University of Idaho  
2013-2014 FACULTY SENATE AGENDA

Meeting #15

3:30 p.m. - Tuesday, February 4, 2014
Brink Hall Faculty-Staff Lounge  
IWC Room 390 – Boise  
213 – Coeur d’Alene  
TAB 321B IF4 – Idaho Falls

Order of Business

I. Call to Order.

II. Minutes.
   • Minutes of the 2013-14 Faculty Senate Meeting #14, January 28, 2014 (vote)

III. Chair’s Report.

IV. Provost’s Report.

V. Other Announcements and Communications.
   • Improve/Enhance Communications (Ewart)

VI. Committee Reports.
   University Curriculum Committee
   • FS-14-023: (UCC-14-050) – CLASS: New PhD - Experimental Psychology (Craig)

VII. Special Orders.

VIII. Unfinished Business and General Orders.
   • Brink Lounge Advisory Committee final report (Bird)

IX. New Business.

X. Adjournment.

Professor Trish Hartzell, Chair 2013-2014, Faculty Senate

Attachments:  Minutes of 2013-2014 FS Meeting #14  
FS-14-023  
Communications Handout
**University of Idaho**
**Faculty Senate Meeting Minutes**
**2013-2014 Meeting #14, Tuesday, January 28, 2014**

**Present:** Aiken (w/o vote), Awwad-Rafferty, Bird, Brandt, Cobb, Couture (Boise), Davis, Eckwright (w/o vote), Flores, Frey, Hartzell (chair), Manic (Idaho Falls), Miller, Morra, Murphy, Pendegraft, Perret, Qualls, Safaii, Smith, Stoll, Stuntzner (Coeur d’Alene), Wolf, Ytreberg **Absent:** Baillageon, Becker, Karsky, Kennelly, Ostrom, Pregitzer  **Guests:** 6

A quorum being present, Senate Chair Hartzell called the meeting to order at 3:30pm.

**Minutes:** It was moved and seconded (Wolf, Brandt) to approve the minutes of meeting #13. Motion carried.

**Chair’s Report.** The Chair reported on the following items:

- Chair Hartzell expressed disappointment that a quorum was not achieved for the winter/December 2013 University Faculty Meeting (UFM) and she asked senators for suggestions on how to improve attendance at the meetings. A senator responded that the 3pm meeting time does not work well with class schedules and that 3:30pm would work better for faculty on the Moscow campus – although this would be less accommodating to the schedules for faculty in an earlier time zone. Another senator pointed out that non-attendance at a UFM where no items require a quorum is a vote in favor of the agenda items and a perfectly rational decision on the part of the senator. Other senators agreed that it is a difficult time of the semester with many competing obligations, including the fall American Geophysical Union conference which was held during that same week in December. Also, senators have already vetted the issues on the UFM agenda and they may feel less compelled to attend. Chair Hartzell asked senators to send their suggestions for ways to improve attendance to her via email: [hartzell@uidaho.edu](mailto:hartzell@uidaho.edu).

- At the time the UFM agenda was put together, it was believed that no policy matters on the agenda needed a quorum in order to be approved. Immediately before the UFM began General Counsel informed Chair Hartzell that Faculty-Staff Handbook (FSH) 2100 – The Student and the University did, in fact, require a quorum and a majority approval vote by faculty in order to become policy. A few days later at a regularly scheduled meeting the Board of Regents determined that the quorum requirement at a University of Idaho UFM before changes to, or that may affect FSH 2200 such as FSH 2100 does, is no longer in effect due to the following Regent’s ruling: the requirement of a prior direct approval of the regents to effect a change in FSH 2200 - Statement of Student Rights, is inconsistent with State Board of Education policy III.P.12. This interpretation therefore negates paragraph 2 of Section VI of FSH 2200 – Statement of Student Rights which allows change only by the Regents. Therefore, FSH 2100 is deemed to have faculty approval and President Burnett approved FSH 2100, as well.

- FSH 2100 – The Student and the University took effect on January 1, 2014. General Counsel made minor changes to other UI policies to be consistent with FSH 2100. These changes will be provided to senate in a redline document. Chair Hartzell noted that there has been some backlash from students regarding FSH 2100 and there have been a number of articles in the Argonaut about changes to this policy.
• Senate leadership received two appeals of University Judicial Council decisions in December 2013. Chair Hartzell thanked all those senators who have agreed to serve on the appeals’ hearings.

• Chair Hartzell attended the University of Idaho’s 125th Anniversary gala celebration in Boise last week. She also attended the Joint Finance – Appropriations Committee (JFAC) hearings and other legislative education week activities. President Burnett gave a good speech at the JFAC hearings regarding UI’s quality of education and research missions. WWAMI (Washington, Wyoming, Alaska, Montana, Idaho) program is asking to increase the number of state-supported students in the program from 25 to 30. The gala for the founding, national, land-grant, constitutionally recognized and therefore, flagship, University of Idaho was very festive with an overflow crowd in attendance. January 30, 1889, is the true anniversary date for UI and the party continues on January 30 on the UI-Moscow campus with cake and gifts in the Commons. All are encouraged to attend.

• Senate leadership met with Dr. Chuck Staben, president-designee, and discussed a number of issues with him, including dual career accommodation, communication with faculty and staff, retention of faculty and students, concerns about UI being reactive instead of taking a leadership role in emerging issues regarding higher education. Dr. Staben joined UI staff, faculty and retirees for the dedication of the Brink Faculty-Staff Lounge on January 14. Special thanks go to the Brink Advisory Committee members and financial supporters who made the remodel a reality, particularly past senate chairs Paul Joyce and Kenton Bird who initiated the process.

• Senate leadership and Staff Affairs leadership have been meeting and will hold regular monthly meetings to discuss issues and policies that are critical to staff and faculty; and to find a better mechanism for acting quickly on issues that are of particular concern to staff.

• Chair Hartzell and Secretary Eckwright have been attending smoke-free taskforce meetings. The taskforce is studying issues related to making UI-Moscow a smoke-free, and eventually tobacco-free, campus.

• Dan Ewart, executive director of IT, will be a guest at next week’s senate meeting. Discussion will focus on improving communication with distance campuses. Chair Hartzell will send senators’ questions to Mr. Ewart in advance of next week’s meeting.

Provost’s Report. Provost Aiken reported on the following items:

• Thank you to all faculty and staff for a very smooth start to the Spring 2014 semester, which is always great.

• UI administration has been thinking about ways to do some kind of change in compensation – this is President Burnett’s top priority as well as the top priority for leadership and many staff and faculty. We need to figure out how to accomplish it, which will be difficult, but necessary.

• If you did not attend the grand opening of the Vandal Ballroom at the SUB earlier this afternoon, be sure to take an opportunity to see the beautiful new space there. It provides an enhanced ability to hold conferences and meetings and it also gives students a terrific place to study.

Institutional 5-Year Plan. Provost Aiken reported that the State Board of Education (SBOE) has a clear policy regarding the addition or discontinuance of programs and has the final say on adding new programs – and they do say “no” sometimes. Additionally:

• It is possible to insert a program with a higher priority into the 5-year-plan but SBOE reviews 5-year-plans only every two years.
• Any programs UI would like to offer must appear on the 5-year-plan and thoughtful planning must go into any programs UI puts on the 5-year-plan as administrators must be able to respond to SBOE questions regarding planned programs.

• A department that would like to propose a new program must talk about it with their college dean. If the dean supports the proposed program, the dean will talk to the provost and then the institution makes the decision as to whether to put the proposed program on the 5-year-plan. “Institution” includes conversations at the Provost’s Council, at the vice-presidents’ groups and at the president’s cabinet; but it is the provosts who put forward proposals for the 5-year-plan.

• Provost must be able to demonstrate that serious planning has gone into something before it is added to the 5-year-plan. Compared with the past, 5-year-plans are now more concrete and less aspirational.

• It is possible to ask the SBOE for exceptions to the usual process, but the board requires a very good rationale for doing so.

• Idaho Council on Academic Affairs and Programs (CAAP) members have recently agreed that emphases and similar things will go through a shortened process. This route requires that the provost write a letter to SBOE stating that the emphasis does not require additional money and it is not a new degree program. SBOE may approve this without going through the usual 5-year-plan process.

• Programs must also go through the UI internal process, including approval by the University Curriculum Committee, senate and so on.

Research at the University. Chair Hartzell next introduced John “Jack” McIver, vice-president for research and economic development, who responded as follows to senators’ questions:

• What plans, if any, are there to build the research infrastructure to make it easier to submit proposals? For example, will there be staff to seek out opportunities, complete forms, develop budgets, etc.? UI subscribes to COS Pivot which is a search engine that allows users to find funding opportunities available from many agencies. There is a UI staff member available to train faculty and staff in using Pivot. Most forms required by the research office are available electronically and self-populate and are transferable to grants.gov. There are limitations to the amount of help available for developing budgets.

• Is it possible for the research office or UI to allocate more staff to fill out budgeting information? My dream is that I provide my bio sketch and research statement; I do the science and someone else does everything else! My dream is the same.

• What plans, if any, are there to increase support for junior faculty whose tenure decision is sometimes tied to funding success (easy to access opportunities, easy to follow/find tutorials, staff support, etc.)? Junior faculty are invited to come to the research office to learn about what is available to them. Junior faculty also require strong mentoring by their departments, although this does not always occur. The research office can provide general mentorship but not the particular mentorship that is department- or college-centered. There is talk of developing a “management academy” (for lack of better words to describe it) for mid-level and junior faculty. This would be a series of classes that would help inform faculty about general things to do in applying for research grants. EPSCoR has agreed to fund it on a trial basis.

• Will UI invest in its current faculty to reach the $140 million research goal? I do not know that the $140 million figure is the current research goal. The president has made it clear that he wants to grow the research enterprise and it does not matter what the figure is. The research office does invest in faculty in a number of ways: we provide money for travel to faculty with good ideas, especially for larger multidisciplinary projects; we would like to spend more money to send faculty back to present ideas to funding agencies; we have brought faculty out to develop projects that have a bigger impact on the institution.
Some colleges have difficulty obtaining funding for travel, but travel is important to the success of faculty members. Is it possible to have more funds available for travel? I would like to offer competitive funding for travel grants, similar to what we do with seed grants. At this time there are no discretionary funds to do this. Faculty requesting travel funds from the research office must have a letter of support from their unit administrators (e.g., department chair and dean). I also look for a contribution from the unit for cost-sharing. For example, a unit could provide $100 toward travel and the research office might provide another $600. If the department or college does not show support for the travel, then the research office is less likely to provide support.

What plans are there to build post-award support infrastructure, e.g., budget projections, and so on? Budget projections are posted on VandalWeb on a monthly basis and currently there is approximately a 17% use-rate.

UI has an ongoing problem with grant-funded-employees not using their annual leave during the grant-funding period. Then when the grant ends the department must find money to pay for the accrued annual leave. Is there anything that can be done about this? Our office has had to deal with the same problem. Information regarding annual leave does not reside with my office. I will talk to my staff about working with HR about the possibility of making that information available on our site. A better solution is to create a university central-leave-pool where it is paid in as it is earned. That would become part of the benefit package that these grant-funded employees receive and if we could negotiate with the government to make that acceptable – then it could come out of the funding awards.

Is there a mechanism to provide bridge funding for labs when a renewal is in question and how long will bridge funding be available? There is no bridge funding at this time because I have no money for it, although that has not always been the case in the past five years. Bridge funding is tricky because it requires some kind of evaluation mechanism. The short answer is that there is no bridge funding at this time.

How are targeted hires selected? How many targeted hires are planned and who will pay for start-up and initial salary? Targeted hires are not planned (as compared to cluster hires which are planned). There has been one targeted hire at UI during Dr. McIver’s years here. That one was suggested to him and he passed the information along to other administrators, including deans. The targeted hire was in the social sciences, an area that had been identified for growth and the targeted hire was seen as “someone who could do a lot for the university.” The start-up salary for this targeted hire came from central administration and targeted hires typically are done this way. An individual identified for a potential targeted hire must go through the same process as any other faculty, i.e., the targeted hire must be accepted by the college and university.

