SUBJECT

Board Policy III.N., Statewide General Education – Second Reading

REFERENCE

June 1996	The Board adopted a common course listing for general education core.
December 2016	The Board approved the first reading of Board Policy III.N. clarifying oral communication competencies.
February 2017	The Board approved the second reading of Board Policy III.N.
August 2017	The Board approved the first reading of Board Policy III.N. amending the makeup of the committee and setting a timeline for competency review.
October 2017	The Board approved the second reading of Board Policy III.N.
August 2018	The Board approved the first reading of proposed amendments to Board Policy III.N. establishing a common course indexing system within the General Education Matriculation (GEM) framework to assist with transfer.
October 2018	The Board approved the second reading of proposed amendments to Board Policy III.N.
August 2019	The Board approved the first reading of proposed amendments to Board Policy III.N. clarifying process for changes to common course index.
October 2019	The Board approved the second reading of proposed amendments to Board Policy III.N.
October 2020	The Board approved the first reading of proposed amendments to Board Policy III.N. designating the Executive Director or designee as chair of the GEM Committee.
December 2020	The Board approved the second reading of proposed amendments to Board Policy III.N.
August 2021	The Board approved the first reading of proposed amendments to Board Policy III.N. expanding membership of the GEM Committee to representatives from digital learning, dual credit, and open education. This included amendments to GEM competency areas.

APPLICABLE STATUTE, RULE OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section III.N. and III.V.

Section 33-3729, Idaho Code

BACKGROUND/DISCUSSION

Consistent with Board Policy III.N., faculty discipline groups representing all institutions shall meet at least annually or as directed by the Board, to ensure consistency and relevance of general education competencies and courses approved for their respective General Education Matriculation (GEM) competency areas. At the October 2020 General Education Summit, the GEM Committee and Board staff facilitated a process with faculty discipline groups to conduct a thorough review and revision of the six GEM competencies.

Proposed amendments primarily clarify and streamline competency language in policy and shared rubrics for all GEM areas. Scientific Ways of Knowing amendments include updating lab course requirements. Throughout the pandemic, delivery of lab classes proved challenging under physical distancing requirements and other restrictions. As a result, this discipline group recommended updating the language to maintain quality delivery and ensure that students meet learning outcomes. Amendments were also made to Social and Behavioral Ways of Knowing, which updates the number of required competencies from four to five.

Other amendments include expanding the membership of the General Education Committee to include members representing digital learning, dual credit, and open education.

IMPACT

Approval of the proposed amendments will conclude the inaugural three-year review cycle for the Idaho GEM framework and improve alignment between institution, state, and national outcomes for discipline areas.

ATTACHMENTS

Attachment 1 - Board Policy III.N., Statewide General Education – Second Reading

BOARD STAFF COMMENTS AND RECOMMENDATIONS

There were no comments or changes between the first and second reading of this policy. Board staff recommends approval.

BOARD ACTION

I move to approve the second reading of proposed amendments to Board Policy III.N., Statewide General Education, as submitted in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

ATTACHMENT 1

Idaho State Board of Education
GOVERNING POLICIES AND PROCEDURES
SECTION: III. POSTSECONDARY AFFAIRS
SUBSECTION: N. Statewide General Education ~~December 2020~~October 2021

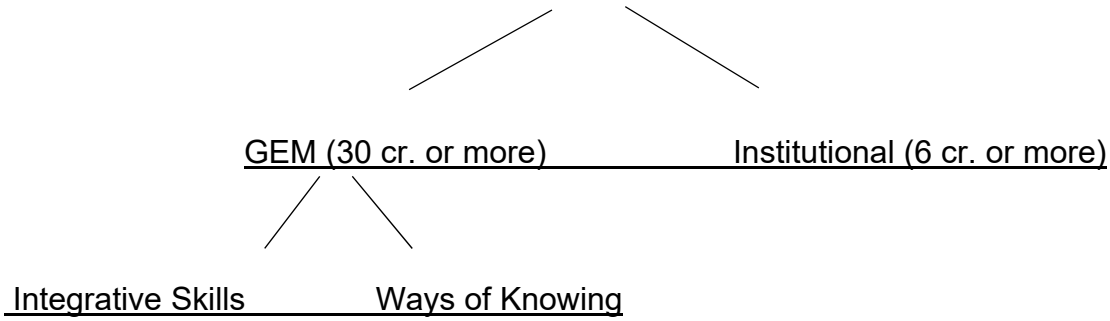
In our rapidly-changing world, students need to understand how knowledge is generated and created. They need to adapt to new opportunities as they arise as well as effectively communicate and collaborate with increasingly diverse communities and ways of knowing. In combination with major coursework, general education curriculum prepares students to use multiple strategies in an integrative manner to explore, critically analyze, and creatively address real-world issues and challenges. General education coursework provides students with an understanding of self, the physical world, and human society—its cultural and artistic endeavors as well as an understanding of the methodologies, value systems, and thought processes employed in human inquiries. General education helps instill students with the personal and civic responsibilities of good citizenship, and prepares them to be adaptive, life-long learners.

This policy shall apply to the University of Idaho, Boise State University, Idaho State University, Lewis-Clark State College, College of Eastern Idaho, College of Southern Idaho, College of Western Idaho, and North Idaho College (hereinafter "institutions").

1. The state of Idaho's general education framework for Associate of Arts, Associate of Science, and Baccalaureate degrees, outlined below in Figure 1, shall be:

   a. Thirty (30) credits or more of the general education curricula must fit within the general education Matriculation (GEM) competency areas defined in subsection 4 of this policy, and
   b. Six (6) or more credits of the general education curricula, which are reserved for institutions to address the specific mission and goals of the institution. For this purpose, institutions may create new competency areas or they may choose to count additional credits from GEM competencies. Regardless, these institutionally designated credits must have learning outcomes linked to Association of American Colleges and Universities (AAC&U) Essential Learning Outcomes.

Fig. 1: General education framework reflecting AAC&U Essential Learning Outcomes



2. The intent of the general education framework is to:

    a. Establish statewide competencies that guide institutions' determination of courses that will be designated as GEM courses
    b. Establish shared rubrics that guide course/general education program assessment; and
    c. Create a transparent and seamless transfer experience for undergraduate students.

3. There are six (6) GEM competency areas. The first two (2) emphasize integrative skills intended to inform the learning process throughout general education and major. The final four (4) represent ways of knowing and are intended to expose students to ideas and engage them in a broad range of active learning experiences. The GEM competency areas are as listed:

    a. Written Communication
    b. Oral Communication
    c. Mathematical Ways of Knowing
    d. Scientific Ways of Knowing
    e. Humanistic and Artistic Ways of Knowing
    f. Social and Behavioral Ways of Knowing

4. GEM courses in each area shall include the following competencies:

    a. Written Communication
    Upon completion of a course in this category, students are able to demonstrate the following competencies:

        i. Use flexible writing process strategies to generate, develop, revise, ~~edit, and~~ proofread, and edit texts.
        ii. Adopt strategies and genre appropriate to the rhetorical situation.
        iii. Use inquiry-based strategies to conduct research that explores multiple and diverse ideas and perspectives, appropriate to the rhetorical context.
        iv. Use rhetorically appropriate strategies to evaluate, represent, and respond to the ideas and research of others.
        v. Address readers' biases and assumptions with well-developed evidence-based reasoning.
        vi. Use appropriate conventions for integrating, citing, and documenting source material~~ as well as for surface-level language and style~~.
        vii. Read, interpret, and communicate key concepts in writing and rhetoric.

    b. Oral Communication
    Upon completion of a course in this category, students are able to demonstrate the following competencies:

i. Research, discover, and develop information resources and structure spoken messages to increase knowledge and understanding.
ii. Research, discover, and develop evidence-based reasoning and persuasive appeals for ethically influencing attitudes, values, beliefs, or behaviors.
iii. Adapt spoken messages to the diverse personal, ideological, and emotional needs of individuals, groups, or contexts.
iv. Employ effective spoken and nonverbal behaviors that support communication goals and illustrate self-efficacy.
v. Listen in order to effectively and critically evaluate the reasoning, evidence, and communication strategies of self and others.
vi. ~~Understand~~ Demonstrate knowledge of key theories, perspectives, principles, and concepts in the Communication discipline, as applied to oral communication.

c. Mathematical Ways of Knowing
Upon completion of a course in this category, a student is able to demonstrate the following competencies:

i. ~~Read, i~~Interpret~~, and communicate~~ mathematical concepts.
ii. Represent ~~and interpret~~ information/data.
iii. ~~Select, execute and explain~~ Use appropriate strategies/procedures when solving mathematical problems.
iv. ~~Apply quantitative reasoning to d~~Draw reasonable conclusions based on quantitative information~~and support appropriate conclusions~~.

d. Scientific Ways of Knowing
Upon completion of a non-lab course in this category, a student is able to demonstrate ~~at least four (4) of the following~~ competencies i-iv~:~. A student is able to demonstrate all five competencies, i-v, upon completion of a lab course.

i. Apply foundational knowledge and models of a discipline in the ~~natural or~~ physical or natural sciences to analyze and/or predict phenomena.
ii. ~~Understand the scientific method and a~~Apply scientific reasoning to critically evaluate ~~arguments~~ assertions.
iii. Interpret and communicate scientific information via written, spoken and/or visual representations.
iv. Describe the relevance of specific scientific principles to the human experience.
v. ~~Form and t~~Test a hypothesis in the laboratory or field using discipline-specific tools and techniques for observation, data collection and~~/or~~ analysis to form a defensible conclusion.

e. Humanistic and Artistic Ways of Knowing
Upon completion of a course in this category, students are able to demonstrate at least five (5) of the following competencies:

i. Recognize and describe humanistic, historical, or artistic works within problems and patterns of the human experience.
ii. Distinguish and apply ~~terminologies,~~ methodologies, approaches, or traditions~~processes, epistemologies, and traditions~~ specific to the discipline~~(s)~~.
iii. ~~Perceive and understand~~ Differentiate formal, conceptual, and technical elements specific to the discipline.
iv. Analyze, evaluate, and interpret texts, objects, events, or ideas in their cultural, intellectual or historical contexts.
v. Interpret artistic ~~and/~~or humanistic works through the creation of art, language, or performance.
vi. Develop critical perspectives or arguments about the subject matter, grounded in evidence-based analysis.
vii. Demonstrate self-reflection, ~~intellectual elasticity,~~ widened perspective, and respect for diverse viewpoints.

f. Social and Behavioral Ways of Knowing
Upon completion of a course in this category, students are able to demonstrate ~~at least four (4)~~ all five (5) of the following competencies.

i. Demonstrate knowledge of the theoretical and conceptual frameworks of a particular Social Science discipline.
ii. ~~Develop an understanding of~~ Describe self and the world by examining the dynamic interaction of individuals, groups, and societies as they shape and are shaped by history, culture, institutions, and ideas.
iii. Utilize Social Science approaches, such as research methods, inquiry, or problem-solving, to examine the variety of perspectives about human experiences.
iv. Evaluate how reasoning, history, or culture informs and guides individual, civic, or global decisions.
v. ~~Understand and appreciate~~ Identify the impact of the similarities and differences among and between individuals, cultures, or societies across space and time.

5. General Education Requirements

a. This subsection applies to Associate of Arts, Associate of Science, and Baccalaureate degrees. For the purpose of this policy, disciplines are indicated by course prefixes.

General education curricula must reflect the following credit distribution:

Competency Area	**Minimum Credits**
Written Communication	6
Oral Communication	2
Mathematical Ways of Knowing	3

Scientific Ways of Knowing	7 (from two different disciplines with at least one laboratory or field experience)
Humanistic and Artistic Ways of Knowing	6 (from two different disciplines)
Social and Behavioral Ways of Knowing	6 (from two different disciplines)
Institutionally-Designated Credits	6

i. GEM courses are designed to be broadly accessible to students regardless of major, thus college-level and non-GEM pre-requisites to GEM courses should be avoided unless deemed necessary by the institution.

ii. Additional GEM courses, beyond the general education curricula, may be required within the major for degree completion.

b. This subsection pertains to Associate of Applied Science (AAS) degrees.

