular and research goals in the future. The Graduate Council strongly recommends that, by December 2012, the Deans of the College of Engineering and the College of Mines and Earth Sciences, together with the Department Chairs of Materials Science and Engineering and Metallurgical Engineering, submit to the Senior Vice President for Academic Affairs a viable proposal for merging the two departments.
2. Enrollment growth in the Department has created financial challenges because the increase in SCH funding has not matched the increase in instructional costs. As a result, there is a shortage of operating funds for teaching assistants, seminar speakers, student recruitment, and financial support for graduate students in the first semester of residency. The University administration is encouraged to consider new ways to fund Departmental teaching activities that do not impose financial penalties for growth in enrollments.

3. A number of concerns were raised with respect to the graduate program:
   a. In light of recent changes in both the DMSE’s research programs and faculty, a comprehensive review of the graduate curriculum should be undertaken to consider the adequacy of course offerings.
   b. Concern has been raised by the reviewers and by graduate students as to the purpose of the PhD qualifying exam, especially in comparison to comprehensive exams at other universities. If the faculty determines that this exam remains an effective way to evaluate students, greater attention should be devoted to explaining the purposes and goals of the exam to incoming graduate students.
   c. More faculty involvement in graduate seminars is needed, as well as more faculty feedback concerning graduate students’ progress towards their degrees.

4. The Department needs to work with the College and central administration to find ways to increase access to facilities during off hours and to improve the conditions and quality of research equipment, especially the electron microscopes.

5. Continued efforts need to be devoted to recruitment of students into this small department, as well as to recruit faculty and students across all racial and economic groups. The Office of the Associate Vice President for Equity and Diversity is committed to this goal and may provide useful ideas and strategies in this regard. The use of annual progress reports to the Graduate School should be considered as a way to encourage the Department to work effectively towards this goal.

Submitted by the Ad Hoc Committee of the Graduate Council:
   Terry Kogan (Chair), Professor, S.J. Quinney College of Law
   Emma Gross, Professor, College of Social Work
   Allyson Mower, Assistant Librarian, Marriott Library
**FACULTY AND STAFF**

**MATERIAL SCIENCE & ENGINEERING**

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*Gerald Stringfellow (tenured in Electrical and Computer Engineering Dept.)*

The OBIA tables included with the Graduate Council report are required by the Board of Regents, but do not currently match the University of Utah’s faculty classifications.
STUDENTS

NOTES:
1) Faculty FTE has been reduced by the amount of FTE paid for by sponsored research (Fund 5000).
2) Count of 2009-2010 Degrees Conferred for 2009-2010 Academic Year will be available the end of August 2010.

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<tr>
<th>ACAD YR</th>
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<td>2005-2006</td>
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NOTE: Information for 2009-2010 is not available until after June 30, 2010; therefore 2004-2005 numbers are shown.

**FINANCIAL ANALYSIS**

**MATERIAL SCIENCE & ENGINEERING**

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<td><strong>Total Revenue</strong></td>
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<tr>
<td>Revenue-Expense</td>
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<td>(9,347)</td>
<td>13,797</td>
<td>(81,410)</td>
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Memorandum of Understanding
Department of Materials Science and Engineering
Graduate Council Review 2010-11

This memorandum of understanding is a summary of decisions reached at a wrap-up meeting on June 25, 2012, and concludes the Graduate Council Review of the Department of Materials Science and Engineering. Michael L. Hardman, Interim Senior Vice President for Academic Affairs; Richard B. Brown, Dean of the College of Engineering; Feng Liu, Chair of the Department of Materials Science and Engineering; Charles A. Wight, Dean of the Graduate School; and Donna M. White, Associate Dean of the Graduate School, were present.

The discussion centered on but was not limited to the recommendations contained in the revised Graduate Council review completed on March 26, 2012. At the wrap-up meeting, the working group agreed to endorse the following actions:

**Recommendation 1:** A central priority for the DMSE is to give serious consideration, in conjunction with the University’s central administration, to merging with the Metallurgical Engineering Program in the College of Mines and Earth Sciences. To remain competitive in the national arena, the DMSE needs to adapt its program to new paradigms of materials education. The de-emphasis on this field within the Department’s curriculum obviously is a result of the presence on campus of another department that is devoted to this discipline. Nonetheless, the DMSE’s weak curricular offerings in this area detract from its national reputation. As the last major department in the country not to integrate material sciences with metallurgy, concern is raised about the Department’s future prominence on the national arena. Moreover, the small size of the Department raises serious concerns about its ability to meet curricular and research goals in the future. The Graduate Council strongly recommends that, by December 2012, the Deans of the College of Engineering and the College of Mines and Earth Sciences, together with the Department Chairs of Materials Science and Engineering and Metallurgical Engineering, submit to the Senior Vice President for Academic Affairs a viable proposal for merging the two departments.

The Dean and Chair agree with the Graduate Council’s Recommendation #1 for all of the reasons mentioned, and to stay in step with national trend they advocate for moving forward with a proposal to merge the Department of Materials Science and Engineering (MSE) and the Department of Metallurgical Engineering. The Sr. Vice President is in agreement and will work with President Pershing and the two Deans (Engineering, and Mines and Earth Sciences) to move forward with this recommendation.
Recommendation 2: Enrollment growth in the Department has created financial challenges because the increase in SCH funding has not matched the increase in instructional costs. As a result, there is a shortage of operating funds for teaching assistants, seminar speakers, student recruitment, and financial support for graduate students in the first semester of residency. The University administration is encouraged to consider new ways to fund Departmental teaching activities that do not impose financial penalties for growth in enrollments.

The Dean and Chair agree that this recommendation likely results from a misunderstanding. The Department operates on the same productivity funding model as all other departments on the main campus. Furthermore, the class sizes are smaller than optimum, so enrollment growth would provide additional funding without significantly increasing instructional costs. The Sr. Vice President was clear in his intention to support growth in enrollments that would fill existing courses being taught in the Department. The Chair has allocated discretionary funds for faculty to invite guest seminar speakers. The College does provide financial rewards for research productivity.

Recommendation 3: A number of concerns were raised with respect to the graduate program:

a. In light of recent changes in both the DMSE’s research programs and faculty, a comprehensive review of the graduate curriculum should be undertaken to consider the adequacy of course offerings.

The Chair is currently working with the Department Curriculum Committee to eliminate ineffective courses and cross-listings between undergraduate and graduate courses. A comprehensive review of the graduate curriculum is in progress.

b. Concern has been raised by the reviewers and by graduate students as to the purpose of the PhD qualifying exam, especially in comparison to comprehensive exams at other universities. If the faculty determines that this exam remains an effective way to evaluate students, greater attention should be devoted to explaining the purposes and goals of the exam to incoming graduate students.

The Chair has solicited graduate student feedback in the process of making changes in the requirements of research proposals that serve as the PhD qualifying exam. The Chair will also consult the faculty to determine exactly what changes will make the process more effective as an
evaluative tool and seek Departmental approval for the new requirements. He then plans to work with advisors to set up more clear lines of communication regarding the purposes and goals of the proposal process to incoming students by fall semester of 2012.

c. More faculty involvement in graduate seminars is needed, as well as more faculty feedback concerning graduate students’ progress towards their degrees.

The Chair provides a modest stipend for guest speakers for graduate seminars. To more fully involve faculty in the seminars, the speakers are recommended by faculty members and often speak on topics related to their specific research areas. So far, this program has been well received. As for providing more feedback concerning graduate students’ progress toward their degrees, the Chair has solved the only problem from the past that he is aware of. The steps being taken under (b.) will continue to provide clearer communication among students, advisors, and faculty in general moving forward.