On a previous visit to senate you mentioned that most grant money comes from very few faculty. There was a plan to increase the number of people who fall into that category at UI and one of the ways to make it happen was through targeted hires. Is this correct? I had intended to say that we need to target areas where we want to hire more people. For example, UI is eligible to have three COBREs but we do not have enough senior people to lead a COBRE. If we “target” this area we would conduct a search to find a faculty member to be a potential leader of one of these projects.

Is the Institute for Resilient Rural Communities being pursued? If so, will the senate be able to provide input on how the institute will be structured? Yes, this institute is written into the EPSCoR proposal to the National Science Foundation. The EPSCoR proposal is an infrastructure award that will create a statewide center. Because this is an EPSCoR proposal it will probably also involve BSU and ISU and possibly EPSCoR institutions from other states. UI will not necessarily lead it. UI has a policy for creating centers and institutes and we will be following the policy as we proceed with this. The university research council, deans, provost and vice-president for research and economic development all must review and approve the plan for this institute. There is not a role for faculty
senate in this process although senate did provide feedback and discussion when we developed the policy regarding creation of centers and institutes.

- Whose salaries are covered by the research office budget? Has the growth of staff and expenditures in the research office paralleled the growth in research dollars? Research expenditures in 2008 were $81.5 million and now are at $95.89 million, a 17% increase. During that same time period the research office staff has increased from 35.32 to 44.17, including temporary help (temporary help are not included in the budget books although their salaries are paid from the research office). The research budget received the same across-the-board cut in budgets when all other UI units’ budgets were cut. Some research office units have been cut while others have grown. The vice-president’s area has increased from 12.3 to 14.8 staff and includes: office staff, lawyer, veterinarian, directors for optical imaging core and mass spectrometry core and a financial unit. Office of Sponsored Programs unit has increased from 16 to 20 due to the volume of proposals which has increased from 700 to 1100. Office of Technology Transfer has decreased from five to four staff. The research compliance office has increased from one person to four people; and there are 1,375 faculty funded through the research office. The research office provides some funding to the following institutes: Aquaculture Research Institute (ARI), approximately $500,000; Idaho Water Resources Research Institute (IWRRI), $332,000; and IBEST (Institute for Bioinformatics and Evolutionary Studies), $294,000. This money is used for building and maintenance costs for the aquaculture institute and IWRRI that are not covered by other budgets. These institutes receive some F&A, with IBEST receiving the greatest amount and they generate some income from service centers and other things. The budgets work out as follows: ARI – $587,000; IWRRI – $338,000; and IBEST – approximately one million dollars.

Sabbatical Leave Evaluation Committee (SLEC). Senators reviewed a list of faculty who have been recommended for 2014-2015 sabbatical leave by SLEC. Chair Hartzell noted that there was one correction to the original list: Professor Dale Graden requested sabbatical for January through December 2015, not 2014. It was moved and seconded (Brandt, Pendegraft) to approve the sabbatical leave recommendations. Motion carried with 18 for and two abstentions (Senators Flores and Awwad-Rafferty).

Brink Lounge Advisory Committee. Senator Kenton Bird spoke briefly about two oral additions to the written report: additional tables are on order to allow for more seating during senate meetings and a schedule of faculty gathering dates will soon be available. Senator Bird encouraged senators to thank all deans for their college and library monetary contributions to the remodeling project and in particular, thanks to Dr. McIver whose financial support was critical to the project. In recognition of the lateness of the hour, Senator Bird graciously offered to make this his penultimate report and provide the “final report” at next week’s senate meeting. Chair Hartzell gratefully accepted this suggestion and determined that the full report will be presented at senate next week.

Adjournment: It was moved and seconded (Pendegraft, Miller) to adjourn at 5:03pm. Motion carried.

Respectfully submitted,

Gail Z. Eckwright
Secretary to Faculty Senate and Faculty Secretary
Questions for Dan Ewart, Faculty Senate Meeting #15, February 4, 2014

1. Please share your perspectives and guidance about to what extent faculty should or may take advantage of various cloud-based computing and storage options, such as Dropbox or Google Drive, in comparison, say with Bblearn?

   For example, though the user may control levels of access to shared documents on Dropbox or Google Drive--whether with colleagues or with students—does that provide for sufficient security of the data? A more specific example: what if a group of students are working on a common assignment to provide feedback to each others' working drafts for a paper or project, via a folder on Google Drive?

2. Do you have any ideas/suggestions on how we can better visualize off-site senators/individuals at meetings such as here today at Senate? We would like to add more monitors so that we can see the faces of our colleagues. If we add two more monitors, can your office set up the communication system so that off campus people can be seen? For example, if we connect with six individuals in their offices (using Lync or Skype) could the three TV displays in Brink be set up to show the off campus people (cycling around). Would we be better off having individual laptops in front of us to see off campus people (would they see 20 of us when we would see six of them?)? Using Lync would save us the set-up costs for the non-Moscow connections.

3. ITS currently charges $60 per hour for “on site” service for faculty and staff computers. Sometimes the problem is a simple software upgrade or a setting that can be fixed in 10 minutes or less – yet the department is still billed for a full hour. Is it possible to bill for actual time, perhaps with a minimum charge of ¼ hour ($15)? We value the expertise of ITS staffers but with multiple computers and frequent problems, we are spending more than ever on these charges.
Request:

Dan Ewart, Chief Information Officer, was asked to attend the 2/4/14 Faculty Senate meeting to discuss methods to enhance communication institution-wide with a specific focus on:

- software costs and available tools
- remote location connections – how can we do better in connecting remote locations.

Response:

There are a number of electronic communication solutions that are already available across UI:

- **Email** (no charge) – a basic and well-understood communication tool.
- **Telephone services** (charges apply) – a basic and well-understood communication mechanism. Conference calling features are available through the AT&T Conferencing service [available through ITS](mailto:its@uiuc.edu).
- **Videoconferencing** (charges apply) – a basic communication mechanism used for classes, seminars, meetings and training. It is available state-wide and can be accessed via computer software to support conferencing outside these locations. UI’s existing video conferencing solution is outdated, does not support high definition conferencing and the vast majority of it is not under vendor support.
- **Microsoft Lync** (no charge) – computer software that allows for basic desktop videoconferencing, document sharing, screen sharing and instant messaging
- **BB Learn** (no charge) – allows for videoconferencing, document sharing and other functionality

A number of UI units also use or have contracted for other solutions:

- **WebEx, GoToMeeting** (charges apply) – online meetings with voice, video and document sharing options
- **Independent videoconferencing solutions** (charges apply)
- **Independent telephone conferencing solutions** (charges apply)
- **DropBox, GoogleDocs** (charges apply in some cases) – document sharing and collaboration tools
- **Google+, Facebook, and other social networking sites** offer collaboration tools
- **Others** (charges apply in some cases)

The majority of these solutions require a broadband internet connection to function at an acceptable level.
Recommendations:

Improving communications across UI, regardless of location, is critical to our collective success. It is the opinion of ITS that UI is better off investing in central services that meet the majority of needs. This allows for lower overall costs, lower support costs and a more consistent level of service. Utilizing the same services will reduce barriers to communication, reduce frustration and will also allow for improved collaboration with other higher education institutions, government agencies and private entities.

ITS is working on the following items to help improve institutional communication:

• **Videoconferencing:** proposals have been submitted to executive leadership to overhaul the current videoconferencing network and eliminate the need to charge for this service. Current cost estimates range from $175,000 annually (for updating bridging and scheduling services but no upgraded classrooms, endpoints or new functionality) up to $600,000 annually for upgrades to all current video infrastructure, endpoints, classrooms and functionality and to provide reoccurring funds to ensure that videoconferencing technology can stay at a high level of functionality. Appendix A in this document includes an executive summary of the state of videoconferencing as of December 2012, with little change since.

• **Telephone services:** ITS is currently working on plans for a new phone system that will reduce institutional costs and integrate more closely with the functionality available in Microsoft Lync. Costs are not yet available for this solution but will be lower than the payments to our current phone service provider.

• **Document Collaboration:** ITS is investigating solutions for document collaboration, similar in functionality to products like DropBox or Google Docs. Our Microsoft Office 365 solution provides these services at no additional cost but we are waiting for some key improvements that have been promised by Microsoft before making the functionality widely available. Other short-term solutions, with costs ranging from free to $75,000 annually, are being investigated.

• **Improved training on existing tools:** ITS is preparing improved training on the use of the tools included with Microsoft Lync and would do the same with an enhanced videoconferencing system. There should no cost to this outside of ITS personnel time.

Additional information, including a Powerpoint presentation on the current state of videoconferencing at UI, is available upon request.
Videoconferencing Background and Current Situation (as of December 2012):

Videoconferencing (VCS) is used to support teaching, research, outreach and administration. Its importance as a communication mechanism continues to increase, as evidenced by five new requests received by ITS since March 2013. Support for VCS is currently decentralized. ITS provides central bridging (connecting multiple sites), scheduling, some solution design, desktop VCS and maintenance, support and endpoints for four video classrooms, multiple conference rooms and three mobile video carts. In addition to the endpoints supported by ITS, individual departments and colleges purchase and support roughly half of UI’s endpoints, with 12 of those endpoints currently in CALS extension offices.

ITS has a service center funding model for support of VCS that annually runs more than $100,000 in the negative. Rates have not changed in many years and have never supported the repair and replacement (R&R) costs required for bridging, classrooms or endpoints. Rates would have to more than triple to fund the service center properly for support and R&R and the rate structure already discourages use rather than encouraging new ways of thinking. In 2012 VCS was used for approximately 4,670 hours of classroom instruction, 2511 hours of UI meetings/events and 440 hours of non-UI events. Beginning with Fall 2012 and with the support of partial funds from the Provost’s Office, we ceased charging colleges for VCS for classes and we have seen a 31.6% increase, representing a change from 39 to 51, in the number of video-supported courses. Enrollment counts went from 559 to 896, representing a 60.3% increase. Unfortunately, the funds from the Provost’s Office did not offset the lost revenue, further exacerbating the service center deficit.

Current video conferencing solutions are aging, require significant financial and personnel resources to support and are not integrated to an appropriate level. The UI VCS bridge, used by all UI entities that conduct VCS, is 8 years old and there is no backup. 22 of the 49 endpoints owned by UI are more than five years old, do not support HD video and are no longer under support from the vendors. Another 22 endpoints are 6-12 months from no longer being supported by vendors. There is currently very limited ability to record VCS sessions for later playback.

ITS has explored numerous options to determine the best mix of technology and long-term cost effectiveness to sustain operations. Cloud options were explored but at this point are too expensive to accommodate our volume of video conferencing. An RFI was done to determine options for on-premise equipment, and the outcome of that RFI was included into a five-year total cost of ownership analysis.

Recommendations:

After a thorough analysis, ITS would appreciate further consideration of a modification to the funding model for VCS. Our recommendation, to remove the service center/chargeback model is encapsulated in the “Recommended Solution” highlighted below.
Depending on the technology chosen, this would represent a cost to UI of $500,000 - $600,000 per year.

The immediate concern with the current situation is the potential demise of the 8 year old bridge. There is no immediate backup to this device and scheduled classes will be offline while alternative arrangements are made and the alternative process will be cumbersome for faculty and support personnel. Failures of the 44 aging endpoints could cause class disruptions as well as decreased connectivity with non-Moscow locations. Additional detail on VCS principles, the current state of VCS at UI and detailed cost analyses are available upon request.