The general education curricula for the AAS degree must contain a minimum of fifteen (15) credits, so distributed in the following areas:

Competency Area	**Minimum Credits**
Written Communication	3
Oral Communication	3
Mathematical Ways of Knowing	3
Social and Behavioral Ways of Knowing	3
Any general education course including institutionally designated courses	3

c. GEM courses and institutionally designated courses shall transfer as meeting an associated general education competency requirement at any institution pursuant to Board policy Section III.V.

6. Governance of the General Education Program and Review of Courses

a. GEM courses are developed by faculty and approved via the curriculum approval process of the institution delivering the courses. Faculty discipline groups representing all institutions shall meet at least annually or as directed by the Board, to ensure consistency and relevance of general education competencies and courses approved for their respective GEM competency areas.

b. Common Course Indexing is developed for courses offered within the GEM framework to provide greater transparency and seamlessness within transfer processes at Idaho's postsecondary institutions. Common-indexed courses are accepted as direct equivalents across institutions for transfer purposes. Common course indexing shall include common course prefix, common course number, common course title, and common GEM discipline area designation. The common

course number shall be three digits in sequence, but can be preceded by a single digit if four numbers are utilized by the institution (x###).

The common course list shall be approved by the Board on an annual basis and shall be maintained by the Board office. Changes to the list may be proposed by faculty discipline groups to the General Education Matriculation Committee. Proposed additions or removal of courses on the common course list must be reviewed by the General Education Matriculation Committee prior to Board approval. The request to remove a common-indexed course from an institution's academic catalog must be approved by the Board. The request to discontinue a course must be submitted in writing by the institution to the Board office. The request shall be submitted no less than a year in advance and provide rationale for the inability to offer the course.

c. The General Education Matriculation (GEM) Committee shall consist of a Board-appointed representative from each of the institutions; a representative from the Division of Career Technical Education; a representative from the Idaho Registrars Council, ~~as an ex-officio member~~; a representative from the digital learning community; a representative from the dual credit community, a representative from the open education community; and the Executive Director of the Board, or designee, who shall serve as the chair of the committee. To ensure alignment with AAC&U Essential Learning Outcomes and subsection 1, the Committee shall meet at least annually to review the competencies and rubrics of the general education framework. The Committee shall make recommendations to the Board regarding the general education framework and the common course list. The Committee shall review and make recommendations on the general education competencies as necessary. GEM Committee duties are prescribed by the Board, including those that may involve addressing issues related to competency areas and course offerings. The GEM Committee reports to the Council on Academic Affairs and Programs.

d. The institutions shall identify all general education courses in their curricula and identify them in a manner that is easily accessible by the public via their respective websites, as well as relevant web resources maintained by the Board office.

SUBJECT

General Education Matriculation (GEM) Committee Appointments

REFERENCE

October 2014	The Board approved the initial membership of the General Education Matriculation Committee.
June 2016	The Board appointed Jana McCurdy (CWI), Dr. Margaret Johnson (ISU), and Kenton Bird (UI) to the GEM Committee.
December 2016	The Board appointed Dr. Joanne Tokle (ISU) and John Bieter (BSU) to the GEM Committee.
August 2017	The Board appointed Lori Barber, representing CEI, to the GEM Committee.
October 2017	The Board appointed Cher Hendricks, representing UI, to the GEM Committee.
April 2019	The Board appointed Dean Panttaja representing UI, and Whitney Smith-Schuler representing CSI to the GEM Committee.
June 2019	The Board appointed Greg Wilson representing CWI, replacing Jana McCurdy to the GEM Committee.
October 2019	The Board appointed Tiffany Seeley-Case representing CSI, replacing Whitney Smith-Schuler to the GEM Committee.
June 2020	The Board appointed Martin Gibbs representing LCSC, replacing Mary Flores to the GEM Committee.
June 2021	The Board appointed Cindy Hill representing ISU and Angela Sackett-Smith representing CWI to the GEM Committee.
August 2021	The Board appointed Candyce Reynolds representing BSU and Lloyd Duman representing NIC to the GEM Committee.

APPLICABLE STATUTE, RULE, OR POLICY

Governing Policies and Procedures section III.N. General Education

BACKGROUND/DISCUSSION

Consistent with Board Policy III.N, the state General Education Matriculation Committee is responsible for reviewing the competencies and rubrics of the general education framework for each institution to ensure its alignment with the Association of American Colleges and Universities (AAC&U) Essential Learning Outcomes. Board Policy III.N also provides that faculty discipline groups have ongoing responsibilities for ensuring consistency and relevance of General Education competencies related to their discipline. The GEM Committee consists of a representative from each Idaho public postsecondary institution appointed by the Board; a representative from the Division of Career Technical Education; a representative from the Idaho Registrars Council; and the Executive Director or

designee of the Office of the State Board of Education, who serves as chair to the committee.

IMPACT

The proposed appointments add three new representatives and replace Idaho Division of Career Technical Education's representative on the GEM Committee with a representative from the Technical College Leadership Council, a committee of career technical college education deans from across the state.

ATTACHMENTS

Attachment 1 – Current GEM Committee Membership

BOARD STAFF COMMENTS AND RECOMMENDATIONS

At the August 2021 Board meeting, the first reading of Board Policy III.N was approved, expanding the membership of the GEM committee to include members representing digital learning, dual credit, and the open education community. The second reading of this policy will be considered under a separate agenda item at the October meeting. In preparation of that approval, staff is forwarding nominations of individuals to fill the new positions on the committee. Nominations also include changes to the current representative of Idaho Division of Career Technical Education to a representative from the Technical College Leadership Council.

Over the past 20 years, Chris Harper has guided teams and learning across military, non-profit, K-12, business, and higher education. Most of his work, including a focus on digital learning, has been right here in the Gem State. He currently serves as Director of the Teaching and Learning Center at the College of Southern Idaho.

Karina Smith is the Assistant Director for Concurrent Enrollment at Boise State University. She has her Ph.D. in International Education from Northcentral University, M.S. in Communication from Portland State University and her B.A. in Cultural Anthropology from the University of Alaska Anchorage. She has over 15 years of experience in higher education, working in Student Housing, Student Affairs, and Academic Advising. She oversees the student support and advising process for the Department of Concurrent Enrollment.

Kristin Whitman is a Health Sciences librarian at Idaho State University's Meridian campus. She serves as chair of ISU's Open and Affordable Educational Resources committee and was chair of the 2021 Idaho Open Education Week virtual event series. She has a Bachelor of Science in Chemistry from The College of William and Mary, a Master's in Library and Information Science from Rutgers, and an MA, Education Curriculum and Instruction from Boise State University.

Debbie Ronneburg has worked at Idaho State University for more than 25 years with most of her time spent in the College of Technology as Director of Student Services, Associate Dean, and Interim Dean. Debbie holds a Bachelor of Arts degree in English, a Master of Public Administration degree, and is near completion of her Doctor of Educational Leadership in Higher Education Administration.

Board staff recommends approval.

BOARD ACTION

I move to appoint Mr. Chris Harper, representing digital learning, to the General Education Matriculation Committee, effective immediately.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

AND

I move to appoint Dr. Karina Smith, representing dual credit, to the General Education Matriculation Committee, effective immediately.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

AND

I move to appoint Ms. Kristin Whitman, representing open education, to the General Education Matriculation Committee, effective immediately.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

AND

I move to appoint Dr. Debbie Ronneburg, representing career technical education, to the General Education Matriculation Committee, effective immediately.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

ATTACHMENT 1

State Board of Education
General Education Matriculation Committee

Dean Panttaja is the Director of General Education and Interim Vice Provost for Academic Initiatives at University of Idaho. Dean Panttaja was appointed in **April, 2019.**

Greg Wilson is the General Education Coordinator at College of Western Idaho. Greg Wilson was appointed in **June, 2019.**

Tiffany Seeley-Case is the Dean of General and Transfer Education at College of Southern Idaho. Tiffany Seeley-Case was appointed in **October, 2019**

Martin Gibbs is the Dean of Liberal Arts & Sciences at Lewis-Clark State College. Martin Gibbs was appointed in **June, 2020.**

Angela Sackett-Smith is the Dean for General Education at College of Eastern Idaho. Angela Sackett-Smith was appointed in **June, 2021.**

Cindy Hill is Interim Vice Provost for Academic Affairs at Idaho State University. Cindy Hill was appointed in **June, 2021**.

Lloyd Duman is the Interim Dean of General Studies at North Idaho College. Lloyd Duman was appointed in **August 2021**.

Candyce Reynolds is the Director of the Foundational Studies Program at Boise State University. Candyce Reynolds was appointed in August 2021.

Debbie Ronneburg is the Interim Dean, College of Technology at Idaho State University, representing the Technical College Leadership Council. **Appointment is pending approval, October 2021.**

Chris Harper is the Director of the Teaching & Learning Center at the College of Southern Idaho, representing digital learning. **Appointment is pending approval, October 2021.**

Karina Smith is the Assistant Director for Concurrent Enrollment at Boise State University, representing dual credit. **Appointment is pending approval, October 2021.**

Kristin Whitman is a Health Sciences librarian at Idaho State University's Meridian campus, representing open education. **Appointment is pending approval, October 2021.**

Mandy Nelson is the Registrar at Boise State University, a representative from the Idaho Registrars Council.

Jonathan Lashley is the Associate Chief Academic Officer at the Office of the State Board of Education, who serves as Chair of the Committee as the designee of the Executive Director.

BOISE STATE UNIVERSITY

SUBJECT

Online Bachelor of Applied Science in Cyber Operations and Resilience

APPLICABLE STATUTE, RULE, OR POLICY

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

BACKGROUND/DISCUSSION

Boise State University (BSU) proposes to create a Bachelor of Applied Science in Cyber Operations Resilience (BAS CORe) program that will be offered wholly online. The program will operate under the guidelines of Board Policy V.R. as it pertains to wholly online programs.

The proposed BAS CORe degree is intended to be part of a statewide joint-degree collaboration among Boise State University, Lewis-Clark State College, College of Eastern Idaho, College of Southern Idaho, College of Western Idaho, and North Idaho College. Other state universities can join this collaboration at any time.

This proposed BAS CORe program is complementary to BSU's recently approved BS CORe program and utilizes the same curriculum to serve student populations with different backgrounds. All CORe programs at BSU are designed around the realities of today's cyber and physical landscape, and they prepare students to anticipate, detect, mitigate, and manage cyber, physical, and interdependencies infrastructure threats. In addition, the unique scaffolding of these programs (designed as a stackable degree program) along with the emerging importance of cyber and physical resilience prepares students with the knowledge, skills, and expertise needed for maintaining the operational effectiveness of complex business, academic, and government information and physical systems.

Because it is entirely online, the proposed program will enable BSU to reach potential students who need flexibility in their education to accommodate professional and personal responsibilities. These students may also live in rural areas of Idaho that do not have face-to-face educational opportunities.

IMPACT

The proposed CORe degree program is a part of the statewide cybersecurity initiative and the collaboration between the Idaho's higher education institutions to meet the growing workforce demand for cyber-related education. This program will collaborate and coordinate with BSU's Institute for Pervasive Cybersecurity. The unique and flexible scaffolding of the program (designed as a stackable degree program) will allow it to be part of other joint programming opportunities in cybersecurity education in Idaho.

BSU projects that the BAS CORe program will reach a size of 44 students by the fifth year, graduating approximately 25 students per year once the program is up and running. The program is scalable to meet the demand for the program.

The student fees will be in accordance with the Online Program Fee as defined in Board Policy V.R.3.a.x. The price point for the online BAS CORe program fee will be $350 per credit. When students transfer in 60 credits from approved Associates of Applied Science degrees, the remaining 60 credits to complete the Boise State University BAS in CORe will be $21,000.