Recommendation 4: The Department needs to work with the College and central administration to find ways to increase access to facilities during off hours and to improve the conditions and quality of research equipment, especially the electron microscopes.

The Chair has hired a graduate student to oversee facilities and research equipment during off hours. This has immediately increased access and improved conditions for students, although it is only a temporary fix. He will continue to work to find a long-term solution. The Dean has some strategies in mind to work with USTAR to improve equipment quality for researchers, but the new transmission electron microscope (TEM) presents a big hurdle financially. The Dean is well aware of the importance of acquiring a new TEM in terms of the program remaining current and competitive, and he will continue to work with USTAR and to find other resources to pursue a solution. The existing TEM is too old to move and is suitable only for a teaching instrument.

Recommendation 5: Continued efforts need to be devoted to recruitment of students into this small department, as well as to recruit faculty and students across all racial and economic groups. The Office of the Associate Vice President for Equity and Diversity is committed to this goal and may provide useful ideas and strategies in this regard. The use of annual progress reports to the Graduate School should be considered as a way to encourage the Department to work effectively towards this goal.
Although the Department’s percentage of female students is low, it exceeds the norm for the discipline. This is due in part to a College-wide diversity project that has been funded by the National Science Foundation for the past 3 years. The College recently hired a female Communications Director who will also be teaching some courses in the Department. She has her PhD in MSE, and the Dean and Chair are hopeful that this will aid in the Department’s student recruitment and retention efforts. The Chair is committed also to increasing racial diversity in the student body and has plans to work with the new NSF Materials Research Science and Engineering Center through their educational outreach initiatives. The Chair has a copy of the University Diversity Committee’s report and plans to implement recommendations from that report where possible.

This memorandum of understanding is be followed by annual letters of progress from the chair of the Department of Materials Science and Engineering to the dean of the Graduate School. Letters will be submitted each year until all of the actions described in the preceding paragraphs have been completed.

Michael L. Hardman
Richard B. Brown
Feng Liu
Charles A. Wight
Donna M. White

Charles A. Wight
Dean, The Graduate School
July 12, 2012
July 12, 2012

Michael L. Hardman
Interim Senior Vice President for Academic Affairs
205 Park Bldg.
Campus

RE: Graduate Council Review
School of Architecture

Dear Vice President Hardman:

Enclosed is the Graduate Council’s review of the School of Architecture. Included in this review packet are the report prepared by the Graduate Council, the Department Profile, and the Memorandum of Understanding resulting from the review wrap-up meeting.

Please forward this review to President David Pershing for his approval. After approval by President Pershing, the review will be forwarded to the Academic Senate to be placed on the information calendar for the next Senate meeting.

Sincerely,

Charles A. Wight
Dean, The Graduate School

Encl.

XC: Brenda C. Scheer, Dean, College of Architecture + Planning
Prescott M. Muir, Director, School of Architecture
The Graduate Council has completed its review of the School of Architecture in the College of Architecture and Planning.

The External Review Committee included:

Timothy de Noble, AIA (Committee Chair)
Professor and Dean
College of Architecture, Planning and Design
Kansas State University

Nichole Wiedemann, M.Arch
Associate Professor
School of Architecture
University of Texas

Douglas Noble, FAIA, PhD
Associate Professor and Chair
School of Architecture
University of Southern California

The Internal Review Committee of the University of Utah included:

Timothy A. Ameel, PhD
Professor
Department of Mechanical Engineering

Eric Michael Handman, MFA
Assistant Professor
Department of Modern Dance

Pamela K. Hardin, PhD
Assistant Professor
College of Nursing
The following summary is based on an analysis of the self-study materials submitted by the School of Architecture, the reports of the external and internal review committees, the report of the University Diversity Committee, and responses from Prof. Prescott Muir, Director of the School of Architecture, and Prof. Brenda Case Scheer, Dean of the College of Architecture and Planning.

DEPARTMENT PROFILE

Overview

The Department of Architecture has been in existence since 1949 and has been accredited continuously by the National Architectural Accreditation Board (NAAB) since its initial accreditation in 1954. The Department was initially housed in the College of Fine Arts and became the Graduate School of Architecture in 1974. In 2002, the undergraduate program in planning was brought into the same unit as architecture and the unit was renamed College of Architecture + Planning. In 2008, the School of Architecture and the Department of City and Metropolitan Planning became separate departments within the College.

At a recent faculty retreat in Spring 2011, a mission statement was developed for the College that serves to advance the discipline and professions of architecture, design, urban design and planning through excellence in education, scholarly and creative endeavors, and professional and community service. Their mission is to: (1) educate dedicated and competent architects, planners, designers, urban designers, and preservation professionals, and provide general design education to university students; (2) advance knowledge through innovative research, scholarship, and creative work; (3) promote community outreach, internship and service as an important component of our educational responsibility; and (4) foster public sensitivity to architecture, design, planning and related urban and environmental issues. A strategic plan exists for the College, but according to the Director, it was developed prior to the separate establishment of the Department of City and Metropolitan Planning and the School of Architecture in 2008. The School of Architecture currently does not have a program-specific strategic plan in place, which the external reviewers noted was evident in some disparate views of long- and short-term objectives expressed by faculty. The Director’s response indicates that the School is now in the process of developing a program-specific strategic plan.

According to the self-study, the architecture program at the University of Utah is one of the smallest state-supported programs in the country, which the faculty acknowledge is both an asset and a liability. Because of its small size, the more intimate learning environment lends itself to highly interactive instruction and personal mentoring of students that fosters collegial relationships, similar to that provided at smaller private schools. In fact, the reviewers commented on the very strong sense of community among both faculty and students. On the negative side, the small program does not appear in the annual rating of architecture schools conducted by Design Intelligence, making it more challenging for the program to maintain national prominence and potentially hindering efforts to recruit nonresident students. Much of the School’s national reputation and attraction to prospective students has been attributed to the School’s longstanding association with the DesignBuildBluff (DBB) program, which provides students with
opportunities to gain understanding and efficacy of design through hands-on learning on the Navajo Reservation. Although changes in the DBB program’s administration and remote location have made student participation and faculty oversight difficult, other design-build initiatives are being planned.

The School currently offers a Bachelor of Science degree in Architectural Studies (BSAS), which students apply to just before their junior year. There also is an Honors Program available for top tier undergraduate architecture students. At the graduate level, the Department offers several versions of the Master of Architecture degree (M.Arch), which is an accredited professional degree. The 4+2 program offers a 4-year pre-professional degree combined with the 2-year professional degree, the 3+ program is designed for those with a baccalaureate degree in a field other than architecture, and the accelerated program, which starts in the Summer semester directly following the senior year and continues for four successive semesters. The School also offers a post-professional Master of Science degree in Architectural Studies (MSAS), which is a nonprofessional program with historic preservation or technology as a major area of study. At present, there are no students enrolled in the MSAS program, which has struggled to build a critical mass of students, and as a result has been dormant for the last several years. The Director’s response indicated that there has been renewed interest in the MSAS program, with several new student applicants.

A joint program for the Master of Architecture and Master of Business Administration is available (MBA/M.Arch), and a similar joint program with the Master of Architecture and Master of Real Estate Development is in the early implementation stage. An interdisciplinary graduate-level certificate in Historic Preservation is also offered, which is a 15-credit hour program that focuses on historic preservation issues in the Western U.S. Another graduate-level certificate in Real Estate has been developed, which is an 18-credit hour program combining courses in real estate, architecture and planning.