**Recommended Solution and Alternatives:**

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<th>Option</th>
<th>Central Cost</th>
<th>Advantages</th>
<th>Risks</th>
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<tr>
<td><strong>Recommended Solution:</strong></td>
<td>$500K to $600K annually</td>
<td>• High definition bridging</td>
<td>• High cost</td>
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<td>Centralized, full featured, full service</td>
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<td>• High definition endpoints</td>
<td>• Requires repurposed staff</td>
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<td>video conferencing</td>
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<td>• Replacement of end of life endpoints</td>
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<td>• Centralized scheduling of video classrooms</td>
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<td>• Technical support for video conferencing</td>
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<td>• Centralized system support and maintenance</td>
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<td>• Session capture and content sharing</td>
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<td>• Standardized user interface</td>
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<td>• Better integration of video resources across UI</td>
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<td><strong>Alternative 1:</strong> Centralized, full</td>
<td>$400K to $500K</td>
<td>Same as above</td>
<td>Same as above</td>
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<td>featured, full service video conferencing</td>
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<td>• Does not capture R&amp;R costs; will need a large</td>
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<td><strong>without R&amp;R</strong></td>
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<td>one-time spend to refresh technology in the</td>
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<td><strong>Alternative 2:</strong> Centralized bridging</td>
<td>$175K annually</td>
<td>• High definition bridging</td>
<td>• Higher long-term costs, no economies of scale,</td>
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<td>and scheduling for classroom instruction,</td>
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<td>• Centralized scheduling of video classrooms</td>
<td>no R&amp;R</td>
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<td>meetings and events</td>
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<td>• Technical support for video conferencing</td>
<td>• Likely technology incompatibilities</td>
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<td>• Four classrooms will be the</td>
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<td>responsibility of other units</td>
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<td>• Units will have to budget for their own</td>
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<td>• Increased load on other units to support</td>
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<td>• No session capture</td>
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<td><strong>Alternative 3:</strong> ITS shuts down its VCS</td>
<td>None</td>
<td>• None (ITS will no longer lose money on this</td>
<td>All of the Alternative 2 risks</td>
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<td>operation; completely decentralized VCS</td>
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<td>cost center)</td>
<td>• Significant increased costs and load on</td>
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<td>support</td>
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<td>• Four video capable rooms under ITS control</td>
<td>other units due to resulting decentralized</td>
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<td>will revert to the respective College or</td>
<td>bridging and scheduling</td>
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<td>Department control</td>
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## Idaho State Board of Education

### Proposal for Graduate and Doctoral Degree Program

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<tr>
<th>Date of Proposal Submission:</th>
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<tbody>
<tr>
<td>Institution Submitting Proposal:</td>
<td>University of Idaho</td>
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<tr>
<td>Name of College, School, or Division:</td>
<td>College of Letters, Arts, and Social Sciences</td>
</tr>
<tr>
<td>Name of Department(s) or Area(s):</td>
<td>Department of Psychology and Communication Studies</td>
</tr>
</tbody>
</table>

### Program Identification for Proposed New, Modified, or Discontinued Program:

<table>
<thead>
<tr>
<th>Title:</th>
<th>Experimental Psychology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree:</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Method of Delivery:</td>
<td>On-Campus</td>
</tr>
<tr>
<td>CIP code (consult IR /Registrar)</td>
<td></td>
</tr>
<tr>
<td>Proposed Starting Date:</td>
<td>Fall-Summer 2014</td>
</tr>
<tr>
<td>Indicate if the program is:</td>
<td>Regional Responsibility</td>
</tr>
</tbody>
</table>

### Indicate whether this request is either of the following:

- [x] New Graduate Program
- [ ] New Doctoral Program
- [ ] New Off-Campus Graduate Program
- [ ] New Off-Campus Doctoral Program
- [ ] Contract Program/Collaborative
- [ ] Expansion of an Existing Graduate/Doctoral Program
- [ ] Consolidation of an Existing Graduate/Doctoral Program
- [ ] Discontinuation of an existing Graduate/Doctoral Program

### Signatures

- College Dean (Institution)
- Vice President for Research (as applicable)
- Graduate Dean (as applicable)
- Academic Affairs Program Manager
- Chief Fiscal Officer (Institution)
- Chief Academic Officer, OSBE
- Chief Academic Officer (Institution)
- SBOE/OSBE Approval
- President
Before completing this form, refer to Board Policy Section III.G., Program Approval and Discontinuance. This proposal form must be completed for the creation of each new program and each program discontinuation. All questions must be answered.

1. **Describe the nature of the request.** Will this program be related or tied to other programs on campus? Please identify any existing program, option that this program will replace. *If this is request to discontinue an existing program, provide the rationale for the discontinuance. Indicate the year and semester in which the last cohort of students was admitted and the final term the college will offer the program. Describe the teach-out plans for continuing students.*

The Department of Psychology and Communication Studies currently offers a M.S. in *Experimental Psychology* with *an emphasis in Human Factors* (which involves applying psychological research and expertise to technological design of human-machine systems to enhance both the safety and productivity of working and living environments). We wish to expand our *Experimental Psychology* program to offer both the M.S. and Ph.D. degree. The *Experimental Psychology* Ph.D. program will incorporate the core curriculum of the existing M.S. program, but will require additional coursework and research credits as well as a dissertation and preliminary exam. The full program is summarized in Appendix A and meets the standards for a University of Idaho doctoral degree.

2. **List the objectives of the program.** The objectives should address specific needs the program will meet. They should also identify and the expected student learning outcomes and achievements. *This question is not applicable to requests for discontinuance.*

**Objective 1:** Congruent with our department’s mission statement, we currently offer internationally competitive masters-level training in applied Experimental Psychology, with an emphasis in Human Factors Psychology. We hope to expand our training to include the Ph.D. to provide our students with the highest-level of training possible. Human factors psychologists specialize in human-technology interaction, ergonomics, biomechanics, and safety. Our goal is to prepare our students either to enter industry or public service as practitioners or to continue their studies at the doctoral level.

Every year, several UI Psychology undergraduates and masters students express their wish to pursue doctoral training in Human Factors Psychology at UI if that were possible. Also, our faculty members spontaneously receive inquiries from students outside of Idaho who are interested in pursuing doctoral training with those faculty members. Further, the Idaho National Laboratory (INL) employs a number of human factors researchers and engineers in a variety of technical areas who have expressed an interest in having a doctoral program in human factors within the state of Idaho for their employees. Our offering a doctoral program would provide opportunities for students like these and many others.

The current M.S. program in *Experimental Psychology* typically enrolls 30 students at a time (approximately half of whom are on-campus students and half of whom are distance students). Adding the doctoral program will allow us to expand the number of full-time graduate students on campus by 8-10 increasing the size of the graduate program from 30 to 40 students in the next 4 years. A graduate program consisting of 40 students in a single area with Psychology is quite large by any standard. The faculty to student ratio would be approximately 8 students for each faculty member. The increase in students at the Ph.D. level will increase the number of full-time students with few additional resources required to...
serve those students. To provide a comparison, Texas Tech University has one of the top Human Factors graduate programs offering a Ph.D. in Experimental Psychology with an emphasis in Human Factors. The Human Factors Psychology program at Texas Tech has a faculty-student ratio of 1:3.5 (4 core HF faculty and 14 graduate students) and we are proposing a significantly larger program with 5 core HF faculty and 40 graduate students. We are able to handle this much larger program because approximately 15 of those students are professionals already employed in the field and matriculating as part-time distance students. Distance students complete the M.S. without requiring funding or laboratory access. Our Experimental Psychology program in Human Factors operates across 5 laboratories with an anticipated 25 graduate students working in these facilities and with the 15 (or so) distance students we would be maximizing our capacity at 40 students without creating undue burden on our faculty or facilities.

Human Factors Psychologists are employed in a wide variety of settings, where they can have various titles including Human Factors Psychologist/Researcher/Engineer, Usability Analyst/Engineer, or User Experience Analyst/Designer. Within Idaho, graduates of our M.S. program in Human Factors Psychology have been employed at a variety of companies and government agencies, including INL and the Center for Advanced Energy Studies (Idaho Falls), Hewlett-Packard and the Kohl Group (Boise), and Benchmark Research and Safety (Moscow, Boise). Outside of the state, major employers of Human Factors Psychologists include the government (agencies such as the FAA, NTSB, NHTSA, NRC, DOE), all branches of the military, the nuclear power industry, the aviation industry (e.g., Boeing, Lockheed-Martin) and all of the large information technology companies (e.g., Intel, HP, Apple, Microsoft, Google, Sony).

Objective 2: Fill a need in the state and region for human factors training that serves employers and also positively impacts the economy in Idaho by providing the highest level of training in the field of human factors.

A doctoral program in human factors experimental psychology will positively impact the state’s economy by providing the highest level training in human-machine system integration and usability. Professionals with doctoral training in human factors typically lead research or design teams concerned with ensuring that complex technological systems meet the needs of end-users, promote safety and increase efficiency and productivity. Anyone who has interacted with a poorly designed product or web site has experienced the costs of poor usability. Idaho has a burgeoning high technology sector and this sector in particular benefits from enhanced usability in its products. We have attached letters of support from INL and HP indicating the value of such a program and the need for more advanced technological training in the workforce.
3. Briefly describe how the institution will ensure the quality of the program (i.e., program review). Will the program require specialized accreditation (it is not necessary to address regional accreditation)? If so, please identify the agency and explain why you do or do not plan to seek accreditation. This question is not applicable to requests for discontinuance.

The Human-FactorsPsychology graduate program with a focus in Human Factors in Psychology has been accredited by the Human Factors and Ergonomics Society (HFES) and joins one of only 16 programs in the nation to be so accredited. The current graduate program offers the Masters of Science degree which has been accredited with a full 6 year accreditation term through July 2019. Our M.S. program in Human-FactorsPsychology met and in some cases exceeded the HFES accreditation requirements.

The HFES accreditation program provides a self-study for Ph.D. programs to undergo as part of the accreditation process and the design of the proposed doctoral program conforms to these standards. If a doctoral program were approved, we would seek accreditation for the doctoral program as soon as we are eligible (HFES requires that a program have at least six graduates before accreditation can be pursued).

In addition, the graduate program is assessed by the department on an annual basis. Information from our last three rounds of assessment indicates that the program is meeting learning outcomes and goals for the Master’s program. In addition, our focus groups with students indicate they would continue at the University of Idaho in pursuit of the Ph.D. should such a program be available. We will incorporate the Ph.D. program into the existing assessment model which includes data on coursework completion and performance, cumulative exams passed, focus groups with graduate students and placement information after graduation.

In anticipation of the proposed program, the department has made significant and strategic hires in the human factors area and includes faculty with a breadth and depth of expertise appropriate to provide graduate students with the knowledge, mentorship and experience needed to excel in the field of Human Factors.
Human Factors Faculty

Core Faculty

**Brian Dyre** (Ph.D., 1993, University of Illinois)

Dr. Dyre’s research uses computational modeling and behavioral and physiological measures to conduct basic and applied research on visual perception. Particular emphasis is on issues related to the control of locomotion and piloting of vehicles, including illusions related to weather phenomena, displays supporting navigation and real-time control, simulation, and mental workload and attentional allocation in cockpits and unmanned-aerial-vehicle (UAV) workstations.

**Steffen Werner** (Ph.D., 1994, University of Göttingen, Germany)

Dr. Steffen Werner conducts basic research in the areas of high-level visual cognition, spatial cognition, and attention. He is particularly interested in understanding long-term visual and spatial memory, as well as the integration of different sources of information during spatial tasks. His applied research interests lie in the areas of Human-Computer Interaction (e.g., user authentication, security, innovative display technologies), driving research (in-vehicle navigational displays, driver distraction), and neuroergonomics (e.g., neurological indicators of mental workload).

**Benjamin Barton** (Ph.D., 2005, University of Alabama at Birmingham)

Dr. Barton’s research concerns lifespan developmental factors affecting risk for unintentional injuries and injury prevention. His primary focus is the influence of developing cognitive skills on pedestrian safety during middle childhood. Other areas of interest include biking safety in children and adults, and driving behaviors among adolescents and elderly.

