SUBJECT

Experimental Program to Stimulate Competitive Research (EPSCoR) Summary Report

BACKGROUND/DISCUSSION

Experimental Program to Stimulate Competitive Research (EPSCoR) in Idaho represents a federal-state partnership to enhance the science and engineering research, education, and technology capabilities of states that traditionally have received smaller amounts of federal research and development funds. Through EPSCoR, participating states are building a high-quality, academic research base that is serving as a backbone of a scientific and technological enterprise.

Idaho EPSCoR is currently led by a state committee composed of 18 members with diverse professional backgrounds from both the public and private sectors and from all regions in the state. The Idaho EPSCoR committee oversees the implementation of the EPSCoR program and ensures program goals and objectives are met. The state committee was under the supervision of the Office of the Governor; however, Executive Order 2009-09 authorized the re-establishment of EPSCoR under the State Board of Education. The Idaho EPSCoR office and the State of Idaho EPSCoR Project Director are located at the University of Idaho. Partner institutions are Boise State University and Idaho State University.

Dr. Greg Bohach is the current Idaho EPSCoR Project Director and will be providing a summary report to the Board regarding current EPSCoR activities to include a summary on progress of the Idaho NSF EPSCoR Research Infrastructure Improvement (RII) project: Water Resources in Changing Climate.

STAFF COMMENTS AND RECOMMENDATIONS

Board staff has no comments or recommendations.

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

THIS PAGE LEFT INTENTIONALLY BLANK

SUBJECT

Northern Idaho Consortium for Higher Education (NICHE)
Local Operations Committee – Summary Report

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies and Procedures, Section III.G. Program Approval and Discontinuance
Idaho State Board of Education Governing Policies and Procedures, Section III.Z. Delivery of Postsecondary Education

BACKGROUND

The Northern Idaho Consortium for Higher Education (NICHE) is a collaborative project formed by agreement among the University of Idaho (UI), North Idaho College (NIC), Idaho State University (ISU), Boise State University (BSU), and Lewis-Clark State College (LCSC) to meet educational needs in Northern Idaho. NICHE has an annual operating budget of $225,000 and is funded through an appropriation by the State of Idaho. North Idaho College currently serves as the fiscal agent for NICHE.

DISCUSSION

NICHE has provided a progress report highlighting this year's activities, which include a reorganization of resources. Some highlights include:

- The development of a Memorandum of Agreement among the member institutions outlining the mission of NICHE.
- The subsequent development of Memorandums of Understanding outlining every collaborative service offered to member institutions.
- A summary of joint and/or co-branded marketing efforts, including the implementation of IdahoGoes!, a web-based gateway to all of the member institutions, their services, and a site that promotes educational attainment.
- Multiple special projects designed to promote higher education in the region

ATTACHMENTS

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

THIS PAGE LEFT INTENTIONALLY BLANK

Executive Summary

1. The MOA
   - Replaced NICHE agreement (1999), eliminating two fulltime staff positions and reorganized effort;
   - MOA among UI, LCSC, NIC, ISU adding BSU. Signed summer 2008;
   - Renamed NICHE from “center” to “consortium;”

   - cont’...

MOA cont'

- Focuses effort and resources on collaboration, cooperation and consolidation.
- Allocated funds ($234k FY 2009) jointly-managed to benefit all.
- Collaborations detailed in a series of MOUs

MOUs

1. Testing Center
2. Director of Joint Communication
3. Concurrent Enrollment Fee Waiver
4. Joint Admissions
5. Disability Services (NIC-LC)
6. Health Services (NIC-LC)

Testing Center MOU

- Allocates $53,000 to fund fulltime testing center director;
- Testing done at NIC on-campus and via NIC outreach centers;
- Consolidates and provides testing services to all NICHE member institutions.

Director, Joint Communication

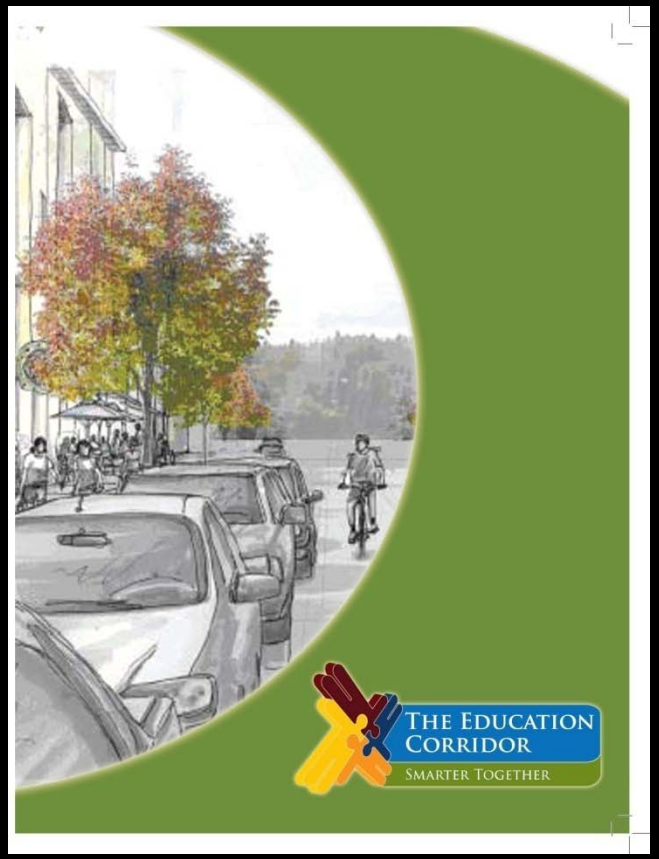
- Allocates $60,000 annually to fund the position;
- Works to promote the shared interests of all institutions; Goals:
  - Raise educational awareness in North Idaho
  - Raise enrollment in the jointly-offered and complimentary programs of the institutions;
  - Identify, assess, and advise on community post-secondary needs.

Joint Marketing

Joint Marketing

- Education Corridor logo, brochure and website: www.edcorridor.com

THE EDUCATION CORRIDOR
SMARTER TOGETHER



Joint Marketing

- "Mr. Ed" twice monthly column appears in the CdA Press.

Work with CdA Chamber

- Internship database project;
- Creating an online database of available internship opportunities;
- Searchable by students and faculty of all institutions.

Other collaborations

- Task Forces on student services / marketing;
- Work on Regional Innovation Grant;
- Instructional Programs
  - Planning shared delivery of Interdisciplinary Studies BA/BS.
  - Military Science program success.

IdahoGoes

- Public Awareness Campaign
  - Print
  - Radio
  - Television
  - Billboards
  - Presentations

idaho GOES
GO. LEARN. EARN.

THIS PAGE LEFT INTENTIONALLY BLANK

SUBJECT

Idaho Comprehensive Literacy Assessment Report

APPLICABLE STATUTE, RULE, OR POLICY

Section 33-1207A Idaho Code, Teacher Preparation

BACKGROUND/DISCUSSION

The Idaho Comprehensive Literacy Assessment has been given to each Idaho prospective K-8 teacher since 2002. Included in the legislation enacted to put this assessment in place is the requirement that the Idaho State Board of Education shall report the number of K-8 preservice teachers taking and passing the assessment annually to the Legislature and the Governor. Attached is the report for 2008 as well as all previous years.

The number of students who have taken and passed the assessment is reflected in a single number. Because candidates for certification are allowed to take the various sections of the assessment more than once the specific number of students who have elected to discontinue taking the assessment or have not passed all the sections is very difficult to indentify. A passing grade is required for the institutional recommendation for certification. A copy of this report will be sent to the Governor and to the chairs of the House and Senate Education committees.

ATTACHMENTS

Attachment 1 – ICLA Report – 2002-2008 Page 3

STAFF COMMENTS AND RECOMMENDATIONS

As a requirement of 33-1207A the attached report will be sent to the Governor and the Legislature.

BOARD ACTION

This item is for informational purposes only. Any action will be at the Board's discretion.

THIS PAGE LEFT INTENTIONALLY BLANK

Number of Students Passing the Idaho Comprehensive Literacy Assessment

Fiscal /School Year	ISU	LCSC	NNU	UI	BSU	BYU Idaho	C of I	TOTAL
(July 1 - June 30)								
2008	61	20	20	45	170	212	8	536
2007	74	40	15	93	124	201	13	560
2006	63	34	22	77	120	242	6	564
2005	66	50	22	82	188	231	8	647
2004	76	39	24	77	93	209	3	521
2003	34	27	23	32	111	157	3	387
2002	28	35	22	0	93	23	0	201
								3416

THIS PAGE LEFT INTENTIONALLY BLANK

IDAHO STATE UNIVERSITY

SUBJECT

Approval of Notice of Intent: New Administrative Unit – Department of Medicine and Surgery

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section III.G

BACKGROUND/DISCUSSION

Idaho State University (ISU) proposes to organize a Department of Medicine and Surgery to house current ISU faculty and future physician faculty who have specialty and subspecialty training in fields other than Family Medicine. Currently, all ISU physician faculty on contract with ISU are administratively housed in the Department of Family Medicine. This new academic department would become a unit within the Kasiska College of Health Professions. No additional resources will be needed to develop this new academic unit. Existing contracts will be adjusted to incorporate the new structure.

Originally, the majority of physicians who were contracted faculty holding academic rank at ISU were trained in Family Medicine and assigned to ISU's Family Medicine Residency Program. In recent years the number of physician faculty at ISU has grown to include medical specialists and subspecialists in fields other than Family Medicine. For example, ISU currently has contracts with two Internists, two Obstetrician/Gynecologists, a Pediatrician and a specialist in Infectious Disease. All of these individuals hold academic rank and are eligible for promotion. These faculty and future faculty need an academic home that is more compatible with their medical training and interests.

Growth in this physician base has, in part, resulted from the development of a Hospitalist Program in collaboration with Portneuf Medical Center. The Hospitalist program provides unique training opportunities for Family Medicine Residents and significant improvements to the inpatient care given to vulnerable populations in the community. It is currently staffed with three Internal Medicine doctors, two of whom are contract ISU faculty holding academic rank. The proposed new academic unit would administer the Hospitalist program. The Hospitalist program faculty is interested in developing a Fellowship program in Hospital Medicine which would benefit Idaho by bringing physicians interested in the field to the state. The opportunity to hold faculty rank, engage in scholarly activity, and partner with the other health professionals at ISU has become a unique attraction for physicians considering a move to Eastern Idaho. Finally, a designated Department of Medicine and Surgery will increase the opportunities for medical student placements. Medical Schools prefer to work with Departments of Medicine when placing students. Medical student placements will

pave the path for medical residency applications to Idaho programs hence help Idaho recruit physicians to the state.

IMPACT

Because ISU already has the key personnel and infrastructure in place to offer this degree, no additional resources will be needed to develop this new academic unit.

ATTACHMENTS

Attachment 1 – Notice of Intent – Department of Medicine and Surgery Page 3

STAFF COMMENTS AND RECOMMENDATIONS

It is suggested that approval of the Administrative Unit-Department of Medicine & Surgery be postponed until the Medical Education subcommittee meets this summer. Because the State Board of Education's Executive Committee is creating a Medical Education Subcommittee for the purpose of reviewing and implementing the recommendations presented at the January Board meeting, it would be prudent for ISU to align this new medical unit with the findings and recommendations of this committee.

BOARD ACTION

A motion to refer the consideration of the Notice of Intent from Idaho State University to create a new Department of Medicine and Surgery to the Medical Education subcommittee for review.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

Institution Tracking No. 2008-18

ATTACHMENT 1

IDAHO STATE BOARD OF EDUCATION

ACADEMIC/PROFESSIONAL-TECHNICAL EDUCATION

NOTICE OF INTENT

To initiate a

New, Expanded, Cooperative, Discontinued, program component or Off-Campus Instructional Program or Instructional/Research Unit

Institution Submitting Proposal: Idaho State ~~Unviersity~~
Name of College, School, or Division: Kasiska College of Health Professions
Name of Department(s) or Area(s):

Indicate if this Notice of Intent (NOI) is for an Academic or Professional Technical Program
Academic X Professional - Technical ____

A New, Expanded, Cooperative, Contract, or Off-Campus Instructional Program or Administrative/Research Unit (circle one) leading to:
New Administrative Unit: Department of Medicine and Surgery
(Degree or Certificate)

Proposed Starting Date: ~~Fall 2008~~ 2009

For New Programs:

Program (i.e., degree) Title & CIP 2000

For Other Activity:

- [ ] Program Component (major/minor/option/emphasis)
- [ ] Off-Campus Activity/Resident Center
- [ ] Instructional/Research Unit
- [X] Addition/Expansion
- [ ] Discontinuance/consolidation
- [ ] Contract Program
- [ ] Other

College Dean (Institution)	Date 10/15/08	VP Research & Graduate Studies	Date
Chief Fiscal Officer (Institution)	Date 2/12/09	State Administrator, SDPTE	Date
Chief Academic Officer (Institution)	Date 2/10/09	Chief Academic Officer, OSBE	Date
President	Date 2/17/09	SBOE/OSBE Approval	Date

Before completing this form, refer to Board Policy Section III.G. Program Approval and Discontinuance.

1. Briefly describe the nature of the request e.g., is this a new program (degree, program, or certificate) or program component (e.g., new, discontinued, modified, addition to an existing program or option).

This is a request to organize a Department of Medicine and Surgery to house current and future Idaho State University (ISU) physician faculty who have specialty and subspecialty training in fields other than Family Medicine. Currently all ISU physician faculty on contract with ISU are administratively

housed in the Department of Family Medicine. This new academic department would become a unit within the Kasiska College of Health Professions. No additional resources will be needed to develop this new academic unit. Existing contracts will be adjusted to incorporate the new structure.

2. Provide a statement of need for program or a program modification. Include student and state need, demand, and employment potential. **Attach a Scope and Sequence, SDPTE Form Attachment B, for professional-technical education requests**. (Use additional sheets if necessary.)

   Originally the majority of physicians who were contracted faculty holding academic rank at ISU were trained in Family Medicine and assigned to our Family Medicine Residency Program. In recent years the number of physician faculty at ISU has grown to include medical specialists and subspecialists in fields other than Family Medicine. For example, we currently have contracts with two Internists, two Obstetrician/Gynecologists, a Pediatrician and a specialist in Infectious Disease. All of these individuals hold academic rank and are eligible for promotion. These faculty and future faculty need an academic home that is more compatible with their medical training and interests

   Growth in this physician base has, in part, resulted from our development of a Hospitalist Program in collaboration with Portneuf Medical Center. The Hospitalist program provides unique training opportunities for our Family Medicine Residents and significant improvements to the inpatient care given to vulnerable populations in our community. It is currently staffed with three Internal Medicine doctors, two of whom are contract ISU faculty holding academic rank. The proposed new academic unit would administrate the Hospitalist program. The Hospitalist program faculty are interested in developing a Fellowship program in Hospital Medicine which would benefit Idaho by bringing physicians interested in the field to the state. The opportunity to hold faculty rank, engage in scholarly activity, and partner with the other health professionals at ISU has become a unique attraction for physicians considering a move to Eastern Idaho. Finally, a designated Department of Medicine and Surgery will increase the opportunities for medical student placements. Medical Schools prefer to work with Departments of Medicine when placing students. Medical student placements will pave the path for medical residency applications to Idaho programs, hence help Idaho recruit physicians to the state.

3. Briefly describe how the institution will ensure the quality of the program (e.g., accreditation, professional societies, licensing boards, etc.).

   Until the Fellowship program in Hospital Medicine is organized, the Department of Medicine and Surgery will not confer certificates or degrees. Once the fellowship is organized, it will be governed by the American council of Graduate Medical Education (ACGME) the same body that accredits our Family Medicine Residency program. All physician faculty are and will be licensed to practice medicine in Idaho.

4. Identify similar programs offered within the state of Idaho or in the region by other colleges/universities. If the proposed request is similar to another program, provide a rationale for the duplication. This may not apply to PTE programs if workforce needs within the respective region have been established.

   ISU is the only state higher education institution with an established graduate medical education program.

Enrollment and Graduates (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 2 previous years

Institution	Relevant Enrollment Data			Number of Graduates		
	Current	Previous Year	Previous Year	Current	Previous Year	Previous Year
BSU						
CSI						
EITC						
ISU						
LCSC						
NIC						
UI						

Degrees offered by school/college or program(s) within disciplinary area under review

Institution and Degree name	Level	Specializations within the discipline (to reflect a national perspective)	Specializations offered within the degree at the institution
BSU			
CSI			
EITC			
ISU			
LCSC			
NIC			
UI			

5. Describe how this request is consistent with the State Board of Education's policy or role and mission of the institution. (i.e., centrality).

The development of a Department of Medicine and Surgery is consistent with ISU's mission as the lead institution in health related educational programs. ISU currently has a Department of Family Medicine which is housed within the Kasiska College of Health Professions.

6. Is the proposed program in the 8-year Plan? Indicate below.

Yes X No _____

If not on 8-year plan, provide a justification for adding the program.

The Hospitalist Program is on the 8-year plan; the formation of new academic units is not required to be included on the 8-year plan.

7. Resources--Faculty/Staff/Space Needs/Capital Outlay. (Use additional sheets if necessary.):

Estimated Fiscal Impact	FY	FY	FY	Total
A. Expenditures				
1. Personnel	0.00			0
2. Operating				0
3. Capital Outlay				0
4. Facilities				
TOTAL:	0.00			0
B. Source of Funds				
1. Appropriated-reallocation				
2. Appropriated – New				
3. Federal				
4. Other:				
TOTAL:	0.00			0
C. Nature of Funds				
1. Recurring *				
2. Non-recurring **				
TOTAL:	0.00			0

*** Recurring is defined as ongoing operating budget for the program, which will become of the base.**
****Non-recurring is defined as one-time funding in a fiscal year and not part of the base.**

Kasiska
College of Health Professions
Idaho State University
Linda Hatzenbuehler
Dean
David Sorensen
Assistant Dean
Linda Rankin
Assistant Dean
University Business Officer
Vivian Golightly
Suzzie Morris
Admin Asst
Joy Chivers
OSII
Development Officer
Vacant
Steve Felt
Counseling
Tony Schlel
CSED
Executive Team
Chair
Kathleen Hodges
Dental Hygiene
Jeni Loftin
Speech
Pathology
Mary Whitaker
Dept Education
Jeff Brockett
Audiology
Brian Crawford
Dental Science
IaSD
Jonathan Cree
Family Medicine
Pamela Powell
Boise
Jeff Ybarguen
IDEP
Department of
Medicine &
Surgery
Leigh Cellucci
HCA
Laura Mohnight
Dietetics
Kim McAlpine
HMS
Larry Murillo
MPH
Kelli Pland
IPH
Carol Larson
Acct Dean
Chair, School of
Nursing
Aaron Eshman
Occupational
Therapy
Alex Urbie
PT-OT
John Schroeder
PAs
Chuck Franci
Radiographic
Science

IDAHO STATE UNIVERSITY

SUBJECT

Approval of Notice of Intent: New Doctoral Program - Ph.D. in Microbiology

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section III.G

BACKGROUND/DISCUSSION

Idaho State University (ISU) proposes to create a new Ph.D. in Microbiology. The new program would be administered by the Department of Biological Sciences within the College of Arts and Sciences. This degree program is included in the Idaho State Board of Education's Eight-Year plan. With appropriate State Board of Education approvals, ISU could be prepared to start this program as early as the fall semester of 2009.

Over the past five years, Idaho State University has increased its commitment to biomedical research by adding faculty lines at ISU in the biomedical sciences. The increased "critical mass" in faculty and resources in the biomedical sciences enables the Department of Biological Sciences at ISU to provide the proposed Ph.D. in Microbiology with minimal expenditure of additional monies. Since the proposed program is already being followed as part of the Ph.D. in Biological Sciences offered in the department, minimal additional resources are required. The proposed Ph.D. in Microbiology will not require additional courses to be developed, as the faculty in the Department of Biological Sciences at Idaho State University is essentially already providing this program to their graduate students. The advantage of this degree is that it will allow those students following the more specialized and rigorous training required by the Microbiology faculty to be awarded a degree that reflects this. The creation of a Ph.D. in Microbiology at Idaho State University will provide additional educational options for students, thereby enhancing their future employment and career options.

The training of doctoral level scientists in Microbiology is quite distinct from that required for students in other disciplines in the Biological Sciences. The inability to distinguish such specialized training by offering Ph.D. students only a Ph.D. in Biology limits the ability of ISU to attract doctoral students interested in Microbiology and Biochemistry. Recent initiatives by ISU Department of Biological Sciences faculty in a number of areas related to Emerging Infectious Diseases and Extremophilic Microorganisms have led to increased interest by students in pursuing graduate studies in these research areas. The ability to offer a Ph.D. in Microbiology would enable ISU to attract a greater number of these students on a national and regional level, thus strengthening the Health Professions mission of the Department of Biological Sciences and ISU.

The additional Ph.D. students studying with the ISU faculty offering this program would conduct research that could enhance the activities of research centers at Idaho State University such as the Institute of Rural Health and the ISU Biomedical Research Institute (IBRI), as well as potentially expand and enhance collaborations with partner entities such as the Boise Veteran's Administration Medical Center and the Inland Northwest Research Alliance. Faculty strengths and interests in extremophilic microorganisms and their enzymes/natural products would also attract new Microbiology Ph.D. students interested in studying these unusual microorganisms and their environments, which are abundant in the diverse ecosystems found in Southeast Idaho and its adjacent environs.

The ability to offer a Ph.D. in Microbiology at Idaho State University would also enable Idaho institutions to retain our highly qualified and motivated students in-state for their advanced degree training, making it more likely that Idaho's 21st century workforce would consist of more native Idahoans. A Ph.D. program in Microbiology is part of the strategic plan of the Department of Biological Sciences at Idaho State University to serve the needs of Idaho for the future, and is well supported by the faculty, as well as personnel in government and industry in the state and region. Senior scientists (Dr. William Apel and Dr. Francisco Roberto) at the Idaho National Laboratory have reviewed the program favorably.