ATTACHMENTS

Attachment 1 – Online BAS in Cyber Operations and Resilience Proposal

BOARD STAFF COMMENTS AND RECOMMENDATIONS

The proposed Bachelor of Applied Science in Cyber Operations and Resilience is a partnership among Boise State University, Lewis-Clark State College, College of Eastern Idaho, College of Southern Idaho, College of Western Idaho, and North Idaho College to meet a workforce need for cybersecurity professionals. The online BAS will provide students a unique, seamless path toward completing a baccalaureate degree, allowing for articulation of community college credits from a technical degree. As outlined in the program proposal, the BAS program will create:

- Pathways for career & technical education students, community college graduates with an AS, AAS, working professionals with career and technical education, and military personnel with technical education.
- Stackable certification pathways for learners to achieve career alignment without the need for long-term program commitments.
- Curriculum that awards experiential learning credits in an affordable manner.
- Accelerated BS/BAS/MS curriculum for learners looking to achieve maximum career opportunity in the shortest timeframe possible.

Under a separate agenda item, Lewis-Clark State College is proposing a new Bachelor of Science in Cybersecurity Management that will also provide students with a seamless pathway to complete a baccalaureate degree. Both programs will have course-sharing capabilities that will provide students with opportunities to take specific courses from either institution through Online Idaho and meet respective program requirements. BSU is working to finalize articulation pathways between the proposed BAS and AAS degrees offered at the four community colleges.

BSU anticipates initial enrollment of 10 students in the first year, reaching 24 by the fifth year and graduating 2-25 students once the program is up and running. Because program will be using the online program fee model, minimum enrollments are based on course registrations, which are what translate to revenue per program proposal. The minimum number to breakeven range from 75 to 1,153

annual credits and 2.5 to 38.4 annual FTEs over a five-year period. If enrollments are not met, the program will be adjusted to reflect actual activity and will be evaluated annually. If in the long term it is not fiscally sustainable, the program will be discontinued.

BSU's proposed Bachelor of Applied Science in Cyber Operations and Resilience is consistent with their Service Region Program Responsibilities and their current institution plan for Delivery of Academic Programs in Region III. As provided in Board Policy III.Z, no institution has the statewide program responsibility cybersecurity programs. Additionally, Board Policy III.Z does not apply to programs for which 90% or more of all activity is required or completed online.

BSU also requests approval to assess an online program fee of $350 per credit for a total cost of $21,000 for students transferring with 60 credits from approved Associate of Applied Science degrees. Based on the information for the online program fee provided in the proposal, staff finds that the criteria have been met for this program.

The proposal completed the program review process and was recommended for approval by the Council on Academic Affairs and Programs on September 30, 2021, and was presented to the Instruction, Research, and Student Affairs Committee on October 7, 2021, and to the Business Affairs and Human Resources Committee on October 8, 2021. Board staff recommends approval.

BOARD ACTION

I move to approve the request by Boise State University to create an Online Bachelor of Applied Science in Cyber Operations and Resilience, as presented in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

AND

I move to approve the request by Boise State University to charge an online program fee of $350 per credit for the Bachelor of Applied Science in Cyber Operations and Resilience, in conformance with the program budget submitted to the Board in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

Institutional Tracking No. _____

Idaho State Board of Education

Proposal for Academic Degree and Certificate Program

Date of Proposal Submission:	September 2021
Institution Submitting Proposal:	Boise State University
Name of College, School, or Division:	College of Engineering
Name of Department(s) or Area(s):	Electrical and Computer Engineering Department

Official Name of the Program:	Bachelor of Applied Science in Cyber Operations and Resilience				
Implementation Date:	Spring 2022				
Degree Information:	Degree Level: Bachelor		Degree Type: B.A.S.		
CIP code (consult IR /Registrar):	43.0404				
Method of Delivery: Indicate percentage of face-to-face, hybrid, distance delivery, etc.	100% online				
Geographical Delivery:	Location(s)		Region(s)		
Indicate (X) if the program is/has: (Consistent with Board Policy V.R.)		Self-Support fee		Professional Fee	X Online Program Fee
Indicate (X) if the program is: (Consistent with Board Policy III.Z.)		Regional Responsibility		Statewide Responsibility	

Indicate whether this request is either of the following:

- [X] New Degree Program
- [ ] Consolidation of Existing Program
- [ ] Undergraduate/Graduate Certificates (30 credits or more)
- [ ] New Off-Campus Instructional Program
- [ ] Expansion of Existing Program
- [ ] Other (i.e., Contract Program/Collaborative

John A Lyby	09/02/2021		
College Dean (Institution)	Date	Vice President for Research (Institution; as applicable)	Date 9/23/21
		Academic Affairs Program Manager, OSBE	Date
(Institution; as applicable)	09/03/2021	Todd J. Kilburn	9/27/21
EVP/Chief Fiscal Officer (Institution)	Date 09/02/2021	Chief Financial Officer, OSBE	Date
John Buckwalter		TJ Bliss	9/24/21
John Buckwalter, Sep 2, 2021 14:40 MDT			
Provost/VP for Instruction (Institution)	Date	Chief Academic Officer, OSBE	Date
Melissa Jensen	09/03/2021		
Melissa Jensen, Sep 3, 2021 12:21 MDT			
President	Date	SBOE/Executive Director Approval	Date

Institutional Tracking No. _____

Idaho State Board of Education

Proposal for Academic Degree and Certificate Program

Date of Proposal Submission:	September 2021
Institution Submitting Proposal:	Boise State University
Name of College, School, or Division:	College of Engineering
Name of Department(s) or Area(s):	Electrical and Computer Engineering Department

Official Name of the Program:	Bachelor of Applied Science in Cyber Operations and Resilience					
Implementation Date:	Spring 2022					
Degree Information:	Degree Level: Bachelor		Degree Type: B.A.S.			
CIP code (consult IR /Registrar):	43.0404					
Method of Delivery: Indicate percentage of face-to-face, hybrid, distance delivery, etc.	100% online					
Geographical Delivery:	Location(s)		Region(s)			
Indicate (X) if the program is/has: (Consistent with Board Policy V.R.)		Self-Support fee		Professional Fee	X	Online Program Fee
Indicate (X) if the program is: (Consistent with Board Policy III.Z.)		Regional Responsibility		Statewide Responsibility		

Indicate whether this request is either of the following:

- [X] New Degree Program
- [ ] Undergraduate/Graduate Certificates (30 credits or more)
- [ ] Expansion of Existing Program
- [ ] Consolidation of Existing Program
- [ ] New Off-Campus Instructional Program
- [ ] Other (i.e., Contract Program/Collaborative) _____

College Dean (Institution)	Date	Vice President for Research (Institution; as applicable)	Date
Graduate Dean or other official (Institution; as applicable)	Date	Academic Affairs Program Manager, OSBE	Date
FVP/Chief Fiscal Officer (Institution)	Date	Chief Financial Officer, OSBE	Date
Provost/VP for Instruction (Institution)	Date	Chief Academic Officer, OSBE	Date
Marlene Tromp (Sep 9, 2021 10:33 MDT) President	09/09/2021 Date	SBOE/Executive Director Approval	Date

Before completing this form, refer to Board Policy Section III.G., Postsecondary Program Approval and Discontinuance. This proposal form must be completed for the creation of each new program. All questions must be answered.

Rationale for Creation or Modification of the Program

1. **Describe the request and give an overview of the changes that will result.** What type of substantive change are you requesting? Will this program be related or tied to other programs on campus? Identify any existing program that this program will replace. If this is an Associate degree, please describe transferability.

   Boise State University proposes the creation of a wholly online program that will award a Bachelor of Applied Science in Cyber Operations and Resilience. This new online degree will allow Associate of Applied Science students to seamlessly complete a Bachelor degree. The proposed program will operate under the guidelines of SBOE Policy V.R. as it pertains to wholly online programs.

   The proposed BAS in CORe degree is intended to be part of a statewide joint-degree collaboration among Boise State University, Lewis-Clark State College, College of Eastern Idaho, College of Southern Idaho, College of Western Idaho, and North Idaho College. Other state universities can join this collaboration anytime.

   The online Cyber Operations and Resilience (CORe) Bachelor of Applied Science (BAS) degree completion program will instruct and produce Cybersecurity professionals focused on operational tools, methodologies, and efficiencies, as well as ensuring system resiliency for maximum risk reduction coverage using risk appropriate costs. The goal of the CORe curriculum is to prepare learners to view and think of systems as holistic models while determining how resiliency can be achieved through interaction of people, process, and technology. CORe presents the interdependencies infrastructure has between cyber and physical in order to achieve operational effectiveness. In short, CORe is about how everything is interrelated and how strengthening the bonds of dependency can lead to a more resilient system/network/society.

   A holistic system level thinking approach is at the heart of the CORe program. The asynchronous online curriculum provides for a number of achievement modalities:
   1. Pathways for career & technical education students, community college graduates with an Associates of Science, Associates of Applied Science, working professionals with career and technical education and military personnel with technical education,
   2. Stackable certification pathways for learners to achieve career alignment without the need for long-term program commitments,
   3. A curriculum that awards experiential learning credits in an affordable manner, and
   4. Accelerated BS/BAS/MS curriculum for learners looking to achieve maximum career opportunity in the shortest time frame possible.

2. **Need for the Program.** Describe evidence of the student, regional, and statewide needs that will be addressed by this proposal to include student clientele to be served and address the ways in which the proposed program will meet those needs.

a. **Workforce and economic need:** Provide verification of state workforce needs that will be met by this program. Include job titles and cite the data source. Describe how the proposed program will stimulate the state economy by advancing the field, providing research results, etc.

Distinct from the online Bachelor of Science CORe program (aka BS CORe), the BAS in CORe allows articulation of community college credits from a technical degree and provides a unique pathway for students who have earned an associate of applied science (AAS) to pursue a bachelor's degree. BAS CORe also allows us to accept military technical credit hours.

The workforce demand for cybersecurity professionals continues to trend upward as cybersecurity increases in priority for government, corporations, and non-profit organizations. In correlation with increasing concern for cybersecurity, the labor market has also shifted to accommodate this issue. Between September 2016 and March 2021, there has been an approximate 300% increase in unique job postings for cybersecurity professionals and the intensity with which postings are made has more than doubled.

The proposed program will stimulate the Idaho economy by training a top-notch workforce that can work for a multitude of companies operating at any physical locations. This online program will provide learning opportunities to anyone in Idaho to be trained as a security professional.

The proposed BAS in CORe degree is part of a statewide joint-degree collaboration.

Identifying job titles for the proposed program or any cyber operations and resilience program is very difficult and can never encompass the types of jobs people with a cyber operations and resilience education can pursue. Therefore, we have chosen the following job titles:

- Computer and Information Analysts SOC Code 15-1210
- Information Security Analysts SOC Code 15-1212

2019 National Employment Matrix Title and Code		Employment		Job Openings Due to Growth and Replacement Needs 2019-2029
		2019	2029	
Computer and Information Analysts	15-1210	763.4	850.8	87.5
Information Security Analysts	15-1212	131.0	171.9	40.9
TOTAL				**128.4**

2018-2028 Idaho Long Term Employment Projections		Employment		Job Openings Due to Growth and Replacement Needs 2018-2028
		2018	2028	
Computer Systems Analyst	15-1121	1,591	1,740	149
Information Security Analysts	15-1122	408	456	48
TOTAL				**197**

b. Student demand. What is the most likely source of students who will be expected to enroll (full-time, part-time, outreach, etc.). Provide evidence of student demand/ interest from inside and outside of the institution.

Boise State's BS in CORe was approved at the February 2021 State Board of Education meeting and for the upcoming academic year of 2021-2022 the program already has 41 students enrolled in the program (in fall 21). The strong enrollment in the first year of the BS CORe program indicates that the program appeals to students and it is likely that the BAS CORe will not face challenges in meeting the projected enrollment and graduate targets outlined in this proposal.