Faculty

In the last five years, there has been significant turnover amongst the faculty in the School of Architecture. Three new tenure-track faculty and two new clinical faculty were hired, four tenured faculty retired, and one faculty left for another position. For 2010-2011, the School included 9 FTE regular faculty members with different levels of appointments (e.g., two faculty share leadership appointments at the University level; one faculty is on sabbatical). The School anticipates a new regular tenure-track hire for 2012, and is currently in the process of negotiations with a candidate. There also are 22 adjunct faculty members who play a critical role in the teaching mission of the School.

The regular faculty in the School represent 9.0 FTE positions and include 4 assistant professors, 3 associate professors, and 6 full professors (1 as Chair). According to the self-study, the average age of the faculty is 42 years. Last summer, the University converted the salary of the previous dean (who retired) to a dedicated line within the School, which became an open position in the area of history and theory. As noted, negotiations are currently underway with an applicant for this position to begin Fall 2012. The School reported that 41% of faculty are women.
and 17% are ethnic or racial minorities. The University Diversity Committee indicated that these percentages are comparable to the University-wide percentages of 28% and 12%, respectively. According to the response from the Director, recent efforts to prioritize diversification of faculty were successful in that the new faculty hire for the history and theory position is a woman of color.

Both the internal and external reviewers were impressed with the distinguished scholarship and research of the faculty. Tenured/tenure-track faculty have active and directed scholarly agendas, resulting in a wide variety of publications, presentations, and creative architecture activities, such as exemplary architectural designs. Faculty are nationally recognized in the areas of Sustainability, Visualization and Animation, Digital Technology, Information Architecture, Structural Concepts, Dynamic Simulation, Preservation, Architectural History and Community Service. The recent new faculty hires are seen as an infusion in energetic talent that can address curricular needs.

Despite limited funding within the architecture discipline, faculty have been successful in securing sponsored research funds from local foundations and corporations and the University, as well as small grants from national foundations. The School continues to prioritize research and offers faculty seed grant funds and some faculty travel support to attend national and international conferences. Both the internal and external reviews commented on the need to examine faculty salaries and increase resource allocations for travel and research in order to facilitate retention of faculty.

**Undergraduate Students**

The undergraduate population was made up of 316 undergraduate majors in the 2010-2011 academic year, with 36 BS degrees awarded in 2011. This has been a fairly steady rate over the last 5 years. The students are very enthusiastic about the School and expressed respect and enthusiasm for the faculty. Individual exit interviews, conducted by the Director, provide opportunities for each student to provide feedback about the program, and this feedback becomes incorporated into program or curricular changes when warranted.

The internal reviewers commented on the struggles that students face in financing valuable overseas studio opportunities and the lack of an organized structure for finding internship opportunities. Students also expressed some concerns regarding the lack of opportunity to take elective courses, which is partly due to the guidelines for curriculum set by the NAAB. Reviewers indicated that the tenured and tenure-track faculty may be encumbered by covering the required courses at the expense of providing specialized elective offerings, which are more frequently covered by adjunct faculty.

Data regarding undergraduate student majors indicate that 25% are women, which is an improvement since the last review. This indicates that recruitment efforts have been successful in attracting more women into the architecture field of study. The racial and ethnic diversity of the student population is not tracked, but estimated by the School to be at 13%, which again, is an
improvement since the last review. No report of retention or graduation rates of underrepresented groups is provided. The self-study indicates that undergraduate students in the second year of the BSAS degree program have priority in receiving scholarship awards. Students may also apply for University scholarship and financial aid programs.

**Graduate Students**

The graduate student population was comprised of 104 students in the 2010-2011 academic year, with 43 master’s degrees awarded. The rate of graduate student enrollment has remained relatively stable over the past 3 years, with a slight increase since 5 years ago. Of the graduate student population, 30% of students during 2010-2011 were female, and in the self-study the School estimated that 14% belong to underrepresented minority groups, although racial and ethnic diversity is not specifically tracked. This represents an improvement since the last review.

The self-study indicates that approximately 55% of graduate students requesting aid receive some amount of financial assistance. Funding for fellowships and assistantships is provided primarily by the professional community or through construction-related industries, and is awarded to graduate students on a competitive basis. Total aid support amounts to approximately $129,000, which is augmented by the Graduate School’s Tuition Benefit Program. Additional funding through the Roger Bailey Traveling Fellowship Fund has supplied some support for international travel through an endowment that currently guarantees about $2,000 per year. The internal review recommended that increased scholarship support for students is warranted with the suggestion of granting somewhat fewer, but higher, graduate stipends in an effort to attract more diverse and international students.

**Curriculum and Programs of Study**

The School of Architecture offers both undergraduate and graduate degrees. At the undergraduate level, the School offers a bachelor’s degree in Architectural Studies (BSAS), a multidisciplinary design minor, and an honors program. The School has developed a proposal for an undergraduate design major, which is currently undergoing University review. A plan to develop a graduate certificate program in design is also being considered. Students are admitted into the BSAS program at the end of their sophomore year. Faculty are currently considering an earlier entry into the program, which would add an extra semester of studio work to students’ application portfolios, and therefore benefit them when applying to graduate school. The program is planning to increase undergraduate enrollment, thereby increasing the pool of candidates applying to graduate programs in the School of Architecture. Increasing undergraduate enrollment will also increase the number of applicants applying to out-of-state graduate programs, which can help enhance the national visibility of the program.

At the graduate level, the School of Architecture offers a Master of Architecture degree (M.Arch) with three variations (4+2, 3+, Accelerated) and an MS in Architecture Studies (MSAS), which is currently inactive with no enrolled students. The School also offers a graduate
certificate in Historic Preservation and another graduate certificate in Real Estate. A joint degree program with a Master of Architecture and Master of Business Administration (MBA/M.Arch) is offered, and a similar joint program with a Master of Architecture and Master of Real Estate Development is in the early implementation stage.

Since the last review, the School has developed the accelerated M.Arch program, which consists of four consecutive semesters of study beginning Summer semester (SU, FA, SP, SU). The cost of the accelerated program is 40% less than the traditional M.Arch program for nonresident and international students due to instate tuition being applied during the summer semesters. The accelerated program was developed in an effort to attract more out-of-state and international applicants. The School has admitted two fully subscribed cohorts to the accelerated program to date. The first cohort included more nonresident and international students, but this was not true of the second cohort. Greater publicity about the accelerated program may be necessary in order to attract more out-of-state and international applicants.

A Doctor of Architecture degree is currently not offered, and although it has been considered, the addition of a doctoral degree is not in the immediate or long-range plan of the School at this time. Such an addition would require additional faculty as currently there are few faculty who hold the doctorate degree.

**Facilities and Resources**

The School is housed in the Architecture Building, which is approximately 33,000 net square feet. The building contains the Roger Bailey Exhibition Hall, two smaller exhibition spaces, two classrooms, large studio spaces for students, faculty offices, a computer lab, an auditorium, and a recently renovated wood and metal shop. An additional classroom is being remodeled into faculty offices. The Exhibition Hall is spacious and used for exhibitions, juries, and receptions. The School sometimes uses other campus facilities for public lectures, professional gatherings, and events when necessary.

Students are assigned their own studio space but lack adequate space for formal juries/critiques in the studios. The building was originally built to house 60 graduate-level students and now houses more than 255 students across the College, in addition to faculty. The limited space reflects the 200% increase in graduate degrees awarded in the past nine years.

The College recently conducted a “Net Zero Retrofit Facilities Plan” that calls for a net zero retrofit, code-compliant upgrade of the existing building and a 19,827-square-foot addition. The College is currently in the process of securing University and state approval for this building project. This initiative was highly praised by the external review team, who saw it as a means of substantially increasing external recognition of and interest in the School.