The University of Idaho (UI) currently offers a Ph.D. in Microbiology, Molecular Biology and Biochemistry. The program proposed by Idaho State University would differ from the UI program in the research emphases determined by the faculty composed of the Microbiology group in the Department of Biological Sciences at Idaho State University. Please refer to page 8 for enrollment and graduate data for both programs.

IMPACT

Because ISU already has the key courses and personnel in place to offer this degree, there will be minimal cost in establishing this program. Please see proposed budget on page 11 for specific details.

ATTACHMENTS

STAFF COMMENTS AND RECOMMENDATIONS

ISU's request to create a new Ph.D. in Microbiology is consistent with their Eight-Year Plan for Delivery of Academic Programs in the Southeast Region for 2009-2010 academic school year. While Board staff acknowledges that this program was listed in the 8-year plan, the current environment must be considered. The economic climate is not conducive to developing new terminal degrees without documentation of a critical mass, which supports economic development for Idaho.

Board staff recommends that Idaho State University proceed to the full proposal stage with the understanding that the full proposal will be reviewed through the regular program review process prior to the university moving forward with an external peer review. Staff also recommends that the full proposal include the following information: 1) additional budget detail regarding financial impact over a 3-yr. period; 2) clarification of the distinction of this curriculum from other related doctoral programs within state institutions; and 3) that opportunities for collaboration across state institutions be identified for shared courses and faculty expertise in the potential development of this new terminal degree.

BOARD ACTION

A motion to approve the intent from Idaho State University to create a new Ph.D. in Microbiology and direct the university to develop a full proposal with the understanding that the full proposal will be subject to the regular program review process prior to the execution of an external peer review. The full proposal will include additional budget detail regarding financial impact over a three-year period; clarification of the distinction of the program curriculum from other related doctoral programs within state institutions; and identification of opportunities for collaborations across state institutions for shared courses and faculty expertise.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

THIS PAGE LEFT INTENTIONALLY BLANK

Institution Tracking No. 2008-17

ATTACHMENT 1

IDAHO STATE BOARD OF EDUCATION

ACADEMIC/PROFESSIONAL-TECHNICAL EDUCATION

NOTICE OF INTENT

To initiate a

New, Expanded, Cooperative, Discontinued, program component or Off-Campus Instructional Program or Instructional/Research Unit

Institution Submitting Proposal: **Idaho State University**

Name of College, School, or Division: **Arts and Sciences**

Name of Department(s) or Area(s): **Biological Sciences (Microbiology)**

Indicate if this Notice of Intent (NOI) is for an Academic or Professional Technical Program
Academic **X** Professional - Technical _____

A New, Expanded, Cooperative, Contract, or Off-Campus Instructional Program or Administrative/Research Unit (circle one) leading to:

_____
(Degree or Certificate)

Proposed Starting Date: **Fall 2009**

For New Programs:

Ph.D. Microbiology 26.05
Program (i.e., degree) Title & CIP 2000

For Other Activity:

- ☐ Program Component (major/minor/option/emphasis)
- ☐ Off-Campus Activity/Resident Center
- ☐ Instructional/Research Unit
- ☐ Addition/Expansion
- ☐ Discontinuance/consolidation
- ☐ Contract Program
- ☐ Other

Scott Wright 11-5-08		Tom Jackson 11-06-08	
College Dean (Institution)	Date	~~VP Research &~~ Graduate Studies	Date
James A. Sletten 2/11/09			
Chief Fiscal Officer (Institution)	Date	State Administrator, SDPTE	Date
Barbara Adamick 2-11-09			
Chief Academic Officer (Institution)	Date	Chief Academic Officer, OSBE	Date
President	Date	SBOE/OSBE Approval	Date

Revised 9/6/06

Before completing this form, refer to Board Policy Section III.G. Program Approval and Discontinuance.

1. Briefly describe the nature of the request e.g., is this a new program (degree, program, or certificate) or program component (e.g., new, discontinued, modified, addition to an existing program or option).

Idaho State University proposes the creation of a new academic program which would enable the University to award a Ph.D. in Microbiology. The new program would be administered by the Department of Biological Sciences, which is an academic unit within the College of Arts and Sciences. This degree program has been included in the Idaho State Board of Education's Eight Year plan, with an implementation date of 2008. With appropriate SBOE approvals, it would be possible to start this program as early as the Fall semester of 2009. Over the past 5 years, the Idaho State University has increased its commitment to biomedical research by adding faculty lines at ISU in the biomedical sciences. The increased "critical mass" in faculty and resources at Idaho State University in the biomedical sciences over the last 5 years enables the Department of Biological Sciences at ISU to provide the proposed Ph.D. in Microbiology with minimal expenditure of additional monies by Idaho State University. Since the program proposed is already being followed as part of the Ph.D. in Biological Sciences offered in the department, minimal additional resources are required. The proposed Ph.D. in Microbiology will not require additional courses to be developed, as the faculty in the Department of Biological Sciences at Idaho State University is essentially already providing this program to our graduate students. The advantage of this degree is that it allows those students following the more specialized and rigorous training required by the Microbiology faculty to be awarded a degree that reflects this. The creation of a Ph.D. in Microbiology at Idaho State University will provide additional educational options for students, thereby enhancing their future employment and career options.

2. Provide a statement of need for program or a program modification. Include student and state need, demand, and employment potential. **Attach a Scope and Sequence, SDPTE Form Attachment B, for professional-technical education requests**. (Use additional sheets if necessary.).

The training of doctoral level scientists in Microbiology is quite distinct from that required for students in other disciplines in the Biological Sciences. The inability to distinguish such specialized training by offering Ph.D. students only a Ph.D. in Biology limits the ability of Idaho State University to attract doctoral students interested in Microbiology and Biochemistry. Recent initiatives by ISU Department of Biological Sciences faculty in a number of areas related to Emerging Infectious Diseases and Extremophilic Microorganisms have led to increased interest by students in pursuing graduate studies in these research areas. The ability to offer a Ph.D. in Microbiology would enable ISU to attract a greater number of these students on a national and regional level, thus strengthening the Health Professions mission of the Department of Biological Sciences and ISU. The additional Ph.D. students studying with the ISU faculty offering this program would conduct research that could enhance the activities of research centers at Idaho State University such as the Institute of Rural Health and the ISU Biomedical Research Institute (IBRI), as well as potentially expand and enhance collaborations with partner entities such as the Boise Veteran's Administration Medical Center and the Inland Northwest Research Alliance (INRA). Faculty strengths and interests in extremophilic microorganisms and their enzymes/natural products would also attract new Microbiology Ph.D. students interested in studying these unusual microorganisms and their environments, which are abundant in the diverse ecosystems found in Southeast Idaho and its adjacent environs.

Recent hires in the Department of Biological Sciences at ISU have strengthened the Microbiology

and Biochemistry faculty (see "Faculty Research Interests and Publications" attachment) to the point where we feel we can offer a Ph.D. in Microbiology. Using the current Ph.D. program in Biology as a guide, we have crafted a program proposal that incorporates the unique training required of Microbiologists at the Ph.D. level (see "Program Description" attachment). As the state of Idaho diversifies its economy from agriculture to a more balanced employer-base that includes biotech companies and the pharmaceutical industry, the proposed Microbiology Ph.D. program would position Idaho State University to play a key role in helping to train Idaho's workforce for the 21st century.

The ability to offer a Ph.D. in Microbiology at Idaho State University would also enable Idaho institutions to retain our highly qualified and motivated students in-state for their advanced degree training, making it more likely that Idaho's 21st century workforce would consist of more native Idahoans. A Ph.D. program in Microbiology is part of the strategic plan of the Department of Biological Sciences at Idaho State University to serve the needs of Idaho for the future, and is well-supported by the faculty, as well as personnel in government and industry in the state and region. Senior scientists (Dr. William Apel and Dr. Francisco Roberto) at the Idaho National Laboratory (INL) have reviewed the program favorably.

Comments by Dr. William Apel:

> "…I think offering a Ph.D. in microbiology is an excellent idea. Frankly, with the current almost blinding expansion of biotechnology, and the specialization that is inherent in that expansion, a Ph.D. degree in "Biology" lacks focus, and carries the stigma of a degree from a small school that does not have the resources to offer more specialized and meaningful degrees. With that said, knowing the microbiology and biochemistry faculty at ISU, I am certain ISU can offer a strong and meaningful Ph.D. in Microbiology. Such a degree would enhance your students' employment potential. Bottom line, I strongly endorse ISU offering this degree and wish you the best of luck in working with the State Board of Education to establish a Ph.D. in microbiology degree program."

Comments by Dr. Francisco Roberto:

> "…I think it's reasonable for the Biological Sciences department to consider offering a specialized PhD in microbiology, and believe that it would have benefits for your graduates primarily by expanding the potential job market available to them. While our history of hiring ISU grads reflects that it's easier to hire a BS/MS level graduate (and we definitely have more opportunities for them), we have had openings recently for PhD scientists that would have been unavailable to your students because of that requirement."

3. Briefly describe how the institution will ensure the quality of the program (e.g., accreditation, professional societies, licensing boards, etc.).

The American Society for Microbiology (ASM) is the preeminent professional society for Microbiologists not only in the USA, but internationally. The Society was founded in 1899 and has over 43,000 members worldwide, representing over 26 sub-disciplines within the field of Microbiology. ASM contains a separate division within the Society that is concerned with the education of Microbiologists. The Society publishes curriculum guidelines for undergraduate majors

in Microbiology, and the Department of Biology at ISU follows these suggested course offerings. This curriculum has been modified for use at the graduate level and is the basis of the current M.S. degree in Microbiology that the Department offers, as well as the proposed Ph.D. in Microbiology. Advanced graduate level courses in the areas detailed by the ASM curriculum guidelines as well as specialized course offerings in ISU faculty members' areas of expertise will ensure that the Microbiology Ph.D. meets the exacting standards of the American Society for Microbiology. We have already designed the curriculum for the Ph.D. program in Microbiology which includes a defined schedule of courses from our preexisting course offerings, a schedule of Written and Oral Exams, Proposal Seminar, et cetera (see "Program Description" attachment).

4. Identify similar programs offered within the state of Idaho or in the region by other colleges/universities. If the proposed request is similar to another program, provide a rationale for the duplication. This may not apply to PTE programs if workforce needs within the respective region have been established.

The University of Idaho offers a Ph.D. in Microbiology, Molecular Biology and Biochemistry. The program proposed by Idaho State University would differ from that offered by the University of Idaho in the research emphases determined by the faculty composing the Microbiology group in the Department of Biological Sciences at Idaho State University. As one example, Idaho State University currently has an active extremophile research group, in which microbial organisms occupying extreme environments are studied. Such specialized research groups will provide a very different training to the students entering the program than would be obtained at the University of Idaho (see "Faculty Research Interests and Publications" attachment).

Data presented in the table below show the estimated enrollment if a Ph.D. program in Microbiology was currently offered at Idaho State University. There would be 13 Microbiology Ph.D. students at ISU, and projected back enrollments for academic years 2007 and 2006 (12 and 11 students, respectively) indicate increasing/steady demand among recruited graduate students for this option. Enrollment numbers for a somewhat similar program at the University of Idaho for academic years 2006, 2005, and 2004 were 24, 27, and 28, respectively.

Enrollment and Graduates (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 2 previous years

Institution	Relevant Enrollment Data			Number of Graduates		
	Current	Previous Year (2007)	Previous Year (2006)	Current	Previous Year (2007)	Previous Year (2006)
BSU	NA	NA	NA	NA	NA	NA
CSI	NA	NA	NA	NA	NA	NA
EITC	NA	NA	NA	NA	NA	NA
ISU Dept. of Biological	Estimate if program in existence	Estimate if program in existence	Estimate if program in existence	Estimate if program in existence	Estimate if program in existence	Estimate if program in existence

Sciences	**13**	**12**	**11**	**0**	**5**	**2**
LCSC	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
NIC	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**
UI **Dept. of Microbiology, Molecular Biology, and Biochemistry**	**24** **(Data for 2006)**	**27** **(Data for 2005)**	**28** **(Data for 2004)**	**6** **(Data for 2006)**	**4** **(Data for 2005)**	**3** **(Data for 2004)**

Degrees offered by school/college or program(s) within disciplinary area under review

Institution and Degree name	Level	Specializations within the discipline (to reflect a national perspective)	Specializations offered within the degree at the institution
BSU			
CSI			
EITC			
ISU **Dept of Biological Sciences**	**B.S**		**Bachelor of Science in Microbiology**
	M.S.		**Master of Science in Microbiology**
	Ph.D.		**Biological Sciences**
	M.S.		**Clinical Lab Sciences**
LCSC			
NIC			
UI **Dept. of Microbiology, Molecular Biology, and Biochemistry**	**B.S.** **M.S.** **Ph.D.**		**Bachelor of Science in Microbiology** **Bachelor of Science in Molecular Biology and Biochemistry** **Bachelor of Science in Medical Technology** **Master of Science in Microbiology, Molecular Biology and Biochemistry** **Ph.D. in Microbiology, Molecular Biology and Biochemistry**

5. Describe how this request is consistent with the State Board of Education's policy or role and mission of the institution. (i.e., centrality).

Idaho State University has the "Health Professions" mission in the state of Idaho. This entails providing educational services/coursework associated with the diverse undergraduate and graduate programs at Idaho State University, as well as distance offerings to other academic units within the state. Future expansion of that mission would necessitate an expansion/enhancement of efforts by faculty to conduct research in biomedically-related areas, such as Emerging Infectious Diseases, an area where faculty at Idaho State University are expanding their influence. A core component of undergraduate and graduate education is providing opportunities for students to engage in scholarly research. Options for conducting this research at the graduate level in the field of Microbiology are currently limited at Idaho State University due to ability of the university to offer only a Master of Science degree in Microbiology. With a large number of faculty at Idaho State University currently engaged in biomedical research relating to infectious diseases and pathogenic organisms, the lack of a Ph.D.-level program in Microbiology hampers our ability to attract graduate students with biomedically-related interests. Furthermore, some of Idaho's "best and brightest" who would prefer to continue their education in Idaho find themselves forced to accept positions in Ph.D. programs in other states to meet their research needs and interests. Approval by the State Board of Education for the initiation of a Ph.D. in Microbiology at Idaho State University would support Idaho State University's health professions mission at the undergraduate and graduate levels, and would provide a boost overall to efforts by ISU faculty members to conduct vigorous research programs in biomedical areas.

6. Is the proposed program in the 8-year Plan? Indicate below.

Yes x No _____

If not on 8-year plan, provide a justification for adding the program.

7. Resources--Faculty/Staff/Space Needs/Capital Outlay. (Use additional sheets if necessary.):

Estimated Fiscal Impact	FY 09	FY 10	FY 11	Total
A. Expenditures				
1. Personnel				
2. Operating				
3. Capital Outlay	7,500	1,500	1,500	10,500
4. Facilities				
TOTAL:	7,500	1,500	1,500	10,500
B. Source of Funds				
1. Appropriated-reallocation	1,500	1,500	1,500	10,500
2. Appropriated – New				
3. Federal				
4. Other:	6,000			
TOTAL:	7,500	1,500	1,500	10,500
C. Nature of Funds				
1. Recurring *	1,500	1,500	1,500	10,500
2. Non-recurring **	6,000			
TOTAL:	10,500	1,500	1,500	10,500

*** Recurring is defined as ongoing operating budget for the program, which will become of the base.**
****Non-recurring is defined as one-time funding in a fiscal year and not part of the base.**

Budget Justification: Funding is required in year 1 ($6000) for purchase of books specific to the discipline, as well as $1500 per year reallocated for journal subscriptions.

Doctor of Philosophy in Microbiology

The degree of Doctor of Philosophy is granted for proven ability, independent investigation, and scholarly attainment in a special field. Although it is primarily a research degree and is not granted solely on the completion of a certain number of credits, there are specific course requirements that must be met. The training of a Ph.D.-level Microbiologist is based on a strong foundation in Mathematics, Chemistry, Genetics, Molecular Biology, and Biochemistry in addition to extensive coursework in the various disciplines within the field of Microbiology. This base is built upon advanced course work in the major sub-disciplines of Microbiology (Molecular Biology, Biochemistry and Physiology, Genetics, Biotechnology, Virology, Industrial and Environmental Microbiology, and Medical Microbiology) as the student focuses his/her area of interest. There is not a fixed total credit requirement for this degree. Credits for the dissertation and the research upon which it is based should comprise a substantial portion of the program and involve original work. It is understood that the research for and writing of the dissertation will require the equivalent of at least one year of full-time work.

Admission

Applicants Who Hold a Master's Degree

Application to the Ph.D. program in Microbiology requires (1) at least a 3.0 grade point average (GPA) for all upper division credits taken in the previous degree program, (2) scores in the 35th percentile or higher on the verbal and quantitative sections of the Graduate Record Exam (GRE), (3) submission of scores for the GRE Biology or Biochemistry subject area exam, and (4) completed application forms for the Graduate School and Department of Biological Sciences, including three letters of recommendation. Scores in the verbal, quantitative, and analytical sections of the GRE must be submitted before entrance can be considered. Foreign students may be accepted without GRE scores, with the requirement that they take the GRE during their first semester in residence. Individuals for whom English is a second language must meet the Graduate School minimal TOEFL score.

Applicants who do not meet the minimum GPA and/or GRE requirements may be admitted under “Conditional” status. The conditions of acceptance will be specified on the applicant's Approval for Admission to Graduate School form. In some cases, students may be required to retake the GRE during their first semester in residence. Students admitted under “Conditional” status because of low/missing GRE scores will be transferred to “Classified” status if new GRE scores that meet the minimal requirement are submitted. Failure to meet the minimum GRE standards during the first year of residence may result in expulsion from the program. Students under “Conditional” status must petition the Graduate Programs Committee for transfer to “Classified” status after a year of graduate work and successful remediation of any deficiencies in coursework or GRE scores. This petition will include a recommendation from the student's Advisory Committee signed by the major professor. Continuation in the Microbiology Ph.D. program is contingent upon approval of transfer to “Classified” status. In rare cases, the Graduate Programs Committee may grant approval for a student to remain on “Conditional” status for a second year. Any student with “Conditional” status who has not been approved for transfer to “Classified” status by the end of his/her second year will be dismissed from the program. Acceptance into the Microbiology Ph.D. program must be approved by majority vote of the Departmental Graduate Programs committee.

Applicants Who Do Not Hold a Master's Degree

For applicants who hold only a Bachelor's degree, acceptance into the Microbiology Ph.D. program requires a minimum of a 3.0 GPA for all undergraduate work, scores in the 50th percentile or higher on the verbal and quantitative sections of the GRE, and submission of scores for the GRE Biology or Biochemistry subject area exam. No waiver of GRE scores is allowed except in the case of students for whom English is a second language who receive a lower verbal GRE score; these individuals must meet the Graduate School minimal TOEFL score. The application must include three letters of recommendation. The application must be approved by majority vote of the Departmental Graduate Programs Committee.

Student in the Department's Master's program may be permitted to change to the Microbiology Ph.D. program with approval of the Graduate Programs Committee. Application for change must include 1) a letter from the student that provides a rationale for the status change and 2) a letter of support from the major professor.

Prerequisites

The following courses are prerequisites for the Microbiology Ph.D. program. The student's committee may make recommendations for meeting prerequisite requirements, but the Graduate Programs Committee must approve any substitution to the courses listed below. Any student who has not met these requirements through previous course work must take these courses as part of his/her graduate program. Coursework taken at the undergraduate level to satisfy deficiencies does not count toward the graduate degree; however, they must appear on the student's Planned Program of Study. Coursework taken at the undergraduate level to satisfy deficiencies must be taken for letter grades and the grades earned must be "C" or better. It is expected that applicants to the program will have a broad background in Biology, and will have completed coursework at the undergraduate level in the following areas:

- 1 semester of Calculus (Calculus through Multivariable Calculus recommended)
- 1 year of General Chemistry (+lab)
- 1 year of Organic Chemistry (+ lab)
- 1 year of Physics (+ lab)
- 1 semester of Quantitative Analysis, Analytical Chemistry, or Inorganic Chemistry (+ lab)
- 1 semester of Statistics
- Genetics (lab recommended)
- General Microbiology (+ lab)

Coursework deficiencies will be determined by the Graduate Programs Committee. Deficiencies will be made up in the first year of study. The Microbiology Ph.D. program will be tailored to the requirements of the student’s program of study (as determined by the student’s Advisory Committee), and will include coursework to rectify any deficiencies as determined by the Graduate Programs Committee.