It is anticipated that the BAS CORe will appeal to the following groups of potential students.

Career Starter - a student who just earned their Associates of Applied Science degree. May be employed, underemployed, or unemployed. A veteran with military technical credit hours transitioning to civilian jobs.

Career Advancer - typically a nontraditional student who is currently employed in an entry or mid-level position, looking to move into a senior-level position but needs a degree and specific skill sets who already holds an Associates of Science or Associates of Applied Science.

Career Changer - employed in a field other than cyber but wants to shift to a cyber career and needs a bachelor's degree, who holds an AAS degree.

c. Societal Need: Describe additional societal benefits and cultural benefits of the program.

A recent study by Cybersecurity Ventures[1], a respected publisher of cybersecurity content, predicts that 3.5 million cybersecurity jobs around the world will be unfilled by 2021. In the United States, the demand for professionals with cybersecurity expertise is outpacing all other occupations[2]. These reports, along with many others, underpin the need for

[1] https://cybersecurityventures.com/jobs/
[2] https://www.nist.gov/news-events/news/2018/11/new-data-show-demand-cybersecurity-professionals-

increasing workforce development initiatives founded in cybersecurity principles. The workforce shortage is across all cybersecurity domains, yet our adversaries are always advancing, always probing for vulnerabilities in corporate enterprise systems, critical infrastructure systems, and vital national security systems.

To combat this persistent threat, which is a 24/7 operation, we need all hands on deck. We must ensure students are positioned to fully support the cyber world; we need people with different perspectives, approaches, ways of thinking, and methods to solve the cyber challenges we are facing and will face. This need is especially pressing when assessing our current and future digital landscape — a tireless and ever expanding connectivity supported by societal needs and economic development, yet compromised by the common criminal to nation-state sponsored criminal activity.

At the center of this program is getting learners to think differently and understand how a stronger system and network can be built for the society to be more resilient. With the upcoming wide deployment of the 5G network, it is even more important that we have a program that addresses a major societal need. Finally, we must educate a workforce that is able to protect our critical infrastructure and our homes with resiliency in mind.

3. Program Prioritization

Is the proposed new program a result of program prioritization?

Yes__X___ No_____

If yes, how does the proposed program fit within the recommended actions of the most recent program prioritization findings.

Boise State University classified this as a high priority program. We are making investments for this to be a self-supporting program.

4. Credit for Prior Learning

Indicate from the various cross walks where credit for prior learning will be available. If no PLA has been identified for this program, enter 'Not Applicable'.

Yes. Prior learning credits will be awarded based on evidence of work experience and certifications.

5. Affordability Opportunities

Describe any program-specific steps taken to maximize affordability, such as: textbook options (e.g., Open Educational Resources), online delivery methods, reduced fees, compressed course scheduling, etc. This question applies to certificates, undergraduate, graduate programs alike.

We will be offering this program at a very market competitive rate of $350 per credit hour. This program has been designed to accept all 60 AAS credit hours from Idaho universities, colleges, and community colleges. If students have earned industry certifications, we can award credits for certifications. Students will also be able to earn internship credits, credit for prior learning and experiential learning credits.

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accelerating

Enrollments and Graduates

6. **Existing similar programs at Idaho Public Institutions.** Using the chart below, provide enrollments and numbers of graduates for similar existing programs at your institution and other Idaho public institutions for the most past four years.

Cyber education programs can be classified in three categories: (1) Cyber awareness program for everyone, (2) cyber for STEM where STEM majors learn how to design and code with security in mind, (3) cyber operations for dealing with security issues 24/7. The BAS CORe degree is in category (3).

Currently, there is no such program across Idaho. University of Idaho's BS in Cybersecurity is a Computer Science based degree meant to teach how to program securely. The Idaho State University's BAS Cyber-Physical Systems Engineering Technology degree, which launched in Fall 2020, is an industry control cybersecurity program. This degree concentrates on operational technology cybersecurity.

This Boise State program (as proposed) is on cyber operations. It will meet the needs of any organization, from local governments, counties governments, state governments, national security, and private entities.

Instit.	Program Name	Fall Headcount Enrollment in Program				Number of Graduates From Program (Summer, Fall, Spring)			
		FY18	FY19	FY20	FY21	FY18	FY19	FY20	FY21
ISU	AAS: Industrial Cybersecurity Engineering Tech	n/a	n/a	29	24	n/a	n/a	8	12
ISU	Intermediate Technology Certificate: Industrial Cybersecurity Engineering Tech	n/a	n/a	2	4	n/a	n/a	1	2
U of I	BS in Cybersecurity	n/a	n/a	3	n/a	n/a	n/a	n/a	n/a
ISU	BAS	22	21	20	34	24	11	15	22

7. **Justification for Duplication** (if applicable). If the proposed program is similar to another program offered by an Idaho public higher education institution, provide a rationale as to why any resulting duplication is a net benefit to the state and its citizens. Describe why it is not feasible for existing programs at other institutions to fulfill the need for the proposed program.

The proposed program is different from the Idaho State University Cyber-Physical System Engineering Technology (UG) program and the University of Idaho Cybersecurity (UG) program because the proposed program instructs and produces cybersecurity professionals focused on operational thinking, tools, methodologies, and efficiencies, as well as ensuring system resiliency for maximum risk reduction coverage using risk appropriate costs. The goal of the CORe curriculum is to prepare learners to view and think of systems as holistic models while determining how resiliency can be achieved. CORe presents the interdependencies infrastructure has between cyber and physical in order to achieve operational effectiveness. In short, CORe is about how everything is interrelated and how strengthening the bonds of dependency can lead to a more resilient system/network/society. This BAS CORe is to serve AAS students or students with technical credits hours.

8. **Projections for proposed program:** Using the chart below, provide projected enrollments and number of graduates for the proposed program:

Proposed Program: Projected Enrollments and Graduates First Five Years											
Program Name: Bachelor of Applied Science in Cyber Operations and Resilience											
Projected Fall Term Headcount Enrollment in Program						**Projected Annual Number of Graduates From Program**					
FY22 (first year)	FY23	FY24	FY25	FY26		FY22 (first year)	FY23	FY24	FY25	FY26	
10	31	36	39	44		0	2	12	23	25	

9. **Describe the methodology for determining enrollment and graduation projections.** Refer to information provided in Question #2 "Need for the Program" above. What is the capacity for the program? Describe your recruitment efforts? How did you determine the projected numbers above?

The program's size will be scaled to demand for the program. The numbers in the table above reflect a reasonable and attainable scaling up of the program.

Marketing and recruitment efforts will include a digital marketing campaign, a web landing page, request for information form and a full program website with details regarding the key program assets, curriculum plan, and costs. In addition, a comprehensive communication plan will be implemented to attract and nurture interested students. Strategic, personalized communications will engage and support students throughout the recruitment life cycle. Our coaching approach to student services will support online students and maintain their connection to Boise State through graduation.

10. Minimum Enrollments and Graduates.

a. What are the minimums that the program will need to meet in order to be continued, and what is the logical basis for those minimums?

Because the program will be utilizing the online fee model, it is best to put minimum enrollment in terms of course registrations, which are what translate to revenue. Based on estimated expenses for instruction and for support personnel, the minimum number of course registrations to achieve breakeven is:

- Year 1: Annual credits 75, Annual FTEs 2.5
- Year 2: Annual credits 451, Annual FTEs 15
- Year 3: Annual credits 860, Annual FTEs 28.7
- Year 4: Annual credits 1,018, Annual FTEs 33.9
- Year 5: Annual credits 1,153, Annual FTEs 38.4

If enrollments do not meet expectations, expenses will adjust to reflect actual activity. The program's financial sustainability will be evaluated at least annually.

b. If those minimums are not met, what is the sunset clause by which the program will be considered for discontinuance?

Programs operating under the online program fee model at Boise State University are expected to be fiscally sustainable. If enrollments do not meet expectations, expenses will be adjusted to reflect actual activity. The program's financial sustainability will be evaluated at least annually. If it is determined to be fiscally unsustainable in the long term, it will be discontinued.

11. Assurance of Quality. Describe how the institution will ensure the quality of the program. Describe the institutional process of program review. Where appropriate, describe applicable specialized accreditation and explain why you do or do not plan to seek accreditation.
The following measures will ensure the high quality of the new program:

Regional Institutional Accreditation: Boise State University is regionally accredited by the Northwest Commission on Colleges and Universities (NWCCU). Regional accreditation of the university has been continuous since initial accreditation was conferred in 1941. Boise State University is currently accredited at all degree levels (A, B, M, D).

Program Review: Boise State has instituted a new program review procedure. At the inception of new programs, the programs will submit to the Office of the Provost a three-year assessment plan to be scheduled into the Periodic Review/Assessment Reporting Cycle. The plan includes program learning outcomes; and an implementation plan with a timeline identifying when and what will be assessed, how the programs will gather assessment data, and how the program will use that information to make improvements. Then, every three years, the programs will provide Program Assessment Reports (PAR), which will be reviewed by a small team of faculty and staff using a PAR Rubric, which includes feedback, next steps, and a follow-up report with a summary of actions.

Program Development Support: The online Bachelor of Applied Science in Cyber Operations and Resilience is one of several that are being created via the eCampus Expansion Initiative at Boise

State University.

- Program Design: Boise State's online program development process includes a facilitated program design process to assist program faculty members in the creation of an intentional, cohesive course progression aligned to both course and program learning outcomes.
- Course Design and Development: Each course is designed and developed by a team of experts, which includes an instructional designer, a multimedia developer, a quality assurance specialist, and a course developer, who work collaboratively with the faculty member. The end result is a single master version of each course. All courses for the program are developed with a consistent look and feel using a common course template aligned with nationally recognized Quality Matters course design standards.
- Course Maintenance: In an effort to support the continuous course improvement of online master courses, there is an opportunity for each master course to undergo minor course maintenance following each time the course is offered. Input for any changes in the course is based on feedback from both instructors and students.

Academic Integrity: Academic integrity is vital to the mission of Boise State University and encompasses the totality of academic rigor, ethical behavior, intellectual curiosity, appropriate teamwork, and persistence. All assignments submitted by a student must represent his/her own ideas, concepts, and current understanding or must cite the original source. Boise State proactively supports academic integrity by providing training, maintaining a website dedicated to academic integrity, providing tools such as pedagogical strategies, workshops, and tips for designing tests, as well as establishing policies and procedures for students who violate the academic integrity policy within the Student Code of Conduct. For this new online program, we will use the following strategies to encourage academic integrity:

- During the design and development of the curriculum and assessment of each course, instructors will be informed by staff of Boise State's eCampus Center about best practices for online course design based on Quality Matters ™ and best practice strategies to promote academic integrity in online education based on WCET's recommendations (Version 2.0, June 2009)
- Through the program development process, course production, course launch support provided by the eCampus Center, and other means, instructors will be reminded about the importance of academic integrity and encouraged to report and act upon suspected violations.
- Academic integrity will be addressed within online student orientation. Programs may require online students to complete the university's Academic Integrity Online Workshop.
- At the beginning of each course, the instructor will communicate expectations regarding academic integrity to students in the syllabus and verbally and may require completion of the university's Academic Integrity Online Workshop.

Student Authentication: Because the proposed program will be offered entirely online, it is important to include mechanisms by which we authenticate the identity of students enrolled in the program. We will use the following mechanisms:

- During the admissions process, the university will confirm required official transcripts and other documentation required for admission into the program.
- Associated with access to and use of our Learning Management System, a secure log-in environment will be provided and students will be required to use strong passwords and change them every 90 days.
- When high-stakes exams are required, faculty will be encouraged to utilize remote or online proctoring services when appropriate. In those instances, students will need to

provide valid photo identification before gaining access to the graded assessments or other required activities.

- Instructors will utilize Canvas's Ouriginal plagiarism detection program when appropriate.
- Instructors are expected to be informed of and aware of the importance of student identity authentication and to report and act upon suspected violations.