The College houses collections in the Katherine W. Dumke Fine Arts and Architecture Library within the Marriott Library. Despite budget cuts, journal subscriptions have been maintained and are available electronically. The College Visual Resource Library in Marriott Library maintains a collection of over 40,000 slides for faculty and students to use for teaching.
and research purposes. Faculty, students, and staff have access to the School’s computer network, scanners, plotters, and other digital equipment. The College has a use agreement with the College of Engineering for equipment sharing.

Over the last seven years, the School has supported a design-build immersive program on the Navajo Indian Reservation. The DesignBuildBluff (DBB) program is a center with a focus on design research in net zero housing for low income families in rural locations. This program has received AIA design awards for its off-the-grid residential buildings and has become a positive brand for the School, providing students with a unique transformative experience. As of 2010, DBB became a non-profit corporation that is managed by its own staff and governing board. These changes in the DBB administration, including the difficulties associated with its remote location, have made student participation and administrative oversight very difficult. The School is currently exploring two new design-build opportunities for students, one locally with the Girl Scouts of Utah to create new buildings for their summer camp, and another focused on building schools in Chiapas, Mexico. The School also maintains an exchange program with the Universidad Nacional del Litoral in Santa Fe, Argentina, and is exploring further such exchange connections in Turin, Italy, and with the Universidad Iberoamericana in Mexico City, Mexico. Such connections provide students with valuable opportunities to experience architecture applications in diverse cultures. Additionally, the School houses the Integrated Technology in Architecture Center (ITAC), which is co-directed by two faculty. ITAC has several ongoing funding research projects in the area of building technology.

**Program Effectiveness and Outcomes Assessment**

Program assessment consists primarily of individual feedback from graduating students and alumni. The Director conducts exit interviews with each graduating student at the undergraduate and master’s level, which have elicited constructive feedback that has been used for program improvement. Examples include: 1) a requirement that a specific piece of design software (Revit) be required in the comprehensive studio, 2) the addressing of concerns regarding adjunct instructor commitment resulting in the replacement of some adjuncts, and 3) the revamping of the curriculum to include finance as one of the topics in research methods. Quantifiable data of program outcomes consists only of degree completion and attrition data.

At the master’s level the final studio is intended as a forum for in-depth research, which is demonstrated in a comprehensive final studio project. Student design awards are given to ensure a competitive process. An assessment of these final projects provides another means of measuring program outcomes.

The School's performance is also measured using external assessments. The professional school accreditation is conducted every 6 years and an accreditation review is due in 2013. The School has been continuously accredited by NAAB in good standing since 1954. Overall student performance on the Architectural Registration Exam (ARE) has been high, with the percentage pass rate in the top tier of programs nationally.
The School’s Advisory Board, consisting primarily of alumni, meets four times a year to provide input on governance issues, strategic plans and goals. These employers feel that there are no major problems in the program; however, most felt that the writing skills of the graduates could be improved and that presentation skills could be emphasized more. The Board members are highly supportive of the travel programs that allow students to see architecture in other settings and would like to see this program grow.

Although employment of graduates is not systematically tracked, employment opportunities for graduates were reported to be good prior to the recent economic downturn. Prior to 2009, 100% of graduates could find work in the field of architecture. Currently, the employment rate in the profession of architecture is estimated at 30-40%, requiring some graduates to work in allied fields such as construction and product manufacturing.

**Actions Taken Since the Last Program Review**

The last program review occurred in 2004. Below is a summary of the Graduate Council’s recommendations and actions taken by the School of Architecture:

1. **National visibility.** The College hosted the American Colleges and Schools of Architecture (ACSA) National Conference in 2006, which served to enhance its national visibility. In the last several years, the College’s Website has been upgraded, including a student blog, and the Website is updated regularly by a media staff person. In addition, the School was recognized by AIA’s publication, *Architect Magazine*, for its leadership in urban and community-related curriculum and outreach.

2. **Student diversity.** There has been an increased focus on recruiting a broader and larger pool of student applicants. The hiring of a recruitment specialist has resulted in targeted efforts to recruit and retain underserved populations, women, and non-resident students. The School also reports an increase in foreign student applicants. Corresponding increases in both gender and ethnic diversity of faculty were also reported due to faculty hires since the last program review.

3. **Restructuring of curriculum.** Faculty were hired with expertise in sustainable design and green building design in order to address the concern of increasing curriculum coverage in these areas. Additionally, a revamped professional practice course sequence will be initiated in the fall of 2012 that emphasizes research methods and leadership, which addresses concerns regarding expanding curriculum in critical inquiry.

4. **Establishment of separate Architecture and Planning departments.** The establishment of separate Architecture and Planning departments within the College has gone smoothly. The programs are closely integrated, with many cross-listed classes and collaborative teaching. The two programs also share service on many committees and responsibilities at the University and College levels. The collaborative atmosphere has been enhanced with the hiring of the new City and Metropolitan Planning Department Chair.
5. **RPT policy.** RPT policies and procedures have been revised to incorporate the suggestions offered in the last Graduate Council Review to clarify the expectations for promotion and tenure. Since the last program review, four new faculty have successfully achieved tenure status.

**COMMENDATIONS**

Both the external and internal reviews offered considerable praise for accomplishments that the School has made since the last review. The following represents a synthesis of the commendations discussed in the internal and external reports in regard to the School of Architecture:

1. The faculty should be highly commended for the positive learning environment they have created. There is evidence of a strong commitment to the academic and personal welfare of students, and the students think very highly of their faculty. Among other areas of interest, the focus on design and sustainability, and extremely relevant and politically engaged areas of inquiry, are notable. Additionally, faculty have established longstanding relationships with the local architectural community, who serve as expert reviewers of student work.

2. The program has received some well-deserved national recognition through the DesignBuildBluff program. While not required of all students, much of the School’s national reputation and attraction to prospective students comes from this loosely associated program. Opportunities for design/build activities are important in this era as students gain significant understanding and efficacy of design through hands-on learning. The potential for recognition and good will generated through service learning is also important in building the regional and national reputation of the program. The program is currently pursuing additional design-build opportunities for students both locally and internationally.

3. Faculty should be applauded for their creative revisions to the curricula in an attempt to increase visibility for the School. Expanding the undergraduate program and developing an accelerated graduate program are innovative steps meant to both import and export an increase in out-of-state students.

4. The School should also be congratulated on its ongoing efforts to increase diversity by way of mentoring programs, connecting with historically underrepresented student organizations, and creating a summer program for high school students, as well as the hiring of a recruitment specialist.
5. Tenured faculty are supportive of and invested in the success of the junior faculty. Lines of communication are open between senior and junior faculty and there exists a sense of high morale and stability, which encourages a stimulating exchange of ideas. Additionally, revisions to RPT policies and procedures include updates that better reflect aspects of the field of architecture as a profession as well as an academic discipline with unique and multiple areas of inquiry. RPT expectations seem appropriate and clear and have resulted in junior faculty giving high marks to the College on its RPT process.

6. The College is to be congratulated on hiring effective development staff who have provided important strategic support to the School and College, including invaluable assistance in grant writing and grant management, as well as coordination of philanthropic support.

7. The available space in the Architecture Building is being used strategically and completely. Faculty have advocated for students and provided the resources they need to be competitive in applying for graduate school and employment. Faculty and students wisely utilize other campus facilities when necessary, including the College of Engineering, the Marriott Library, and the Utah Museum of Fine Arts.