Graduate Coursework in the Microbiology Ph.D. program

The intent of the Microbiology Ph.D. program is to produce scientists with a broad background in the major sub-disciplines of Microbiology, while ensuring focused study in their major field of interest. The student’s Graduate Advisory Committee will direct the student to specific course offerings within the Department and University to satisfy coursework guidelines. The three core areas in the Microbiology Ph.D. program are:

- Biochemistry, Genetics, Molecular Biology, and Physiology of Microorganisms

- Immunology, Virology, and Medical Microbiology
- Microbial Ecology and Applied, Industrial, and Environmental Microbiology

Students in the Microbiology Ph.D. program will take at least 30 credits of formal graduate coursework (at least 15 credits will be at the 600-level). The following courses are NOT to be considered part of this 30 credits of formal graduate coursework: BIOL 581-582 Independent Problems; BIOL 648 Graduate Problems; BIOL 650 Thesis; BIOL 699 Doctoral Dissertation. Six credits of courses will be taken in **each** of the three Microbiology core areas. The remaining 12 credits will be taken in any one of the three core areas or in subject areas recommended by the student's Advisory Committee. Expertise in the generation, manipulation, and analysis of gene and protein sequence data has become an expected skill set of Ph.D.-level Microbiologists. Therefore, it is recommended that students avail themselves of coursework in Bioinformatics and Phylogenetic Analysis in their coursework. It is expected that students in the Microbiology Ph.D. program will complete the majority of their coursework by the end of their 4th semester (or equivalent) in the program. Students in the Microbiology Ph.D. program will also be required to take 6 credits of Graduate Seminar in Microbiology (BIOL 691-692) and may be required to take other courses (as determined by recommendation of the student's Graduate Advisory Committee). The 6 credits of graduate seminar may be taken at any time during the student's residence in the Microbiology Ph.D. program, but it is recommended that the student start taking Graduate Seminar no later than their 5th semester (or equivalent) in the program. The specific course list for each student will be determined by the student's Graduate Advisory Committee based on the criteria outlined in this document. Students who have already received an M.S. degree may transfer 9 credits of graduate level work, providing a grade of "B" or higher was earned. Transfer of credits is subject to approval by the Graduate Programs Committee. Specific course requirements include:

BIOS 691-692 Graduate Seminar	6 credits
Microbiology Core Area Courses	18 credits (6 credits in each area)
Advisory Committee recommended Courses	12 credits minimum

Residency Requirements

The equivalent of least two years of full-time study is required. Part of the work may be completed elsewhere with the approval of a student's Advisory Committee, but two consecutive regular semesters of full-time study must be taken in residence at this university.

Advisory Committee

The student's Advisory Committee will consist of (at least) three additional members of the graduate faculty who are chosen by the student in consultation with the major professor. It is the student's responsibility to contact members of the faculty to ascertain their willingness to serve. The Advisory Committee may include individuals from other departments or persons from outside the University who hold affiliate rank in the Department, with the approval of the Dean of Graduate Studies, but the majority of any committee must consist of regular departmental faculty.

The final member of the student's Advisory Committee is a Graduate Faculty Representative (GFR) from outside the Department who is appointed by the Dean of Graduate Studies. The Dean will automatically appoint a GFR to participate in the defense of the dissertation if one has not been appointed before that time. However, it has been traditional for the GFR to be an active member of the Advisory Committee who participated in committee meetings and the Comprehensive Examination. In such cases, the student

must submit a request in writing to the Dean of Graduate Studies that a particular individual be appointed. The GFR must be a member of the Graduate Faculty of Idaho State University.

Comprehensive Examination

Before submission of the final program of study, the student must pass a Comprehensive Examination intended to test his/her knowledge of the major and minor fields of study. The student will be admitted to this examination after completion of the majority of the course requirements and when the student is considered by his/her Advisory Committee to be prepared adequately in the major and minor fields. This is to be interpreted as allowing the student to take the Comprehensive Exam, even though one or two courses remain to be taken for the completion of the student's program. The Comprehensive Examination should be taken following the 4th semester (or equivalent) of residence in the Microbiology Ph.D. program, and prior to the start of the student's 5th semester (or equivalent) in the program. Normally, this means that the student would take the Comprehensive Exam sometime during the summer between their 2nd and 3rd years in the Microbiology Ph.D. program. Several months (3 to 6) prior to the intended date for examination, the student should meet with his/her Advisory Committee to seek approval to schedule the exam. If approval is given, the student may at that time ascertain from the committee which topical areas will be covered and which committee member will be responsible for each. Students should meet individually with committee members to determine more specifically what materials will be pertinent and how to prepare for the exam. The examination will consist of a written and an oral portion. Both portions must be passed satisfactorily in order to complete the comprehensive requirements.

The written portion of the Comprehensive Exam should not be less than 25 hours nor more than 40 hours of actual writing time. Normally the written exams will be completed within the span of one week. The written portion of the Comprehensive Examination generally will involve the student applying the knowledge gained through graduate coursework and readings suggested by the Advisory Committee. The examination will consist of five sections, each meant to be answered by a five-hour essay. The specific topic areas covered will be determined by the student's Advisory Committee. Grading on the written portion will be on a Pass/Fail basis with four of the five sections graded satisfactory required for a Pass. If the student fails two or more sections of the written portion of the exam, the student's Advisory Committee will convene to determine if the student will be allowed to remain in the program. The student's Advisory Committee may recommend one of three options: dismissal from the program; transfer from the Microbiology Ph.D. program to the Microbiology M.S. program; or re-examination of the failed sections of the written exam. Failed sections may be repeated once, at a time designated by the student's Advisory Committee, but within a year of the original examination. If a student has not passed all the written sections after repeating the failed sections once, that student will be dismissed from the program. The completed and graded written portion of the Comprehensive Exam is to be deposited in the student's department file.

The purpose of the oral portion of the examination is to provide an opportunity to clarify and explore further implications of the written examination as well as to present the student with new questions in the same general subject areas as those covered by the written exams, but it can also cover other areas that are relevant to the student's graduate program. The oral portions should not be given until after the written examination has been evaluated by all of the committee members, but no later than two weeks after completion of the written portion. The student must pass the written portion of the Comprehensive Exam prior to taking the oral portion of the Comprehensive Exam. The oral exam must be passed by simple majority vote of the Advisory Committee. Once a student has passed both the written and oral portions of the Comprehensive Exam, the student will be admitted to Candidacy in the Microbiology Ph.D. program. When the student has passed both written and oral portions of the Comprehensive Exam, the Advisory Committee should finalize and approve the student's Final Program of Study. The Advisory Committee

may recommend additional coursework to strengthen the student's background in areas in which the student was considered weak. In case of failure, the student may be allowed to retake all or part of the oral examination at the discretion of his/her Advisory Committee. If a student fails the oral exam a second time, that student will be dismissed from the program.

Research Proposal and Seminar

Students pursuing the Microbiology Ph.D. are required to write a Research Proposal and present a Seminar based on the Research Proposal to the Department of Biological Sciences prior to the end of their 5th semester (or equivalent) in the program. The purposes of Research Proposal and Seminar are to assess the student's potential for graduate study at the doctoral level, to determine areas in which the student shows strength or weakness, and to assess the student's ability to assimilate, evaluate, and synthesize subject matter. The format of the Research Proposal will follow the guidelines for an NSF grant or comparable NIH proposal. The proposal will be prepared with the same care and in the same detail that one would expect to find in a proposal submitted to a national-level funding agency. It is expected that the student and his/her advisor will submit the proposal for funding to the relevant agency to fund the student's dissertation research. The proposal will include:

- survey of the literature to develop a rationale for the research

- statement of the problem(s) or hypothesis(es) to be addressed

- detailed description of methods including, if appropriate, the experimental approach and planned statistical analyses

- preliminary date (optional, but highly encouraged)

- time line

- bibliography

- budget

When the research proposal has been approved by the major professor and the student's Advisory Committee, the student will present a one-hour seminar on the proposed research to the Department. This presentation will occur no later than the end of the student's 5th semester (or equivalent) in residence. Immediately after the seminar, the student will convene a meeting with his/her Advisory Committee to review and critique the Research Proposal and Seminar.

Doctoral Dissertation

Every student working toward the Microbiology Ph.D. degree must submit a dissertation embodying the results of original and creative research. The dissertation must demonstrate the student's ability in independent investigation and must be a contribution to scientific knowledge. It must display mastery of the literature of the subject field and must demonstrate an organized, coherent development of ideas, with a clear exposition of results and a creative discussion of the conclusions. Students may register for dissertation credit only after completion of all formal course work.

After the dissertation, in substantially final form, has been approved for format and content by the major professor, and not later than two weeks before the date of the final examination, the student must personally deliver a copy of the dissertation to each member of the Advisory Committee.

Final Examination

The final examination of the dissertation will be conducted by the student's Advisory Committee including the GFR. The final examination must be completed at least two weeks before the date set for the commencement exercises at which the student expects to obtain a degree. Students are required to give a departmental seminar on the dissertation immediately preceding the final examination. The examination is concerned primarily with the student's research as embodied in the dissertation, but it may be broader and extend over fields of study related to the dissertation. The final examination is entirely oral and is open to faculty invited by the advisor, Department Chair, or Dean of Graduate Studies. Questions may be asked by committee members and those visitors specifically invited to do so by mutual agreement of the student's Advisory Committee and the Dean of Graduate Studies. A majority of the examining committee must approve the dissertation and the final examination.

Master of Science in Microbiology

The M.S. programs require a substantial, original research project that culminates in a thesis, a minimum of 30 credits (including research and thesis) earned in graduate courses and seminars, and expertise in core conceptual areas of the major sub-disciplines of Microbiology (Molecular Biology, Biochemistry and Physiology, Genetics, Biotechnology, Virology, Industrial and Environmental Microbiology, and Medical Microbiology).

Admission

Acceptance to the Microbiology M.S. program requires that a faculty member agree to serve as the candidate's advisor. Candidates must have at least a 3.0 GPA for all upper division credits taken in the previous degree program. Scores in the verbal, quantitative, and analytical portions of the GRE must be submitted; scores in the 35th percentile or higher are required on the verbal and quantitative portions of the GRE. If either the GPA or GRE requirement is not met, the Department may choose to admit the candidate to “Conditional” status.

Prerequisites

The following courses are prerequisites for the Microbiology M.S. program. The student's committee may make recommendations for meeting prerequisite requirements, but the Graduate Programs Committee must approve any substitution to the courses listed below. Any student who has not met these requirements through previous course work must take these courses as part of his/her graduate program. Coursework taken at the undergraduate level to satisfy deficiencies do not count toward the graduate degree; however, they must appear on the student's Planned Program of Study. Coursework taken at the undergraduate level to satisfy deficiencies must be taken for letter grades and the grades earned must be "C" or better. It is expected that applicants to the program will have a broad background in Biology, and will have completed coursework at the undergraduate level in the following areas:

- 1 semester of Calculus (Calculus through Multivariable Calculus recommended)
- 1 year of General Chemistry (+lab)
- 1 year of Organic Chemistry (+ lab)

- 1 year of Physics (+ lab)
- 1 semester of Quantitative Analysis, Analytical Chemistry, or Inorganic Chemistry (+ lab)
- 1 semester of Statistics
- Genetics (lab recommended)
- General Microbiology (+ lab)

Coursework deficiencies will be determined by the Graduate Programs Committee. Deficiencies will be made up in the first year of study. The Microbiology M.S. program will be tailored to the requirements of the student's program of study (as determined by the student's Advisory Committee), and will include coursework to rectify any deficiencies as determined by the Graduate Programs Committee.

Graduate Coursework in the Microbiology M.S. program

The intent of the Microbiology M.S. program is to produce scientists with a broad background in the major sub-disciplines of Microbiology, while ensuring focused study in their major field of interest. The student's Graduate Advisory Committee will direct the student to specific course offerings within the Department and University to satisfy coursework guidelines. The three core areas in the Microbiology M.S. program are:

- Biochemistry, Genetics, Molecular Biology, and Physiology of Microorganisms
- Immunology, Virology, and Medical Microbiology
- Microbial Ecology and Applied, Industrial, and Environmental Microbiology

Students in the Microbiology M.S. program will take at least 17 credits of graduate coursework (at least 9 credits will be at the 600-level). Three credits of courses will be taken in each of the three Microbiology core areas (as recommended by the student's Graduate Advisory Committee). The remaining 8 credits may be taken in any of the three core areas or in subject areas recommended by the student's Advisory Committee. During the Spring semester of their first year in the program, students in the Microbiology M.S. program are required to take BIOL 691 Thesis Proposal Seminar, during which they will present their research proposal in a public forum. Students in the Microbiology M.S. program will also be required to take 2 credits of Graduate Seminar in Microbiology (BIOL 691-692) and may be required to take other courses (as determined by recommendation of the student's Graduate Advisory Committee). The specific course list for each student will be determined by the student's Graduate Advisory Committee based on the criteria outlined in this document. Thirty graduate credits approved by the Graduate Programs Committee and the Graduate School are required to complete the Microbiology M.S. degree program. At least 15 of these credit hours must be earned at the 600 level. Students may take an unlimited number of credits of BIOS 648 and BIOS 650, however only 4 credits of BIOS 648 and 6 credits of BIOS 650 may be counted towards the required 30 credits. Specific course requirements include:

BIOL 691 M.S. Thesis Proposal Seminar	1 credit
BIOS 691-692 Graduate Seminar	2 credits
Microbiology Core Area Courses	9 credits
Advisory Committee recommended Courses	8 credits minimum
BIOS 648 Graduate Problems	1-4 credits
BIOS 650 Thesis	1-6 credits

Residency Requirements

The equivalent of least two years of full-time study is required. Part of the work may be completed elsewhere with the approval of a student's Advisory Committee, but two consecutive regular semesters of full-time study must be taken in residence at this university.

Courses qualifying for credit in each Microbiology core area are:

Biochemistry, Genetics, Molecular Biology, and Physiology of Microorganisms

Course #	Course Title	# Credits
BIOL 511k	Molecular Biology Lab Techniques	3 cr
BIOL 534	Microbial Diversity	3 cr
BIOL 545	Biochemistry I	3 cr
BIOL 547	Biochemistry II	3 cr
BIOL 548	Advanced Experimental Biochemistry	2 cr
BIOL 561	Advanced Genetics	3 cr
BIOL 610	Principles of Molecular Biology	3 cr
BIOL 621	Advanced Methods in Microbiology	3 cr
BIOL 633	Advanced Microbial Physiology	3 cr
BIOL 634	Intermediary Metabolism	3 cr
BIOL 636	Experimental Intermediary Metabolism	2 cr
BIOL 659	Advanced Studies in Genetics	2-6 cr
BIOL 660	Selected Topics in Biochemistry	3 cr
BIOL 599	Environmental Biotechnology	3 cr
BIOL 699	Microbial Biochemistry	3 cr
BIOL 599	Directed Evolution	3 cr
BIOL 599	Molecular Biotechnology	3 cr

Immunology, Virology, and Medical Microbiology

Course #	Course Title	# Credits
BIOL 511k	Molecular Biology Lab Techniques	3 cr
BIOL 554	Advanced Immunology	3 cr
BIOL 561	Advanced Genetics	3 cr
BIOL 566	Medical Mycology	3 cr
BIOL 641	Advanced Topics in Immunology/Immunohematology	1-4 cr
BIOL 675	Advanced Bacterial Virology	3 cr
BIOL 676	Advanced Animal Virology	3 cr
BIOL 699	Microbial Biochemistry	3 cr

Microbial Ecology and Applied, Industrial, and Environmental Microbiology

Course #	Course Title	# Credits
BIOL 511k	Molecular Biology Lab Techniques	3 cr
BIOL 534	Microbial Diversity	3 cr
BIOL 573	Industrial Microbiology	4 cr
BIOL 623	Soil and Ground Water Bioremediation	3 cr
BIOL 624	Microbial Ecology	3 cr
BIOL 599	Environmental Biotechnology	3 cr
BIOL 599	Molecular Biotechnology	3 cr

All Microbiology Graduate Courses

BIOL 511k	Molecular Biology Lab Techniques	3 cr S
BIOL 533	Microbial Physiology	3 cr F

BIOL 534	Microbial Diversity	3 cr S
BIOL 545	Biochemistry I	3 cr F
BIOL 547	Biochemistry II	3 cr S
BIOL 548	Advanced Experimental Biochemistry	2 cr S
BIOL 551	Immunology	3 cr F
BIOL 554	Advanced Immunology	3 cr F
BIOL 555	Pathogenic Microbiology	3 cr S
BIOL 561	Advanced Genetics	3 cr OS
BIOL 565	Microbial Genetics	3 cr S
BIOL 566	Medical Mycology	3 cr S
BIOL 567	Microbial Genetics Laboratory	l cr S
BIOL 569	Special Topics in Microbiology	1-4 cr
BIOL 573	Industrial Microbiology	4 cr ES
BIOL 575	General Virology	3 cr F
BIOL 577	Bacterial Virology Laboratory	1 cr S
BIOL 578	Animal Virology Laboratory	1 cr F
BIOL 581	Independent Problems	1-4 cr/semester
BIOL 582	Independent Problems	1-4 cr/semester
BIOL 605	Biometry	4 cr OS
BIOL 606	Scientific Writing	3 cr OF
BIOL 610	Principles of Molecular Biology	3 cr F
BIOL 621	Advanced Methods in Microbiology	3 cr S
BIOL 623	Soil and Ground Water Bioremediation	3 cr OS
BIOL 624	Microbial Ecology	3 cr AS
BIOL 633	Advanced Microbial Physiology	3 cr OS
BIOL 634	Intermediary Metabolism	3 cr IR
BIOL 636	Experimental Intermediary Metabolism	2 cr IR
BIOL 641	Advanced Topics in Immunology/Immunohematology	1-4 cr
BIOL 648	Graduate Problems	1-9 cr/semester
BIOL 650	Thesis	1-6 cr/semester
BIOL 659	Advanced Studies in Genetics	2-6 cr IR
BIOL 660	Selected Topics in Biochemistry	3 cr IR
BIOL 670	Selected Topics in Microbiology	1-4 cr S
BIOL 675	Advanced Bacterial Virology	3 cr S
BIOL 676	Advanced Animal Virology	3 cr S
BIOL 691	Seminar	1 cr F
BIOL 692	Seminar	1 cr S
BIOL 699	Doctoral Dissertation	1-9 cr/semester
BIOL 599	Environmental Biotechnology	3 cr F
BIOL 599	Directed Evolution	3 cr AS
BIOL 599	Molecular Biotechnology	3 cr AS
BIOL 599	Advanced Molecular Biology Lab Techniques	3 cr AS
BIOL 699	Microbial Biochemistry	3 cr AS

Microbiology Faculty Current and Pending Support

Current:

CAES grant: Electricity generation from waste using microbial fuel cells 2007-2008. $50,000. (CoPI: **Shields**)

Idaho State Board of Education: Development of an oral delivery system for DNA plasmid vaccines in rainbow trout. $548,300 2 years, 2008-2009. (CoPI: **Shields, Sheridan**)

NASA: The Radio-Protective Effects of Salt Crystal Formation in an Extreme Halophile 3/15/2007-3/14/2009 $30,000 (PI: **Evilia**; CoPI: **DeVeaux**)

Idaho State Board of Education: Development of Dye-Sensitized Solar Cells (DSSCs) Incorporating Novel Synthetic and Natural Dyes 1/22/2008-6/30/2009 $75,000 (CoPI: **Evilia**)

DoD: Small Accelerators and Detection Systems for Homeland Defense and National Security Applications. 2008-2010, $2,000,000 (CoPI: **DeVeaux**)

Pfizer, Inc: Toxin production in methicillin-resistant *Staphylococcus aureus (MRSA)*: The role of cell cycle, PBPs, beta lactam antibiotics and protein synthesis inhibitors. 08/01/2006 – 07/31/2008 (CoPI: **Ma**)

Oak Ridge National Laboratory-University of Tennessee-Battelle. Probing molecular interaction between microbial-cell protein and mineral surfaces with neutrons. $25,000. 2006-2008 (CoPI: **Magnuson**).

DOE-Basic Energy Sciences: Redox interactions of cytochromes and bacteria with oxide surfaces: Probing redox-linked conformational change. $271,468. 2006-2009 (PI: **Magnuson**).

NSF-Research in Biogeosciences. Collaborative Research: Redox metalloproteins and conformational gating in electron transfer to ferric minerals. $85,328. 2004-2008 (PI: **Magnuson**).

NSF: UMEB: Undergraduate Training in Ecological and Evolutionary Analyses of Micro and Macro Systems. $401,068. 9/1/2003-8/31/2008 (CoPI: **Sheridan**)

Pending:

CAES-INL: Development of Lignocellulosic Ethanol Production Potential in Idaho. $90,000. (CoPI: **Magnuson**).

NSF: Environmental Adaptations of Extremophilic Enzymes $590,510 (PI: **Evilia**)

NIH: Antigenic characterization of *Blastomyces dermatitidis* (R-15) $178,000 (CoPI: **Scalarone**)

NSF Physics of Living Systems, "Collaborative Research: Determining physiological limits to stress using accelerator-based radiation" $443,653. (PI: **DeVeaux**; CoPI: **Evilia**)

NASA Astrobiology Institute, "Life in extremis: within and beyond the Solar System" $5,119,254; (Collaborator: **DeVeaux**)

DoD: Security Solutions from Life in Extreme Environments Center (SSLEEC) $6,000,000. (PI: **DeVeaux**, CoPIs: **Evilia, Sheridan, Shields**)

NSF: GSTEP: Genomic Sequencing Training and Education Program $682,160 (PI: **Sheridan**; CoPIs: **DeVeaux, Evilia, Shields**).