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

N/A

13. **Teacher Education/Certification Programs** All Educator Preparation programs that lead to certification require review and recommendation from the Professional Standards Commission (PSC) prior to consideration and approval of the program by the State Board of Education.

Will this program lead to certification?

Yes_____ No__X___

If yes, on what date was the Program Approval for Certification Request submitted to the Professional Standards Commission?

14. **Three-Year Plan: If this is a new proposed program, is it on your institution's approved 3-year plan?**

Yes __X__ No _____

If yes, proceed to question 15. If no:

a. **Which of the following statements address the reason for adding this program outside of the regular three-year planning process.**

Indicate (X) by each applicable statement:

	Program is important for meeting your institution's regional or statewide program responsibilities.
	The program is in response to a specific industry need or workforce opportunity.
	The program is reliant on external funding (grants, donations) with a deadline for acceptance of funding.
	There is a contractual obligation or partnership opportunity related to this program.
	The program is in response to accreditation requirements or recommendations.
	The program is in response to recent changes to teacher certification/endorsement requirements.

b. **Provide an explanation for all statements you selected.**

Educational Offerings: Curriculum, Intended Learning Outcomes, and Assessment Plan

15. Curriculum. Provide descriptive information of the educational offering.

a. Summary of requirements. Provide a summary of program requirements using the following table.

Credit hours in required courses offered by the department(s) offering the program.	43
Credit hours in required courses offered by other departments:	
Credit hours in institutional general education curriculum	37
Credit hours in free electives	40
Total credit hours required for degree program:	120

b. Curriculum. Provide the curriculum for the program, including credits to completion, courses by title and assigned academic credit granted.

BAS Degree Completion in Cyber CORe	Credits
University Foundations	***37***
University Foundations requirements indicated in bold. See page 48 for details and lists of approved courses.	
UF 100 Foundations of Intellectual Life	**3**
UF 200 Foundations of Ethics and Diversity	**3**
FW ENGL 101 Writing and Rhetoric I	**3**
FW ENGL 102 Writing and Rhetoric II	**3**
FC Foundations of Oral Communication	**3**
FM Foundations of Mathematics course	**3**
FN Foundations of Natural, Physical, & Applied Sciences course with lab	**4**
FN Foundations of Natural, Physical, & Applied Sciences course in a second field	**3**
FA Foundations of Arts course	**3**
FH Foundations of Humanities course	**3**
FS Foundations of Social Sciences course	**3**
FS Foundations of Social Sciences course in a second field	**3**
Required Courses *	***27***
CORE 400 Cyber Systems Thinking	**3**
CORE 405 Cyber Project Management and Design	**3**
CORE 470 Cyber Risk Management	**3**
CPS 301 Information Assurance and Critical Thinking	**3**
CPS 401 Defensive Security	**3**

CPS 402 Offensive Security	3
CPS 403 Recovery and Forensics	3
CPS 411 Networking (CompTIA Network+)	3
CPS 412 Foundational Essential for IT Cyber Security Practitioner (CompTIA Security+)	3
CORe Electives	***4-13***
CORE 401 Cyber Risk Assessment	1
CORE 410 Applied Cyber Security Programming	1
CORE 411 Artificial Intelligence & Machine Learning	1
CORE 413 Internet of Things Architecture	1
CORE 420 Cyber Security Operations Center	1
CORE 421 Cyber Business and Regulatory Operations	1
CORE 422 Cyber Red and Blue Teams	1
CORE 450 Cyber Threat Intelligence	3
CORE 460 Cyber Resilience Systems Design	3
Applied Learning	***2-6***
Internships/Experiential Learning/Certification/Credit for Prior Learning	6
Finishing Foundation (FF)	***3***
FF CORE 480 Cyber Capstone	3
AS/AAS Technical Credit Hours / Electives	***40-47***
Total	**120**

c. Additional requirements. Describe additional requirements such as comprehensive examination, senior thesis or other capstone experience, practicum, or internship, some of which may carry credit hours included in the list above.

CORE 480 Cyber Capstone Capstone: design experience integrating previous coursework with cyber operations and resilience design theory and methodology. Prereq: CORE 405, CORE 470, CPS 301.

Internships/Experiential Learning/Certification/Credit for Prior Learning: Students can earn internship or experiential learning credit hours. For those students with work experience, evidence of learning can be presented to earn credit hours. Traditional students can also earn credit hours through internships to prepare for their career at completion of degree.

16. Learning Outcomes: Expected Student Learning Outcomes and Connection to Curriculum.

a. Intended Learning Outcomes. List the Intended Learning Outcomes for the proposed program, using learner-centered statements that indicate what students will know, understand, and be able to do, and value or appreciate as a result of completing the

program.

- Recognize the correct fundamentals of cyber operations, resilience, risk assessment, and information assurance to both cyber-physical and information systems.
- Make decisions based on the ethics, laws, policies, and governance of the cyber security field.
- Practice acceptable tactics, techniques, and procedures necessary to enhance cyber-physical and informational security operations and resiliency.
- Recognize industry acceptable cyber security models to secure, inform, involve, and educate stakeholders in security/ resilience operations and strategies.
- Continuously evaluate and monitor the operational and resilient maturity of an entity.
- Analyze operation and resiliency policies, metrics, testing and security solutions for an entity using both rigorous risk assessment and threat intelligence people, processes, tools and measures

17. Assessment plans.

a. **Assessment Process.** Describe the assessment plan for student learning outcomes that will be used to evaluate student achievement and how the results will be used to improve the program.

The BAS in Cyber Operations and Resilience degree program will follow a systematic assessment and improvement process in which multiple approaches will be used, not only to measure student attainment of program outcomes, but to also inform programmatic improvements. The learning outcomes are mapped to courses that provide relevant content. Student work in these courses that address specific outcomes is collected and evaluated by program faculty. The outcomes are assessed on a three-year cycle with data for all outcomes collected each year, and then the results are analyzed every three years. For each outcome, student work across the program is reviewed in a comprehensive approach. A group of three faculty members and instructors review the overall attainment of the outcome based on the evidence collected. As part of the review, recommendations for improvement to the program are outlined. All faculty then review these results and make suggestions/changes for program improvement. Evaluation results inform programmatic, pedagogical, and curricular improvements.

The key knowledge unit as defined by the National Initiative for Cyber Security Education (NICE) Cybersecurity Workforce Framework, NSA CAE, and UK Cyber Security Body of Knowledge (CyBok) will also be mapped to all the courses. This will ensure we are teaching the most important skill sets and critical thinking.

Resources Required for Implementation – fiscal impact and budget.
Organizational arrangements required within the institution to accommodate the change including administrative, staff, and faculty hires, facilities, student services, library; etc.

18. Physical Facilities and Equipment: Describe the provision for physical facilities and equipment.

a. **Existing resources.** Describe equipment, space, laboratory instruments, computer(s), or other physical equipment presently available to support the successful

implementation of the program.

No impact. Since this is a cyber program, the hands-on activities can either be carried out using students' computers or using cloud computing services.

b. **Impact of new program.** What will be the impact on existing programs of increased use of physical resources by the proposed program? How will the increased use be accommodated?

No impact is anticipated.

c. **Needed resources.** List equipment, space, laboratory instruments, etc., that must be obtained to support the proposed program. Enter the costs of those physical resources into the budget sheet.

N/A

19. **Library and Information Resources:** Describe adequacy and availability of library and information resources.

a. **Existing resources and impact of new program.** Evaluate library resources, including personnel and space. Are they adequate for the operation of the present program? Will there be an impact on existing programs of increased library usage caused by the proposed program? For off-campus programs, clearly indicate how the library resources are to be provided.

No impact is anticipated.

b. **Needed resources.** What new library resources will be required to ensure successful implementation of the program? Enter the costs of those library resources into the budget sheet.

No impact. Boise State University has ACM and IEEE subscriptions. Most publications are online and the program can get access to those publicly available resources.

20. **Faculty/Personnel resources**

a. **Needed resources.** Give an overview of the personnel resources that will be needed to implement the program. How many additional sections of existing courses will be needed? Referring to the list of new courses to be created, what instructional capacity will be needed to offer the necessary number of sections?

All of the courses in the proposed BAS in CORe are already part of the approved online undergraduate degree in Cyber Operations and Resilience (a.k.a, BS in CORe). No new courses need to be created or developed.

Instructional capacity needs to be added, as well as administrative support. An Associate Faculty Director position is added to the BAS CORe budget with an anticipated start date to align with the spring 2022 launch. This position provides sustainability for a full-time faculty position. This increases instructional capacity and provides the program director with curriculum support. This position supports three degree programs: BAS in CORe, BS

in CORe, and Master of Science in CORe. The primary funding source for this position is through the BAS CORe budget with revenue transfer of funds from the other two degrees. Also, additional teaching assistants will be added to support the growth due to BAS CORe enrollments.

b. **Existing resources.** Describe the existing instructional, support, and administrative resources that can be brought to bear to support the successful implementation of the program.

All courses in the BAS in CORe degree are shared with the BS CORe degree. Instructional and administrative support expenses have already been accounted for in the BS in CORe and MS in CORe budget.

c. **Impact on existing programs**. What will be the impact on existing programs of increased use of existing personnel resources by the proposed program? How will quality and productivity of existing programs be maintained?

The BAS CORe degree will fund the Faculty Associate Director position which supports three degree programs: BAS in CORe, BS in CORe, and MS in CORe. Instructional and administrative support expenses have already been accounted for in the BS in CORe and MS in CORe budgets.

d. **Needed resources.** List the new personnel that must be hired to support the proposed program. Enter the costs of those personnel resources into the budget sheet.

The following positions will be hired for the program:

- Associate Faculty Director

Expenses for this position is included in the program budget sheet.

21. Revenue Sources

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

Not applicable. No appropriated funds are being used for the BAS CORe program.

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

No new appropriation will be required.

c. **Non-ongoing sources**:

i. If the funding is to come from one-time sources such as a donation, indicate the sources of other funding. What are the institution's plans for sustaining the program when that funding ends?

N/A. No grant or one-time funding sources needed.

ii. Describe the federal grant, other grant(s), special fee arrangements, or contract(s) that will be valid to fund the program. What does the institution propose to do with the program upon termination of those funds?

N/A

d. Student Fees:

i. If the proposed program is intended to levy any institutional local fees, explain how doing so meets the requirements of Board Policy V.R., 3.b.

N/A

ii. Provide estimated cost to students and total revenue for self-support programs and for professional fees and other fees anticipated to be requested under Board Policy V.R., if applicable.

The student fee will be in accordance with the Online Program Fee as defined in the Board Policy V.R., 3.a.x. That policy enables the institution to set a price-point appropriate for the program; students will pay an online program fee in lieu of tuition. The price-point for our online program fee will be as follows: $350 per credit. When students transfer in 60 credits from approved Associates of Applied Science degrees, the remaining 60 credits to complete the Boise State University BAS in CORe will be $21,000.

We project that by the fourth year of the program, it will generate 1,018 SCH, which will yield a total revenue of $356,160.

22. Using the excel budget template provided by the Office of the State Board of Education, provide the following information:

- Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first **four** fiscal years of the program.
- Include reallocation of existing personnel and resources and anticipated or requested new resources.
- Second and third year estimates should be in constant dollars.
- Amounts should reconcile subsequent pages where budget explanations are provided.
- If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies).
- Provide an explanation of the fiscal impact of any proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

I. PLANNED STUDENT ENROLLMENT

	FY 2022		FY 2023		FY 2024		FY 2025		FY 2026	
	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount
A. New enrollments	2.3	9	13.5	29	25.8	46	30.5	51	34.6	57
B. Shifting enrollments	0.3	1	1.5	3	2.9	5	3.4	6	3.8	6
Total Enrollment	2.5	10	15.0	33	28.7	51	33.9	57	38.4	63
Student Credit Hours Generated	75		451		860		1,018		1,153	

II. REVENUE

	FY 2022		FY 2023		FY 2024		FY 2025		FY 2026	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
1. New Appropriated Funding Request										
2. Institution Funds				$10,000		$40,000		$65,000		
3. Federal										
4. New Tuition Revenues from Increased Enrollments										
5. Student Fees		$26,250		$157,982		$301,006		$356,160		$403,574
6. Other (i.e., Gifts)		$0		$0						
Total Revenue	$0	$26,250	$0	$167,982	$0	$341,006	$0	$421,160	$0	$403,574

Ongoing is defined as ongoing operating budget for the program which will become part of the base.
One-time is defined as one-time funding in a fiscal year and not part of the base.