RECOMMENDATIONS

The following recommendations represent a synthesis of the recommendations discussed in the internal and external reports in regard to the School of Architecture:

1. An updated, program-specific five-year strategic plan that incorporates the newly devised mission statement and also includes program goals and objectives should be completed as planned. This strategic plan should be based on input from all faculty and be revisited annually to assess progress towards the established objectives and goals.

2. At present, program assessment is primarily based on anecdotal evidence. Although it is apparent that student input is taken seriously, as it has been used constructively to improve the program, efforts should be undertaken to acquire objective, quantifiable data that may be used to assess program outcomes. An objective assessment instrument that requires numeric input could be designed and implemented in conjunction with the exit interviews currently conducted with graduates by the Director. Similar instruments could be used annually with both graduating students and alumni to allow for anonymous input and generate a database for assessing quantifiable program changes over time.

3. The accelerated program at the graduate level, although successful locally, appears to lack broader visibility. To increase awareness and grow the enrollment among nonresident and international students, the accelerated master’s program should be advertised more widely. Although it may be difficult at present, increasing the number of students in the undergraduate program would positively impact the program.
4. All efforts to continue to build faculty and student diversity should be maintained and enhanced. Ongoing recruitment efforts to increase student quality and diversity should be continued and expanded. The Office of the Associate Vice President for Equity and Diversity is committed to this goal and may provide useful ideas and strategies in this regard. The use of annual progress reports to the Graduate School should be considered as a way to encourage the Department to work effectively towards this goal.

5. Development efforts should be continued. Development priorities should include a capital campaign to refit and expand the Architecture Building, purchase of additional digital fabrication equipment to keep the program current, more funds for salary enhancement, professional development and sabbatical opportunities for faculty, and promotional efforts to increase the national visibility of the School. Additionally, to assist the student recruitment effort, resources to grow the number of scholarships and teaching assistantship opportunities for students should also be pursued.

6. The School should consider establishing a more formalized mechanism to enhance consistent communication of events, deadlines, and opportunities across the entire school community. Scheduling periodic informational gatherings of the entire School, along with regular communiqués, would also serve to provide a more formal mechanism of communication, particularly between faculty and students.

7. The School may wish to consider alternative strategies to its present policy for the granting of graduate student aid. The granting of somewhat fewer, but higher, graduate stipends would be one way to attract more, and potentially stronger, students from outside the state. This may also serve to attract more diverse and international students.

Submitted by the Ad Hoc Review Committee of the Graduate Council:

Lora Tuesday Heathfield, Department of Educational Psychology (Chair)
Chris Lippard, Department of Film and Media Arts
Jeff Stratman, Department of Operations and Information Systems
Ed Barbanell, Department of Philosophy (Undergraduate Council Representative)
FACULTY AND STAFF

SCHOOL OF ARCHITECTURE

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The OBIA tables included with the Graduate Council report are required by the Board of Regents, but do not currently match the University of Utah’s faculty classifications.
NOTE: Faculty FTE has been reduced by the amount of FTE paid for by sponsored research (Fund 5000).

### SCHOOL OF ARCHITECTURE

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*Includes PreMajors in Architectural Studies; includes Architecture and Architectural Studies, only

**Did not include major counts for "Urban Planning", "City & Metropolitan Planning" and "Metro Planning, Policy and Design" for academic years 2006-07 through 2009-10.

***Degree counts included only "University Studies: Architecture" and "Architectural Studies" and "Architecture"
# FINANCIAL ANALYSIS

## SCHOOL OF ARCHITECTURE

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Memorandum of Understanding
School of Architecture
Graduate Council Review 2011-12

This memorandum of understanding is a summary of decisions reached at a wrap-up meeting on June 25, 2012, and concludes the Graduate Council Review of the School of Architecture. Michael L. Hardman, Interim Senior Vice President for Academic Affairs; Brenda C. Scheer, Dean of the College of Architecture + Planning; Prescott M. Muir, Director of the School of Architecture; Charles A. Wight, Dean of the Graduate School; and Donna M. White, Associate Dean of the Graduate School, were present.

The discussion centered on but was not limited to the recommendations contained in the revised Graduate Council review completed on April 30, 2012. At the wrap-up meeting, the working group agreed to endorse the following actions:

**Recommendation 1:** An updated, program-specific five-year strategic plan that incorporates the newly devised mission statement and also includes program goals and objectives should be completed as planned. This strategic plan should be based on input from all faculty and be revisited annually to assess progress towards the established objectives and goals.

The Director of the School of Architecture held a faculty retreat in 2011 and developed the current mission statement as well as program goals and objectives. For the last year, the College has been engaged in a strategic planning process and the Dean has provided an outline for the School to use. This combined effort to finalize strategic plans both at the College and School levels must be completed for the national accreditation review scheduled for 2013. Once completed, the strategic plan will be revisited annually for the National Architectural Accreditation Board (NAAB) and updates will also be articulated in annual progress reports prepared for the Graduate School.

**Recommendation 2:** At present, program assessment is primarily based on anecdotal evidence. Although it is apparent that student input is taken seriously, as it has been used constructively to improve the program, efforts should be undertaken to acquire objective, quantifiable data that may be used to assess program outcomes. An objective assessment instrument that requires numeric input could be designed and implemented in conjunction with the exit interviews currently conducted with graduates by the Director. Similar instruments could be used annually with both graduating students and alumni to allow for anonymous input and generate a database for assessing quantifiable program changes over time.
The Director and the Dean described numerous quantifiable measures of program assessment that are based on student performance indicators. Some examples include: licensing exam results (students from this program have been in the top 10-12 ranked programs nationally for many years), annual public juried reviews of the final master’s projects of all graduating students, and over 30 specific measures of student performance required by the national accreditation body which again are based on student performance outcomes. These are all quantifiable indicators that present evidence that go beyond the anecdotal. In addition, since the Graduate Council external and internal reports were submitted, the Director has worked with the Center for Teaching and Learning Excellence (CTLE) to redesign the exit interview he uses to provide more objective, quantifiable answers. This new survey was implemented for the first time in the spring of 2012. The faculty will be encouraged to continue to use this feedback and data in ongoing ways as they continue to make decisions on improving the program. The Director noted that he has not yet addressed the part of the recommendation on annual interviews with alumni but he is supportive of this suggestion.

Recommendation 3: The accelerated program at the graduate level, although successful locally, appears to lack broader visibility. To increase awareness and grow the enrollment among nonresident and international students, the accelerated master’s program should be advertised more widely. Although it may be difficult at present, increasing the number of students in the undergraduate program would positively impact the program.

The Director agrees that it is a goal to recruit high quality students who are nonresident and/or international at the graduate level. He will work with the new College recruitment/public relations staff in this regard and will engage the faculty, through the strategic planning process, to consider the most effective way to revitalize the accelerated program while upping the quality of the students. Undergraduate admission is already selective, and it would be difficult to increase the number of students in the undergraduate program due to facility and other resource challenges. The U. of U. has the only School of Architecture in the state, so it is important to maintain a reasonable percentage of admissions for in-state students. At the same time, the Graduate Dean urged the Director and Dean to recruit top undergraduate students from outside of Utah in order to boost the graduate programs in general.