**Rajal Cohen** (Ph.D., 2008, Pennsylvania State University)

Dr. Cohen studies the interconnectedness of cognition, posture, and action, with a special interest in principles that apply across the spectrum from high performance to dysfunction.

**Russell Jackson** (Ph.D., 2007, University of Texas)

Dr. Jackson’s research investigates how the environments in which humans evolved may have shaped how we navigate and perceive our environment. His work focuses on human factors applications in the navigation of environmental hazards. He uses virtual reality methods and live outdoor testing in order to determine how perception and navigation adapt to risks such as falling.
4. **List new courses that will be added to your curriculum specific for this program.** Indicate number, title, and credit hour value for each course. Please include course descriptions for new and/or changes to courses. *This question is not applicable to requests for discontinuance.*

Our current master's curriculum will serve as the core curriculum for the doctoral program. This will ensure that students receive a solid background in human factors. We will add a 1 credit special topics course on human factors that doctoral students must take each semester (for a total of 8 semesters or 8 credits). This course will be used to introduce students to current research in human factors and to address professional development issues (e.g., preparing presentations for scientific conferences; manuscript preparation; grant proposals).

After completion of the master’s coursework, students will be expected to spend most of their time working closely with faculty on basic and applied research projects to further develop their research skills. Depending on the student’s interests and career goals, additional coursework may be required in related fields (e.g., statistics, computer science).

5. **Please provide the program completion requirements to include the following and attach a typical curriculum to this proposal as Appendix A.** *For discontinuation requests, will courses continue to be taught?*

<table>
<thead>
<tr>
<th>Credit hours required:</th>
<th>44</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit hours required in support courses:</td>
<td>0</td>
</tr>
<tr>
<td>Credit hours in required electives:</td>
<td>12</td>
</tr>
<tr>
<td>Credit hours for thesis or dissertation:</td>
<td>22</td>
</tr>
<tr>
<td><strong>Total credit hours required for completion:</strong></td>
<td><strong>78</strong></td>
</tr>
</tbody>
</table>

6. **Describe additional requirements such as preliminary qualifying examination, comprehensive examination, thesis, dissertation, practicum or internship, some of which may carry credit hours included in the list above.** *This question is not applicable to requests for discontinuance.*

Doctoral students will be required to complete a master’s thesis, preliminary examination, and doctoral dissertation. The master’s thesis, which may be up to 10 credits hours, is expected to be completed by the end of the student’s second year. A preliminary examination will be completed following the thesis and before the student can start his or her dissertation. The preliminary examination will be tailored to the student’s career goals and includes two options. The first option is a traditional exam which will assess the student’s mastery of human factors and ability to utilize that knowledge to solve problems. The exam will have a written component and an oral defense. The second option is the completion of a paper, which could be a theoretical paper that is related to the student’s dissertation or a technical report documenting the use of human factors to solve an applied problem. An oral defense of the paper is required. The human factors faculty will decide which option is best for the student, taking into account the student’s preference, interests, and career goals.
7. Identify similar programs offered within Idaho or in the region by other colleges/universities. If the proposed request is similar to another state program, provide a rationale for the duplication.

No other programs in Idaho, Montana, Oregon, or Western Washington offer graduate training in Human Factors Psychology. In 2011, when we began preparing this program proposal, we sought a letter of support from our nearest neighbor, Washington State University and we have attached that letter (See Appendix E for Letters of Support). Recent communications indicate they continue to be in support of this program.

UI and ISU have offered complementary, non-overlapping Experimental Psychology M.S. programs for many years (with UI focusing on Human Factors and ISU on other areas of Experimental Psychology); however, both universities recognize the need for doctoral level training in Experimental Psychology. The field of psychology is divided into two primary areas: clinical psychology and experimental psychology. However, within experimental psychology there are many additional areas of specialty in which a person may receive graduate training (i.e., social psychology, developmental psychology, cognitive psychology, personality psychology, health psychology, community psychology, psychology and law, comparative psychology, behavioral pharmacology/neuroscience, evolutionary psychology, interpersonal psychology, school psychology, military psychology, industrial organizational psychology, and human factors psychology).

ISU has historically offered graduate training in clinical psychology and some areas of experimental psychology (i.e., behavioral neuroscience, behavioral pharmacology, cognition, developmental psychology, learning, personality, sensation and perception, social psychology.) By contrast the University of Idaho Experimental Psychology Master’s and proposed PhD program is focused specifically on the Human Factors area within experimental psychology. ISU and UI cooperatively agreed to develop Ph.D. programs in Experimental Psychology that maintained the same complementary, non-overlapping foci as our existing M.S. programs. The NOI to add Ph.D. training in Experimental Psychology at ISU was approved first (i.e., in August, 2010) and states “…the focus of U of I’s program is very different from the focus of our proposed program. We wish to be direct in supporting U of I’s efforts in maintaining their program in human factors." Having well-defined doctoral programs in both departments allows the State of Idaho to meet the needs of students interested in a range of specializations and the needs of employers interested in hiring students with those specializations. A letter from the Idaho State University Chair of Psychology is forthcoming and will further attest to this plan to provide graduate training in psychology in the state.

<table>
<thead>
<tr>
<th>Institution and Degree name</th>
<th>Level</th>
<th>Specializations within the discipline (to reflect a national perspective)</th>
<th>Specializations offered within the degree at the institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSU</td>
<td>B.S.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSI</td>
<td>A.A.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CWI</td>
<td>A.A.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The nearest Ph.D. Experimental Psychology program offering Human Factors training is New Mexico State University in Las Cruces, New Mexico. The New Mexico State University program in Human Factors is smaller than our proposed program serving only 7 graduate students with 4 faculty members. There are only 21 Human Factors Psychology programs in the United States and of these only 16 have HFES accreditation, including the M.S. program at University of Idaho and once our Ph.D. program is implemented we will also seek accreditation for the doctoral program.

8. Describe the methodology for determining enrollment projections. If a survey of student interest was conducted, attach a copy of the survey instrument with a summary of results as Appendix B. This question is not applicable to requests for discontinuance.

We conducted a survey of students at Idaho universities to estimate the degree of interest in a human factors psychology doctoral program (see Appendix B for the survey and complete results). Responses were received from 298 students from five universities (U-Idaho, ISU, BYU-Idaho, Northwest Nazarene University, and College of Idaho). We will focus on the responses of those who were considering graduate school in psychology (N = 214; sample size varies per question because some participants chose not to respond to all questions). Focusing on respondents who selected a response above the midpoint of the scale, we find that 44 out of 212 respondents expressed an interest in pursuing a Ph.D. in human factors psychology. This number grows considerably larger when we look at the likelihood of students to apply and to attend the University of Idaho if funding were available to cover tuition and living expenses: 107 out of 213 would apply and 100 out of 212 would attend if accepted.

These numbers may be a bit inflated as it included participants who are primarily interested in a master’s degree. If we focus on the 102 respondents who plan on pursuing a doctorate, we find that 37 out of 101 reported interest in pursuing a Ph.D. in human factors psychology. In addition, 59 out of 102 would apply and 56 out of 102 would attend the University of Idaho if funding were provided to cover tuition and living expenses.

Our survey results are encouraging as a sufficient number of students appear interested in pursuing a doctorate in human factors psychology. Similar to our master’s program, we also expect to recruit applicants from nearby states (e.g., Washington, Utah, Montana), so there appears to be a sufficient applicant pool to generate 2-3 high quality doctoral students a year.

In addition, our experience recruiting students to our master’s program also suggests that there is sufficient demand to generate 2-3 high quality doctoral students a year. Every year,
one to two applicants to our master’s program are lost to doctoral programs in other states. We expect that a number of other high quality applicants never applied because they were focused on doctoral programs. In addition, the number of applicants seeking admission to a Human Factors Ph.D. programs in Psychology was over 350 for the last year data are available (https://www.hfes.org/Web/Students/grad_programs.html), only 18% of those were admitted in those programs. Clearly there is both student demand that nationally and students seeking Experimental Psychology Ph.D. training in Human Factors. We anticipate the pool is more than adequate to allow for the selection of 2-3 highly qualified students for our program each year.

9. Enrollment and Graduates. Using the chart below, provide a realistic estimate of enrollment at the time of program implementation and over three year period based on availability of students meeting the criteria referenced above. Include part-time and full-time (i.e., number of majors or other relevant data) by institution for the proposed program, last three years beginning with the current year and the previous two years. Also, indicate the projected number of graduates and graduation rates.

Discontinuations. Using the chart below include part-time and full-time (i.e., number of majors or other relevant data) by institution for the proposed discontinuation, last three years beginning with the current year and previous two years. Indicate how many students are currently enrolled in the program for the previous two years, to include number of graduates and graduation rates.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Relevant Enrollment Data</th>
<th>Number of Graduates</th>
<th>Graduate Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st Year of Program</td>
<td>Year 1 Previous</td>
<td>Year 2 Previous</td>
</tr>
<tr>
<td>BSU</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISU</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LCSC</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>UI</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>CSI</td>
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<td>EITC</td>
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<td></td>
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<tr>
<td>NIC</td>
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</table>

*There is not a current program in place so we do not have current year or previous year data for UI. In the first year we would anticipate enrolling 2 full-time doctoral students with 2-3 additional students per year. The program is a four year program so we would not anticipate graduating anyone with the Ph.D. until the Spring of Year 4 after implementation and would anticipate 2-3 Ph.D. graduates each year under normal circumstances and a slightly higher number (5-6) M.S. graduates. We would anticipate that any student who continued for the Ph.D. after completing their M.S. work would be likely to defend their dissertation and graduate within 2 years of their M.S. thesis defense.

**According to the Idaho State University’s Ph.D. program website, the experimental psychology Ph.D. program has not yet generated data, as they are only in the second year of their program and have not made applicant/enrollment data available for their PhD program. However, their Master’s program in experimental psychology areas has historically enrolled 2-3 students in the last years for which data are available. This is compared to our enrollments of 4-6 1st year Master’s students each year.
10. **Will this program reduce enrollments in other programs at your institution?** If so, please explain.

The University of Idaho does not offer programs that might typically compete for students with interests in Human Factors. Specifically, programs related to Human Factors Psychology such as Industrial Engineering, Aviation Psychology, Ergonomics, Human Computer Interaction, and Usability are not offered at the University of Idaho and therefore it is unlikely that other programs would see declines in their enrollments. Indeed, we would expect that the Human Factors Ph.D. will actually increase enrollments in our M.S. Psychology program as students would be more likely to continue their education at University of Idaho rather than seek enrollment in M.S./Ph.D. human factors programs nationally.

11. **Provide verification of state workforce needs such as job titles requiring this degree.** Include State and National Department of Labor research on employment potential.

Using the chart below, indicate the total projected job openings (including growth and replacement demands in your regional area, the state, and nation. Job openings should represent positions which require graduation from a program such as the one proposed. Data should be derived from a source that can be validated and must be no more than two years old. This question is not applicable to requests for discontinuance.

<table>
<thead>
<tr>
<th></th>
<th>Year 1--2015</th>
<th>Year 2--2016</th>
<th>Year 3--2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Local (Regional)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>856 (expected employment)</td>
<td>870 (expected employment)</td>
<td>884 (expected employment)</td>
</tr>
<tr>
<td>Nation</td>
<td>6,550 (new openings)</td>
<td>7,860</td>
<td>9,190 (1,330 new openings projected per year until 2020)</td>
</tr>
</tbody>
</table>

a. Describe the methodology used to determine the projected job openings. If a survey of employment needs was used, please attach a copy of the survey instrument with a summary of results as Appendix C.