DoD: Small Accelerators and Detection Systems for Homeland Defense and National Security Applications. 2008-2010, $1,600,000 (CoPI: **DeVeaux**)

Faculty Members in Microbiology, Research Areas and Recent Publications:

Linda C. DeVeaux
Associate Professor, Department of Biological Sciences
Responses of microorganisms to extremely high doses of ionizing radiation. General stress response mechanisms in bacteria and archaea. Adaptation to extreme conditions.
(17-21, 43)

Caryn M. Evilia
Assistant Professor, Department of Chemistry
Protein Structure and Function, Nucleic Acid Structure and Function, Protein Adaptation to Extreme Environments, Nucleic acid adaptation to Extreme Environments.
(11-13, 22, 23, 33, 37)

Yongsheng Ma
Assistant Professor, Department of Biological Sciences
Gene regulation in both eukaryotic and prokaryotic systems; specifically, localization of gene promoters, identification of requisite transcription factors, and elucidation of the mechanisms through which gene expression is regulated.
(3, 8, 9, 29, 32, 38-40, 57)

Timothy S. Magnuson
Associate Professor, Department of Biological Sciences
Biochemistry, Physiology, and Genomics of Metal- and Mineral-Transforming Microbes; Bioenergy and Biofuels; Microbial Ecophysiology of Extreme Environments; Development of New Methods in Microbial Ecology
(7, 15, 16, 24, 31, 34, 36, 41)

Gene M. Scalarone
Professor, Department of Biological Sciences
Studies on fungal immunology: Production and evaluation of antigenic reagents , including purification and characterization of the immunoreactive components of the systemic fungal organisms. Development of improved immunoassays for the clinical diagnosis of blastomycosis (ELISA methods plus studies on delayed dermal hypersensitivity). Comparative studies on isolates of *Blastomyces dermatitidis* from various geographical regions of the United States and other countries.
(1, 2, 4-6, 10, 46, 48, 54, 55)

Peter P. Sheridan
Associate Professor, Department of Biological Sciences
Evolution of Protein Structure and Function, Molecular Biology of Adaptation to Extreme Environments, Biogeochemistry of Novel Prokaryotic Isolates, Microbial Molecular

Biology, Microbial Diversity and Evolution of Prokaryotes, Detection of Microorganisms in the Environment, Emerging Infectious Diseases.
(14, 25-27, 30, 35, 42, 44, 45, 49-53, 56)

Malcolm S. Shields
Associate Professor, Department of Biological Sciences
The evolution, diversity and environmental role of bacterial toxins; bacterial generation of electricity in Microbial Fuel Cells; ultrasonic and ultraviolet treatment methods for water disinfection systems; construction and delivery systems for fish genetic-vaccine vectors; the role of gene products in the developmental cycle of *Dictyostelium* using RNAi and genetic knockout, monitoring methods for DNA from environmental and low concentration samples
(26, 28, 35, 47, 56)

Vern D. Winston
Professor, Department of Biological Sciences
Evolution of fish viruses
(33)

Recent Publications, 2000-Present

1. **Abuodeh, R. O., E. M. Chester, and G. M. Scalarone.** 2004. Comparative serological evaluation of 10 Blastomyces dermatitidis yeast phase lysate antigens from different sources. Mycoses **47:**143-9.
2. **Abuodeh, R. O., J. N. Galgiani, and G. M. Scalarone.** 2002. Molecular approaches to the study of Coccidioides immitis. Int J Med Microbiol **292:**373-80.
3. **Aldape, M. J., A. E. Bryant, Y. Ma, and D. L. Stevens.** 2007. The leukemoid reaction in Clostridium sordellii infection: neuraminidase induction of promyelocytic cell proliferation. J Infect Dis **195:**1838-45.
4. **Axtell, R. C., and G. M. Scalarone.** 2002. Serological differences in three Blastomyces dermatitidis strains. Mycoses **45:**437-42.
5. **Axtell, R. C., and G. M. Scalarone.** 2002. Serological differences in two Blastomyces dermatitidis isolates from different geographical regions of North America. Mycopathologia **153:**141-4.
6. **Bono, J. L., B. Jaber, M. A. Fisher, R. O. Abuodeh, E. O'Leary-Jepson, G. M. Scalarone, and L. H. Smith, Jr.** 2001. Genetic diversity and transcriptional analysis of the bys1 gene from Blastomyces dermatitidis. Mycopathologia **152:**113-23.
7. **Briggs, B., T. Mitton, R. Smith, and T. S. Magnuson.** 2008. Using sediment batteries to demonstrate cellular respiration. Amer. Biol. Teacher **in press**.
8. **Bryant, A. E., Y. Ma, S. M. Hayes-Schroer, C. R. Bayer, and D. L. Stevens.** Group A streptococcus elicits C-C chemokine gene expression in human skeletal muscle cells. Infect. Immun. **Submitted**.

9. **Bryant, A. E., Y. Ma, D. B. Salmi, S. M. Hayes-Schroer, E. McIndoo, M. J. Aldape, and D. L. Stevens.** 2008. Regulation of the bi-cistronic genes speB/prsA and nga/slo in Streptococcus pyogenes by a novel locus (vfer). J Bacteriol **in press**.
10. **Chester, E. M., R. C. Axtell, and G. M. Scalarone.** 2003. Blastomyces dermatitidis lysate antigens: antibody detection in serial serum specimens from dogs with blastomycosis. Mycopathologia **156:**289-94.
11. **Christian, T., C. Evilia, and Y. M. Hou.** 2006. Catalysis by the second class of tRNA(m1G37) methyl transferase requires a conserved proline. Biochemistry **45:**7463-73.
12. **Christian, T., C. Evilia, S. Williams, and Y. M. Hou.** 2004. Distinct origins of tRNA(m1G37) methyltransferase. J Mol Biol **339:**707-19.
13. **Christian, T., R. S. Lipman, C. Evilia, and Y. M. Hou.** 2000. Alternative design of a tRNA core for aminoacylation. J Mol Biol **303:**503-14.
14. **Coker, J. A., P. P. Sheridan, J. Loveland-Curtze, K. R. Gutshall, A. J. Auman, and J. E. Brenchley.** 2003. Biochemical characterization of a beta-galactosidase with a low temperature optimum obtained from an Antarctic arthrobacter isolate. J Bacteriol **185:**5473-82.
15. **Connon, S. A., A. K. Koski, A. L. Neal, S. A. Wood, and T. S. Magnuson.** 2008. Ecophysiology and geochemistry of microbial arsenic oxidation within a high arsenic, circumneutral hot spring system of the Alvord Desert. FEMS Microbiol Ecol **64:**117-28.
16. **Cummings, D. E., S. Fendorf, N. Singh, R. K. Sani, B. M. Peyton, and T. S. Magnuson.** 2007. Reduction of Cr(VI) under acidic conditions by the facultative Fe(lll)-reducing bacterium Acidiphilium cryptum. Environ Sci Technol **41:**146-52.
17. **DeVeaux, L. C.** 2008. Radiation-Induced Bystander Effects, p. 323-344. *In* W.-Y. Tan and L. Hanin (ed.), Handbook of Cancer Models with Applications, vol. 9. World Scientific Publishing Co., Singapore.
18. **DeVeaux, L. C., L. S. Durtschi, J. G. Case, and D. P. Wells.** 2006. Bystander effects in unicellular organisms. Mutat Res **597:**78-86.
19. **DeVeaux, L. C., J. A. Muller, J. Smith, J. Petrisko, D. P. Wells, and S. DasSarma.** 2007. Extremely Radiation-Resistant Mutants of a Halophilic Archaeon with Increased Single-Stranded DNA-Binding Protein (RPA) Gene Expression. Radiat Res **168:**507-14.
20. **DeVeaux, L. C., J. R. Smith, S. Hobdey, E. C. Spindler, D. P. Wells, C. Frandsen, T. Webb, M. A. Mestari, and W. Beezhold.** 2007. Effect of Electron Beam Dose Rate on Microbial Survival. Proceedings of the Eighth International Topical Meeting on Nuclear Applications and Utilization of Accelerators:388-393.
21. **DeVeaux, L. C., D. P. Wells, A. Hunt, T. Webb, W. Beezhold, and J. F. Harmon.** 2006. Accelerator-based radiation sources for next-generation radiobiological research. Nuclear Instruments & Methods in Physics Research section A **562:**981-984.
22. **Evilia, C., and Y. M. Hou.** 2006. Acquisition of an insertion peptide for efficient aminoacylation by a halophile tRNA synthetase. Biochemistry **45:**6835-45.
23. **Evilia, C., X. Ming, S. DasSarma, and Y. M. Hou.** 2003. Aminoacylation of an unusual tRNA(Cys) from an extreme halophile. Rna **9:**794-801.
24. **Ferris, M. J., T. S. Magnuson, J. A. Fagg, R. Thar, M. Kuhl, K. B. Sheehan, and J. M. Henson.** 2003. Microbially mediated sulphide production in a thermal, acidic algal mat community in Yellowstone National Park. Environ Microbiol **5:**954-60.
25. **Germino, M. J., N. J. Hasselquist, T. McGonigle, W. K. Smith, and P. P. Sheridan.** 2006. Colonization of conifer seedling roots by fungal mycelium in an alpine-treeline ecotone: Relationships to microsite, developmental stage, and ecophysiology of seedlings. Canadian Journal of Forest Research **36:**901-909.
26. **Gerrish, R. S., J. E. Lee, J. Reed, J. Williams, L. D. Farrell, K. M. Spiegel, P. P. Sheridan, and M. S. Shields.** 2007. PCR versus hybridization for detecting virulence genes of enterohemorrhagic Escherichia coli. Emerg Infect Dis **13:**1253-5.

27. **Gresham, T. L. T., P. P. Sheridan, M. E. Watwood, Y. Fujita, and F. S. Colwell.** 2007. Design and Validation of ureC-based Primers for Groundwater Detection of Urea-Hydrolyzing Bacteria. Geomicrobiology Journal **24:**353-364.
28. **Grunwald, A. G., and M. S. Shields.** 2001. Plasmid purification using membrane-based anion-exchange chromatography. Anal Biochem **296:**138-41.
29. **Hamilton, S. M., A. E. Bryant, K. C. Carroll, V. Lockary, Y. Ma, E. McIndoo, L. G. Miller, F. Perdreau-Remington, J. Pullman, G. F. Risi, D. B. Salmi, and D. L. Stevens.** 2007. In vitro production of panton-valentine leukocidin among strains of methicillin-resistant Staphylococcus aureus causing diverse infections. Clin Infect Dis **45:**1550-8.
30. **Horton, R. N., W. A. Apel, V. S. Thompson, and P. P. Sheridan.** 2006. Low temperature reduction of hexavalent chromium by a microbial enrichment consortium and a novel strain of Arthrobacter aurescens. BMC Microbiol **6:**5.
31. **Kahre, N., D. M. Lovelace, C. M. Eggleston, M. W. Swenson, and T. S. Magnuson.** 2006. Redox-linked conformation change and electron transfer between monoheme c-type cytochromes and oxides. Geochim. Cosmochim. Acta **70:**4332-4342.
32. **Kastl, S. P., W. S. Speidl, C. Kaun, K. M. Katsaros, G. Rega, T. Afonyushkin, V. N. Bochkov, P. Valent, A. Assadian, G. W. Hagmueller, M. Hoeth, R. de Martin, Y. Ma, G. Maurer, K. Huber, and J. Wojta.** 2008. In human macrophages the complement component C5a induces the expression of oncostatin M via AP-1 activation. Arterioscler Thromb Vasc Biol **28:**498-503.
33. **LaPatra, S. E., C. Evilia, and V. Winston.** 2008. Positively selected sites on the surface glycoprotein (G) of infectious hematopoietic necrosis virus. J Gen Virol **89:**703-8.
34. **Ledbetter, R. N., S. A. Connon, A. L. Neal, A. Dohnalkova, and T. S. Magnuson.** 2007. Biogenic mineral production by a novel arsenic-metabolizing thermophilic bacterium from the Alvord Basin, Oregon. Appl Environ Microbiol **73:**5928-36.
35. **Lee, J. E., J. Reed, M. S. Shields, K. M. Spiegel, L. D. Farrell, and P. P. Sheridan.** 2007. Phylogenetic analysis of Shiga toxin 1 and Shiga toxin 2 genes associated with disease outbreaks. BMC Microbiol **7:**109.
36. **Lee, M. H., J. L. Keams, D. W. Helzer, O. P. Leiser, M. A. Ochoa, S. A. Connon, and T. S. Magnuson.** 2007. Characterization of viral and prokaryotic communities in Alvord Desert Hot Springs, Oregon. Aqua. Microb. Ecol. **48:**19-26.
37. **Lipman, R. S., J. Chen, C. Evilia, O. Vitseva, and Y. M. Hou.** 2003. Association of an aminoacyl-tRNA synthetase with a putative metabolic protein in archaea. Biochemistry **42:**7487-96.
38. **Ma, Y., A. E. Bryant, D. B. Salmi, S. M. Hayes-Schroer, E. McIndoo, M. J. Aldape, and D. L. Stevens.** 2006. Identification and characterization of bicistronic speB and prsA gene expression in the group A Streptococcus. J Bacteriol **188:**7626-34.
39. **Ma, Y., A. E. Bryant, and D. L. Stevens.** Chloride down-regulates GAS ropB expression. **in preparation.**
40. **Ma, Y., A. E. Bryant, and D. L. Stevens.** Cloning and Characterization of a novel gene vfr from GAS. **in preparation.**
41. **Magnuson, T. S., A. L. Neal, and G. G. Geesey.** 2004. Combining in situ reverse transcriptase polymerase chain reaction, optical microscopy, and X-ray photoelectron spectroscopy to investigate mineral surface-associated microbial activities. Microb Ecol **48:**578-88.
42. **Miteva, V. I., P. P. Sheridan, and J. E. Brenchley.** 2004. Phylogenetic and physiological diversity of microorganisms isolated from a deep greenland glacier ice core. Appl Environ Microbiol **70:**202-13.
43. **Petrisko, J. E., S. Hobdey, B. Pierson, J. Downey, L. C. DeVeaux, and J. Battista.** 2008. Persistence as a survival mechanism in *Deinococcus radiodurans*. in preparation.
44. **Petrisko, J. E., C. A. Pearl, D. S. Pilliod, P. P. Sheridan, C. F. Williams, C. R. Peterson, and R. B. Bury.** 2008. Saprolegniaceae identified on amphibian eggs throughout the Pacific

Northwest, USA, by internal transcribed spacer sequences and phylogenetic analysis. Mycologia **100:**171-80.

45. **Reed, D. W., Y. Fujita, M. E. Delwiche, D. B. Blackwelder, P. P. Sheridan, T. Uchida, and F. S. Colwell.** 2002. Microbial communities from methane hydrate-bearing deep marine sediments in a forearc basin. Appl Environ Microbiol **68:**3759-70.
46. **Roomiany, P. L., R. C. Axtell, and G. M. Scalarone.** 2002. Comparison of seven Blastomyces dermatitidis antigens for the detection of antibodies in humans with occupationally acquired blastomycosis. Mycoses **45:**282-6.
47. **Sato, C. C., R. G. Marginez, M. S. Shields, A. Perez, and M. Schoen.** 2007. Characterization of bacterial growth in single-chamber microbial fuel cell. International Journal of Environment and Waste Management **in press**.
48. **Sestero, C. M., and G. M. Scalarone.** 2006. Detection of IgG and IgM in sera from canines with blastomycosis using eight blastomyces dermatitidis yeast phase lysate antigens. Mycopathologia **162:**33-7.
49. **Sheridan, P. P., and J. E. Brenchley.** 2000. Characterization of a salt-tolerant family 42 beta-galactosidase from a psychrophilic antarctic *Planococcus* isolate. Appl Environ Microbiol **66:**2438-44.
50. **Sheridan, P. P., J. Loveland-Curtze, V. I. Miteva, and J. E. Brenchley.** 2003. Isolation and Characterization of *Rhodoglobus vestalii* gen. nov.., sp. nov., a novel psychrophilic organisms isolated from an Antarctic Dry Valley Lake. Int. J. Syst. Evol. Microbiol. **53:**985-994.
51. **Sheridan, P. P., J. Loveland-Curtze, V. I. Miteva, and J. E. Brenchley.** 2003. Rhodoglobus vestalii gen. nov., sp. nov., a novel psychrophilic organism isolated from an Antarctic Dry Valley lake. Int J Syst Evol Microbiol **53:**985-94.
52. **Sheridan, P. P., V. I. Miteva, and J. E. Brenchley.** 2003. Phylogenetic analysis of anaerobic psychrophilic enrichment cultures obtained from a greenland glacier ice core. Appl Environ Microbiol **69:**2153-60.
53. **Sheridan, P. P., N. Panasik, J. M. Coombs, and J. E. Brenchley.** 2000. Approaches for deciphering the structural basis of low temperature enzyme activity. Biochim Biophys Acta **1543:**417-433.
54. **Shurley, J. F., A. M. Legendre, and G. M. Scalarone.** 2005. Blastomyces dermatitidis antigen detection in urine specimens from dogs with blastomycosis using a competitive binding inhibition ELISA. Mycopathologia **160:**137-42.
55. **Shurley, J. F., and G. M. Scalarone.** 2007. Isoelectric focusing and ELISA evaluation of a Blastomyces dermatitidis human isolate. Mycopathologia **164:**73-6.
56. **Simmon, K. E., D. D. Steadman, S. Durkin, A. Baldwin, W. H. Jeffrey, P. Sheridan, R. Horton, and M. S. Shields.** 2004. Autoclave method for rapid preparation of bacterial PCR-template DNA. J Microbiol Methods **56:**143-9.
57. **Stevens, D. L., Y. Ma, D. B. Salmi, E. McIndoo, R. J. Wallace, and A. E. Bryant.** 2007. Impact of antibiotics on expression of virulence-associated exotoxin genes in methicillin-sensitive and methicillin-resistant Staphylococcus aureus. J Infect Dis **195:**202-11.

THIS PAGE LEFT INTENTIONALLY BLANK

UNIVERSITY OF IDAHO

SUBJECT

Change to the Constitution of the University Faculty.

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section III. C. Institutional Governance, Subsection 2. Faculty Governance.
University of Idaho Faculty Staff Handbook Section 1520 – Constitution of the University Faculty.

BACKGROUND/DISCUSSION

The faculty of the University of Idaho approved amendments to the Faculty Constitution at their meeting held April 19, 2009. Article VII of the Faculty Constitution states that amendments are subject to review and approval by the President and the Regents. Section III.C.2. of the Board Governing Policies and Procedures states that the faculty constitution is subject to approval by the Chief Executive Officer and the Board.

The changes to the faculty constitution presented to the Regents for approval are summarized as follows:

1. Change the name of the Faculty Council to Faculty Senate.
2. To provide faculty located outside of the university's Moscow campus with representatives in the Faculty Senate
3. Revise the quorum requirements for meetings of the general faculty from one-sixth to one-eighth of the membership of the university faculty.
4. To allow faculty across the state to vote at and participate in general faculty meetings through audio and visual aids between the Moscow campus and faculty venues at university centers and other venues across the state.

The changes enhance the participation of faculty in the university's shared governance model and recognize the statewide presence of the university.

IMPACT

The university already utilizes streaming video and other communications assets at existing centers in Boise, Coeur d' Alene, and Idaho Falls. Other sites may require some investment in equipment but this will likely occur as part of the university's expansion of its capabilities in this area for general university purposes.

ATTACHMENTS

Attachment 1 – Redline showing Faculty Council name change and Center representation Page 3

Attachment 2 – Redline showing quorum change and statewide faculty meetings. Page 11

STAFF COMMENTS AND RECOMMENDATIONS

IRSA and Board staff recommend approval of the amendments to the Constitution of the UI faculty as presented.

BOARD ACTION

A motion to approve the revisions to the Constitution of the Faculty of the University of Idaho as set forth in the materials presented to the Board.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

1520

CONSTITUTION OF THE UNIVERSITY FACULTY

NOTE: *When the university was young, the faculty's business could be transacted quite satisfactorily in general meetings and through presidential committees. After the mid-20th century, however, the need for a representative form of government became obvious. Shortly after assuming the presidency in 1965, Ernest W. Hartung expressed great confidence in the faculty and urged it to assume the responsibilities entrusted to it by the territorial legislature and the state constitution [see 1120 A-3]. Accordingly, the Interim Committee of the Faculty, a body that performed limited academic functions for a time, recommended the establishment of a council having responsibilities and authority essentially as set forth in this constitution. The university faculty adopted the Interim Committee's recommendation on October 20, 1966, the regents approved it on November 18, 1966, and elections were held in the several colleges. The first Faculty ~~Council~~Senate assembled on February 23, 1967, with Professor Thomas R. Walenta (law) as chair; during the ensuing year, the ~~council~~senate developed a proposed constitution of the university faculty. The document was amended and approved by the university faculty on March 20, 1968, and, with President Hartung's support, was ratified with minor amendments by the regents on September 5, 1968. The last major revision took place in 1986. The text printed here includes all amendments to date (see also 1420 A-1-c). Unless otherwise noted, the text is of 1996. For more information, contact the Office of the Faculty Secretary (208-885-6151).* [ed. 7-00]

CONTENTS:

PREAMBLE. The faculty of the University of Idaho, designated "university faculty," as defined in article II, section 1, in acknowledgement of the responsibilities entrusted to it for the immediate government of the university by article IX, section 10, of the constitution of the state of Idaho, has adopted and declared this constitution to be the basic document under which to discharge its responsibilities.

ARTICLE I--GENERAL PROVISIONS.

Section 1. Regents. The regents are vested by article IX, section 10, of the constitution of the state of Idaho with all powers necessary or convenient to govern the university in all its aspects. The regents are the authority for actions of the university faculty, and policy actions taken by the university faculty are subject to review and approval by the president and by the regents. [See 1120 A-2 and 1220 A-1.]

Section 2. President. The president of the university is both a member of and the president of the university faculty and is also the president of the other faculties referred to in section 4, below, and in article II. The president is the representative of the regents, the institution's chief executive officer, and the official leader and voice of the university. [See also 1420 A.] *[ed. 7-00]*

Section 3. Faculty ~~Council~~Senate. This ~~council~~senate is empowered to act for the university faculty in all matters pertaining to the immediate government of the university. The ~~council~~senate is responsible to and reports to the university faculty and, through the president, to the regents. The university faculty, president, and regents retain the authority to review policy actions taken by the ~~council~~senate. [See III-3, V, and 1420 A-1-c.] *[ed. 7-00]*

Section 4. Constituent Faculties. The university faculty is composed of various constituent faculties, including the faculties of the several colleges and other units of the university.

Clause A. College Faculties. The constituent faculty of each college or similar unit, meeting regularly and in accordance with bylaws adopted by a majority vote of the members of such faculty, is authorized to establish and to effect its own educational objectives, including matters of student admission and curriculum, and to participate in the selection of its own dean, other executive officers, and faculty members, subject only to the general rules and regulations of the university faculty and the authority of the president and the regents.