Recommendation 4: All efforts to continue to build faculty and student diversity should be maintained and enhanced. Ongoing recruitment efforts to increase student quality and diversity should be continued and expanded. The Office of the Associate Vice President for Equity and Diversity is committed to this goal and may provide useful ideas and strategies in this regard. The use of annual progress reports to the Graduate School should be considered as a way to encourage the Department to work effectively towards this goal.
Memorandum of Understanding  
School of Architecture  
Graduate Council Review 2011-12  
Page 3

Ongoing, strategic efforts to increase diversity among faculty and students have yielded results for the School, and the Dean and Director remain committed to maintaining and enhancing those efforts. Currently, the School of Architecture faculty is 50% more diverse than other programs at the University, and diversity among the student body has been increased since the last review. The Director and Dean are proactive in their diversity efforts and discussed strategies to recruit more Hispanic students from the community and also to create a cohort model based on the Medical School’s, which is planned to start in the fall of 2013. It should be noted that there are several commendations (one in the report of the University Diversity Committee) for the efforts and results the School has achieved to increase diversity. Since this review took place, a new faculty member, a woman of color, has been hired.

Recommendation 5: Development efforts should be continued. Development priorities should include a capital campaign to refit and expand the Architecture Building, purchase of additional digital fabrication equipment to keep the program current, more funds for salary enhancement, professional development and sabbatical opportunities for faculty, and promotional efforts to increase the national visibility of the School. Additionally, to assist the student recruitment effort, resources to grow the number of scholarships and teaching assistantship opportunities for students should also be pursued.

The Dean has a well-conceived development plan in place. She works on annual goals that address all of the priorities listed in this recommendation, and there are major gift donors that are being pursued. All parties agreed that this recommendation is a challenge on many levels but the Sr. Vice President will continue to work with the Dean to make progress. The refit and expansion of the Architecture building and the acquisition of digital fabrication equipment are crucial initiatives to move forward if the School is to stay current and viable nationally and internationally.

The longstanding relationship of the School to the DesignBuildBluff (DBB) program is in a state of flux, and though it offers many opportunities in terms of national visibility, recruitment, and student research, there remain many challenges in terms of resources, management, and leadership. The Sr. Vice President is working with the Dean to strategize about the future of this program to make the undertaking successful and sustainable.

Recommendation 6: The School should consider establishing a more formalized mechanism to enhance consistent communication of events, deadlines and opportunities across the entire School community. Scheduling periodic informational gatherings of the entire School, along with regular communiqués, would also serve to provide a more formal mechanism of communication, particularly between faculty and students.
The College has created a staff position for a media/events coordinator who is also updating the Website. All events are highlighted on the Website and are included on a School-wide calendar created on CANVAS. In addition, annual social events and numerous Brown Bag events have been offered in the past, and currently a student blog is being created to connect students to students as well as students to faculty. The School is making comprehensive, concerted efforts to address this recommendation.

**Recommendation 7: The School may wish to consider alternative strategies to its present policy for the granting of graduate student aid. The granting of somewhat fewer, but higher, graduate stipends would be one way to attract more, and potentially stronger, students from outside the state. This may also serve to attract more diverse and international students.**

The School will continue to distribute existing funds and supplement assistantships with scholarship endowment funds for graduate students as is warranted. The Graduate Dean encouraged the Director to involve the faculty in decision-making regarding making awards to exceptional students at full funding levels. The faculty could decide that they want to prioritize attracting out-of-state and international students with these higher level funding offers. It should be noted that the high visibility international exchange opportunities with the Universidad Nacional del Litoral of Santa Fe, Argentina, has had a positive impact on the School’s recruitment efforts.

This memorandum of understanding is be followed by annual letters of progress from the director of the School of Architecture to the dean of the Graduate School. Letters will be submitted each year until all of the actions described in the preceding paragraphs have been completed.

Michael L. Hardman  
Brenda C. Scheer  
Prescott M. Muir  
Charles A. Wight  
Donna M. White

Charles A. Wight  
Dean, The Graduate School  
July 12, 2012
Michael L. Hardman  
Interim Senior Vice President for Academic Affairs  
205 Park Bldg.  
Campus

RE: Graduate Council Review  
Department of Mechanical Engineering

Dear Vice President Hardman:

Enclosed is the Graduate Council’s review of the Department of Mechanical Engineering. Included in this review packet are the report prepared by the Graduate Council, the Department Profile, and the Memorandum of Understanding resulting from the review wrap-up meeting.

Please forward this review to President David Pershing for his approval. After approval by President Pershing, the review will be forwarded to the Academic Senate to be placed on the information calendar for the next Senate meeting.

Sincerely,

Charles A. Wight  
Dean, The Graduate School

Encl.

XC: Richard B. Brown, Dean, College of Engineering  
Timothy A. Ameel, Chair, Department of Mechanical Engineering
The Graduate Council has completed its review of the **Department of Mechanical Engineering**. The External Review Committee included:

Paul A. Dellenback, PhD  
Head, Department of Mechanical Engineering  
University of Wyoming

Kyle Squires, PhD  
Director, School for Engineering of Matter, Transport and Energy  
Arizona State University

Byard Wood, PhD  
Head, Mechanical & Aerospace Engineering Department  
Utah State University

The Internal Review Committee of the University of Utah included:

James A. Anderson, PhD  
Professor  
Department of Communication

Leslie P. Francis, PhD, JD  
Distinguished Professor, Department of Philosophy  
Alfred C. Emery Professor of Law, S.J. Quinney College of Law

Jack P. Simons  
Professor  
Department of Chemistry
This report of the Graduate Council is based on the self-study report submitted by the Department of Mechanical Engineering and the findings of the internal, external, and University Diversity committees. The Department Chair and Dean of the College of Engineering did not respond to multiple requests by the Graduate School for responses to these reports prior to the ad hoc committee preparing its report.

DEPARTMENT PROFILE

Program Overview

The Department of Mechanical Engineering is one of seven academic departments in the College of Engineering and was established in the early 1900s. The Department consists of four divisions: thermal fluids and energy systems, robotics, solid mechanics, and design/manufacturing. It offers both undergraduate (BS) and graduate degrees (thesis and nonthesis MS and PhD).

The self-study reports on the Department’s response to the major recommendations included in the last Graduate Council review. Since the last review, the Department has had many changes: hiring of six new faculty, including three that started in fall of 2010; two changes in the Department Chair’s office; and a decrease in state funding due to the recession. The Department was able to respond positively to previous recommendations by: (1) substantially increasing in undergraduate and MS enrollment; (2) refocusing the PhD qualifying exam on research; (3) hiring of an additional undergraduate advisor; and (4) revamping the Department Website to improve access and showcase Department and individual faculty activities. The Department continues to work on two primary areas stipulated in their previous review. The Department’s research productivity has not grown as recommended, and they still do not have the Department staff to meet their surge in student enrollment.

Faculty

The Department currently has 25 tenure-track faculty (two of whom are in phased retirement), 5 research faculty (4 full-time), and 4 instructors. Among the tenure-track faculty, there are 4 women and no minorities. Since the last review, the Department has hired 6 junior faculty and is expected to hire two more this coming year. Two of the untenured faculty have received the NSF Career Award. Faculty typically teach two courses per year, with one being a large course of 120-160 students with TAs and a smaller, advanced course. Faculty research and scholarly activity is described as “uneven” and “slightly below” that of other mechanical engineering departments. The Department shows an average of about 9 journal publications or book chapters per faculty member for the period from 2005-2009. According to the Chair, average research expenditures for the seven-year period from 2003-04 to 2009-10 are approximately $120,000 annually per FTE. For research active faculty, the average is approximately $180,000 per person per year over the same time period. Both the internal and
external reviewers noted a sense of faculty collegiality but a need for strengthened mentorship of junior faculty. The reviewers emphasized mentorship for junior faculty on teaching and student advising, about the RPT process, and guidance in balancing teaching commitments with expectations for research productivity.