Labor market projections were obtained from the Idaho Department of Labor website (http://labor.idaho.gov/workforceglance/; accessed on 1/28/2013). The occupation, human factors psychologist/engineer, was not listed, so we chose “Engineers, All Other.” In 2010, there were 785 jobs in this occupation which is expected to grow to 927 in 2020 for a growth rate of 18.09%.

National market projections were obtained from O*Net OnLine retrieved from http://www.onetonline.org/link/summary/17-2112.01 on January 30, 2013. In 2010, there were 203,900 people in the “Human Factors” occupations with projected national grown between 2010 and 2020 to be 3-9% for a projected 2020 employment of 217,000. The projected growth in Idaho is twice the expected national growth.
Human Factors Psychologists are employed in a wide variety of settings, where they can have various titles including Human Factors Psychologist/Researcher/Engineer, Usability Analyst/Engineer, or User Experience Analyst/Designer. Currently within Idaho, graduates of our M.S. program in Human Factors are employed at a variety of companies and government agencies, including INL and the Center for Advanced Energy Studies (Idaho Falls), Hewlett-Packard and the Kohl Group (Boise), and Benchmark Research and Safety (Moscow, Boise). Outside of the state, major employers of HF Psychologists include the government (agencies such as the FAA, NTSB, NHTSA, NRC, DOE), all branches of the military, the nuclear power industry, the aviation industry (e.g., Boeing, Lockheed-Martin) and all of the large information technology companies (e.g., Intel, HP, Apple, Microsoft, Google, Sony).

Our master’s students have been successful in securing positions in a variety of industries and the national employment picture for Human Factors specialists is very good. The Department of Labor statistics combines together all psychologists who are not in the subfields of clinical, counseling, school, or industrial-organizational; for this somewhat heterogeneous category of applied psychologists, the mean annual wage in 2010 was $89,900 (and $100,790 for those in the “scientific research and development services”, which includes HF Psychologists), and employment was projected to increase 14% from 2008 to 2018. According to the Department of Labor sponsored Occupational Information Network (O*NET), the projected growth in 2008-2018 employment for “Psychologists-Other” is listed as “Faster than average (14% to 19%)”, and the projected growth in 2008-2018 employment for “Human Factors Engineers and Ergonomists” is likewise listed as “Faster than average (14% to 19%)”.


State Data Source: Idaho Commerce & Labor, Research & Analysis Bureau

b. Describe how the proposed change will act to stimulate the state economy by advancing the field, providing research results, etc.

A doctoral program in human factors will positively impact the state’s economy by providing the highest level training in human-machine system integration and usability. Professionals with doctoral training in human factors typically lead research or design teams concerned with ensuring that complex technological systems meet the needs of end-users, promote safety and increase efficiency and productivity. Anyone who has interacted with a poorly designed product or web site has experienced the costs of poor usability. Idaho has a burgeoning high technology sector and this sector in particular benefits from enhanced usability in its products.
c. Is the program primarily intended to meet needs other than employment needs, if so, please provide a brief rationale.

The increase in energy concerns nationally and advances in technology have increased employment opportunities for individuals with Ph.D.’s in human factors psychology. This increase in employment opportunities is a primary motivating factor for creating the program. However, the broad training that students in Doctoral Human Factors programs receive also enables them to fulfill a variety of needs in industry. Individuals who are currently employed in Industry benefit from additional graduate training which allows their organizations to be competitive for grant funding and larger industrial contracts.

12. Will any type of distance education technology be utilized in the delivery of the program on your main campus or to remote sites? Please describe. This question is not applicable to requests for discontinuance.

The current Human Factors **emphasis-focus** in the Psychology graduate program includes a significant distance component that would allow students to complete early coursework via distance education (online coursework). This flexibility in course delivery will also maximize student opportunities to collaborate with INL and other industries while they complete internships. In the typical case, the final five semesters of graduate work for the Ph.D. will require students to be on campus for completion of additional coursework (not available online) and thesis and dissertation level research. In particularly exceptional cases, where a student is already employed in industry and has appropriate facilities and support to conduct thesis and dissertation level work, it may be possible for them to complete their graduate degree via distance coursework and research collaborations at their current place of employment. Proposals, defense of final thesis and dissertation work, and preliminary exams would be held on the Moscow campus, but would require no more than a day or two for completion. Lab experience is a key component of graduate level work in Human Factors and all students would be encouraged to take advantage of those experiences available to them.

The current MS distance program involves online coursework and courses provided via streaming video and/or pre-recorded video. This core coursework can all be completed without any requirement to be on the Moscow or any UI campus. In order to complete the comprehensive exams for the Master’s degree appropriate arrangements must be made in collaboration with the major professor to arrange for a proctor for these exams. For the PhD, program coursework could be completed similarly via online courses, streaming or pre-recorded video of courses. Additional coursework that is currently not available online, could be easily delivered using streaming video technology. Research requirements for the thesis and dissertation would need to be arranged carefully with the major professor and committee as well as ensuring that appropriate research facilities are available to carry out the proposed work for those students who would not be located on the Moscow campus. The more typical model for students not already employed in a Human Factors capacity, would be that in the last semesters of the program as research becomes the primary focus of the training that students would be present on the Moscow campus for some term (e.g., summer) to work in an appropriate Human Factors lab to gather data and gain critical experience working with the technology that is typical in human factors research.
13. Describe how this request is consistent with the State Board of Education’s strategic plan and institution’s role and mission. This question is not applicable to requests for discontinuance.

The State Board of Education’s strategic plan emphasizes the following goals: (1) “a well-educated citizenry,” (2) “critical thinking and innovation,” and (3) “effective and efficient delivery systems.” Our graduate training program recruits many of our students from within Idaho and we expect that the addition of a doctoral program will enhance our ability to recruit in-state students, which is consistent with Goal 1.

In accordance with Goal 2, our faculty and students are actively engaged in applied research on contemporary problems (e.g., improving pedestrian and aviation safety). Our faculty and students have been active in developing collaborations with agencies that will expand research opportunities and funding opportunities (e.g., ongoing research collaborations with INL/CAES and the National Institute for Advanced Transportation (NIATT)). Our doctoral students’ research projects and internships will further facilitate these types of collaborations.

Finally, expanding our existing graduate program to include a Ph.D. program meets Goal 3. By adding the doctoral program and maximizing our use of existing resources (e.g., curriculum for the master’s program will serve as the foundation) additional costs will be minimal we are providing an effective and efficient method of delivery for a key STEM (Science, Technology, Engineering, and Mathematics) program. Human Factors Psychology incorporates Psychology, Engineering, and Technology and provides a unique intersection of STEM disciplines. This type of program provides STEM discipline emphasis, but also applications of STEM education in the highly employable field of Human Factors. Further, some of our master’s students who would otherwise leave our program to attend doctoral programs elsewhere will stay and the time and resources spent training them can be applied toward research and projects that benefit the university and state. Doctoral students could also help us meet instructional needs at the undergraduate level and assist on grants.

14. Describe how this request fits with the institution’s vision and/or strategic plan. This question is not applicable to requests for discontinuance.

The University of Idaho’s strategic plan emphasizes the following goals: (1) “Enable student success in a rapidly changing world”, (2) “Promote excellence in scholarship and creative activity to enhance life today and prepare us for tomorrow”, and (3) “Meet society’s critical needs by engaging in mutually beneficial partnerships.” Our graduate training program meets all three of these goals. In accord with Goals 1 and 2, our faculty and students are actively engaged in applied research on contemporary problems (e.g., improving pedestrian and aviation safety). Moreover, in accord with Goal 3, our faculty and students have been actively and successfully developing collaborations with both private industry and public agencies (e.g., ongoing research collaborations with INL/CAES and with Nissan Corporation on how to minimize pedestrian risk associated with quieter electric cars). Our doctoral students’ research projects and internships will further facilitate these types of collaborations. Finally, our cross-listing of courses (across departments and universities) and our involvement in the Neuroscience program support the interdisciplinary activity emphasized in UI’s Strategic Plan.
<table>
<thead>
<tr>
<th>Goals of Institution Strategic Mission</th>
<th>Proposed Program Plans to Achieve the Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable student success in a rapidly changing world.</td>
<td>Our faculty and students engage in curriculum and research that actively engages in understanding how changing technology impacts current thinking about human factors. For example, the increase in hybrid vehicles and decreased car noise has direct impact on pedestrian safety.</td>
</tr>
<tr>
<td>Promote excellence in scholarship and creative activity to enhance life today and prepare us for tomorrow.</td>
<td>Our faculty and students have pursued research on topics that are directly applicable to contemporary problems (e.g., improving pedestrian and aviation safety). Our students routinely present their work at the Human Factors and Ergonomics Society conference and our faculty members publish in peer reviewed journals to disseminate the important work conducted in the University of Idaho Human Factors laboratories.</td>
</tr>
<tr>
<td>Meet society’s critical needs by engaging in mutually beneficial partnerships.</td>
<td>Our faculty and students have been actively and successfully developing collaborations with both private industry and public agencies (e.g., ongoing research collaborations with INL/CAES and with Nissan Corporation on how to minimize pedestrian risk associated with quieter electric cars). Our faculty are also collaborating with NIATT and the Alaska Department of Transportation and generating new collaborative opportunities with the Idaho Department of Transportation. Our doctoral students’ research projects and internships will further facilitate these types of collaborations.</td>
</tr>
</tbody>
</table>

15. Is the proposed program in your institution’s Five-Year plan? Indicate below. This question is not applicable to requests for discontinuance.

   Yes  x   No  

   The proposed program, a Ph.D. in Human Factors Experimental Psychology, is listed on the current five-year plan and has been on the State Board 8 year plan (later 5 year plan) since 2006. This timeline has provided us with the time required to develop a strong, competitive, and economically viable program.

   The proposed program, a PhD in Human Factors Experimental Psychology was on the State of Idaho Board of Education plan as early as August of 2006. When ISU forwarded their proposal for the Experimental Psychology program, our response reiterated our intent to continue to pursue the Human Factors psychology specialization as planned. We have been continuously on the 8 year plan (and later the 5 year plan) to propose this program. At every point we have made it clear that we have carefully invested resources and energy to meet the suggestions and recommendations to be able to deliver such a program successfully. Our strategy has been a cautious one. We have built a robust Master’s level program in Psychology with a focus on Human Factors and took the time to do so in an economically sustainable way prior to adding the PhD program. It is only after this cautious planning and responsiveness to feedback at every level, that we are proposing a carefully thought out PhD in Human
Factors Experimental Psychology.

In 2009, an external review of our program was conducted and the reviewers were particularly asked about the appropriateness of our continuing to pursue the PhD in Human Factors Experimental Psychology program and reported that this plan was favorable. In anticipation of this proposal, we made strategic hires in the area of Human Factors that would best serve the proposed program. We have invested resources to develop labs that would serve not only as appropriate training facilities but also state of the art research facilities so that we would be competitive for external funding and contracts to fund our students and serve the state.

16. Explain how students are going to learn about this program and where students are going to be recruited from (i.e., within institution, out-of-state, internationally). For requests to discontinue a program, how will continuing students be advised of impending changes and consulted about options or alternatives for attaining their educational goals?

The initial focus of the program will be on recruiting applicants from in-state and the nearby region. Information about the program will be distributed to universities within the state and region. Depending on available funding, we will also plan some recruiting trips to universities in the state and region to inform students about the field of human factors and the opportunities at the University of Idaho. Within the university, we will publicize the program to our majors and other related majors through class presentations, brochures, and the advising process. Finally, program information will be added to the website of the Human Factors and Ergonomic Society (HFES). HFES maintains a list of graduate programs and this resource is widely used by students to identify appropriate programs.

17. In accordance with Board Policy III.G., an external peer review is required for any new doctoral program. Attach the peer review report as Appendix D.

Pending selection of reviewers by SBOE and Provost. Suggested external peer reviewers are listed in Appendix D with short curriculum vitae of each.