Clause B. Faculties of Subdivisions. If there are schools, intracollege divisions, departments, or separate disciplines within a college or similar unit, the constituent faculty of each such subdivision participates in decisions concerning its educational objectives, including matters of student admission and curriculum, the selection of its executive officers, and its faculty appointments, subject only to the general rules and regulations of the college faculty and the university faculty and the authority of the president and the regents.

Clause C. Interim Government. The Faculty ~~Council~~Senate will provide for the establishment of bylaws for any college or similar unit that has not adopted its own bylaws.

Clause D. Matters of Mutual Concern. The Faculty ~~Council~~Senate has the responsibility for resolving academic matters that concern more than one college or similar unit.

ARTICLE II--FACULTY CLASSIFICATIONS.

Section 1. University Faculty. The university faculty is constituted of the president, provost, vice presidents, deans, professors, associate professors, assistant professors, senior instructors, instructors (including those professors, associate professors, assistant professors, senior instructors, and instructors whose titles have distinguished, research, extension, or visiting designations, e.g., "assistant research professor" and "visiting associate professor"), and lecturers who have served at least four semesters on more than half-time appointment [see 1565 K-1]. Those who qualify under this section have the privilege of participation with vote in meetings of the university faculty and the appropriate constituent faculties. *[ed. 7-99, rev. 7-01]*

Section 2. Emeriti. Faculty members emeriti have the privilege of participation without vote in meetings of the university faculty and the appropriate constituent and associated faculties. Also, they may be appointed to serve with vote on UI committees. [See also 1565 H.] *[ed. 7-00]*

Section 3. Associated Faculties.

Clause A. The adjunct faculty [see 1565 I] and the affiliate faculty [see 1565 J] are associated faculties. Other associated faculties may be established as needed with the approval of the university faculty, president, and regents. *[ed. 7-00]*

Clause B. Members of associated faculties have the privilege of participation without vote in meetings of the university faculty. They have the privilege of participation with vote in meetings of their associated faculties and on faculty committees. When the bylaws of the constituent faculty concerned so provide, members of the associated faculties have the privilege of participation with vote in meetings of their respective constituencies of the university faculty; however, when they are authorized to vote, they are not counted among the full-time-equivalent faculty members when determining the basis for the constituent faculty's representation on the Faculty ~~Council~~Senate.

Section 4. General Faculty. "General faculty" is a collective description for the combined faculties referred to in sections 1, 2, and 3, above.

ARTICLE III--FACULTY MEETINGS.

Section 1. Meetings. The university faculty meets at least once each semester. Meetings of the university faculty may be called at any time, with due notice, by the president. Meetings of the university faculty must be called with due notice by the president on the request of the Faculty ~~Council~~Senate or on the written petition of 25 members of the university faculty. The president, or a member of the university faculty designated by the president, presides at meetings of the university faculty.

Section 2. Secretary. The president appoints the secretary of the faculty from among the tenured members of the university faculty [see 1570]. The secretary is responsible for recording and distributing the minutes and performs such other duties as may be assigned by the president or the university faculty.

Section 3. Quorum. A quorum consists of one-sixth of the membership of the university faculty, as defined in article II, section 1, who are assigned to the Moscow campus. If there is not a quorum at a faculty meeting, Faculty ~~Council~~Senate actions reported in the agenda for that meeting have faculty approval and are forwarded to the president and regents. *[rev. 7-97]*

Section 4. Agenda. An agenda listing all subjects to be voted on, other than routine matters, must be issued to all members of the university faculty at least one week in advance of each meeting of the university faculty, except as provided in clause E. Faculty ~~Council~~Senate actions that require approval by the university faculty must be published in full in the agenda. [See also 1420 A-1-c.] *[ed. 7-00]*

Clause A. Responsibility. The president is responsible for the agenda and it is issued under the president's direction.

Clause B. Agenda Items from Individual Members. Individual members who wish to suggest items for the agenda are to submit them to the president. No items may be considered under this clause that are presented to the president less than 12 calendar days before the meeting.

Clause C. Resolutions Requiring Action. Ten or more members of the university faculty desiring to submit a resolution that requires action at the next meeting are to submit the signed resolution to the president at least twelve calendar days before the meeting. Such resolutions must be published in full with, and included in, the agenda. [But see 1540 B.] *[ed. 7-00]*

Clause D. Proposed Changes of Written Policies or Regulations. Any proposed change in a written policy or regulation of the university to be voted on by the university faculty must be published in full in the agenda, or final action on the proposal must be delayed until the next meeting. This provision can be waived only by unanimous consent.

Clause E. Agenda for Emergency Meetings. If circumstances require an emergency meeting of the university faculty, the president declares the emergency and calls the meeting. In such circumstances the agenda may be limited to items approved by the president and must be published not less than three calendar days before the meeting. Policy actions taken at emergency meetings require an approving vote of two-thirds of the members of the university faculty in attendance at the meeting, a quorum being present. This constitution cannot be amended at an emergency meeting.

ARTICLE IV--RESPONSIBILITIES OF THE UNIVERSITY FACULTY. Subject to the authority of the president and the general supervision and ultimate authority of the regents, the university faculty accepts its responsibilities for the immediate government of the university, including, but not restricted to:

Section 1. Standards for Admission. The university faculty establishes minimum standards for admission to the university. Supplementary standards for admission to individual colleges or other units of the university that are recommended by the appropriate constituent faculties are subject to approval by the university faculty.

Section 2. Academic Standards. The university faculty establishes minimum academic standards to be maintained by all students in the university. Supplementary academic standards to be maintained by students in individual colleges or other units of the university that are recommended by the appropriate constituent faculties are subject to approval by the university faculty. [See I-4-D.]

Section 3. Courses, Curricula, Graduation Requirements, and Degrees. Courses of instruction, curricula, and degrees to be offered in, and the requirements for graduation from, the individual colleges or other units of the university, as recommended by the appropriate constituent faculties, are subject to approval by the university faculty. [See I-4-D.]

Section 4. Scholarships, Honors, Awards, and Financial Aid. The university faculty recommends general principles in accordance with which privileges such as scholarships, honors, awards, and financial aid are accepted and allocated. The university faculty may review the standards recommended by the individual constituent faculties for the acceptance and allocation of such privileges at the college or departmental levels.

Section 5. Conduct of Students. The faculty's responsibility for approving student disciplinary regulations and the rights guaranteed to students during disciplinary hearings and proceedings are as provided in the "Statement of Student Rights," the "Student Code of Conduct," and the "Student Judicial System." [See 2200, 2300, and 2400.]

Section 6. Student Participation. The university faculty provides an opportunity for students of the university to be heard in all matters pertaining to their welfare as students. To this end, the students are entrusted with their own student government organization and are represented on the Faculty ~~Council~~Senate. If students so desire, they are represented on faculty committees that deal with matters affecting them.

Section 7. Selection of Officers. The university faculty assists the regents in the selection of the president and assists the president in the selection of the provost, vice presidents and other administrative officers of the university.

Section 8. Governance of Colleges and Subdivisions. The university faculty promulgates general standards to guarantee the right of faculty members to participate in the meetings of the appropriate constituent faculties and in the governance of their colleges, schools, intracollege divisions, departments, and other units of the university. [See 154~~2~~0 A.]

Section 9. Faculty Welfare. The university faculty recommends general policies and procedures concerning the welfare of faculty members, including, but not limited to, appointment, reappointment, nonreappointment, academic freedom, tenure, working conditions, promotions, salaries, leaves, fringe benefits, periodic evaluations, performance reviews, reassignment, layoff, and dismissal or termination.

Section 10. The Budget. Members of the university faculty participate in budgetary deliberations, and it is expected that the president will seek faculty advice and counsel on budgetary priorities that could significantly affect existing units of the university. [See 1640.20, University Budget and Finance Committee.] *[ed. 7-05]*

Section 11. Committee Structure. The university faculty, through the medium of its Faculty ~~Council~~Senate, establishes and maintains all university-wide and interdivisional standing and special committees, subcommittees, councils, boards, and similar bodies necessary to the immediate government of the university and provides for the appointment or election of members of such bodies. This section does not apply to *ad hoc* advisory committees appointed by the president or committees made up primarily of administrators. [See 1620 and 1640 *(ed. 7-97).*]

Section 12. Organization of the University. The university faculty advises and assists the president and the regents in establishing, reorganizing, or discontinuing major academic and administrative units of the university, such as colleges, schools, intracollege divisions, departments, and similar functional organizations.

Section 13. Bylaws of the Faculty ~~Council~~Senate. The bylaws under which the Faculty ~~Council~~Senate discharges

its responsibilities as the representative body of the university faculty are subject to review and approval by the university faculty. [See 1580.]

ARTICLE V--FACULTY ~~COUNCIL~~SENATE.

Section 1. Function. The Faculty ~~Council~~ Senate functions as provided in this constitution and in accordance with its bylaws as approved by the university faculty. [See I-3 and 1580.]

Section 2. Structure. The ~~council~~ senate is constituted as follows:

Clause A. Elected Members. *[ed. 7-00]*

(1) College Faculties. The faculty of each college, except the College of Graduate Studies, elects one ~~representative~~ senator for each 50, or major fraction thereof, full-time-equivalent faculty members in the college, provided, however, that each college faculty elects at least one ~~representative~~senator. If, because of a reduction in the membership of a college faculty, there is to be a corresponding reduction in the college's representation ~~on~~ in the ~~council~~senate, the reduction does not take place until the expiration of the term of office of an elected ~~representative~~senator from the college.

(2) University Centers. The resident faculty of the university centers in Boise, Coeur D'Alene and Idaho Falls each elects one senator from among its number. Those senators shall have the right to participate and vote in faculty senate meetings by means of telephone or other appropriate technology.

(~~2~~3) Faculty-at-Large. Members of the university faculty who are not affiliated with a college faculty constitute the faculty-at-large, and this constituent faculty, in accordance with procedures adopted by the faculty-at-large, elects ~~representatives~~ senators to serve with vote ~~on~~ in the ~~council~~ senate on the same basis as provided above for college faculties. [See 1566.]

(~~3~~4) Dean. The academic deans elect one of their number to serve with vote ~~on~~ in the ~~council~~senate.

(~~4~~5) Staff. The representative body of the university staff elects one employee who does not have faculty status to serve with vote ~~on~~ in the ~~council~~senate.

(~~5~~6) Students. Two undergraduate students and one graduate student serve as voting members of the ~~council~~senate, and the ~~council~~ senate provides regulations governing the qualifications, terms of office, and election of student members, and procedures for filling vacancies in the student membership. [See 1580 VI.]

Clause B. Members *Ex Officiis*. The president or the president's designated representative and the secretary of the faculty are members *ex officiis* of the ~~council~~senate, with voice but without vote.

Section 3. Officers. Each year the ~~council~~senate elects a chair and a vice chair from among the elected faculty members of the ~~council~~senate. Also, each year a secretary is appointed by the chair, subject to confirmation by the ~~council~~senate, from among the members of the ~~council~~senate or from the membership of the university faculty. The appointment of a person who is not a member of the ~~council~~senate to serve as secretary does not carry with it membership on the ~~council~~senate.

Section 4. Terms of Office. Elected faculty members of the ~~council~~senate serve for three years. The academic dean and the staff representative serve for one year. The terms of office for student members are as established by the ~~council~~senate. [See 1580 VI.] Newly elected members take office each year on September 1 or on the official opening date of the academic year, whichever is earlier. To carry out the requirement that approximately one-third of the elected faculty members are to take office each year, the ~~council~~senate may shorten the initial term of office of faculty ~~representative~~senators elected to fill new positions ~~on~~ in the ~~council~~senate to conform to a balanced rotation plan. When members are elected to fill a vacancy, they take office at the first meeting after the election and serve for

the unexpired term of the vacancy. No elected faculty member of the ~~council~~senate may serve an immediately ensuing term [but see 1580 III-3].

Section 5. Eligibility. Every member of the university faculty is eligible to vote for members of the ~~council~~senate representing his or her college or other unit. Every member of the university faculty is eligible to serve as an elected member of the Faculty ~~Council~~Senate and to hold an elective or appointive office ~~on~~ in the ~~council~~senate.

Section 6. Elections. Regular elections for ~~representatives~~ senators on the ~~council~~senate are held before April 15 of each year in which an election is to be held. All elections for members of the ~~council~~senate are by secret ballot. Appropriate procedures for nominations and elections are developed and approved by a majority vote of the faculty of the college or other unit.

Section 7. Vacancies.

Clause A. If it is necessary for a member of the ~~council~~senate to be absent temporarily (more than a month, but less than four months), the candidate who received the next highest number of votes in the most recent election in the college or unit acts as his or her alternate ~~on~~ in the ~~council~~senate with full vote. If it is necessary for a member to be absent for more than four months, but less than one year, a special election is held to fill the temporary vacancy. When the ~~council~~senate member returns, he or she resumes the position ~~on~~ in the ~~council~~senate. If it is necessary for a member to be absent for more than one year, or if the member is unable to complete the term of office for any reason, a special election is held to fill the unexpired term. [See 1580 VI for procedures covering student vacancies.]

Clause B. The chair of the Faculty ~~Council~~Senate must declare a position vacant if a member is absent from three consecutive meetings unless the member has informed the chair of the ~~council~~senate in writing that he or she intends to participate fully in the activities of the ~~council~~senate in the future. When a position is declared vacant, the chair must notify the constituency concerned.

Section 8. Recall. The recall of a member of the ~~council~~senate may be initiated by a petition bearing the signatures of at least 10 percent, or five members, whichever is greater, of the membership of the particular constituency represented. The petition must be delivered to the chair of the ~~council~~senate. On the receipt of a valid petition, the chair calls a meeting of the faculty of the college or other unit and appoints a chair. Charges against the member are presented in writing and the member is given adequate opportunity for his or her defense. A two-thirds majority vote by secret ballot of the members of the college or other unit present at the meeting is necessary for recall, providing the members present constitute a quorum as defined in the bylaws of the college or other unit. In the event that the vote is to recall the ~~representative~~senator, the member may appeal the case to the ~~council~~senate within 10 days. If the case is appealed and the ~~council~~senate affirms the recall, or if the recall stands for 10 days without appeal, the members of the college or other unit elect another ~~representative~~senator. Regular procedures are followed in replacing the recalled person, except that the chair of the ~~council~~senate appoints the chair of the election committee of the college or other unit. During the interval between recall and the election of a replacement, the candidate who received the next highest number of votes in the most recent election acts as the alternate ~~on~~ in the ~~council~~senate with full vote.

ARTICLE VI--RULES OF ORDER. The rules contained in *Robert's Rules of Order Newly Revised* govern all meetings of the university faculty, other faculties, the Faculty ~~Council~~Senate, and faculty committees in all cases to which they are applicable and in which they are not in conflict with this constitution, regents' policies, or any bylaws or rules adopted by any of those bodies for the conduct of their respective meetings. An action taken by the university faculty, a constituent or associated faculty, the Faculty ~~Council~~Senate, or a faculty committee that conflicts with a previous action by that body takes precedence and, in effect, amends, in part or in full, the previous action.

ARTICLE VII--AMENDMENTS. This constitution may be amended by a two-thirds affirmative vote of the members of the university faculty, as defined in article II, section 1, in attendance at a regular meeting, a quorum being present. Proposed amendments must have been published in full in the agenda at least one week before the meeting or presented

in writing at a meeting previous to the one at which the vote is to be taken. Amendments to this constitution are subject to review and approval by the president and by the regents.

THIS PAGE INTENTIONALLY LEFT BLANK

FSH 1520 – Proposed revision to meeting procedure – voting faculty who are physically present or attending via compressed video / webcast.

ARTICLE III--FACULTY MEETINGS.

Section 1. Meetings. The university faculty meets at least once each semester. Meetings of the university faculty may be called at any time, with due notice, by the president. Meetings of the university faculty must be called with due notice by the president on the request of the Faculty Council or on the written petition of 25 members of the university faculty. The president, or a member of the university faculty designated by the president, presides at meetings of the university faculty.

Clause A. Venue. Faculty may participate and vote in meetings by being physically present at the designated venue on the Moscow campus, or by being physically present at another designated venue in the state that is connected via electronic video and audio link as outlined in Clause B. Venues will be designated annually by faculty council as described in 1540 A-1.

Clause B. Participation. To be eligible for meeting participation, venues remote from the Moscow campus must be linked to the Moscow venue via compressed video link or other electronic means that conveys audio and visual signals in both directions between Moscow and the remote venue. In addition, an authorized delegate of the Secretary of the Faculty must be present at each site to facilitate meeting participation and counting and reporting of votes (see Section 3, Clause C, Secretary's Delegates at remote sites).

Section 2. Secretary. The president appoints the secretary of the faculty from among the tenured members of the university faculty [see 1570]. The secretary is responsible for recording and distributing the minutes, tallying and recording of votes, and performs such other duties as may be assigned by the president or the university faculty.

Section 3. Quorum, Recognition of Speakers, Recording of Votes and Delegates.

Clause A. Quorum. A quorum consists of one-~~sixth~~ eighth of the membership of the university faculty, as defined in article II, section 1~~,~~

~~who are assigned to the Moscow campus~~. If there is not a quorum at a faculty meeting, Faculty Council actions reported in the agenda for that meeting have faculty approval and are forwarded to the president and regents. *[rev. 7-97].*

Clause B. Recognition of Speakers. Participants wishing to speak at the Moscow site or at remote sites will be recognized by the presiding officer in Moscow and may obtain the floor with his/her approval.

Clause C. Recording of Votes. In determining the outcome of motions, the secretary will determine the number of votes for or against. The Secretary's Delegate at each electronically linked site will convey votes for and against to the Secretary (see FSH 1540 A).

Clause D. Secretary's Delegates. Delegates at remote sites shall be members of the University Multi-Campus Communications Committee appointed by the Committee on Committees as outlined in 1640.

SUBJECT

Approval of Higher Education Research Council (HERC) FY10 Budget

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies and Procedures, Section III.W.3., Higher Education Research Council Policy

Senate Bill No. 1207 Appropriations – College and Universities - System-wide Programs

BACKGROUND/DISCUSSION

The State Board of Education was appropriated $1,341,000 for FY 2010 through the colleges and universities appropriation to be used for the mission and goals of the Higher Education Research Council (HERC). This amount represents a decrease from the traditional appropriation of $1,440,000 in previous years.

The Board office provided HERC with a proposed allocation of funds for FY 2010, which included a reduction to the Matching Funds and Research Center Grant program budget categories due to the reduction in appropriation this year. HERC has reviewed the budget and forwards their recommendation to disburse the FY 2010 allocation as outlined on page 3.

IMPACT

HERC funding is provided each year by the Legislature as part of the college and university lump-sum appropriation and is to be used for the mission and goals of HERC. Those mission and goals include research activities that will have the most beneficial effect on the quality of education and the economy of the state. The Board allocates funds for research activities to the four-year public institutions (Boise State University, Idaho State University, University of Idaho, and Lewis-Clark State College) for the following: Infrastructure, Research Center Grants, and Matching Grant Awards. There is also a line item for Administrative Costs, which covers the expenses for meetings and office supply needs. This line item also covers the administration of HERC grant programs and activities such as the Research Center Grant Competition.

ATTACHMENTS

Attachment 1 – FY10 HERC Budget Page 3

STAFF COMMENTS AND RECOMMENDATIONS

HERC reviewed and recommended approval of the FY 2010 budget allocation at their April 13, 2009 meeting. Staff recommends approval of the budget as presented.

BOARD ACTION

A motion to approve the FY 2010 HERC Budget Allocation as presented.

Moved by_____ Seconded by_____ Carried Yes_____ No_____

THIS PAGE LEFT INTENTIONALLY BLANK

FY 2010 Allocation of HERC Funds

Amount to be Awarded $1,341,000	**Proposed Allocation**
Infrastructure Funds	
BSU	$125,000
ISU	$125,000
UI	$200,000
LCSC	$50,000
Total Infrastructure	**$500,000**
Matching Award Grants	
NSF-EPSCoR (UI)	$531,000
Total Matching Grants	**$531,000**
Research Centers	
BSU-Musculoskeletal Research Institute (Final Year of Funding of Three-Year Award)	$297,200
Total Research Center	**$297,200**
Administrative Costs	
FY10 Administrative Costs	$12,800
Total Administrative Costs	**$12,800**
Total Budget / Allocation	**$1,341,000**
	$1,341,000

NOTES

HERC's budget includes Governor holdback for FY10. Budget was reduced by $99,000 (plus $6,000 for RCGP). The Matching funds & Research Center budget categories were reduced by approx 11.5% respectively to make up the shortfall of $99,000 to HERC's budget.

THIS PAGE LEFT INTENTIONALLY BLANK

SUBJECT

Idaho Technology Incentive Grant Program FY 2010 Award

APPLICABLE STATUTE, RULE, OR POLICY

Senate Bill No. 1207 Appropriations – College and Universities - System-wide Programs

BACKGROUND/DISCUSSION

The Idaho Technology Incentive Grant (ITIG) program was created in 1997, and has since funded 195 projects at a total of more than $22.2 million. The Board was appropriated $1,275,600 from the Legislature for FY10 for purposes of awarding instructional projects specifically designed to foster innovative learning approaches using technology and to promote the Idaho Electronic Campus. This amount represents a decrease from the average appropriation of $1.4M in previous years.

The funds are designed to promote the creation and use of innovative methods of instruction that:

- focus on integrating technology into the curriculum;
- enhance the rate and quality of student learning;
- enhance faculty productivity; and
- increase access to educational programs.