**Students**

There has been substantial growth in the number of undergraduates (up 38%) and graduates (18%) since the last review, from 510 (2005-2006) to 674 undergraduate majors (2009-2010); and from 180 (2005-2006) to 224 graduate students (2009-2010). The external reviewers, in particular, stress that the current enrollment exceeds the ability of the Department to accommodate student needs and is likely to impact faculty research productivity. Despite reportedly having the largest enrollment growth of all departments in the College, the faculty FTE lines have remained unchanged. The faculty and staff support for undergraduate and graduate advising is stretched. Counting both undergraduate and graduate students, it is estimated that there are 900 students, which is a ratio of about 36 students per faculty member (25). This ratio puts the Utah program at the 13th highest of approximately 250 U.S. mechanical engineering programs.

Most undergraduate and graduate student applicants are local. The Department engages in a multi-pronged effort to recruit undergraduate students throughout the state, which includes targeting middle and high schools and Utah colleges. Recently the Department instituted a Graduate Visitation Weekend to increase the number of out-of-state applicants and female applicants. The self-study indicates the visitation program has improved the graduate application pool from within the U.S. but has not contributed to an increase in female applicants. Efforts to recruit more domestic students of color are largely organized in partnership with the College and Graduate School, but with little success. Since the last review, the Department has seen equalization in the ratio of international to domestic graduate applicant pool. In 2007 it was 2 to 1 and is now 1 to 1, international vs. domestic respectively. Approximately 30% of the MS students are nonthesis and this program largely serves professional engineers. For the most part, graduate students depend on teaching assistantships ($6,000 stipend/semester) for support.

**Staff**

The department has been challenged by staff turnover. The turnover in the Graduate Academic Advisor position has led to instability in record-keeping for academic programs. Additional turnover has occurred in the Accounting Specialist, Administrative Program Coordinator, and Clerk positions. A high rate of change in these positions puts extra work on the remaining staff, faculty, and ultimately upon students.
Curriculum and Program Effectiveness

In addition to having increased student enrollment, the program is design and laboratory intensive. In 2009, the Department redesigned its undergraduate curriculum to a hands-on “spiral curriculum” with laboratory-based experiences. The Department requires 10 laboratory-based undergraduate courses, compared to five or fewer in comparable programs. While this program is likely to impact student learning, it has put additional stress on the Department. Laboratory space is limited and scattered across three different facilities, leading to issues of safety, equipment maintenance, frequency of course offerings, TA/staff coverage, and limiting availability to graduate students and faculty for research—all of which have fiscal implications. The Department accepts a significant number of transfer students (30-40%) from Weber State University and SLCC, and there is some concern that these students may not be as well prepared for the laboratory-intensive curriculum; however, the Department has not formally evaluated this concern.

As for program effectiveness, national accreditation seems to suggest the Department is exemplary. All national engineering programs are reviewed for accreditation by ABET and the Utah program was awarded an extension of its accreditation in 2010 for six years, the longest period of accreditation extension allowed in the ABET process. The external reviewers also pointed to the student performance on the NCEES Fundamentals of Engineering exam as a less positive indicator of educational effectiveness. Utah is one of only six programs nationwide that require passing the exam as a graduation requirement, yet the Department’s pass rate has been somewhat below the national average for the past five years. The external reviewers suggest that Utah’s pass rate may not accurately reflect the quality of the program and that students might be taking the exam prematurely.

Facilities and Resources

The Department of Mechanical Engineering is housed across three buildings, resulting in the faculty, students, and staff being dispersed. The current available space is insufficient to meet the research and teaching needs of both students and faculty. Laboratory space is at or near capacity and much of the work space is small with equipment in close quarters, resulting in potential safety hazards. At present, there is virtually no community space for students (e.g., meeting rooms, student lounge, and computer lab), which is essential for a discipline involving extensive teamwork. Many projects require welding, but there is no welding station in the Department, thus requiring students to transport materials and projects elsewhere for completion. Although there are plans for renovation of the Kennecott Building, the timeline is unclear and facility needs are immediate.
COMMENDATIONS

1. The Department has been highly successful in rapidly increasing student enrollment by responding to the previous review recommendations and with the help of the state’s undergraduate engineering initiative.

2. The Department is to be commended for hiring six promising, dynamic junior faculty and is expected to hire two more this coming year.

3. The overall educational experience for undergraduates and graduate students is strong. Special commendation should be noted for the “spiral curriculum” program for undergraduates. This is innovative and is likely to enhance student learning. The new program has the potential to distinguish Utah’s mechanical engineering program from others across the nation.

4. In 2010, the undergraduate program completed a rigorous and successful ABET accreditation with full six-year extension of accreditation. It is notable that only about 50% of mechanical engineering programs nationwide receive a full six-year extension of accreditation through this review process.

5. Despite undergoing substantial Departmental change, faculty are collegial and morale is high. The Department Chair is highly regarded.

RECOMMENDATIONS

1. The space in specific laboratories and the machine shop render these rooms a safety hazard. The Dean’s office should be encouraged to move quickly to help the Department find a solution for a safer work environment. Overall, the current facilities set-up does not meet the Department needs. Prior to the renovation, the College and Department should be encouraged to work together to find, at the minimum, temporary space and access options. This solution would include increasing community spaces for students. The Department and Dean should be encouraged to examine the potential for hiring additional support staff for laboratory and equipment management, which will serve to increase the time in which laboratories are accessible and ensure student safety.

2. Although the Department has been highly responsive to encouragement for growing enrollment, they have not been provided with increased resources to match that growth, nor is there any indication that those resources are forthcoming. Therefore, it is recommended that they determine the maximum number of students the faculty can accommodate while sustaining a quality program of education and balancing their teaching and advising demands with their research productivity. A plan from the Department should be developed in coordination with the Dean to ensure the goals can be achieved.
3. It is recommended that the Department examine multiple approaches to improving research productivity: 1) examine how the laboratory-intensive education program impacts faculty research productivity (i.e., what are the costs and benefits to their research productivity?); 2) implement differential workload based on research productivity or other forms of incentives for gaining external funding; 3) consider emphasizing the nonthesis MS program as a means for freeing faculty time, thus stimulating the PhD program and research productivity; and 4) improve mentorship of junior faculty, specifically to help them allocate their time towards the research mission and more broadly, RPT criteria.

4. Additional staff support is needed, especially in relation to administrative, outreach, student advising and tracking. These staff need to be facile in computer tracking capabilities to increase automated and timely communication with the Department’s large number of students. The Department should work with the Dean to provide research support staff (e.g., technical writing assistance, budget preparation).

5. It is recommended that the Department evaluate the value, fit of the laboratory-intensive curriculum, and timing of the NCEES FE exam as a required program element, given the unimpressive pass rate.

6. The Department should formulate and implement efforts to recruit minority faculty and students to achieve appropriate diversity among its body. The Office of the Associate Vice President for Equity and Diversity is committed to this goal and may provide useful ideas and strategies in this regard. The use of annual progress reports to the Graduate School should be considered as a way to encourage the Department to work effectively towards this goal.

Submitted by the Ad Hoc Committee of the Graduate Council:

Lee Ellington (Chair), Associate Professor, College of Nursing
Marjorie A. Chan, Professor, Geology and Geophysics
Geoffrey D. Silcox (Undergraduate Council), Professor (Lecturing) and Associate Chair, Chemical Engineering
## FACULTY AND STAFF

### MECHANICAL ENGINEERING

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The OBIA tables included with the Graduate Council report are required by the Board of Regents, but do not currently match the University of Utah’s faculty classifications.
## STUDENTS

NOTES:
1) Faculty FTE has been reduced by the amount of FTE paid for by sponsored research (Fund 5000).