Budget Notes:

I.A. B. Calculation of FTE and headcount as follows:
>1 FTE = 30 credits
>Headcount determined as the distinct number of students in the program that year.
>Assume that 90% of the enrollments will be new enrollments and 10% will be shifting enrollments
>Assume 25% attrition from 1st to 2nd semester, then 3% attrition every semester. No attrition from 2nd to last semester to last semester.

II.2. The College of Engineering will support program in Yr2. Yr3 and Yr4 from revenue generated by Bachelor of Science and Master of Science in Cyber Operations and Resilience

II.5. Student Fee revenue calculated as Student Credit Hours * $350 per credit
$350 calculated as estimate of 2021-2022 per credit rate
To be conservative assume in calculations that per-credit fee does not increase over time to align with the amount charged to traditional resident students

III. EXPENDITURES

	FY 2022		FY 2023		FY 2024		FY 2025		FY 2026	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
A. Personnel Costs										
1 FTE		0.00		1.00		1.00		1.00		1.00
2 Faculty		$0		$116,733		$120,235		$123,842		$127,559
3 Adjunct Faculty		$0		$0		$0		$0		$0
4 Graduate/Undergrad Assistants										
5. Research Personnel										
6 Directors/Administrators		$0		$0		$0		$0		$0
7. Administrative Support Personnel		$0		$0		$0		$0		$0
8 Fringe Benefits		$308		$37,300		$38,368		$39,152		$40,574
9 Other Teaching Assistants		$7,692		$7,692		$15,385		$15,385		$30,769
Total Personnel and Costs	$0	$8,000	$0	$161,726	$0	$173,988	$0	$178,379	$0	$198,900

Budget Notes (continued)

III.A.1 FTE: Calculated using Credit hour load divided by 24 - This is the Faculty Associate Director position

III.A.8 Benefits calculated at staff fringe rate of $11,650+(annual wage*20.47%) professional staff

III.A.9 Other: Teaching Assistants hired to support high enrollment courses starting year 1

	FY 2022		FY 2023		FY 2024		FY 2025		FY 2026	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
B. Operating Expenditures										
1. Travel										
2 Marketing and Promotion										
3 Other Services										
4 Communications										
5 Materials and Supplies										
6. Rentals										
7. Materials & Goods for Manufacture & Resale										
8 Miscellaneous - Computer Hardware/Software		$2,500		$2,500		$2,500		$2,500		$2,500
Total Operating Expenditures	$0	$2,500	$0	$2,500	$0	$2,500	$0	$2,500	$0	$2,500

Budget Notes (continued):
III B 8 Miscellaneous: Computer hardware/software

	FY 2022		FY 2023		FY 2024		FY 2025		FY 2026	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
C. Capital Outlay										
1 Library Resources										
2 Equipment										
Total Capital Outlay	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

	FY 2022		FY 2023		FY 2024		FY 2025		FY 2026	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
D. Capital Facilities Construction or Major Renovation										
E. Other Costs										
1. Boise State University Support		$13,125		$78,991		$150,503		$178,080		$201,787
Utilities										
Maintenance & Repairs										
Other										
Total Other Costs	$0	$13,125	$0	$78,991	$0	$150,503	$0	$178,080	$0	$201,787
TOTAL EXPENDITURES:	$0	$23,625	$0	$243,217	$0	$326,991	$0	$358,958	$0	$403,188
Net Income (Deficit) to College	$0	$2,625	$0	-$75,235	$0	$14,014	$0	$62,201	$0	$387

Budget Notes (specify row and add explanation where needed; e.g., "I.A.,B. FTE is calculated using..."):

III.E.1 Boise State University Support is defined as follows:

Boise State Central Services (10.00% of revenue): A fund dedicated to funding support services for online students

Boise State eCampus Center (8.75% of revenue): Provide funding for initiative management, online course/program development and other support services

Boise State Online Innovation Fund (3.80% of revenue): Seed funding for academic programs, course development stipends to faculty, open education resource grants and eventually innovation grants

Boise State Online Marketing, Recruitment, Enrollment, Advising and Retention Fund (27.45% of revenue): A fund dedicated to marketing the program, recruiting students, enrolling qualified students, advising students and retaining students throughout the life of the program

NIC NSA to BSU BAS CORe (DRAFT)

https://catalog.nic.edu/program-guidelines/network-security-administration-aas/

Bachelor of Applied Science		
Course Number and Title	*Credits*	*NIC NSA*
University Foundations Program requirements indicated in bold. See page 48 for details and lists of approved courses.		
UF 200 Foundations of Ethics and Diversity	3	
FW ENGL 101 Writing and Rhetoric I	3	X
FW ENGL 102 Writing and Rhetoric II	3	
FC Foundations of Oral Communication	3	X
FM Foundations of Mathematics course	3-4	X
FN Foundations of Natural, Physical, & Applied Sciences course with lab	4	
FN Foundations of Natural, Physical, & Applied Sciences course in a second field	3-4	
FA Foundations of Arts course	3	
FH Foundations of Humanities course	3-4	
FS Foundations of Social Sciences course	3	X
FS Foundations of Social Sciences course in a second field	3	
CORE 400 Cyber Systems Thinking	3	
CORE 405 Cyber Project Management and Design	3	
CORE 470 Cyber Risk Management	3	
FF CORE 480 Cyber Capstone	3	
CPS 301 Information Assurance and Critical Thinking	3	
CPS 401 Defensive Security	3	
CPS 402 Offensive Security	3	
CPS 403 Recovery and Forensics	3	
CPS 411 Networking (CompTIA Network+)	3	
CPS 412 Foundational Ess for IT Cyber Security Prac (CompTIA Security+)	3	
Complete 7 Elective Credits CORE 401 Cyber Risk Assessment (1) CORE 410 Applied Cyber Security Programming (1) CORE 411 Artificial Intelligence & Machine Learning (1) CORE 413 Internet of Things Architecture (1) CORE 420 Cyber Security Operations Center (1) CORE 421 Cyber Business and Regulatory Operations (1) CORE 422 Cyber Red and Blue Teams (1) CORE 450 Cyber Threat Intelligence (3) CORE 460 Cyber Resilience Systems Design (3)	4-7	
Internships/Experiential Learning/Certification/Credit for Prior Learning	2-6	ATEC-117, CITE-289, CITE-296
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	40-47	47 ***
Total	120	

* Students with a 37+ on SAT or 31+ on ACT don't need these two ENGL 101/102 classes

*** CITE 118, CITE 121, CITE 122, CITE 140, CITE 142, CITE 155, CITE 213, CITE 215, CITE 165, CITE 235, CITE 243, CITE 275, CITE 104, CITE 105, CITE 237, CITE 239 --- 47 credit hours…

NIC CIT to BSU BAS CORe (DRAFT)

https://catalog.nic.edu/program-guidelines/computer-information-technology-aas/#requirementstext

Bachelor of Applied Science		
Course Number and Title	*Credits*	*NIC CIT*
University Foundations Program requirements indicated in bold. See page 48 for details and lists of approved courses.		
UF 200 Foundations of Ethics and Diversity	3	
FW ENGL 101 Writing and Rhetoric I	3	X
FW ENGL 102 Writing and Rhetoric II	3	
FC Foundations of Oral Communication	3	
FM Foundations of Mathematics course	3-4	X
FN Foundations of Natural, Physical, & Applied Sciences course with lab	4	
FN Foundations of Natural, Physical, & Applied Sciences course in a second field	3-4	
FA Foundations of Arts course	3	
FH Foundations of Humanities course	3-4	
FS Foundations of Social Sciences course	3	X
FS Foundations of Social Sciences course in a second field	3	
CORE 400 Cyber Systems Thinking	3	
CORE 405 Cyber Project Management and Design	3	
CORE 470 Cyber Risk Management	3	
FF CORE 480 Cyber Capstone	3	
CPS 301 Information Assurance and Critical Thinking	3	
CPS 401 Defensive Security	3	
CPS 402 Offensive Security	3	
CPS 403 Recovery and Forensics	3	
CPS 411 Networking (CompTIA Network+)	3	
CPS 412 Foundational Ess for IT Cyber Security Prac (CompTIA Security+)	3	
Complete 7 Elective Credits CORE 401 Cyber Risk Assessment (1) CORE 410 Applied Cyber Security Programming (1) CORE 411 Artificial Intelligence & Machine Learning (1) CORE 413 Internet of Things Architecture (1) CORE 420 Cyber Security Operations Center (1) CORE 421 Cyber Business and Regulatory Operations (1) CORE 422 Cyber Red and Blue Teams (1) CORE 450 Cyber Threat Intelligence (3) CORE 460 Cyber Resilience Systems Design (3)	4-7	
Internships/Experiential Learning/Certification/Credit for Prior Learning	2-6	CITE-295 or ATEC-117
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	40-47	47 ***
Total	120	

*** CITE-116, CITE-118, CITE-119, CITE-127, CITE-104, CITE-105, CITE-121, CITE-122, CITE-206, CITE-207, CITE-213, CITE-215, CITE-208, CITE-209, CITE-217, CITE-219 ---45 credit hours…

CEI – IAC to BSU BAS CORe (DRAFT)

https://www.cei.edu/programs-of-study/business/information-assurance-and-cybersecurity

Bachelor of Applied Science		
Course Number and Title	*Credits*	*CEI - IAC*
University Foundations Program requirements indicated in bold. See page 48 for details and lists of approved courses.		
UF 200 Foundations of Ethics and Diversity	3	
FW ENGL 101 Writing and Rhetoric I	3	X
FW ENGL 102 Writing and Rhetoric II	3	
FC Foundations of Oral Communication	3	X
FM Foundations of Mathematics course	3-4	X
FN Foundations of Natural, Physical, & Applied Sciences course with lab	4	
FN Foundations of Natural, Physical, & Applied Sciences course in a second field	3-4	
FA Foundations of Arts course	3	
FH Foundations of Humanities course	3-4	X
FS Foundations of Social Sciences course	3	X
FS Foundations of Social Sciences course in a second field	3	X
CORE 400 Cyber Systems Thinking	3	
CORE 405 Cyber Project Management and Design	3	
CORE 470 Cyber Risk Management	3	
FF CORE 480 Cyber Capstone	3	
CPS 301 Information Assurance and Critical Thinking	3	
CPS 401 Defensive Security	3	
CPS 402 Offensive Security	3	
CPS 403 Recovery and Forensics	3	
CPS 411 Networking (CompTIA Network+)	3	
CPS 412 Foundational Ess for IT Cyber Security Prac (CompTIA Security+)	3	
Complete 7 Elective Credits CORE 401 Cyber Risk Assessment (1) CORE 410 Applied Cyber Security Programming (1) CORE 411 Artificial Intelligence & Machine Learning (1) CORE 413 Internet of Things Architecture (1) CORE 420 Cyber Security Operations Center (1) CORE 421 Cyber Business and Regulatory Operations (1) CORE 422 Cyber Red and Blue Teams (1) CORE 450 Cyber Threat Intelligence (3) CORE 460 Cyber Resilience Systems Design (3)	4-7	
Internships/Experiential Learning/Certification/Credit for Prior Learning	2-6	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	40-47	47 ***
Total	120	

*** CNT 114, CNT 150, BOT 150, BOT 151, CNT 123, CNT 171, CNT 224, CNT 290, CNT 291, BOT 216, CNT 292, CNT 293 ---45 Credit Hours…