18. Program Resource Requirements. Using the Excel spreadsheet provided by the Office of the State Board of Education indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first three fiscal years of the program. Include reallocation of existing personnel and resources and anticipated or requested new resources. Second and third year estimates should be in constant dollars. Amounts should reconcile budget explanations below. If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies). Provide an explanation of the fiscal impact of the proposed discontinuance to include impacts to faculty (i.e., salary savings, reassignments).
a. Personnel Costs

Faculty and Staff Expenditures
Project for the first three years of the program the credit hours to be generated by each faculty member (full-time and part-time), graduate assistant, and other instructional personnel. Also indicate salaries. After total student credit hours, convert to an FTE student basis. Please provide totals for each of the three years presented. Salaries and FTE students should reflect amounts shown on budget schedule.

As of February 2013, the Department of Psychology and Communication Studies has 14 full-time board-appointed faculty members on our Moscow campus; 12 of whom are dedicated to the psychology program, and 5 of those 12 will have teaching and research emphases in Human Factors Psychology. Our faculty research interests cover a wide range of topics in Human Factors (e.g., visual perception and spatial cognition, pedestrian and vehicular safety, human-computer interaction, automated alarm systems, virtual aviation displays), which will provide students with excellent research training in these areas.

Training doctoral students will only minimally increase faculty workloads and allow them to gain maximum use of their laboratory equipment and facilities. There will be no increase in the number of courses each faculty member teaches per semester. We anticipate each faculty member in our HF program to be the major advisor for at most 5 graduate students at a time (3 master’s level and 2 doctoral students) at a time. Our admissions standards will be selective, ensuring that we have high quality doctoral students who have the potential to enhance faculty research programs. Moreover, our advanced doctoral students will be able to help teach our undergraduates and mentor newer graduate students.

The department has an administrative assistant and financial technician on staff who would be able to provide support for the anticipated 2-3 additional students per year or a total of 10 additional graduate students.

Year 1

<table>
<thead>
<tr>
<th>Name, Position &amp; Rank</th>
<th>Annual Salary Rate</th>
<th>FTE Assignment to this Program*</th>
<th>Projected Graduate Student Credit Hours</th>
<th>Projected Ph.D. Student Credit Hours</th>
<th>FTE Ph.D. Students</th>
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*Note: Faculty FTE is for the Human Factors graduate program inclusive of both the existing Master’s program and the proposed extension of the existing graduate program to offer the Ph.D.. That is, the effort devoted only to the Ph.D. program would be difficult to disentangle from the effort for the M.S. program in terms of advising or research. Projected credit hours are per year and based on the assumption that a faculty member would oversee 1-2 graduate students generating thesis/dissertation credit hours or research credit hours in

### Year 3

<table>
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<th>Name, Position &amp; Rank</th>
<th>Annual Salary Rate</th>
<th>FTE Assignment to this Program*</th>
<th>Projected Graduate Student Credit Hours</th>
<th>Projected Ph.D. Student Credit Hours</th>
<th>FTE Ph.D. Students</th>
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addition to the credits generated by taking core coursework. The distribution of students across faculty should be relatively even, though for the purposes of this table the even distribution of students across faculty would not be evident until the third or fourth year. Faculty members with a higher FTE are those who are more involved in our distance education program.

Project the need and cost for support personnel and any other personnel expenditures for the first three years of the program.

**Administrative Expenditures**

Describe the proposed administrative structure necessary to ensure program success and the cost of that support. Include a statement concerning the involvement of other departments, colleges, or other institutions and the estimated cost of their involvement in the proposed program.

<table>
<thead>
<tr>
<th>Name, Position &amp; Rank</th>
<th>Annual Salary Rate</th>
<th>FTE Assignment to this Program</th>
<th>Value of FTE Effort to this Program</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

Our current administrative structure is sufficient to support the addition of 2-3 per year for a total of 10 additional graduate students to our program.

Additional assistantship funding is typically provided to graduate students in return for teaching or research assistantships at 20 hours per week during the academic year ($10,500 per student per year).

In order to attract high quality Ph.D. students we will need to provide tuition and fee waivers or cover these expenses ($7,162 per student per academic year).

In addition, summer funding would allow students to complete necessary research during the summer months to ensure an on-time graduation in the fourth year ($3,640 per student per summer).

We anticipate accepting 2-3 students each year into the Ph.D. program. We intend to use department F&A return, grant funding, and cooperative internships to cover some of these expenses when possible and rely on outreach revenue to cover the remainder of these costs.

**Operating Expenditures**

Briefly explain the need and cost for operating expenditures (travel, professional services, etc.)

We typically provide graduate students with funds to travel to conferences and disseminate their work. Indeed the HFES meeting each year is a key employment networking opportunity for students. We currently fund this for our master’s students in their second year. However, Ph.D. students will need funds to attend this and other conferences for four years. Finally, we hope to use some of the travel money to fund recruiting trips in the early years of the program to build our applicant pool for the Ph.D. and existing M.S. Human Factors programs. Again, grant funding could feasibly offset some of this expense, but the remainder would need to be covered by the department through outreach revenue or grant F&A returned to
the department.

Over the longer term, we anticipate some advanced doctoral students teaching sections of certain courses independently or securing (and helping our faculty to secure) additional external funding. In summary, we will be able to provide competitive funding and quality training to doctoral students with our current staffing and funding levels.

However, if outreach revenue is redistributed within the University or College additional funds would be needed to fund graduate assistantships and tuition and fees for doctoral students.

b. Capital Outlay

(1) Library resources

(a) Evaluate library resources, including personnel and space. Are they adequate for the operation of the present program? If not, explain the action necessary to ensure program success.

The current library resources are sufficient to meet the needs of our program and the anticipated addition of a Ph.D. program. We are requesting additional funding for the library in the budget to offset the costs associated with continuing to provide the necessary journal subscriptions to our faculty and students as costs of electronic journals continues to increase.

(b) Indicate the costs for the proposed program including personnel, space, equipment, monographs, journals, and materials required for the program.

We currently have over 2,400 square feet across five laboratories dedicated to Human Factors Research.

<table>
<thead>
<tr>
<th>Department of Psychology and Communication Studies</th>
<th>Human Factors Program Lab Space Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Name</td>
<td>Location</td>
</tr>
<tr>
<td>Idaho Child Safety Lab</td>
<td>Forney 003</td>
</tr>
<tr>
<td>Mind in Movement Laboratory</td>
<td>Forney 001</td>
</tr>
<tr>
<td>Visual Psychophysics Lab &amp; General Lab Space</td>
<td>SHC 016D, SHC 005, SHC 008</td>
</tr>
<tr>
<td>Evolved Navigation Lab</td>
<td>SHC 014</td>
</tr>
<tr>
<td>Cognitive Lab</td>
<td>SHC 009</td>
</tr>
<tr>
<td>Driving &amp; Flight Simulation Lab</td>
<td>Memorial Gym B46A</td>
</tr>
</tbody>
</table>

(c) For off-campus programs, clearly indicate how the library resources are to be provided. Our distance program students make use of the digital collections provided by the University of Idaho Moscow campus library. The vast majority of literature relevant to HF research is available digitally.
Equipment/Instruments
Describe the need for any laboratory instruments, computer(s), or other equipment. List equipment, which is presently available and any equipment (and cost) which must be obtained to support the proposed program.

The department currently has over 2,000 square feet of lab space providing access to cutting edge technology and sophisticated equipment used in human factors research. The department also has a graduate student space with computers available to students for data analysis and typical office functions.

Human Factors Simulation Lab housed in B46A Memorial Gym measures 700 sq ft.

Bay 1 of the simulation lab hosts the Driving Simulator
NADS (National Advanced Driving Simulator, U of Iowa) seven channel MiniSim driving simulator (3 forward view, 1 dashboard display, 3 rear view mirrors)
- Total forward field-of-view 135° (front-projection screens)
- 3 high-resolution data projectors for the forward view
- 1 fully instrumented Chevy S10 cab with 3D sound
- 3 LCD displays for dash display and side mirrors
- Pedals for breaking and acceleration
- Steering wheel with switches and gear shifter
- 1 60" Plasma screen for the center rear view or alternatively
- 1 “Flight Seat” with controls suitable for aviation simulation
- 1 host PC for simulation control using our in-house-developed ViEWER simulation software using the same front projection setup

Bay 2 of the simulation lab is set aside to be equipped with
- 1 Process control simulation station (for INL Alarm Dashboard project)
- 3 large-screen monitors and 1 server running the process control simulation software currently developed in house (to be installed Spring 2013).

Lab also includes:
- 5 PCs for office applications (data analysis, manuscript writing)
- Apparatus for “Human Water Maze” for spatial cognition experiments

- **016D SHS** (~250 square feet, painted flat black with black carpeting to control reflections for visual psychophysics experiments) contains the Flight simulator with high-resolution 90 degree FOV (two 54" diagonal rear-projection enclosures with NEC high-resolution/fast phosphor CRT projectors)
  - 2 large (60" diagonal) rear projection cabinets with high-resolution and fast-phosphor NEC CRT projectors (1 of which is currently inoperable).
  - 2 graphics workstations capable of generating high quality 3D graphics for our simulations
  - 1 host computer for controlling simulations
  - 1 ASL head mounted eye-head tracking system that also can be used for measurement of pupil diameter with its own dedicated computer
  - Sensors and amplifiers for monitoring heart rate, breathing rate, and skin
conductance (on loan from WSU psych department due to my adjunct status there)
  o 1 file server with redundant back-up systems
  o 1 height-adjustable participant seat with various controls (joysticks, steering wheels, etc.)
  o Flock of Birds magnetic head tracking system and IS-300 3DOF inertial tracking system.

- **The Idaho Child Safety Lab** in Forney Hall 003 is housed in a 226 square foot lab space that contains both eye-tracking technology and a sound booth for auditory studies.
  o Eye tracking: ASL EYE-TRAC6 System with remote desk-mounted tracking. The system uses an infrared beam to track head position so that the person doesn't have to lock their head into a device to hold it still.
  o Sound booth: 4x4 feet, lined with fabric for visual isolation, insulated with foam and fabric sound-deadening material, equipped with two 5-inch powered studio monitors, sound is controlled externally by the researcher. The idea is that the person is placed in a semi-isolated environment so that they can experience traffic sounds (or other auditory stimuli), and we can measure physiological reactions, self-reports, etc.
  o In addition this lab includes technology allowing for the measurement of heart rate and electrodermal response.
  o Several GPS trackers for use in real-world behavioral data collection.

- **Cognition and Usability Lab** is located in SHC 009 Student Health Center, a 279 square foot mixed lab/office space. The cognition and usability lab will be structurally divided into a usability lab (approximately 120 square feet) containing:
  o 1 Wacom Cintiq 24” graphics tablet with multi-touch capability
  o 2 iMac 24” personal computers
  o 1 Tobii eye-tracker (pending purchase)
  o 1 Windows computer workstation running ePrime II for time-critical experiments.
  o The remaining 150 square feet are going to be used as graduate student office space and meeting space.

- **The Evolved Navigation Lab** is a 390 sq. ft. space in Student Health Center Room 014 featuring immersive single-user virtual reality capacities. The lab houses a 4 camera PPTX and InertiaCube system with an NVIS SX60 Head Mounted Display. The PPTX machine runs Vizard software and the rendering computer is a liquid-cooled machine with a solid state drive and state of the art graphics capacities. Users receive 60 degree field of view with integrated sound across virtual environments. Additionally this lab has a Kaiser PV-60 head-mounted stereo display (FOV 45 degrees) and Intersense 300 head tracking.