Funding is awarded by the Board via a Request for Proposals (RFP) and based on the overall merit of the proposals. Proposals are not automatically funded and the total number of projects awarded to each institution is determined by the Idaho Technology Incentive Grant Program Review Committee's evaluation. An allotted amount is recommended for each institution; however, the institutions may not be funded at this level if their submitted proposals fail to meet all the criteria in the RFP and/or if the merit of the project fails to meet intended objectives. Additional or expanded projects may be funded if another institution's proposals fail to show merit or fail to meet the criteria of the RFP.

The proposals are evaluated by the Idaho Technology Incentive Grant Program Review Committee. The committee consists of the following categories:

Two Board members: Milford Terrell, from the Business Affairs and Human Resources (BAHR) Committee and Superintendent Luna's representative, Troy Wheeler; Chief Information Officer; Greg Zickau, representative from the State Information Technology Resource Management Council (ITRMC); and Dale Bower, the Board's Chief Academic Officer.

The committee met on April 29, 2009 and May 15, 2009 to review the proposals and to formulate recommendations to the Board.

IMPACT

Funding was recommended for 18 projects based on the merit of the applications.

ATTACHMENTS

Attachment 1 – FY10 Idaho Technology Incentive Brochure Page 3

STAFF COMMENTS AND RECOMMENDATIONS

The Evaluation Committee recommends funding the grant projects as follows:

Proposal No.	Institution	Project Title	Dollar Amount Requested
T10-001	BSU	Incorporation of computer modeling into chemistry lecture and laboratory curricula	**$40,540**
T10-003	BSU	Improving Faculty Effectiveness: Syncing Student Feedback with Digitized Lecture Performance	**$48,200**
T10-004	BSU	Modernizing How We Do Chemistry for the Masses	**$55,700**
T10-005	BSU	Integrating video into the curriculum to enhance faculty productivity and student learning	**$80,560**
T10-006	BSU	Em-Po WeR-ing Student Success through Video Tutorials	**$47,200**
T10-007	BSU	Development of a Bimolecular Immunology Lab Course: Integrating Advanced Technology, Bioinformatics, and 3-D Molecular Visualization	**$104,800**
T10-009	ISU	Introductory Physics Lab Videos on the World Wide Web	**$26,800**
T10-010	ISU	Mass Communication/Chemistry Podcasts	**$51,400**
T10-011	ISU	English and Sociology Course Redesign	**$124,700**
T10-015	ISU	University Health High School (UHHS) - Networking and Early College Opportunities in Health Sciences	**$96,300**
T10-016	ISU	Bioinformatics: A portal to 21st Century Biology Education	**$68,900**
T10-017	LCSC	Integration of QSR Nvivo 8 Software into Research Curriculum	**$3,900**
T10-022	LCSC	Assessing & Evaluating Social Work Student Achievement, Field Experience, and Professional Development Using Web-Based Technology	**$5,700**
T10-023	LCSC	Lewis-Clark State College (LCSC) Radiographic Science and Nursing C-Arm Surgical Student Training Device	**$123,200**
T10-026	UI	VR Biomedical Learning Platforms	**$79,800**
T10-028	UI	Hybrid Masters of Music Education	**$78,000**
T10-029	UI	Connecting Educators Across Idaho Through Virtual Worlds	**$186,700**
T10-039	UI	UI-IF Online Course Content Delivery Program – Developing, Demonstrating, and Integrating Dimensionality to Asynchrounous Delivery of Technical Courses	**$53,000**

BOARD ACTION

A motion to approve funding of review committee recommended projects under the Idaho Technology Incentive Grant Program for FY2010 totaling $1,275,600 as submitted.

Moved by_____ Seconded by_____ Carried Yes_____ No_____

FY 2010
IDAHO TECHNOLOGY INCENTIVE GRANT PROGRAM FUNDED PROJECTS

The purpose of the ITIG is: to focus on integrating technology into the curriculum; to enhance the rate and quality of student learning; to enhance faculty productivity; and to increase access to educational programs.

Boise State University Projects

Incorporation of Computer Modeling into Chemistry Lecture and Laboratory Curricula
Ken Cornell – PI
$40,540

This project proposes to develop new curricula that use computer 3-D modeling software to study basic and complex features of biochemical molecules (proteins, carbohydrates, etc). In the process, students will be engaged in the topics through hands-on use of the modeling programs. Faculty productivity will improve by revitalizing the instruction of complex biomolecules, and through opportunities to engage in activities that can lead to scholarly output. Ultimately, students will be more competitive in their professional careers because they have better understanding and training in an area of study increasingly fundamental to today's technological age.

Improving Faculty Effectiveness: Syncing Student Feedback with Digitized Lecture Performance
R. Eric Landrum – PI
$48,200

This project will combine existing technologies for the purpose understanding the detailed and complex issues surrounding faculty lectures to students, and better understand students' simultaneous assessment of the lecture experience. The proposed project will bring together two existing technologies in a unique and innovative approach to (1) create a retrievable database of digitized, video-based "best practices" about faculty lectures to aid in professional development and (2) create synchronized evaluative data derived from the videotaped lecture segments on multiple dimensions of critical teacher behaviors.

Modernizing How We Do Chemistry for the Masses
Owen McDougal – PI
$55,700

This project will focus on the freshmen level Chemistry laboratories that have increased in student capacity by providing them with a standardized, coherent procedure for completing the lab portion of their freshmen experience while also providing the tools and other resources necessary for success. This proposal offers a process for using technology in effective and innovative ways to (1) improve student success in freshman chemistry laboratory courses; (2) enhance the quality of education in freshman laboratory courses; (3) maintain or lower the cost of conducting freshman laboratory courses, and (4) increase the efficiency and productivity of laboratory instructors.

Integrating Video into the Curriculum to Enhance Faculty Productivity and Student Learning
Robert Minch – PI
$80,560

This project will study ways to integrate video into the curriculum, measure its success, and recommend tools and methods that will contribute to future and continuing progress. PI will investigate and use (1) faculty development of video tutorials and exercises; (2) student development of video homework assignments, tutorials, and project reports; and (3) tools to locate public and open media sources that may be integrated into and repurposed in educational contexts. Throughout this process they will emphasize the creation of a more accessible, compelling, and challenging learning environment by involving students in three different courses with the development, use, and assessment of innovative video materials. As a result of the project, they will have developed methods for identifying, creating, organizing, storing, and retrieving video materials, using Boise State on iTunes

U and public resources such as YouTube; they will measure and assess the success, effectiveness, and efficiency of the methods; and will make recommendations for best practices to successfully integrate video into future curricula.

Em-Po WeR-ing Student Success through Video Tutorials

Sara Seely – PI
$47,200

This project will create a series of streaming video tutorials that teach information literacy. The videos created will be tailored for and embedded in First-Year Writing courses to provide research instruction and ease library research anxiety, a condition common in new undergraduates. The videos will include appearances by the librarian and writing instructors. Seeing familiar faces on the videos will contribute to a sense of being part of an academic community and further alleviate research anxiety among students. The videos will be customized to teach the specific resources available at Boise State University, and revised to incorporate the rapid changes in information retrieval technology. This initiative builds upon existing projects, cross-campus collaborations, and technology resources, which will ensure its sustainability and continued success. The framework for this project is years of instructional collaboration between the library and the First-Year Writing Program. In particular it will advance the innovative PoWeR program, in which the library and First-Year Writing Program are linking writing and research courses to benefit student learning.

Development of Biomolecular Immunology Lab Course: Integrating Advanced Technology, Bioinformatics, and 3-D Molecular Visualization

Denise Wingett – PI
$104,800

The goal of this proposal is to develop a state-of-the-art immunology laboratory course that incorporates multiple high-technology facilities and advanced scientific instrumentation to enhance the quality of the learning environment at Boise State University. A new laboratory course focused on the field of molecular immunology will not only support student education and professional development in health care and biomedical research, but will also utilize multiple components of advanced technology that are currently present on the BSU campus but under-utilized. This new laboratory course will enrich student learning opportunities in biomolecular science by incorporating a state-of-the-art fluorescent-activated cell sorter, an instrument recently acquired with funding (~$500,000) from the National Science Foundation.

This new course will also promote student learning by integrating computational biology and molecular 3-D visualization into teaching modules addressing vaccine and antibody design, stereoscopic imaging of biological molecules, and visualization of mammalian immune system organs.

Idaho State University Projects

Introductory Physics Lab Videos on the World Wide Web

Martin Hackworth - PI
$26,800

This project will create a series of web-based instructional videos to accompany elementary teaching laboratories: Astronomy Lab (PHYS153 - a University goals course), General/Engineering Physics Lab (PHYS111/112 and PHYS211/212). The purpose of these videos is to allow students enrolled in these courses to access, via existing laboratory websites, a complete video "walk through" demonstration of the lab procedure before attending lab and, if desired, to review the lab afterward. Enrollment in these courses is very high (700+ students each academic year) and they anticipate that these videos, once made available, will be well-subscribed.

Mass Communication/Chemistry Podcasts

Tom Hallaq - PI
$51,400

The departments of Chemistry and Mass Communication together produced a series of video podcasts for instruction of Organic Chemistry labs in 2008. The podcasts, made available online, provided background theory and safety instruction for experiments. The existing Chemistry Department video podcasts have enhanced student learning dramatically. The aim of this proposal is to continue support for collaboration between the departments of Chemistry and Mass Communication by extending the project into three other Chemistry courses (Chem 111, 112, and 304), impacting approximately 1,000 students each academic year. The Chemistry project can then serve as a model for other departments.

English and Sociology Course Redesign

Ann Hunter - PI
$124,700

This project will utilize the latest information from The National Center for Academic Transformation's (NCAT) Program in Course Redesign to reduce *seat time* with high enrollment, Goal 12 Introduction to Sociology (Sociology 101) and Goal1English Composition (English 101) classes. Sociology offers a minimum of four sections each semester, two of which are taught by tenured and/or tenure-track faculty, and English offers even more sections. Enrollment for Sociology 101 averages *about* 794 students per academic year and English 101 averages about 994. The intent is to improve the quality of student learning while generating a cost savings by consolidating classes and courses to involve a larger number of students.

University Health High School (UHHS) - Networking and Early College Opportunities in Health Sciences

Randy Stamm – PI
$96,300

The University Health High School (UHHS) is a social learning environment for state high school students interested in learning about health sciences and degree seeking programs offered at Idaho State University (ISU). The UHHS concept would support high school students with tools to explore health occupations; offer opportunities to communicate with health professionals; meet other students from other area high schools, collaborate with ISU students enrolled in health sciences programs; and acquire online early college course credit. In collaboration with the Kasiska College of Health Professions (KCHP) and Early College Program (ECP), the Instructional Technology Resource Center (ITRC) will develop online resources for high school students, parents, teachers, and counselors. UHHS online courses (e.g., HCA 210, HCA 110, HE 200, RS 105, DENT 201, CSED 256, and HE 190) will be offered as prerequisites for most health profession programs at ISU.

Bioinformatics: A portal to 21st century Biology Education

Michael Thomas - PI
$68,900

This project will use advanced, web-based resources to integrate human health and disease genomics into college introductory, high-enrollment Goal 4 biology courses. The Portal-21 resources will target introductory biology (BIOL 101) students to (1) enhance understanding of the nature of science and biomedical research, (2) teach core biology concepts through the lens of human medical and disease genomics, and (3) teach skills in modern bioinformatics and computational biology.

The team will develop, test, assess and revise web-based Portal-21 resources. The instructional material will be widely field-tested with extensive outcomes assessment, revision and publication as a stand-alone website and workbook. An instructor-training workshop will be developed in conjunction with the Instructional Technology Resource Center (ITRC) at ISU to provide continuing support for implementation of Portal-21 exercises beyond the period of the grant.

Lewis-Clark State College Projects

Integration of QSR Nvivo 8 Software into Research Curriculum

Chris Ahlman - PI
$3,900

This project proposes to bring 15 faculty together from Lewis-Clark State College and University of Idaho to the LCSC Lewiston campus for a one-day training seminar on NVivo 8(9). Faculty from Coeur d'Alene, Boise, and Moscow will be compensated for travel to the Lewiston campus. The bulk of the monies will go for the trainer from QSR, International.

Faculty participating in this training will be asked to commit to develop one classroom assignment by Spring 2010 that will integrate the use of NVivo in the analysis of qualitative data gathered by students for their course projects. Faculty not teaching a research course will be asked to commit to utilize NVivo in a qualitative analysis of their own and to present to their colleagues their analysis process at a "brown bag-type" lecture.

Assessing & Evaluating Social Work Student Achievement, Field Experience, and Professional Development Using Web-Based Technology

Heath Walters - PI
$5,700

Social Work field internships are designed to provide a supervised practice experience that enables students to apply the knowledge, skills, values, and ethics learned in the classroom to real life scenarios where the student is socialized to the mechanisms of contemporary social work practice (Birkenmaier, et al, 2005). The social work program at Lewis-Clark State College is seeking to integrate an innovative web-based field assessment and evaluation instrument to:

- Increase frequency of communication regarding student progress and professional development between faculty, agency field supervisors, and students in rural internships via web-based software by 50% during the course of this project.
- Increase student and field instructor's awareness, skills, and knowledge of computer assisted assessment of student professional development measured by pre and post-test training assessments.
- Decrease work output for volunteer, agency field supervisors by 25% through integrating web-based assessment of student professional development.

Radiographic Science and Nursing C-Arm Surgical Student Training Device

Scott Wimer - PI
$123,200

Healthcare facilities require radiography students to demonstrate proficiency on a C-arm unit prior to employment. A C-arm is a highly sophisticated mobile x-ray unit which uses x-ray energy to produce a 'live' image feed and is displayed on a monitor or screen. In the medical environment, the C-arm is used extensively from therapeutic imaging in Pain Clinics to orthopedic, neurological, or vascular imaging in surgical departments. The C-arm has played a vital role in radiographic procedures of all kinds. This project proposes to purchase a C-arm to train radiographic science and nursing students at Lewis-Clark State College for proficiency in the clinical setting using sterile technique.

University of Idaho Projects

VR Biomedical Learning Platforms

Gustavo Arrizabalaga – PI
$79,800

The proposed project will merge Art and Science to create new platforms for education. Design arts have an important place in science as it allows educators and researches to visually convey complex and non-linear concepts to students and colleagues. Within this context, virtual design is becoming an important aspect of scientific education and research, as it allows for a multi-dimensional, interactive depiction of concepts and processes. The overarching goal of the project is to use virtual design to make scientific concepts more accessible and understandable for students. The primary objectives of this project are to develop five concrete interactive virtual learning platforms, to implement those platforms within five science classes, and to evaluate the project as it concerns learning and added value for the instructors.

Hybrid Masters of Music Education

Loraine Enloe – PI
$78,000
Continuation Project

The overall goal for the second year (FY2010) is to use technology to continue to broaden access to the graduate music education curriculum, including professional development credits for teachers who have degrees. Funding will be directed towards providing means for students to share their work in the lab and to teach music teachers how to use technology in the music classroom. A digital audio and video teaching workstation will allow faculty to enable access to a central switching system where individual students can share compositions, teaching videos and other multi-media creations through a new audio/video stereo and projection system. A music education technology summer camp will begin in the summer session 2010 and continue annually to serve both students enrolled in the Master's program and those teachers who need professional development credit but not a degree.

Connecting Educators Across Idaho Through Virtual Worlds

Karin Hatheway-Dial – PI
$186,700

The purpose of this project is to promote and implement the increased use of virtual world technology in online education across the state through expanding Second Life® virtual campus and providing "How to use Second Life®" workshops to educators. The project proposes utilizing immersive, interactive, real-time multi-user virtual worlds as a means of bringing people together in a collaborative environment. Workshops will be hosted on how to use these worlds from both a pedagogical and technical aspect. Furthermore, once in-world, educators and students can connect with the growing educational community that is utilizing virtual world technology. As educators become more familiar with the virtual, PIs will assist them in translating and evolving current classes (on-line and traditional) and developing new classes for delivery in-world. PIs will also explore and expand the sharing of information with the global educational community through guest speakers and lecturers. The targeted outcomes for this grant are to prepare educators across Idaho to utilize evolving technologies and assist them in taking the first steps in an expanded methodology of educational delivery.

UI-IF Online Course Content Delivery Program – Developing, demonstrating and integrating dimensionality to asynchrounous delivery of technical courses (Multi-Year Project)

Akira Tokuhiro – PI
$53,000

This project plans to broaden and enrich the students' styles of learning; specifically through multimedia-based enhancement of 'learning content' via availability of online course materials. The University of Idaho-Idaho Falls proposes to increase enrollment of Outreach and asynchronous students by as much as 100 students per semester. Co-PIs propose to increase the information content of learning materials via procurement of additional digital image and document editing infrastructure so that both synchronous and asynchronous students can enhance their learning experience.

SUBJECT

First Reading - Amendment to Board Policy III.Y. Advanced Opportunities, Idaho Standards

REFERENCE

December 2008	The Board approved the Second Reading to Section III.P. changing the definition of full-time student.

BACKGROUND/DISCUSSION

In December 2008, the Board approved amendments to Section III.P., Students. The amendments included revising the definition of a full-time student to "any undergraduate student carrying twelve (12) or more credits (or equivalent in audit and zero-credit registrations)."

A recent review of Board Policy III.Y., Advanced Opportunities, Idaho Standards, revealed that the standards contained the former definition of a full-time student. To minimize the need for potential amendments to the standards should the definition change in future, staff incorporated nonspecific language to direct individuals to reference Board policy III.P for the definition of full-time student. Additionally, the standards were incorporated by reference to an external document; they have now been merged into the policy itself in order to eliminate confusion that has been caused by referencing the external document.

ATTACHMENTS

Attachment 1 – Board Policy III.Y. Advanced Opportunities Page 3

STAFF COMMENTS AND RECOMMENDATIONS

Board staff recommends approval of the proposed changes as presented.

BOARD ACTION

A motion to approve the first reading of the proposed amendments to Board Policy III.Y. Advanced Opportunities.

Moved by_____ Seconded by_____ Carried Yes_____ No_____

THIS PAGE LEFT INTENTIONALLY BLANK

Idaho State Board of Education
GOVERNING POLICIES AND PROCEDURES
SECTION: III. POSTSECONDARY AFFAIRS
SUBSECTION: Y. Advanced Opportunities

December 2005

1. Coverage

Boise State University, Idaho State University, Lewis-Clark State College, the University of Idaho, and Eastern Idaho Technical College are covered by these policies. North Idaho College, the College of Southern Idaho and College of Western Idaho ~~Eastern Idaho Technical College~~ are also covered since postsecondary programs intended for transfer come under the purview of the Board.

2. Purpose

The State Board of Education has made a commitment to improve the educational opportunities to Idaho citizens by creating a seamless system. To this end, the Board has instructed its postsecondary institutions to provide educational programs and training to their respective service regions, support and enhance regional and statewide economic development, and to collaborate with the public elementary and secondary schools. In addition to the Board's desire to prepare secondary graduates for postsecondary programs, the Board is also addressing advanced opportunities programs for qualified secondary students. These programs have the potential for reducing the overall costs of secondary and postsecondary programs to the students and institutions.

The primary intent of the Board is to develop a policy for advanced opportunities programs for secondary students, which would:

a. Enhance their postsecondary goals;
b. Reduce duplication and provide for an easy transition between secondary and postsecondary education; and
c. Reduce the overall cost of educational services and training.

3. Definitions

There are ~~many different~~ various advanced opportunities programs students may access to receive post-secondary credit for education completed while enrolled in the secondary system. Examples include Advanced Placement® (AP), dual credit courses that are taken either in the high school or on the college campus, Tech Prep, ~~etc~~and International Baccalaureate programs. For the purpose of this policy the State Board of Education recognizes four different types of advanced opportunities programs depending upon the delivery site and faculty. They are: Advanced Placement®, dual credit, Tech Prep, and the International Baccalaureate program.

a. Advanced Placement® (AP)

The Advanced Placement® Program is administered by the College Board. AP students may take one or more college level courses in a variety of subjects. AP courses are not tied to a specific college curriculum, but rather follow national College Board curricula. While taking the AP exam is optional, students may earn college credit by scoring well on the national exams. It is up to the discretion of the individual colleges to accept the scores from the AP exams to award college credit or advanced standing.

b. Dual Credit

Dual credit allows high school students to simultaneously earn credit toward a high school diploma and a postsecondary degree or certificate. Postsecondary institutions work closely with high schools to deliver college courses that are identical to those offered on the college campus. Credits earned in a dual credit class become part of the student's permanent college record. Students may enroll in dual credit programs taught at the high school or on the college campus.

c. Tech Prep

Tech Prep is a sequenced program of study that combines at least two years of secondary and two years of postsecondary education. It is designed to help students gain academic knowledge and technical skills, and often earn college credit for their secondary coursework. Programs are intended to lead to an associate's degree or a certificate in a specific career field, and ultimately, to high wage, high skill employment or advanced postsecondary training.

d. International Baccalaureate (IB)

Administered by the International Baccalaureate Organization, the IB program provides a comprehensive liberal arts course of study for students in their junior and senior years of high school. IB students take end-of-course exams that may qualify for college-credit. Successful completion of the full course of study leads to an IB diploma.