CEI – ITS to BSU BAS CORe (DRAFT)

https://www.cei.edu/programs-of-study/business/computer-networking

Bachelor of Applied Science		
Course Number and Title	*Credits*	*CEI - ITS*
University Foundations Program requirements indicated in bold. See page 48 for details and lists of approved courses.		
UF 200 Foundations of Ethics and Diversity	3	
FW ENGL 101 Writing and Rhetoric I	3	X
FW ENGL 102 Writing and Rhetoric II	3	
FC Foundations of Oral Communication	3	X
FM Foundations of Mathematics course	3-4	X
FN Foundations of Natural, Physical, & Applied Sciences course with lab	4	
FN Foundations of Natural, Physical, & Applied Sciences course in a second field	3-4	
FA Foundations of Arts course	3	
FH Foundations of Humanities course	3-4	
FS Foundations of Social Sciences course	3	X
FS Foundations of Social Sciences course in a second field	3	
CORE 400 Cyber Systems Thinking	3	
CORE 405 Cyber Project Management and Design	3	
CORE 470 Cyber Risk Management	3	
FF CORE 480 Cyber Capstone	3	
CPS 301 Information Assurance and Critical Thinking	3	
CPS 401 Defensive Security	3	
CPS 402 Offensive Security	3	
CPS 403 Recovery and Forensics	3	
CPS 411 Networking (CompTIA Network+)	3	
CPS 412 Foundational Ess for IT Cyber Security Prac (CompTIA Security+)	3	
Complete 7 Elective Credits CORE 401 Cyber Risk Assessment (1) CORE 410 Applied Cyber Security Programming (1) CORE 411 Artificial Intelligence & Machine Learning (1) CORE 413 Internet of Things Architecture (1) CORE 420 Cyber Security Operations Center (1) CORE 421 Cyber Business and Regulatory Operations (1) CORE 422 Cyber Red and Blue Teams (1) CORE 450 Cyber Threat Intelligence (3) CORE 460 Cyber Resilience Systems Design (3)	4-7	
Internships/Experiential Learning/Certification/Credit for Prior Learning	2-6	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	40-47	47 ***
Total	120	

Any elective course

*** CNT 114, CNT 150, BOT 150, BOT 151, CNT 123, CNT 142, CNT 171, CNT 224, CNT 225, CNT 271, BOT 216, CNT 226, CNT 270, ---45 Credit Hours…

CSI – *C&P* to BSU BAS CORe (DRAFT)

https://csi.smartcatalogiq.com/2021-2022/Catalog/Business-and-Information-Systems-Department/Cybersecurity-and-Programming/Cybersecurity-and-Programming-Associate-of-Applied-Science

Bachelor of Applied Science		
Course Number and Title	*Credits*	*CSI – C&P*
University Foundations Program requirements indicated in bold. See page 48 for details and lists of approved courses.		
UF 200 Foundations of Ethics and Diversity	3	
FW ENGL 101 Writing and Rhetoric I	3	X
FW ENGL 102 Writing and Rhetoric II	3	
FC Foundations of Oral Communication	3	X
FM Foundations of Mathematics course	3-4	X
FN Foundations of Natural, Physical, & Applied Sciences course with lab	4	
FN Foundations of Natural, Physical, & Applied Sciences course in a second field	3-4	
FA Foundations of Arts course	3	
FH Foundations of Humanities course	3-4	
FS Foundations of Social Sciences course	3	X
FS Foundations of Social Sciences course in a second field	3	
CORE 400 Cyber Systems Thinking	3	
CORE 405 Cyber Project Management and Design	3	
CORE 470 Cyber Risk Management	3	
FF CORE 480 Cyber Capstone	3	
CPS 301 Information Assurance and Critical Thinking	3	
CPS 401 Defensive Security	3	
CPS 402 Offensive Security	3	
CPS 403 Recovery and Forensics	3	
CPS 411 Networking (CompTIA Network+)	3	
CPS 412 Foundational Ess for IT Cyber Security Prac (CompTIA Security+)	3	
Complete 7 Elective Credits CORE 401 Cyber Risk Assessment (1) CORE 410 Applied Cyber Security Programming (1) CORE 411 Artificial Intelligence & Machine Learning (1) CORE 413 Internet of Things Architecture (1) CORE 420 Cyber Security Operations Center (1) CORE 421 Cyber Business and Regulatory Operations (1) CORE 422 Cyber Red and Blue Teams (1) CORE 450 Cyber Threat Intelligence (3) CORE 460 Cyber Resilience Systems Design (3)	4-7	
Internships/Experiential Learning/Certification/Credit for Prior Learning	2-6	CISW 298 or CISS 223
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	40-47	47 ***
Total	120	

Students can choose one Gen Ed course as they'd like.

*** CISW 111, CISW 125, CISS 107, CISS 212, CISS 213, CISW 126, CISS 131, CISS 212, CISS 216, CISW 128, CISW 217, CISS 236, CISW 240, CISW 250, CISW 245

CWI – Cybersecurity to BSU BAS CORe (DRAFT)

https://cwi.edu/program/cybersecurity

Bachelor of Applied Science		
Course Number and Title	*Credits*	*CWI – Cybersecurity*
University Foundations Program requirements indicated in bold. See page 48 for details and lists of approved courses.		
UF 200 Foundations of Ethics and Diversity	3	
FW ENGL 101 Writing and Rhetoric I	3	X
FW ENGL 102 Writing and Rhetoric II	3	
FC Foundations of Oral Communication	3	X
FM Foundations of Mathematics course	3-4	X
FN Foundations of Natural, Physical, & Applied Sciences course with lab	4	
FN Foundations of Natural, Physical, & Applied Sciences course in a second field	3-4	
FA Foundations of Arts course	3	
FH Foundations of Humanities course	3-4	
FS Foundations of Social Sciences course	3	X
FS Foundations of Social Sciences course in a second field	3	
CORE 400 Cyber Systems Thinking	3	
CORE 405 Cyber Project Management and Design	3	
CORE 470 Cyber Risk Management	3	
FF CORE 480 Cyber Capstone	3	
CPS 301 Information Assurance and Critical Thinking	3	
CPS 401 Defensive Security	3	
CPS 402 Offensive Security	3	
CPS 403 Recovery and Forensics	3	
CPS 411 Networking (CompTIA Network+)	3	
CPS 412 Foundational Ess for IT Cyber Security Prac (CompTIA Security+)	3	
Complete 7 Elective Credits CORE 401 Cyber Risk Assessment (1) CORE 410 Applied Cyber Security Programming (1) CORE 411 Artificial Intelligence & Machine Learning (1) CORE 413 Internet of Things Architecture (1) CORE 420 Cyber Security Operations Center (1) CORE 421 Cyber Business and Regulatory Operations (1) CORE 422 Cyber Red and Blue Teams (1) CORE 450 Cyber Threat Intelligence (3) CORE 460 Cyber Resilience Systems Design (3)	4-7	
Internships/Experiential Learning/Certification/Credit for Prior Learning	2-6	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	40-47	47 ***
Total	120	

- One GEM Course of Students Choosing

*** CSEC 110, CSEC 123, CSEC 125, CSEC 127, CSEC 129, CSEC 131, CSEC 246, CSEC 248, CSEC 252, CSEC 255, CSEC 257, CSEC 290 --- 48 Credit hours…

CWI – NA to BSU BAS CORe (DRAFT)

https://search.cwi.edu/s/search.html?cat=top&collection=cwi-search&query=Network+Administrations+

Bachelor of Applied Science		
Course Number and Title	*Credits*	*CWI - NA*
University Foundations Program requirements indicated in bold. See page 48 for details and lists of approved courses.		
UF 200 Foundations of Ethics and Diversity	3	
FW ENGL 101 Writing and Rhetoric I	3	X
FW ENGL 102 Writing and Rhetoric II	3	
FC Foundations of Oral Communication	3	X
FM Foundations of Mathematics course	3-4	X
FN Foundations of Natural, Physical, & Applied Sciences course with lab	4	
FN Foundations of Natural, Physical, & Applied Sciences course in a second field	3-4	
FA Foundations of Arts course	3	
FH Foundations of Humanities course	3-4	
FS Foundations of Social Sciences course	3	X
FS Foundations of Social Sciences course in a second field	3	
CORE 400 Cyber Systems Thinking	3	
CORE 405 Cyber Project Management and Design	3	
CORE 470 Cyber Risk Management	3	
FF CORE 480 Cyber Capstone	3	
CPS 301 Information Assurance and Critical Thinking	3	
CPS 401 Defensive Security	3	
CPS 402 Offensive Security	3	
CPS 403 Recovery and Forensics	3	
CPS 411 Networking (CompTIA Network+)	3	
CPS 412 Foundational Ess for IT Cyber Security Prac (CompTIA Security+)	3	
Complete 7 Elective Credits CORE 401 Cyber Risk Assessment (1) CORE 410 Applied Cyber Security Programming (1) CORE 411 Artificial Intelligence & Machine Learning (1) CORE 413 Internet of Things Architecture (1) CORE 420 Cyber Security Operations Center (1) CORE 421 Cyber Business and Regulatory Operations (1) CORE 422 Cyber Red and Blue Teams (1) CORE 450 Cyber Threat Intelligence (3) CORE 460 Cyber Resilience Systems Design (3)	4-7	
Internships/Experiential Learning/Certification/Credit for Prior Learning	2-6	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	40-47	47 ***
Total	120	

- One GEM Course of Students Choosing

*** NADM 140, NADM 142, NADM 144, NADM 155, NADM 157, NADM 159, NADM 260, NADM 262, NADM 264, NADM 266, NADM 268, NADM 271 ***48 Credit Hours…

CWI – CNST to BSU BAS CORe (DRAFT)

https://cwi.edu/program/cisco-networking-and-security-technologies

Bachelor of Applied Science		
Course Number and Title	*Credits*	*CWI - CNST*
University Foundations Program requirements indicated in bold. See page 48 for details and lists of approved courses.		
UF 200 Foundations of Ethics and Diversity	3	
FW ENGL 101 Writing and Rhetoric I	3	
FW ENGL 102 Writing and Rhetoric II	3	
FC Foundations of Oral Communication	3	X
FM Foundations of Mathematics course	3-4	X
FN Foundations of Natural, Physical, & Applied Sciences course with lab	4	
FN Foundations of Natural, Physical, & Applied Sciences course in a second field	3-4	
FA Foundations of Arts course	3	
FH Foundations of Humanities course	3-4	
FS Foundations of Social Sciences course	3	
FS Foundations of Social Sciences course in a second field	3	
CORE 400 Cyber Systems Thinking	3	
CORE 405 Cyber Project Management and Design	3	
CORE 470 Cyber Risk Management	3	
FF CORE 480 Cyber Capstone	3	
CPS 301 Information Assurance and Critical Thinking	3	
CPS 401 Defensive Security	3	
CPS 402 Offensive Security	3	
CPS 403 Recovery and Forensics	3	
CPS 411 Networking (CompTIA Network+)	3	
CPS 412 Foundational Ess for IT Cyber Security Prac (CompTIA Security+)	3	
Complete 7 Elective Credits CORE 401 Cyber Risk Assessment (1) CORE 410 Applied Cyber Security Programming (1) CORE 411 Artificial Intelligence & Machine Learning (1) CORE 413 Internet of Things Architecture (1) CORE 420 Cyber Security Operations Center (1) CORE 421 Cyber Business and Regulatory Operations (1) CORE 422 Cyber Red and Blue Teams (1) CORE 450 Cyber Threat Intelligence (3) CORE 460 Cyber Resilience Systems Design (3)	4-7	
Internships/Experiential Learning/Certification/Credit for Prior Learning	2-6	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	40-47	47 ***
Total	120	

- One GEM Course of Students Choosing

*** CNST 124, CNST 127, CNST 129, CNST 135, CNST 230, CNST 238, CNST 240, CNST 242, CNST 244, CNST 248 --- 48 Credit Hours