### MECHANICAL ENGINEERING

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Memorandum of Understanding
Department of Mechanical Engineering
Graduate Council Review 2010-2011

This memorandum of understanding is a summary of decisions reached at a wrap-up meeting on May 1, 2012, and concludes the Graduate Council Review of the Department of Mechanical Engineering. Michael L. Hardman, Interim Senior Vice President for Academic Affairs; Richard B. Brown, Dean of the College of Engineering; Timothy A. Ameel, Chair of the Department of Mechanical Engineering; Charles A. Wight, Dean of the Graduate School; and Donna M. White, Associate Dean of the Graduate School, were present.

The discussion centered on but was not limited to the recommendations contained in the Graduate Council review completed on February 27, 2012. At the wrap-up meeting, the working group agreed to endorse the following actions:

Recommendation 1: The space in specific laboratories and the machine shop render these rooms a safety hazard. The Dean’s office should be encouraged to move quickly to help the department find a solution for a safer work environment. Overall, the current facilities set-up does not meet the department needs. Prior to the renovation, the college and department should be encouraged to work together to find, at the minimum, temporary space and access options. This solution would include increasing community spaces for students. The department and Dean should be encouraged to examine the potential for hiring additional support staff for laboratory and equipment management, which will serve to increase the time in which laboratories are accessible and ensure student safety.

The Sr. Vice President, Chair, and Dean recognize the high priority of improving the safety of the work environment for students and faculty in the Department and the challenges and issues impeding immediate action are being addressed through several avenues. The root of the problem lies in the fact that, because of unprecedented growth in Mechanical Engineering, there are too many students needing access to the limited space and equipment currently available to fulfill lab requirements. Therefore, as one strategy for improving the situation, the curriculum is being reviewed this summer (2012) to try to reduce the number of labs required. Also, there is a request pending for funding for new faculty and staff positions. The Dean is using all possible resources, including negotiating for a loan from President Pershing, toward renovating the Kennecott Building. The South wing construction is slated to begin in summer of 2012 and be completed by August of 2013. The Dean and Chair have been working closely with architects and Campus Planning to plan strategically about all aspects of the phased renovation process.
Recommendation 2: Although the department has been highly responsive to encouragement for growing enrollment, they have not been provided with increased resources to match that growth, nor is there any indication that those resources are forthcoming. Therefore, it is recommended that they determine the maximum number of students the faculty can accommodate while sustaining a quality program of education and balancing their teaching and advising demands with their research productivity. A plan from the department should be developed in coordination with the dean to ensure the goals can be achieved.

The Dean clarified that the productivity model has provided some increased funding. The Engineering Initiative (EI) provided funding for three new positions in 2008, but with budget cuts imposed during that same time, those open positions had to be used to meet the cuts, so the cuts in essence cancelled out the funding increase. The Chair is not in favor of reducing enrollments because the need for engineers in the State and beyond is increasing. Therefore, the goal of the Dean and Chair is to increase resources vs. decreasing enrollments. Currently, a funding request has been submitted to the Technology Initiative Advisory Board (TIAB). This request will enable ME to teach its core courses during both academic semesters, improving conditions for students and faculty while facilitating increased capacity. It is clear that there are many dimensions of the resource sustainability issue in play, but the Sr. VP, Chair, and Dean agree to work together to facilitate positive changes that make sense for all parties involved.

Recommendation 3: It is recommended that the department examine multiple approaches to improving research productivity: 1) examine how the laboratory-intensive education program impacts faculty research productivity (i.e., what are the costs and benefits to their research productivity?); 2) implement differential workload based on research productivity or other forms of incentives for gaining external funding; 3) consider emphasizing the nonthesis MS program as a means for freeing faculty time, thus stimulating the PhD program and research productivity; and 4) improve mentorship of junior faculty, specifically to help them allocate their time towards the research mission and more broadly, RPT criteria.

In his response, the Chair addresses each of these parts of the recommendation.

1) “The curriculum committee will conduct a complete curriculum review during the summer of 2012. The committee will consider laboratory course changes that would make the curriculum more manageable for faculty and staff without negatively impacting student education.” 2) “As suggested by the external reviewers, a differential workload model based on SCH generated and research expenditures will be implemented for the 2012-13 academic year. Faculty underperforming in the research arena will be expected to carry a higher than average teaching load.” 3) Graduate Dean Wight and the Sr. VP have reservations about a coursework-only MS degree, although the College Dean and Chair think this is entirely in line with Mechanical
Engineering MS degrees at other top institutions (data have been provided by the College Dean). Dean Wight will work with the Dean and Chair to find an appropriate way to resolve this issue.

4) The Chair’s response provided a detailed account of the Department’s junior faculty mentoring structure, which appears to be extensive. In addition, the College provides additional orientations and mentoring. The Dean and Chair view this part of the recommendation as a “non-issue.”

**Recommendation 4**: Additional support staff is needed, especially in relation to administrative, outreach, student advising and tracking. These staff need to be facile in computer tracking capabilities to increase automated and timely communication with the department’s large number of students. The department should work with the Dean to provide research support staff (e.g., technical writing assistance, budget preparation).

Since the review, a new and better qualified advising staff member has been hired who will fill the administrative, outreach, student advising, and tracking needs. In addition, a peer advisor has been hired to work 20 hrs/week. The Chair will work with the VP for Research to find more support for grant writing. The strategy of using curriculum streamlining could provide more resources for hiring or helping to support a grant writer, and it is hoped that the new model for differential teaching loads will encourage the junior faculty to continue to be productive with their grant submissions.

**Recommendation 5**: It is recommended that the department evaluate the value, fit of the laboratory-intensive curriculum, and timing of the NCEES FE exam as a required program element, given the unimpressive pass rate.

The Chair took issue with the label of “unimpressive.” He stated that their students have average pass rates on the FE exam. The requirement of the exam seems to be outdated compared to practices at other top institutions and the external review team recommended that the exam be taken but that the requirement to pass be eliminated. The Dean supports this change and the Chair is working with the faculty to reevaluate the convention of the exam requirement. ABET reviews student learning outcomes annually and the Department’s accreditation is reviewed every six years.

**Recommendation 6**: The department should formulate and implement efforts to recruit minority faculty and students to achieve appropriate diversity among its body. The Office of the Associate Vice President for Equity and Diversity is committed to this goal and may provide useful ideas and strategies in this regard. The use of annual progress reports to the Graduate School should be considered as a way to encourage the department to work effectively towards this goal.
The Dean stated that the College spends approximately one million dollars annually working toward recruiting minority students, including women. There are four staff members in the college devoted to recruitment. There are also numerous well-developed recruitment programs in place in the Department such as High Gear, NSF recruitment, and four summer camps that bring high school students to campus to visit the Department. Retention efforts are being addressed as well with new Math and Chemistry courses specifically designed for entry-level Engineering students to meet their needs as applied to the discipline. The Society for Women Engineers organization has grown from 20 to 50 recently. The Chair will meet with the VP for Equity and Diversity to discuss additional strategies for recruiting minority faculty members, and he also received the University Diversity Committee’s suggestions from their review of the Department’s self-study.

This memorandum of understanding is be followed by annual letters of progress from the chair of the Department of Mechanical Engineering to the dean of the Graduate School. Letters will be submitted each year until all of the actions described in the preceding paragraphs have been completed.

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Richard B. Brown
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Charles A. Wight
Dean, The Graduate School
June 5, 2012