- A 279 square foot **Mind in Motion laboratory** facility The focus of the Mind in Motion Laboratory is to investigate how cognitive abilities (and cognitive deficits) influence movement and posture. The lab includes a large open space equipped with an 8-camera Vicon Bonita motion capture system and the Motion Monitor integration package. This combined system allows us to (1) collect three-dimensional position data from passive reflective markers on the body; (2) accurately identify the reflective markers in real time to
generate a model of the human body in motion; (3) seamlessly integrate and synchronize of data from future equipment purchases (such as force plates, accelerometers, electromyography, and biofeedback). It also (4) allows students working in my lab to collect and analyze data without spending years learning to program computers, thus freeing up more of their time to focus on learning about science.

- All Labs contain PCs for data analysis and manuscript preparation. Multiple high-performance graphics workstations for the development of synthetic environments

d. Revenue Sources

(1) If funding is to come from the reallocation of existing state appropriated funds, please indicate the sources of the reallocation. What impact will the reallocation of funds in support of the program have on other programs?

We currently have 5 full-time faculty members who offer coursework in the graduate program and mentor graduate students. This effort would continue and the addition of 2 more students per year to courses would not significantly impact their workload. In addition, faculty already provide advising and mentorship to graduate students and this would continue for two additional years for Ph.D. students. Again, this would not significantly impact allocation of time for faculty. Salaries are already allocated in the amount of $315,000 for these lines and there is no foreseeable need for an increase in this amount nor a significant redistribution of labor for these faculty members based on the addition of the Ph.D. Program. As noted in item 18.b.1, an additional $2,000 would need to be reallocated to the University of Idaho library for capital outlay each year.

(2) If the funding is to come from other sources such as a donation, indicate the sources of other funding. What are the institution’s plans for sustaining the program when funding ends?

Currently, all of our on-campus graduate students are fully funded through a combination of sources, including graduate teaching assistants funded by our College, research assistantships funded through grants and paid internships, and assistantships provided by departmental funds generated by faculty research and outreach activities. These resources will be sufficient to fully fund the number of Ph.D. students that we expect to admit over the next few years. Ph.D. students would need to have tuition and fees covered and this can be managed with generated revenue from outreach courses and faculty research grants. We do not anticipate a decline or end to outreach revenue, though our ability to support students will rely on the continued distribution of funds to departments or equivalent budget lines to the department. Funding and training Ph.D. level graduate students is a priority for many federal grants and the addition of a graduate program would make our faculty more competitive for these awards.

(3) If an above Maintenance of Current Operations (MCO) appropriation is required to fund the program, indicate when the institution plans to include the program in the legislative budget request.

This program does not require an MCO appropriation as proposed.
(4) Describe the federal grant, other grant(s), special fee arrangements, or contract(s) to fund the program. What does the institution propose to do with the program upon termination of those funds?

While, faculty grant funding will off-set the costs for the proposed Ph.D. program and the existing M.S. program in human factors, the program is not entirely reliant on these funds and could support the program with current resources and outreach revenue. Currently, we have three grants or contracts funding four students in the program through partial assistantships and in some cases funds covering tuition and fees.

(5) Provide estimated fees for any proposed professional or self-support program.
The program being proposed does not fit a professional or self-support graduate program model, but rather a more traditional model in which graduate student support and tuition would be paid by the institution. However, the students currently in the distance program are part-time students who pay tuition and fees for their coursework and do not receive assistantships or other funding from the institution.
Appendix A – Proposed Curriculum

NOTE: Total required credits = 78; maximum # 400-level credits = 26; maximum # PSYC 600 credits = 45.

<table>
<thead>
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<th>Number</th>
<th>Course</th>
<th>Institution</th>
<th>Credits</th>
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<td>STAT 511</td>
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</table>
APPENDIX B – SURVEY OF STUDENT INTEREST

Survey on Human Factors Psychology

The University of Idaho Institutional Review Board has certified this project as Exempt.

The Department of Psychology and Communication Studies at the University of Idaho is investigating whether to add a doctoral program in human factors psychology. The purpose of this survey is to gather information about the potential interest in this program. The survey will take approximately 5-10 minutes to complete. It consists of questions about your plans to go to graduate school and your interest in human factors psychology. There are no risks to this study beyond what would be encountered in daily life.

Your responses to the survey will be anonymous. No identifying information will be associated with your responses. Your participation in this survey is voluntary and you may withdraw from the survey at any time. If you have any questions about the survey, you may contact Dr. Todd Thorsteinson (thorstee@uidaho.edu; 208-885-4944)

If you are at least 18 years of age and agree to participate in the survey, please click on “Next to start the survey.

[Numbers next to the responses are frequencies; 298 respondents]

1. Are you a psychology major?
   - Yes 222
   - No 76

2. What year are you?
   - Freshman 27
   - Sophomore 67
   - Junior 86
   - Senior 113
   - Other 5

3. What is your gender?
   - Female 221
   - Male 76
   - Prefer not to respond 1

4. Are you a current resident of Idaho?
   - Yes 207
   - No 91

5. Are you familiar with the field of human factors psychology? [Mean = 2.50]
   - Very familiar 5
   - Familiar 4
   - Somewhat 3
   - A little 2
   - Never heard of it 1

   [Numbers in brackets represent frequencies]
6. Are you planning on attending graduate school in psychology?
   - Yes [139]
   - No [84] [If participants selected “No,” they skipped to the last question, Question 12]
   - Unsure [75]

7. What graduate degree are you interested in pursuing? (check all that apply)
   - master’s degree [155]
   - a doctoral degree [102]
   - unsure [34]

Human factors applies psychological knowledge about human perception, cognition, and social interactions to a range of topics – like product design, human performance and human error, human-machine and human-computer interaction, interface design, safety, and ergonomics. Human factors researchers and user experience engineers try to improve the ways that people interact with products and environments.

8. How interested are you in human factors as a career? [Mean = 3.77]
   - Not at all [17]
   - Somewhat interested [37]
   - Moderately interested [38]
   - Very interested [48]
   - Extremely interested [45]

9. How interested are you in pursuing a master's degree in human factors psychology? [Mean = 3.34]
   - Not at all [32]
   - Somewhat interested [52]
   - Moderately interested [28]
   - Very interested [45]
   - Extremely interested [33]

10. How interested are you in pursuing a doctoral degree (i.e., a Ph.D.) in human factors psychology? [Mean = 2.88]
    - Not at all [58]
    - Somewhat interested [52]
    - Moderately interested [27]
    - Very interested [31]
    - Extremely interested [26]
11. If the University of Idaho offered a Ph.D. in human factors psychology and provided funding that covered your tuition and basic living expenses...

<table>
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<th>[32]</th>
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What is the likelihood that you would apply to the program? 
[Mean = 4.31]

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<th>[29]</th>
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What is the likelihood that you would attend? 
[Mean = 4.16]

12. What university are you currently attending?

[111 = Brigham Young University – Idaho]
[69  = Northwest Nazarene University]
[58  = Idaho State University]
[53  = University of Idaho]
[5   = College of Idaho]
[1   = Other]
[1   = Not reported]

Thank you for your participation!
Appendix C

Employment Needs Survey

We did not use a survey instrument to assess employment needs to generate the reported data.
Appendix D
Recommendations for External Reviewers

Below is a list of external reviewer suggestions in order of our preference and suitability for reviewing our program, though all on the list would be able to provide valuable insight into the viability of our proposal. Their biographical sketches follow this page in order of preference.

1. Patricia DeLucia, Department of Psychology, Texas Tech University, Lubbock, TX (currently the Chair of the HFES accreditation committee)
2. Christopher Wickens, Professor Emeritus from the University of Illinois Department of Psychology, Adjunct Professor University of Colorado Department of Psychology, and Senior Scientist at AlionSciences Company Boulder, CO
3. John Flach, Chair, Department of Psychology, Wright State University, Dayton OH (Wright State has a very good Ph.D. program in Human Factors)
4. Douglas Gillan, Head, Department of Psychology, North Carolina State University, Raleigh, NC
5. Mark Scerbo, Professor, Department of Psychology, Old Dominion University, Norfolk, VA
6. David Strayer, Professor, Department of Cognition and Neuroscience, University of Utah, Salt Lake City, UT
7. Thomas Dingus, Director of Virginia Tech Transportation Institute, Virginia Tech, Blacksburg, VA
Patricia DeLucia, Ph.D.
Chair of HFES Accreditation Committee

Patricia DeLucia received her PhD from Columbia University in 1989 and completed her postdoctoral work at Wright Patterson Air Force Base in 1991. She is currently a professor at Texas Tech University and coordinator of their human factors psychology program. On the basis of her outstanding contributions to the field of human factors psychology, she was elected a fellow of both the Human Factors and Ergonomics Society (HFES) and the American Psychological Association (APA). In 2010-2011, she served as president of Division 21 (Applied Experimental and Engineering Psychology) of the American Psychological Association. She currently serves as the Chair of the Accreditation Committee for the Human Factors and Ergonomics Society, is an Associate Editor of Human Factors (one of the leading journals in the field), and is on the editorial board for the Journal of Experimental Psychology: Applied.

Her research program has resulted in over 30 publications focusing on theoretical and applied issues in visual perception and human factors. Her interests include (a) the perception of collision, motion, and depth with applications to transportation (e.g., driving and aviation), health care (e.g., minimally invasive surgery), military (e.g., night vision goggles), and sport (e.g., umpiring), and (b) human factors in health care (e.g., patient safety).

Positions:
Professor, Department of Psychology; Coordinator of the Human Factors Psychology Program; Adjunct Professor, School of Nursing.

Education:

Contact:
Phone: (806) 742-3711, ext. 259       Fax: (806) 742-0818
Email: pat.delucia@ttu.edu       Web site: Web site

Program site: Human Factors Psychology Program


Christopher D. Wickens, Ph.D.
Professor Emeritus, Department of Psychology
Professor and Head Emeritus, Aviation Human Factors Division
Associate Director Emeritus, Institute of Aviation
University of Illinois at Urbana-Champaign
Adjunct Professor
University of Colorado
cwickens@alionscience.com

Dr. Wickens is currently working part-time at Alion Science in Boulder, CO.

He received a B.A. from Harvard College in Physical Sciences in 1967. He received a M.A. from the University of Michigan in Psychology in 1969. He completed his Ph.D. under Dick Pew at Ann Arbor in 1974. He rose through the ranks from Assistant Professor to Professor in the Department of Psychology at the University of Illinois at Urbana-Champaign. He was Visiting Professor, Department of Behavioral Sciences & Leadership, U. S. Air Force Academy in 1983-1984, 1991-1992, and 1999-2000.

For over 30 years Chris Wickens' research has focused on the interface between basic research and the applied area of human factors. His research is concerned with two primary themes. From a psychological perspective, one theme has been the study of human attention related to the performance of complex tasks. From a human factors perspective, the second theme relates to the study of how displays and the automation can be used to support the behavior of operators in high-risk systems. Professor Wickens and his students have focused their research interests primarily on aviation vehicle control. Through his career his research has bridged the intersection of these two themes in order to show how basic research in attention can account for human behavior in these complex systems. As a result of his research, he has developed two theories or models of attention: multiple resources theory developed in the early 1980s; and Salience, Effort, Expectancy and Value (SEEV) theory elaborating the selective aspects of attention in the late 1990s and early 2000s.

Wickens' research is internationally recognized. He has been invited to give the keynote address at a number of international conferences. He has supervised 38 Ph.D. theses, 64 master theses and 7 undergraduate honors theses. Many of Wickens’ graduate students went on to distinguished interdisciplinary careers in universities, government and industry.

He has authored or co-authored eight books including an introductory text in Psychology, an introduction to human factors engineering and the most widely used advanced textbook in engineering psychology and human performance. Two books on human factors in air traffic control have been published by the National Academy Press. The other three books are concerned with display technology, workload transition and displays. Wickens has published over 200 articles in refereed journals and book chapters.
John M. Flach, Ph.D
Department of Psychology
Wright State University
335 Fawcett Hall
Dayton, OH 45435
(937) 775-2391 (office), (937) 775-3347 (fax), (937) 266-2954 (cell)
john.flach@wright.edu
http://www.wright.edu/cosm/departments/psychology/faculty/flach.html

John Flach is a professor of psychology and former chair of the psychology department at Wright State University (from 2004 to 2012). He has been on the faculty at the University of Illinois at Urbana-Champaign, served as adjunct research scientist at the Air Force Research Laboratory at the Wright Patterson Air Force Base, and worked in engineering departments as well as psychology departments.