4. Idaho Programs Standards for Advanced Opportunities Programs

~~The standards were designed as a resource to help school districts, colleges and universities plan, implement, and evaluate high quality advanced opportunities programs for high school students prior to graduation. The standards ensure acceptance of college credit among the post secondary institutions in Idaho and out-of-state institutions accredited by one of the six regional associations.~~

~~The standards were developed by the Advanced Opportunities Subcommittee, which was one of two subcommittees organized under the auspices of the Accelerated~~

~~Learning and Preparation for Postsecondary Education Task Force appointed by the Idaho State Board of Education in January 2005.~~

All advanced opportunities programs in the state of Idaho shall be developed and managed in accordance with these standards, which ~~will be in effect until revisions are instituted and approved by the Board. The Idaho Standards for Advanced Opportunities Programs are available from the Idaho State Board of Education or by going to www.boardofed.Idaho.gov/policies/iii/index.asp. Information about the International Baccalaureate program is available at their website.~~ were designed to help school districts, colleges and universities plan, implement, and evaluate high quality advanced opportunities programs offered to high school students before they graduate.

a. Dual Credit Standards for Students Enrolled in Courses Taught at the High School

Curriculum

Curriculum 1 (C1)	Courses administered through a dual credit program are catalogued courses and approved through the regular course approval process of the postsecondary institution. These courses have the same departmental designation, number, title, and credits; additionally these courses adhere to the same course description and course content as the postsecondary course
Curriculum 2 (C2)	Postsecondary courses administered through a dual credit program are recorded on students' official academic record of the postsecondary institution.
Curriculum 3 (C3)	Postsecondary courses administered through a dual credit program reflect the pedagogical, theoretical and philosophical orientation of the sponsoring faculty and/or academic department at the postsecondary institution

Faculty

Faculty 1 (F1)	Instructors teaching college or university courses through dual credit meet the academic requirements for faculty and instructors teaching in postsecondary or provisions are made to ensure instructors are capable of providing quality college-level instruction through ongoing support and professional development.
Faculty 2 (F2)	The postsecondary institution provides high school instructors with training and orientation in course curriculum, student assessment criteria, course philosophy, and dual credit administrative requirements before certifying the instructors to teach the college/university's courses.
Faculty 3 (F3)	Instructors teaching dual credit courses are part of a continuing collegial interaction, through professional development, such as seminars, site visits, and ongoing communication with the postsecondary institutions' faculty and dual credit administration. This interaction addresses issues such as course content, course delivery, assessment, evaluation, and professional development in the field of study.
Faculty 4 (F4)	High school faculty are evaluated by using the same classroom performance standards and processes used to evaluate college faculty.

Students

Students 1 (S1)	High school students enrolled in courses administered through a dual credit are officially registered or admitted as degree-seeking, non-degree or non-matriculated students of the sponsoring post-secondary institution.
Students 2 (S2)	High school students are provided with a student guide that outlines their responsibilities as well as guidelines for the transfer of credit.

Students 3 (S3)	Students and their parents receive information about dual credit programs. Information is posted on the high school's website regarding enrollment, costs, contact information at the high school and the postsecondary institution, grading, expectations of student conduct, and other pertinent information to help the parents and students understand the nature of a dual credit course.
Students 4 (S4)	Admission requirements have been established for dual credit courses and criteria have been established to define "student ability to benefit" from a dual credit program such as having junior standing or other criteria that are established by the school district, the institution, and State Board Policy.
Students 5 (S5)	Prior to enrolling in a dual credit course, provisions are set up for awarding high school credit, college credit or dual credit. During enrollment, the student declares what type of credit they are seeking (high school only, college only or both high school and college credit). Students are awarded academic credit if they successfully complete all of the course requirements.

Assessment

Assessment 1 (A1)	Dual credit students are held to the same course content standards and standards of achievement as those expected of students in postsecondary courses.
Assessment 2 (A2)	Every course offered through a dual credit program is annually reviewed by postsecondary faculty from that discipline and dual credit teachers/staff to assure that grading standards meet those in on-campus sections.
Assessment 3 (A3)	Dual credit students are assessed using the same methods (e.g. papers, portfolios, quizzes, labs, etc.) as their on-campus counterparts.

Program Administration and Evaluation

Admin & Evaluation 1 (AE1)	The dual credit program practices are assessed and evaluated based on criteria established by the school, institution and State Board to include at least the following: course evaluations by dual credit students, follow-up of the dual credit graduates who are college or university freshmen, and a review of instructional practices at the high school to ensure program quality.
Admin & Evaluation 2 (AE2)	Every course offered through a dual credit program is annually reviewed by faculty from that discipline and dual credit staff to assure that grading standards meet those in postsecondary sections.
Admin & Evaluation 3 (AE3)	Dual credit students are assessed using the same methods (e.g. papers, portfolios, quizzes, labs, etc.) as their on-campus counterparts.
Admin & Evaluation 4 (AE4)	A data collection system has been established based on criteria established by the high school, institution and State Board to track dual credit students to provide data regarding the impact of dual credit programs in relation to college entrance, retention, matriculation from high school and college, impact on college entrance tests, etc. A study is conducted every 5 years on dual credit graduates who are freshmen and sophomores in a college or university.
Admin & Evaluation 5 (AE 5)	Costs for high school students have been established and this information is provided to students before they enroll in a dual credit course. Students pay a reduced cost per credit that is reviewed annually by the Council on Academic Affairs and Programs (CAAP) at their April meeting to ensure the rate is comparable among institutions within the state and in comparison to adjacent states.
Admin & Evaluation 6 (AE 6)	Agreements have been established between the high school and the postsecondary institution to ensure instructional quality. Teacher qualifications are reviewed, professional development is provided as needed, course content and assessment expectations are reviewed, faculty assessment is discussed, student's costs are established, compensation for the teacher is identified, etc.
Admin &	Postsecondary institutions have carefully evaluated how to provide services to all

Evaluation 7 (AE 7)	students regardless of where a student is located.

b. Dual Credit Standards for Students Enrolled in Courses at the College/University Campus

A.	The student is admitted by the postsecondary institution as a non-matriculating student.
B.	The student is charged the part-time credit hour fee or tuition and additional fees as established by the institution.
C.	Instructional costs are borne by the postsecondary institution.
D.	Four (4) semester college credits are typically equivalent to at least one (1) full year of high school credit in that subject.
E.	In compliance with Idaho Code 33-5104, prior to enrolling, the student and the student's parent/guardian must sign and submit a counseling form, provided by the school district, that outlines the provisions of the section of this Code. The counseling form includes written permission from the student's parent/guardian, and principal or counselor.
F.	Any high school student may make application to one of the public postsecondary institutions provided all of the following requirements are met: In compliance with Idaho Code 33-202, the student has reached the minimum age of 16 years or has successfully completed at least one-half of the high school graduation requirements as certified by the high school. Submission of the appropriate institutional application material for admission. Written notification of acceptance to the institution will be provided to the student after he or she submits the appropriate application If required by institutional policy, a student must obtain approval of the college or university instructor to enroll in a course. Those high school students meeting the above requirements will be permitted to enroll on a part-time basis ~~for a maximum of 7 credits or two courses per semester or on a full-time basis taking at least 8 credits per semester.~~ or full-time basis as defined in Board policy.
G.	Students seeking admission who do not meet the above requirements may petition the institution's admission committee for consideration. Students enrolled in a public school may seek admission to enroll by submitting a petition to the high school principal's office and to the admission's office of the postsecondary institution.

c. Advanced Placement Standards

Advanced Placement (AP) courses are taught by high school teachers following the curricular goals administered by The College Board. These college level courses are academically rigorous and conclude with the optional comprehensive AP exam in May. Students taking AP courses accept the challenge of a rigorous academic curriculum, with the expectation of completing the complex assignments associated with the course and challenging the comprehensive AP exam. The AP Examination is a national assessment, based on the AP curriculum, given in each subject area on a specified day at a specified time, as outlined by the College Board. Students and parents are responsible for researching the AP policy of the postsecondary institution the student may wish

to attend. College/university credit is based on the successful completion of the AP exam, and dependent upon institutional AP credit acceptance policy.

Curriculum

Curriculum 1 (C1)	Postsecondary institutions evaluate AP scores and award credit reflecting the pedagogical, theoretical, and philosophical orientation of the sponsoring faculty and/or academic department at the institution.
Curriculum 2 (C2)	High school credit is given for enrollment and successful completion of an AP class.

Faculty

Faculty 1 (F1)	AP teachers shall follow the curricular materials and goals outlined by The College Board.
Faculty 2 (F2)	The AP teacher may attend an AP Institute before teaching the course.

Students/Parents

Students 1 (S1)	A fee schedule has been established for the AP exam. Students and their parents pay the fee unless other arrangements have been made by the high school.
Students 2 (S2)	Information must be available from the high school counselor, AP coordinator or other faculty members regarding admission, course content, costs, high school credit offered and student responsibility.

Assessment

Assessment 1 (A1)	Students are assessed for high school credit according to the requirements determined by the high school.

Program Administration and Evaluation

Admin & Evaluation 1 (AE1)	To evaluate the success of the programs and to improve services, the school district must annually review the data provided by The College Board.
Admin & Evaluation 2 (AE2)	The school district must carefully evaluate how to provide services to all students, regardless of family income, ethnicity, disability, or location of educational setting.

d. Tech Prep Standards

Professional-Technical Education in Idaho is delivered through comprehensive high schools, professional-technical schools, and the technical college system. An approved articulation agreement allows the student to earn postsecondary credit while in a secondary school that leads to a specific postsecondary two-year certificate, degree, or apprenticeship.

Curriculum

Curriculum 1 (C1)	Articulated agreements must include a curriculum outline that lists at least two years of secondary and two or more years of postsecondary professional-technical courses in an unduplicated sequence with a common core of required proficiency.

Curriculum 2 (C2)	The curriculum must identify student competencies in math, science, and communication including applied academics and work-site learning experiences in a coherent sequence of courses.
Curriculum 3 (C3)	Secondary and postsecondary educators must agree on the common core of required proficiency and agree to meet that proficiency in the program.
Curriculum 4 (C4)	Tech Prep program proposals must provide equal access to members of special populations.

Faculty

Faculty 1 (F1)	Secondary and postsecondary educators must hold appropriate certification in the program area for which articulated credit is to be awarded.

Students/Parents

Students 1 (S1)	To receive articulated credit, students must apply for and must be accepted into the program.
Students 2 (S2)	Information must be available from the high school counselor, Tech Prep Coordinator or other faculty members regarding admission, course content, costs, credit offered and student responsibility.
Students 3 (S3)	The students are assessed for high school and postsecondary credit according to the requirements of the articulation agreement determined by the high school and the articulated institution.

Assessment

Assessment 1 (A1)	Approved end-of-course assessments must be administered to senior students enrolled in a Professional-Technical School who have completed the required sequence of instruction.

Program Administration and Evaluation

Admin & Evaluation 1 (AE1)	School districts and postsecondary technical colleges make up the Tech Prep Consortia. Each consortium elects an Executive Council. The Tech Prep program is administered through six consortia and each of the technical colleges serves as the fiscal agent.
Admin & Evaluation 2 (AE2)	Each Tech Prep articulated agreement must be reviewed annually.

THIS PAGE INTENTIONALLY LEFT BLANK

SUBJECT

Distribution of $500,000 for Advanced Opportunities Training

APPLICABLE STATUTE, RULE, OR POLICY

Idaho Administrative Code, IDAPA 08.02.03.106 Rules Governing Thoroughness Advanced Opportunities (Effective July 1, 2008)
House Bill 324 Appropriations – Public Schools, Section 6 (2)

BACKGROUND/DISCUSSION

The legislature appropriated $500,000 in the Public schools budget for training teachers and/or administrators to effectively provide advanced learning opportunities. The allocation of the funds is to be jointly determined by staff from the State Board of Education and the State Department of Education.

ATTACHMENTS

STAFF COMMENTS AND RECOMMENDATIONS

Staff from the Office of the Board of Education and the Department of Education met and agreed on an allocation plan. Using the senior count total from the state for the 2008-2009 school year, the money will be divided at an equitable rate among all districts. All districts and all charter schools will receive a minimum of $500. The funds are to be utilized for Advanced Placement Institutes, Pre-Advanced Placement Institutes, Vertical Training Institutes and/or Online Training Institutes.

BOARD ACTION

A motion to approve the distribution plan to allocate $500,000 to Idaho's LEA's for teacher/administrator training to increase the effectiveness of providing advanced learning opportunities for students.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

THIS PAGE LEFT INTENTIONALLY BLANK

Distribution to Districts and Charter Schools for Advanced Learning Opportunities: Using the senior count total from the state for the 2008-2009 school year, the money will be divided at an equitable rate among all districts. All districts and all charter schools will receive a minimum of $500. The intent of Advanced Opportunities is to focus on raising the rigor of courses offered in high school. The senior count is used in the formula, as the definition of a high school is a school with grade 12.

Elementary districts and charters will be provided a minimum of $500. Research has shown that in order for high school students to be ready to take and succeed in higher level course work, students must be prepared. By training lower-grade teachers in pre-Advanced Placement, vertical alignment of curriculum and raising the level of rigor in lower grade courses, students will be better prepared for high school advanced opportunities.

THIS PAGE LEFT INTENTIONALLY BLANK

Gifted and Talented Training Grant
2009-2010
ADVANCED OPPORTUNITIES

District # 465

District Name North Valley Academy

2009-2010 – *Distribution to Train Teachers to Provide Services in Advanced Opportunities for Students (Advanced Placement, International Baccalaureate, Tech Prep, Pre-Advanced Placement, Concurrent Enrollment)*

$500.00

The districts go online to the budget page to see what their amount of funding is for the 2009-2010 school year and fill out the form with their expected training activities.

	Total Amount Available for 2009-2010	$500.00	
	Training Activities Provide a brief description for each planned activity	**Amount of Award Budgeted**	**Anticipated Number Trained**
1.			
2.			
3.			
4.			
	Total Amount Budgeted (must equal total amount available)		

Signature of G/T Program Director

Signature of Business Manager

THIS PAGE LEFT INTENTIONALLY BLANK

SUBJECT

One Year Contract Renewal with Questar Assessment, Inc for Idaho English Language Assessment (IELA)

REFERENCE

Idaho State Board of Education/Division of Purchasing Contract CPO01884-04

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies and Procedures, Section III.J. Grants and Contracts
IDAPA 08.02.03 - Section 111.
No Child Left Behind Act of 2001. Section 1111(b)(7)
House Bill NO. 787

BACKGROUND/DISCUSSION

The federal requirements under the No Child Left Behind Act of 2001 for standard achievement testing require a statewide English language proficiency test for all students designated as limited English proficient (LEP).

Through the Division of Purchasing, the State Board of Education entered into a three-year contract with Questar Assessment, Inc (formerly TASA, Inc), beginning in July 2005. In the contract, the Division of Purchasing allowed for two one-year contract renewal options. The first contract extension with Questar will end July 11, 2009 and the IELA Assessment Program wants to implement the second one-year renewal option, which will extend the contract through July 11, 2010. After Board approval, the Division of Purchasing will "assign" the contract to the State Department of Education, due to the transfer of the assessment program.

The IELA Assessment Program and the Idaho school districts have been very pleased with Questar's implementation of the Idaho English Language Assessment. The contract will be extended to continue the full implementation of the IELA, which includes all of the annually implemented items in the original contract (i.e. production, printing, distribution, scoring and reporting of the tests for all Idaho school districts with LEP students.) Several additional items will be included in the contract extension in order to continue the process of ongoing test development.

The total negotiated cost, with the additions of the one-year renewal is: $595,093.

The additional contract items are essential for the furtherance of the contract and will include:

- Equating of secure forms. Questar will equate the alternate set of Level 2 forms, one in each of the following grade clusters: 1-2, 3-5, 6-8, and 9-12,

to IELA forms administered in prior years and scale scores will be reported on the same score scale as prior forms.

- Transition to new vendor. Questar will ensure a seamless transition to the new vendor at the expiration of the contract. The following will be transitioned to the successful bidder beginning in April 2010, or upon the successful completion of the RFP process in spring 2010. The following will be transitioned to the new vendor:

  - Data files for Idaho students from 2006, 2007, 2008, 2009, and 2010
  - All files and graphics pertaining to test items
  - All LEP number files
  - All native files of assessment items
  - All other documentation deemed necessary at the discretion of the Board

- Race/Ethnicity changes. Questar will allow for the new two-step designation of race/ethnicity, per U.S. Department of Education guidelines.

- Testing of non-LEP students. Questar will allow for the testing of non-LEP students. This will include the increase in production, printing, shipping and scoring for 200 additional students per grade span, for a total of 1,000 additional students. This will enable a comparison study of LEP and non-LEP students for validity purposes.

- Creation of IELA Foundation Document. Questar will create a Foundation Document describing the foundation of the IELA and will provide a draft by November 15, 2009 and a final copy by December 31, 2009. Questar will submit one bound, hard copy and an electronic copy of the document to the Board Manager. The IELA Foundation Document will include, but not be limited to:

  - The purpose of the IELA
  - The theoretical framework of the IELA
  - English language proficiency definition
  - Item development
  - Research base for assessment
  - How the assessment works
  - Any other information that the Board determines

- DIF analysis. Questar will conduct a Differential Item Functioning (DIF) analysis for gender and provide a report to be included in the 2010

Technical Report. The DIF analysis will be used to determine if test questions are fair and appropriate for assessing the knowledge of students based on gender.

- Licensing agreement with Montana. The IELA program will continue a licensing agreement with the State of Montana to permit its use of the spring 2010 Idaho English Language Assessment. Questar will continue to provide a credit to the Board of four dollars ($4.00) for each student who will be administered the MontCAS English Language Proficiency assessment in Montana or twenty thousand dollars ($20,000), whichever amount is greater.

IMPACT

The impact of the contract extension will be minimal, as there will be no change in vendor, therefore maintaining the continuity in testing vendors for Idaho school districts. There will also be no vendor overlap costs associated with a release of a new RFP. In addition, the contract renewal cost is consistent with the previous four years of the contract (Year 1 - $658,395, Year 2 - $584,150, Year 3 - $555,857, Year 4 - $595,193).

ATTACHMENTS

Attachment 1 – Draft Contract Amendment Page 5

STAFF COMMENTS AND RECOMMENDATIONS

Board staff recommends the approval of the second one-year contract extension with Questar.

BOARD ACTION

A motion to approve a one-year contract extension with Questar Assessment, Inc. at a cost of $595,093.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

THIS PAGE INTENTIONALLY LEFT BLANK

FIFTH AMENDMENT TO AGREEMENT FOR IMPLEMENTATION OF AN ENGLISH LANGUAGE PROFICIENCY ASSESSMENT

This FIFTH AMENDMENT TO AGREEMENT FOR IMPLEMENTATION OF AN ENGLISH LANGUAGE PROFICIENCY ASSESSMENT ("Fifth Amendment") is made effective as of the 12th day of July 2009 by and between the **STATE OF IDAHO**, by and through the Department of Administration, Division of Purchasing (Purchasing) on behalf of the State Board of Education ("Board"), and **QUESTAR ASSESSMENT, INC.**, a Delaware corporation, formerly known as **TOUCHSTONE APPLIED SCIENCE ASSOCIATES, INC.** (hereinafter referred to as "Questar").

RECITALS

A. Purchasing issued a Request for Proposals for Implementation of an English Language Proficiency Assessment on May 16, 2005 under request for proposals number RFP01618 (the "RFP").

B. Questar was the successful bidder under the RFP and Purchasing and Questar entered into Contract Purchase Order number CPO01884 dated as of July 12, 2005 (the "Purchase Order"). The RFP and the Purchase Order were amended by the First Amendment to Agreement for Implementation of an English Language Proficiency Assessment dated as of December 21, 2005, the Second Amendment to Agreement for Implementation of an English Language Proficiency Assessment dated October 24, 2006, the Third Amendment to Agreement for Implementation of an English Language Proficiency Assessment dated November 5, 2007; and the Fourth Amendment to Agreement for Implementation of an English Language Proficiency Assessment dated as of July 12, 2008 (collectively, the "Amendments"). The RFP, Purchase Order and the Amendments are collectively referred to as the "Contract".

C. The parties desire to further amend the Contract as provided herein.

AGREEMENT

NOW THEREFORE, in consideration of the above recitals, which are incorporated herein by this reference, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. *Extension and Continuation of Terms*. The Contract is hereby extended through July 11, 2010. Its terms remain in full force and effect except as specifically modified in this Fifth Amendment. All of the terms herein shall have the same meaning as contained in the Contract, except as specifically defined otherwise in this Fifth Amendment.

2. *Contract Modifications.*

a. Montana Licensing Agreement. The Contract is hereby modified by deleting paragraph 2(c) of the Fourth Amendment to Agreement for Implementation of an English Language Proficiency Assessment dated July 12, 2008, and inserting the following:

1. The Board will negotiate terms of a licensing agreement with the State of Montana to permit its use of the following (collectively (a)-(c), the "Licensed Property"):

a. The spring 2010 Idaho English Language Assessment developed for the Board by Questar under the Contract (the "Spring 2010 Assessment").

b. The raw score to scale score conversion tables developed for the Board by Questar under the Contract for the Spring 2010 Assessment.

c. Answer keys for the Spring 2010 Assessment.

Upon receipt by Questar of an executed copy of the licensing agreement between the Board and the State of Montana, Questar shall be permitted to utilize the Licensed Property to the extent Questar and the State of Montana determine is necessary or desirable to create assessments for the MontCAS English Language Proficiency assessments for the State of Montana that may be identical or substantially similar to the Licensed Property (the "Montana Assessments"). The Board hereby specifically grants Questar a license to create the Montana Assessments for 2010 as a derivative work of the Licensed Property.

b. Montana License Fees. The Contract is hereby modified by deleting paragraph 2(d) of the Fourth Amendment to Agreement for Implementation of an English Language Proficiency Assessment dated July 12, 2008, and inserting the following:

1. Following execution of the licensing agreement with the State of Montana for the Licensed Property, Questar shall provide a credit to the Board of four dollars ($4.00) for each student who is administered the Montana Assessments or twenty thousand dollars ($20,000), whichever amount is greater. Such credit shall appear on the billing immediately following the administration of the Spring 2010 Montana Assessments.

c. Equating required. The contract is hereby modified by deleting paragraph 3(a)(i) of the Fourth Amendment for Implementation of an English Language Proficiency Assessment dated July 12, 2008, and inserting the following:

1. Equating Required. Questar will equate the alternate set of Level 2 forms, one in each of the following grade clusters: 1-2, 3-5, 6-8, and 9-12, to IELA forms administered in prior years and scale scores will be reported on the same score

scale as prior forms. Equating will be performed using the "common item" design and procedures outlined in the Fourth Contract Amendment.

3. *Additional Contract Terms*. In addition to the terms set forth in the RFP and subsequent amendments, the following terms and conditions shall apply to the contract:

a. Transition to New Vendor. Questar will ensure a seamless transition to the new vendor at the expiration of the contract. The following will be transitioned to the successful bidder beginning in April 2010, or upon the successful completion of the RFP process in spring 2010. The following will be transition to the new vendor:

- Data files for Idaho students from 2006, 2007, 2008, 2009, and 2010
- All files and graphics pertaining to test items
- All LEP number files
- All native files of assessment items
-All other documentation deemed necessary at the discretion of the Board.

b. Race/Ethnicity Changes. Questar will allow for new the 2 step designation of Race/Ethnicity, per U.S. Department of Education guidelines.

c. Testing of Non-LEP students. Questar will allow for the testing of non LEP students. This will include the increase in production, printing, shipping and scoring for 200 additional students per grade span, for a total of 1,000 additional students.

d. Creation of IELA Foundation Document. Questar will create a Foundation Document describing the foundation of the IELA and will provide a draft of the document to the Board Manager by November 15, 2009. The Board Manager will review the draft and request any revisions and/or additions to the document within ten (10) business days. A final bound, hard copy of the document, as well as an electronic copy, will be submitted by Questar to the Board Manager by December 31, 2009. The IELA Foundation Document will include, but not be limited to:

-The purpose of the IELA
-The theoretical framework of the IELA
-English language proficiency definition
-Item development
-Research base for assessment
-How the assessment works
-Other information as requested by the Board

e. DIF Analysis. Questar will conduct a Differential Item Functioning analysis for gender and provide a report to be included in the 2010 Technical Report. The DIF analysis will be used to determine if test questions are fair and appropriate for assessing the knowledge of students based on gender.

4. *Budget and Payment*.

a. Extension Term Budget. The State shall pay Questar for all services between the expiration of the original Contract on July 11, 2009 and July 11, 2010 as set forth in Exhibit A. The State shall not be liable to Questar for any expenses Questar pays or incurs unless agreed to herein or as otherwise agreed to in writing by the Purchasing and the Board. Except as set forth in the Contract or this Fifth Amendment, Questar shall supply, at its sole expense, all equipment, tools, materials or supplies to accomplish the services to be performed pursuant to the Contract and this Fifth Amendment. Reimbursable expenses, as more particularly discussed in section 2.12.2 of the RFP, shall not exceed the estimated reimbursable expenses set forth on Exhibit A. Services will be invoiced as more particularly set forth in RFP section 2.12.3. Questar may invoice the Board for partial payment for the portion of products and services rendered in each quarter and Idaho agrees to remit payment for such items in the same manner as payment is made for completed products and services.

5. This Fifth Amendment shall be governed by, construed, and enforced in accordance with, the laws of Idaho without regard to its conflicts of law principles.

6. The Contract, as amended by this Fifth Amendment constitutes the entire agreement between the parties and supersedes all prior agreements or understandings between Questar, Purchasing and the Board. The Agreement may not be further amended in any manner except in a writing signed by Questar and Purchasing.

7. This Contract may be executed in counterparts. Each such counterpart shall constitute and original, but all such counterparts shall constitute but one agreement.

[Signature Page Follows]

NOW THEREFORE, the parties have entered into this Fifth Amendment effective as of the date first written above.

STATE OF IDAHO
Department of Administration
Division of Purchasing

By: _____
Its _____

QUESTAR ASSESSMENT, INC.

By: _____
Its _____

WITH ITS SIGNATURE SET FORTH BELOW, the State Board of Education acknowledges that it has reviewed this Fifth Amendment and has approved such Fifth Amendment as to substance and form.

STATE OF IDAHO
State Board of Education

By: _____
Its _____
Date: _____

THIS PAGE LEFT INTENTIONALLY BLANK

SUBJECT

Approval of the Idaho Accountability Workbook - Amendment to Adopt Indexing

APPLICABLE STATUTE, RULE, OR POLICY

Idaho Administrative Code IDAPA 08.02.03 - Section 112, Accountability
No Child Left Behind Act of 2001. Title IX, Part C, Section 9302 of the Elementary and Secondary Education Act (Public Law 107-110)
Consolidated State Application Accountability Workbook

BACKGROUND/DISCUSSION

The No Child Left Behind Act of 2001 requires an overall accountability plan summarizing the implementation status for required elements of the Idaho accountability system. The Consolidated State Application Accountability Workbook (CSAAW) was first submitted in 2003. Contents included in the CSAAW are cited in Idaho Administrative Code 08.02.03 Rules Governing Thoroughness. The plan is reviewed annually by Board staff. Amendments are submitted each March and approved by the U.S. Department of Education (USDE).

The Board last approved amendments to the Accountability Workbook in January 2009. At that time the Office of the State Board of Education (OSBE) and the State Department of Education (SDE) were not prepared to calculate accountability with an indexing model. Since that time, significant changes in the Informational Technology department of SDE allow for a revision of the process of calculating Adequate Yearly Progress (AYP) that gives a better analysis of the student achievement in Idaho schools. Eight other states use the indexing model to calculate AYP.

Idaho reports student achievement in four levels of proficiency, advanced, proficient, basic, and below basic. Currently, the system makes a categorical determination of *proficient and advanced* or *not proficient* and schools are evaluated on the percentage of students that are proficient and advanced divided by the total number of students. The indexing model allows attribution of partial credit (.5) for students that are determined to be in the basic category. Using this weighted average accomplishes two objectives. First, the percent proficient number for each school will discriminate between a school that has most of the non-proficient students in the basic proficiency band from a school that has the majority of students in the below basic. In the current system, this discrimination is hidden. In attachment 1, Understanding Idaho Indexing, you will see an example of two schools that were determined to be 61.1% proficient. These same schools' calculation with indexing identifies School A as significantly lower student achievement (63.9%) than School B (79.2%). The distinction is important. Secondly, to prevent an artificial inflation of schools' and districts' *percent proficient,* it is necessary to recalculate the starting point for the Annual Measurable Objectives (AMOs). Attachment 1 includes the chart of the revised AMOs. For example, the target AMOs for reading for 2009 jumps from 78% on

the legacy model to 85.6 %. See Attachment 1, slide 4 for the comparison of the legacy AMOs and the indexing AMOs.

IMPACT

Resetting the AMOs prevents any false inflation and keeps schools focused on improving student achievement for all students.

ATTACHMENTS

STAFF COMMENTS AND RECOMMENDATIONS

Staff recommends that the Indexing Model be approved and supported by the Board.

BOARD ACTION

A motion to approve the proposed amendments to the State of Idaho Consolidated State Application Accountability Workbook as submitted.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

Understanding Idaho's 2009 Indexing

2009 AYP Status Results

Index Definition

Index System provides partial credit for Basic scores below proficient. A school's index score will be the average of all student index points assigned to the school.

Proficiency Level		Index Points
Level 1: Below Basic	1	0
Level 2: Basic	2	50
Level 3: Proficient Level 4: Advanced		100

An Index Example: Two schools

Two schools, both with 180 students tested and 61.1% of their students scoring (legacy scoring method) proficient or better in reading.

READING		School A		School B	
Level	points	# of students	total	# of students	total
Level 1	0	60	0	5	0
Level 2	50	10	500	65	3250
Level 3	100	60	6000	60	6000
Level 4	100	50	5000	50	5000
Sum		180	1150	180	14250
Index		63.9		79.2	

Index Formula (n1x0+ n2x50+ n3x100+ n4x100) = Sum then "Divide Sum by N count Rounded to Tenth"

Comparison of Current AMO Chart and Proposed AMO Chart

1. Current AMO

	2002-03 2003-04	2004-05 2005-06	2006-07 2007-08 2008-09	2009-10 2010-11	2011-12 2012-13	2013-14
Reading	66%	72%	78%	85%	92%	100%
Math	51%	60%	70%	80%	90%	100%
Language Usage	66%	72%	78%	85%	92%	100%

2. Proposed AMO

Percent "Proficient or Higher" Required to Meet AYP

Idaho Partial Proficiency Weighted Model

	2007-08 2008-09	2009-10 2010-11	2011-12 2012-13	2013-14
Reading	90.1	93.4	96.7	100
Mathematics	88.5	92.3	96.2	100
Language Arts	83.0	88.7	94.3	100

PRINCIPLE 3. State definition of Adequate Yearly Progress (AYP) is based on expectations for growth in student achievement that is continuous and substantial, such that all students are proficient in reading and mathematics by no later than 2013-2014.

3.1 How does the state's definition of AYP require all students to be proficient in reading and mathematics by the 2013-2014 school year?

Idaho's definition of AYP requires all students to be proficient in reading and mathematics by the end of the 2013-2014 school year. It also requires all students and each subgroup to be held accountable to meet all of the academic indicators used to measure AYP (percent proficient in reading and mathematics; percent of participation in the assessments). Graduation rate for secondary schools and an additional academic indicator for elementary and middle schools will also be used to determine if a school has made AYP. See Chart 3 for 2007-2008 disaggregation of high school graduation rate that will be available for use in safe harbor calculations.

High school students take the ISAT in grade 10. The online test is presented multiple times each year for the purpose of meeting the graduation requirements. If a student meets the proficiency requirement in an administration prior to the spring assessment, that student will be counted as meeting standard for purposes of calculating AYP. Idaho will include retesting 11th grade students in 2009 and 11th and 12th grade student retesters in 2010 for high school proficiency calculations for AYP.

Idaho's Technical Advisory Committee recommended a validation of the Achievement Standards and Proficiency Level Descriptors (PLDs) after the 2007 ISAT was operational in 2007. The PLDs were reviewed and revised by 25-30 teachers per content area in March 2007. Academic Achievement Standards were validated using the Modified Bookmarking method immediately following the first administration of the ISAT (May 2007) after changing vendors in 2006. Statewide teams of 25-30 teachers in each content area reviewed student achievement using ordered item booklets and PLDs.

Idaho PLDs define proficiency in terms of general understanding of grade level content and skills. Students at the Basic level are expected to demonstrate limited (partial) proficiency of grade level content and skills. The lower end scale scores for basic leave a wide range for the Below Basic category.

Applying a weighted average value to Basic scale scores will support the PLDs and give partial credit for student achievement. Idaho Standard Achievement Tests scale scores are set on a vertical scale of 0 – 300. Idaho chose to keep the same scale when the test was revised in 2007 to maintain continuity for schools and districts data files. Student achievement in every grade level ranges from 160-300, further compressing the spread of students' scale scores. This issue does not allow breaking Basic proficiency band without jeopardizing the validity when some bands are as narrow as five scale score points with a standard error of three.

Reviewing Idaho student data from 2008 administration and the range of scale scores for each proficiency band, we have adapted the weighted model to create an equitable and fair assignment of partial credit.

Table I: Weighted Average in Proficiency Bands

Proficiency Level		**Index Points**
Level 1: Below Basic	**1**	**0**
Level 2: Basic	**2**	**50**
Level 3: Proficient **Level 4: Advanced**		**100**

Table I.a: AYP Calculation Table by Weighted Average in Proficiency Bands

Idaho Adequate Yearly Progress - Status				***District:***			
School Index Report				***School:*** *ELEMENTARY*			
				School ID:			
				Grade:			
		Performance Index Points Earned					
Group	***N*** *- (Total Number of Students in this group) NOTE: AYP proficiency not determined with 33 or less students*	***Below Basic***	***Basic***	***Proficient***	***Advanced***	***Calculation***	
		Level 1 *Number of Students Scoring at Scaled Score Range 1*	***Level 2*** *Number of Students Scoring at Scaled Score Range 2*	***Level 3*** *Number of Students Scoring at Scaled Score Range 3*	***Level 4*** *Number of Students Scoring at Scaled Score Range 4*	*Sum of totals Across row*	***Group Performance Index Score***
		n1 x 0 +	*n2 x 50 +*	*n3 x 100 +*	*n4 x 100 =*	*Sum*	*Divide Sum by N count Rounded to Tenth*

All subgroups will be held accountable for the academic indicators of reading and mathematics participation rate. Disaggregation of the graduation rate for 2006-2007 will be available for AYP determination in the 2007-2008 school year.

In the 2009 amendment to the Accountability Workbook, Idaho used spring 2007-2008 ISAT scores as the baseline for calculating the weighted average index model for AYP determinations. A timeline was established for public schools to reach the goal of 100% of students proficient in reading and mathematics by the end of the 2013-14 school year. Annual intermediate goals were established beginning in the 2008–09 school year with subsequent goals in 2010-11, 2012-13 and 2013-14 to assure increases in the percent of students proficient in reading and mathematics.

Table II: Percent "Proficient or Higher" Required to Meet AYP
Idaho Partial Proficiency Weighted Model

	2008-09	2009-10 2010-11	2011-12 2012-13	2013-14
Reading	85.6	90.4	95.2	100
Mathematics	83.0	88.7	94.3	100
Language Arts	75.1	83.4	91.7	100

Table II displays the Annual Measurable Objectives that plot growth toward 100% by 2014. This table replaces the previous version that was based on a status model that did not award partial proficiency for students scoring in the Basic range on the Idaho Achievement Standards.

GROWTH OBJECTIVE ("Safe Harbor" Provision)

If any student subgroups do not meet or exceed the Idaho's annual measurable objectives, the public school or LEA may be considered to have achieved AYP if the percent of students in the non-proficient subgroup:

1. Decreased by 10% from the preceding school year on the reading and mathematics indicators, as applicable,
2. Made progress on one or more of the other indicators, or is at/above the target goal for that indicator, and
3. Attained a 95% participation rate

Evidence:
Board action August 2006
Board Information February 28, 2008

3.2 How does the State Accountability System determine whether each student subgroup, public school, and LEA achieves AYP?

The Plan bases the annual determination of whether each subgroup, public school, and LEA achieves AYP on the achievement of all students, including the following subgroups:

1. Economically disadvantaged
2. Racial/ethnic
3. Students with disabilities
4. Limited English Proficient

Idaho's AYP calculation also incorporates additional academic indicators of graduation rate (for secondary schools) and for elementary and middle schools beginning in the 2004-2005 school year the third indicator described in Section 7.2. Disaggregation of the 2006-2007 graduation rate will be available for AYP determinations in 2007-2008. (See Chart 3.)

> (NOTE: For accountability purposes, the requirement to disaggregate graduation rate and growth index data into the subgroups is effective on when the public school or LEA must use the "Safe Harbor" provision to achieve AYP.)

Idaho will use a decreasing trend calculation under the "Safe Harbor" provision to identify schools that failed to achieve AYP by the method outlined in Chart 3. An Idaho public school or LEA may be considered to have achieved AYP if the percent of students in the non-proficient subgroup:

Part 1: Decreased by 10% from the preceding school year,
Part 2: Made progress on the additional academic indicators, or is at/above the target for that academic indicator, and
Part 3: Attained a 95% participation rate

An LEA is identified for improvement when it misses AYP in the same subject and same grade span for two consecutive years, or misses the other academic indicator in the same grade span for two consecutive years.

Beginning in 2002-2003 Idaho introduced the ISAT in grades 4, 8, and 10. With this phased-in introduction, many subgroups did not appear to have missed a target in reading or math because there were less than 34 students (see section 5.5). With the introduction of more grades, more subgroups now have 34 or more students. To avoid the over-identification of schools and districts in "need of improvement," Idaho will apply safe harbor (the reduction of not proficient students by 10%) to subgroups' results from 2003 even when the "n" is less than 34.

- The safe harbor formula used is

$$\frac{\text{\% of not proficient students, year 1 - \% of not proficient students, year 2}}{}$$

- Idaho will use the % of not proficient students in year 1 even when "n" is less than 34
- The "n" for year 2 data must be equal to or greater than 34

Completion of the introduction of the ISAT in grades 3-8 and 10 significantly reduced the use of data from groups less than 34 to apply Part 1 of safe harbor.

Chart 3. "Safe Harbor" Provision for AYP Determination with Accountability

Subgroups and Indicators

	Academic Indicators		Participation Rate		Graduation / Additional Academic Indicator*
	Reading % Meeting Standard	Mathematics % Meeting Standard	Reading	Mathematics	
	Decrease by 10% that percent of students not proficient from the preceding year in the school	Decrease by 10% that percent of students not proficient from the preceding year in the school	Attained a 95% Participation Rate	Attained a 95% Participation Rate	Meets or shows progress toward this indicator by that sub-group
All Students					
Economically Disadvantaged					
American Indian/Alaskan Native					
Asian					
Black/African American					
Native Hawaiian/Other Pacific Islander					
White					
Hispanic or Latino Ethnicity					
Students with Disabilities					
LEP Students					

* The requirement to disaggregate graduation rate and additional academic indicator data into the subgroups for accountability is effective only when the public school and LEA must use the "Safe Harbor" provision to achieve AYP.

The state contractor, now Data Recognition Corporation, will employ its current web-based system to collect and report data for all subgroups.

Evidence:
Board action August 15, 2003 IDAPA 08.02.03, §114.07

3.2a What is the State's starting point for calculating Adequate Yearly Progress?

In 2009, Idaho amended the accountability workbook to implement an indexing model requiring recalculation of the starting point. Idaho used student scores from the Spring 2007-2008 school year ISAT test for the starting point to calculate AYP. Based on those scores, Idaho set separate starting points for reading and mathematics for public schools with the goal of having a common starting point statewide for all public schools with similar grade configurations based on the ISAT. These averages were used to determine intermediate goals and annual measurable objectives.

The vendor assigns proficiency levels based on achievement standards approved by the State Board (see section 1.3). The State Board contracts with the vendor to report proficiency levels on individual student, school, district, and state reports.

Calculating the Starting Point for AYP

Because it provided the higher starting point of two options, the following method was used for establishing the starting point for AYP.

- Rank all Idaho public schools in order according to the percent of students who scored at the proficient level or above in reading in Spring 2008. The same process was used to calculate the starting point for mathematics. (In Steps 1 through 5, references are made to Chart 4, Example A, found on the following page.)

    1. In a chart similar to Example A, record the total students in the enrollment records for each school after they have been ordered based on the percent of students who scored at the proficient level or above.

    2. Beginning with the school with the smallest percent of proficient students in reading, calculate the cumulative enrollment. Referring to Example A, the cumulative enrollment for School X is 397 {200 (School Z) + 65 (School Y) + 132 (School X)}.

    3. Multiply the total student enrollment for Idaho public schools (top cumulative enrollment number) by 20 percent (.20) to find 20 percent of the total student enrollment. In the example, 20 percent of 1619 is 323.8. Rounding yields 324.

    4. Count up from the school with the smallest percent of students proficient in reading to identify the public schools whose combined school populations represent 20 percent of the total student enrollment (cumulative enrollment). From Example A, 20 percent of the total student enrollment is 324. To reach this number, the student populations from School X, School Y, and School Z are combined.

5. Use the percent of students who scored at the proficient level in reading and mathematics from the public schools identified in Step 4. This percent is the minimum starting point for reading and mathematics. In Chart 4, Example A, the minimum starting point is 30 percent (the percent of proficient students at School X).

Chart 4. Example

School Name	Percent of Students Proficient in Reading and Math	Total students in enrollment records	Cumulative enrollment
School A	54 %	235	1619 (1384 + 235)
School B	40 %	400	1384 (984 + 400)
School W	38 %	587	984 (397 + 587)
School X	30 %	132	397 (265 + 132)
School Y	29 %	65	265 (200 + 65)
School Z	20 %	200	200

Evidence:
IDAPA 08.02.03, Section 112
Board action, August 15, 2003
Board action, May 30, 2007

3.2b What are the State's annual measurable objectives for determining Adequate Yearly Progress?

Idaho reset starting points in 2009 based on 2007-2008 student achievement data. Idaho has established annual measurable objectives/intermediate goals for reading and mathematics. These goals/objectives will identify a single percent of students who must meet or exceed the proficient level of performance on the ISAT and the Idaho Alternate Assessment.

Idaho has set annual measurable objectives/intermediate goals separately for reading and mathematics. Beginning in 2007-2008 the annual intermediate goals/objectives will be used to determine AYP and serve as a guide to public schools in reaching the target goal by the end of the 2013-14 school year. The goals/objectives are the same for all public schools and LEAs for each grade configuration. The goals/objectives may be the same for more than one year. Idaho has set the goals/objectives and will use them to determine AYP for each public school and LEA by each student subgroup through 2013-14. (Refer to Section 3.1.)

Table II: Percent "Proficient or Higher" Required to Meet AYP
Idaho Partial Proficiency Weighted Model

	2008-09	2009-10 2010-11	2011-12 2012-13	2013-14
Reading	85.6	90.4	95.2	100
Mathematics	83.0	88.7	94.3	100
Language Arts	75.1	83.4	91.7	100

Evidence:

Board action, August 15, 2003
Board Information, February 21, 2008

3.2c What are the State's intermediate goals for determining Adequate Yearly Progress?

Idaho has set intermediate goals that will be applied to all school configurations (elementary, middle, and high school) by allowing multiple years at a specific target level. These targets lead to the ultimate goal of having 100% of students proficient in 2013-14. See chart in Section 3.2b.

Idaho Peer Review for 2006 required significant changes in the ISAT. As such, revised proficiency level descriptors were developed in March 2007. Based on revised PLDs and Spring 07 student data, performance standards were reset in May 2007.

Evidence:

Board action, August 2006
Board Information, 2006

THIS PAGE LEFT INTENTIONALLY BLANK