Since earning his PhD in 1984 from Ohio State University, he has made significant contributions to the field of applied experimental and human factors psychology. He studies issues of coordination and control in cognitive systems. More specifically, his work focuses on visual control of locomotion, graphical interface design, decision-making, manual control, and tactile displays.

Along with numerous articles, he is the author of two books (one on control theory and another on display and interface design) and has published two edited books on ecological approaches to human-machine systems. His book on control theory attempts to introduce the logic and analytical language of control systems to social scientists, whereas his book on display and interface design offers a theoretical context for designing displays to support human problem solving.

Education and Degrees:
Ph.D., Human Experimental Psychology, 1984 The Ohio State University
M.A., Psychology, 1978 University of Dayton
B.A. Psychology, 1975 St. Joseph's College, Indiana

Professional History:
2004(July) – Present Chair, Department of Psychology, Wright State University
2004 (Jan – Mar) Visiting Professor, Departments of Aeronautical, Mechanical, and Industrial Design Engineering, TU Delft (Sabbatical from WSU)
2000 (May - June) Erskine Fellow. University of Canterbury, Christchurch, NZ.
1998 – Present Professor, Department of Psychology, Wright State University
1994 - 1998 Associate Professor, Department of Psychology
Wright State University
1990 – 1996 Adjunct Research Scientist
Air Force Research Laboratory, Wright Patterson AFB
1990 - 1994 Assistant Professor, Department of Psychology
Wright State University
1984 - 1990 Assistant Professor, Department of Mechanical & Industrial Engineering, Department of Psychology, Institute of Aviation, University of Illinois at Urbana-Champaign
Selected Journal Articles, Book Chapters, and Published Proceedings
Dr. Douglas Gillan  
Human Factors & Ergonomics  
Professor  
*Head of Psychology Department*  
Email: doug_gillan@ncsu.edu  
Phone: 919.515.1715

Douglas Gillan earned a bachelor’s degree in psychology from Macalester College (St. Paul, MN) in 1974 and a PhD in experimental psychology from the University of Texas at Austin in 1978. For the two years following his doctorate, he was a National Science Foundation Fellow at Yale University and a Sloan Foundation Fellow at the University of Pennsylvania. He worked in industry for the next 10 years, conducting taste research for General Foods Research Center’s Sensory Evaluation Department from 1980 to 1984, then human factors research and development for Lockheed Engineering and Sciences Company at NASA-Johnson Space Center in Houston. In 1989, he returned to academia, working the psychology departments at Rice University, the University of Idaho, New Mexico State University, and North Carolina State University.

He is currently a professor of psychology and head of the psychology department at North Carolina State University. He has served as a department head for nearly 20 years at two universities, both of which have doctoral programs in human factors (New Mexico State University and North Carolina State University). As department head at NC State, he manages 33 faculty members, 120 graduate students, and 750 undergraduate majors.

His numerous publications and presentations have focused on perceptual and cognitive processes in reading graphical displays and human-computer interaction. Based on his significant contributions to the field of human factors, he was elected a fellow of the Human Factors and Ergonomics Society.

**Research Interests**

Human-computer interaction, knowledge acquisition and representation, information visualization and high level perception

**Recent Publications**


- Gillan, D. J., & Sapp, M. V. (2005a). Out of the box: Approaches to good initial interface


Mark Scerbo
Professor
Department of Psychology
346a Mills Godwin Bldg
Norfolk, VA 23529
757-683-4217
mscerbo@odu.edu

Mark Scerbo graduated with a BA in Psychology from Rutgers in 1981, an MA in Psychology from University of Cincinnati in 1985 and the PhD in 1987. He is currently a professor of human factors psychology at Old Dominion University. He has over 25 years of experience researching and designing systems and displays that improve user performance in academic, military, and industrial work environments. His research interests are focused in two areas: 1) human interaction with automated and adaptive automated systems, and 2) user interaction with medical simulation technology. He has won many awards, most recently the Paper of Distinction at the Association for Surgical Education meeting in 2010. He also has significant experience in human factors research in industry, having supervised the Human Factors Research Laboratory at AT&T from 1987 to 1990. He is an Associate Editor of Human Factors and a Fellow of the Human Factors and Ergonomic Society.

Education
Degree: Ph. D., Psychology, University Of Cincinnati, 1987
Degree: M.A., Psychology, University of Cincinnati, 1985
Degree: B.A., Psychology, Rutgers College, Rutgers University, 1981

Selected Articles
David L. Strayer
Department of Psychology
380 South, 1530 East, Room # 502
University of Utah
Salt Lake City, Utah 84112-0251
(801) 581-5037
David.Strayer@utah.edu

David Strayer received his PhD in 1989 from the University of Illinois-Urbana Champaign and is currently a professor of psychology at the University of Utah. He is the director of the Applied Cognition Lab at the University of Utah, which has been studying driver distraction to better understand how and why people can become overloaded while multi-tasking. His research has clearly shown the large cost of common distractions - like cell phone use and texting - on driving performance. Talking on the cell-phone increases the risk of accidents fourfold - the same amount as driving while intoxicated above the legal limit. As he and many other researchers have shown, the act of talking on the phone is the culprit - not holding the phone in one's hand. There is thus no difference between handheld and hands-free phones in cars. Apart from his applied research in human attention, Dr. Strayer has also identified a small set of people who seem to be able to multitask without a significant cost to their performance. Identifying the characteristics of these so-called 'supertaskers' is a new topic he currently pursues. His research has been covered widely in the media, including The New York Times, PBS News Hour with Jim Lehrer, and the Oprah Winfrey Show.

Educational History: 1989 Ph.D. University of Illinois at Urbana-Champaign
Major: Experimental Psychology
Minors: Quantitative, Biological
1982 M.S. Eastern Washington University
Major: Experimental Psychology
1980 B.A. Eastern Washington University
Majors: Psychology, History

Professional History
2004 – Present Professor, Department of Psychology, University of Utah
Adjunct Professor, Dept. of Educational Psychology, University of Utah
1995 - 2004 Associate Professor, Department of Psychology, University of Utah
1991 - 1995 Assistant Professor, Department of Psychology, University of Utah
1990 - 1991 Member of Technical Staff, Network Architecture and Services Laboratory, GTE Laboratories
1989 - 1990 Post-Doctoral Research Associate, Department of Psychology, University of Illinois at Urbana-Champaign

Recent Publications


Thomas A. Dingus  
**Director of Virginia Tech Transportation Institute**

Newport News Shipbuilding/Tenneco Professor of Civil and Environmental Engineering  
*Transportation Infrastructure and Systems Engineering*  
VTTI (0536); 3500 Transportation Res. Plaza  
tdingus@vt.edu  
(540) 231-1501  
Certified Human Factors Professional, Board of Certification in Professional Ergonomics

Thomas Dingus received his B.A. and M.S. in Experimental Psychology from Eastern Washington University. In 1989 he completed his PhD at the University of Illinois-Urbana Champaign in Experimental Psychology in the area of Human Factors. He is the Director of the Virginia Tech Transportation Institute (VTTI) and is the Newport News Shipbuilding Professor of Civil and Environmental Engineering at Virginia Tech. He is center director of the Tier 1 Connected Vehicle/Infrastructure University Transportation Center (CVI-UTC), which comprises a consortium of Virginia Tech/VTTI, the University of Virginia, and Morgan State University.

Since 1996, Dr. Dingus has managed the operations and research at VTTI. This multidisciplinary organization annually conducts more than $30 million in sponsored research. Prior to joining Virginia Tech, Dr. Dingus was founding director of the National Center for Transportation Technology at the University of Idaho and was an associate director of the Center for Computer-Aided Design at the University of Iowa.

Alternate URL for this homepage: [http://www.cee.vt.edu/people/dingus.html](http://www.cee.vt.edu/people/dingus.html)

**Education:**

- **B.S.** Systems Engineering, Wright State University, 1979
- **M.S.** Engineering and Operations Research, Virginia Polytechnic Institute and State University, 1985
- **Ph.D.** Engineering and Operations Research, Virginia Polytechnic Institute and State University, 1987

**Work Experience:**

- Associate Professor, Department of Industrial Engineering, University of Iowa. 1993-95
- Assistant/Associate Professor, Department of Psychology, University of Idaho. 1986-92
- Adjunct Professor, Department of Mechanical Engineering, University of Idaho. 1990-92

**Selected Publications:**


Appendix E
Letters of Support

These letters were originally requested in 2011 when we began to prepare this proposal and strategically invest in the future of our program. The following pages include letters of support from the following entities:

1. R. M. Craft, Chair, Department of Psychology, Washington State University
2. Ron Boring, Human Factors Principal Scientist, Idaho National Laboratories
3. Jeffrey Joe, Group Leader in Human Factors, Controls, and Statistics Department, Idaho National Laboratory
4. Bill Brown, User Experience Design Manager, Hewlett Packard Company, Boise, ID
5. Shannon Lynch, Chair, Department of Psychology, Idaho State University
TO: Faculty Senate
FROM: Kenton Bird, chair, Brink Advisory Committee
RE: Brink Hall lounge: renovation and refurbishing
DATE: Jan. 28, 2014

I’m proud to submit this report at the conclusion of the nearly two-year project to repair, restore and rejuvenate the historic lounge of Carol Ryrie Brink Hall to promote collaboration among faculty. As you may recall, this idea grew out of discussions about a “faculty club” that would build on the interest in the monthly faculty gatherings at the Commons. A committee appointed by former Senate Chair Paul Joyce began exploring options in the summer of 2012.

The renovated Brink Lounge advances the University’s strategic plan in these ways:

- **Enable faculty, student, and staff engagement in interdisciplinary scholarship and creative activity.** [Goal 2]
- **Strengthen and expand mutually beneficial partnerships with stakeholders in Idaho and beyond.** [Goal 3]
- **Be a community committed to productivity, sustainability, and innovation.** [Goal 4]

Based on a preliminary cost estimate of $84,000, former President Nellis initially committed $39,000 and each college (with the exception of COGS) and the library contributed $3,800, for a total of $38,000. Vice President McIver approved $5,000 from the Office of Research and Economic Development. Finally, President Nellis agreed to provide the remaining funding to make the project possible. Here is the breakdown of costs:

- **Construction** $54,900
- **Furnishings** $36,096 [plus another $2,000-$3,000 for additional furnishings]
- **UI Facilities support** $1,000
- **Architectural fees** $6,875
- **TOTAL** $98,871

Project Architect Daryle Faircloth reports: “Remaining work includes minor punch list items and exterior mortar tuck and point at east wall around windows. This will wait until warmer weather arrives, likely spring.”

The space will continue to be used for weekly Faculty Senate meetings. It is the committee’s intent that the lounge also for monthly faculty gatherings (currently held in the Idaho Commons). With a few possible exceptions, no other regular events will be scheduled here, allowing maximum usage for informal conversations by faculty and staff to share ideas.

I would like to thank everyone who made this project such a success: members of the Brink Advisory Committee, Shauna Corry, Gail Eckwright, Stephan Flores, Julia McIlroy, Debra Saul, Ellen Schreiber; the project team, Castellaw Kom Architects (Greg Castellaw, principal); KACI General Contractors (Sean Dorigo, superintendent), Gropp Electric; UI Architectural & Engineering Services, Guy Esser and Daryle Faircloth, Project Managers; Richard Rader, Construction Manager, and Brian Woodruff, Construction Inspector; UI Purchasing Office staff. And thanks to faculty senators, past and present, for their support of this project.