CWI – CSS to BSU BAS CORe (DRAFT)

https://cwi.edu/program/computer-support-specialist

Bachelor of Applied Science		**CWI - CSS**
Course Number and Title	*Credits*	
University Foundations Program requirements indicated in bold. See page 48 for details and lists of approved courses.		
UF 200 Foundations of Ethics and Diversity	3	
FW ENGL 101 Writing and Rhetoric I	3	X
FW ENGL 102 Writing and Rhetoric II	3	
FC Foundations of Oral Communication	3	X
FM Foundations of Mathematics course	3-4	X
FN Foundations of Natural, Physical, & Applied Sciences course with lab	4	
FN Foundations of Natural, Physical, & Applied Sciences course in a second field	3-4	
FA Foundations of Arts course	3	
FH Foundations of Humanities course	3-4	
FS Foundations of Social Sciences course	3	X
FS Foundations of Social Sciences course in a second field	3	
CORE 400 Cyber Systems Thinking	3	
CORE 405 Cyber Project Management and Design	3	
CORE 470 Cyber Risk Management	3	
FF CORE 480 Cyber Capstone	3	
CPS 301 Information Assurance and Critical Thinking	3	
CPS 401 Defensive Security	3	
CPS 402 Offensive Security	3	
CPS 403 Recovery and Forensics	3	
CPS 411 Networking (CompTIA Network+)	3	
CPS 412 Foundational Ess for IT Cyber Security Prac (CompTIA Security+)	3	
Complete 7 Elective Credits CORE 401 Cyber Risk Assessment (1) CORE 410 Applied Cyber Security Programming (1) CORE 411 Artificial Intelligence & Machine Learning (1) CORE 413 Internet of Things Architecture (1) CORE 420 Cyber Security Operations Center (1) CORE 421 Cyber Business and Regulatory Operations (1) CORE 422 Cyber Red and Blue Teams (1) CORE 450 Cyber Threat Intelligence (3) CORE 460 Cyber Resilience Systems Design (3)	4-7	
Internships/Experiential Learning/Certification/Credit for Prior Learning	2-6	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	40-47	47 ***
Total	120	

- One GEM Course of Students Choosing

*** CSSP 103, CSSP 104, CSSP 106, CSSP 108, CSSP 109, CSSP 111, CSSP 114, CSSP 210, CSSP 212, CSSP 214, CSSP 220, CSSP 222, CSSP 224

CWI – SD to BSU BAS CORe (DRAFT)

https://search.cwi.edu/s/search.html?cat=top&collection=cwi-search&query=Software+Development

Bachelor of Applied Science		
Course Number and Title	*Credits*	*CWI - SD*
University Foundations Program requirements indicated in bold. See page 48 for details and lists of approved courses.		
UF 200 Foundations of Ethics and Diversity	3	
FW ENGL 101 Writing and Rhetoric I	3	X
FW ENGL 102 Writing and Rhetoric II	3	
FC Foundations of Oral Communication	3	X
FM Foundations of Mathematics course	3-4	X
FN Foundations of Natural, Physical, & Applied Sciences course with lab	4	
FN Foundations of Natural, Physical, & Applied Sciences course in a second field	3-4	
FA Foundations of Arts course	3	
FH Foundations of Humanities course	3-4	
FS Foundations of Social Sciences course	3	X
FS Foundations of Social Sciences course in a second field	3	
CORE 400 Cyber Systems Thinking	3	
CORE 405 Cyber Project Management and Design	3	
CORE 470 Cyber Risk Management	3	
FF CORE 480 Cyber Capstone	3	
CPS 301 Information Assurance and Critical Thinking	3	
CPS 401 Defensive Security	3	
CPS 402 Offensive Security	3	
CPS 403 Recovery and Forensics	3	
CPS 411 Networking (CompTIA Network+)	3	
CPS 412 Foundational Ess for IT Cyber Security Prac (CompTIA Security+)	3	
Complete 7 Elective Credits CORE 401 Cyber Risk Assessment (1) CORE 410 Applied Cyber Security Programming (1) CORE 411 Artificial Intelligence & Machine Learning (1) CORE 413 Internet of Things Architecture (1) CORE 420 Cyber Security Operations Center (1) CORE 421 Cyber Business and Regulatory Operations (1) CORE 422 Cyber Red and Blue Teams (1) CORE 450 Cyber Threat Intelligence (3) CORE 460 Cyber Resilience Systems Design (3)	4-7	
Internships/Experiential Learning/Certification/Credit for Prior Learning	2-6	SWDV 293
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	40-47	47 ***
Total	120	

COMM 259 – Elective

***SWDV 120, SWDV 125, SWDV 130, SWDV 135, SWDV 140, SWDV 143, SWDV 152, SWDV 210, SWDV 220, SWDV 235, SWDV 265, SWDV 271, SWDV 280 --- 47 Credit Hours

LCSC Information Technology to BSU CORe (Draft)

http://catalog.lcsc.edu/professional-technical-programs/technical-industrial-division/associate-applied-science-degrees/information-technology/#generaleducationtext

Bachelor of Applied Science		
Course Number and Title	*Credits*	*LCSC -IT*
University Foundations Program requirements indicated in bold. See page 48 for details and lists of approved courses.		
UF 200 Foundations of Ethics and Diversity	3	
FW ENGL 101 Writing and Rhetoric I	3	X
FW ENGL 102 Writing and Rhetoric II	3	X
FC Foundations of Oral Communication	3	X
FM Foundations of Mathematics course	3-4	X
FN Foundations of Natural, Physical, & Applied Sciences course with lab	4	
FN Foundations of Natural, Physical, & Applied Sciences course in a second field	3-4	
FA Foundations of Arts course	3	
FH Foundations of Humanities course	3-4	
FS Foundations of Social Sciences course	3	X
FS Foundations of Social Sciences course in a second field	3	
CORE 400 Cyber Systems Thinking	3	
CORE 405 Cyber Project Management and Design	3	
CORE 470 Cyber Risk Management	3	
FF CORE 480 Cyber Capstone	3	
CPS 301 Information Assurance and Critical Thinking	3	
CPS 401 Defensive Security	3	
CPS 402 Offensive Security	3	
CPS 403 Recovery and Forensics	3	
CPS 411 Networking (CompTIA Network+)	3	
CPS 412 Foundational Ess for IT Cyber Security Prac (CompTIA Security+)	3	
Complete 7 Elective Credits CORE 401 Cyber Risk Assessment (1) CORE 410 Applied Cyber Security Programming (1) CORE 411 Artificial Intelligence & Machine Learning (1) CORE 413 Internet of Things Architecture (1) CORE 420 Cyber Security Operations Center (1) CORE 421 Cyber Business and Regulatory Operations (1) CORE 422 Cyber Red and Blue Teams (1) CORE 450 Cyber Threat Intelligence (3) CORE 460 Cyber Resilience Systems Design (3)	4-7	
Internships/Experiential Learning/Certification/Credit for Prior Learning	2-6	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	40-47	47 ***
Total	120	

- One GEM Course of Students Choosing

*** ISATI-125, ISATI-126, ISATI-127, ISATI-204, ISATI-205, ISATI-207, ISATI-208, ISATI-229, ISATI-230, ISATI-231, ISATI-232, ISATI-233 --- 48 Credit Hours…

LEWIS-CLARK STATE COLLEGE

SUBJECT

Bachelor of Science in Cybersecurity Management

APPLICABLE STATUTE, RULE, OR POLICY

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

BACKGROUND/DISCUSSION

Lewis-Clark State College (LCSC) Business & Computer Science Division is proposing a multidisciplinary degree. This degree would combine key concepts from Computer Science and Business courses and will provide a pathway to a bachelor's degree for students who have earned an associate's degree in cyber security and other technical fields. This degree program will utilize existing face-to-face and online courses from each discipline including core business, cyber security, and computer science courses. This degree will serve students interested in Cybersecurity, Computer Science, and Business Management. It will prepare them for careers that require skills within all three areas.

This program was first proposed in February 2021. Expediting this program's implementation will ensure we are meeting student and employer needs faster. This program should also assist with enrollment growth.

IMPACT

According to the U.S. Bureau of Labor Statistics' Information Security Analyst's Outlook, cybersecurity jobs are among the fastest-growing career areas nationally. Employment of information security analysts is projected to grow 31 percent from 2019 to 2029, much faster than the average for all occupations.

LCSC's program would be the only Cybersecurity Management degree in the state and will serve the L-C Valley, meeting the needs of the students and employers in this area. The local, state and national economy will be stimulated by producing cyber management graduates. As the need for information security continues to grow and privacy within the digital age increases, this degree program will provide businesses with skilled graduates to fill their employment needs. The proposed program will not require the creation of new courses, additional resources or faculty for implementation. The overall impact to physical resources and existing programs will be minimal.

ATTACHMENTS

Attachment 1 – BS in Cybersecurity Management Proposal

BOARD STAFF COMMENTS AND RECOMMENDATIONS

The proposed Bachelor of Science in Cybersecurity Management is a partnership among Boise State University, Lewis-Clark State College, College of Eastern

Idaho, College of Southern Idaho, College of Western Idaho, and North Idaho College to meet a workforce need for cybersecurity professionals. The proposed program will provide students with a seamless path toward completing a baccalaureate degree. This includes articulation of community college credits from specific technical degrees and provides an option for students to complete their third and fourth years online with LCSC. Board staff has confirmed with LC-State leadership that the long-term goal is to create online versions of the major courses in this program, to be fully offered through Online Idaho.

Under a separate agenda item, Boise State University is proposing a new online Bachelor of Applied Science in Cyber Operations and Resilience that will also provide students with a seamless pathway to complete a baccalaureate degree. Both programs will have course-sharing capabilities that will provide students with opportunities to take specific courses from either institution through Online Idaho and meet respective program requirements. LCSC is working on finalizing articulation pathways between the proposed BS and specific AAS degrees offered at the four community colleges.

The program anticipates 16 initial enrollments, reaching 26 by year five, and graduating 11-20 students per year once the program is up and running. LCSC indicates a minimum of 10 enrollments per year will be necessary to maintain the program. Should the program fall below 8 students per year, LCSC will discontinue it.

LCSC's proposed Bachelor of Science in Cybersecurity Management is consistent with their Service Region Program Responsibilities and their current institution plan for Delivery of Academic Programs in Regions I and II. As provided in Board Policy III.Z, no institution has the statewide program responsibility for cybersecurity programs.

The proposal completed the program review process and was recommended for approval by the Council on Academic Affairs and Programs on September 30, 2021, and was presented to the Instruction, Research, and Student Affairs Committee on October 7, 2021. Board staff recommends approval.

BOARD ACTION

I move to approve the request by Lewis-Clark State College to create a Bachelor of Science in Cybersecurity Management, as presented in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

ATTACHMENT 1

Idaho State Board of Education
Proposal for **Undergraduate/Graduate Degree** Program

Date of Proposal Submission:	3/15/2021 *9/10/21 ps*						
Institution Submitting Proposal:	Lewis-Clark State College						
Name of College, School, or Division:	Business & Computer Science Division						
Name of Department(s) or Area(s):							
Program Title:	Cybersecurity Management						
Degree:	BA/BS	Degree Designation	X	Undergraduate		Graduate	
Indicate if Online Program:	X	Yes		No			
CIP code (consult IR /Registrar):							
Proposed Starting Date:	Spring 2022						
Geographical Delivery:	Location(s)	Lewiston		Region(s)			
Indicate (X) if the program is/has:		Self-Support		Professional Fee		Online Program Fee	
Indicate (X) if the program is:		Regional Responsibility		Statewide Responsibility			

Indicate whether this request is either of the following:

- [X] New Degree Program
- [ ] Consolidation of Existing Program
- [ ] Undergraduate/Graduate Certificates (30 credits or more)
- [ ] New Off-Campus Instructional Program
- [ ] Expansion of Existing Program
- [ ] Other (i.e., Contract Program/ Collaborative

College Dean (Institution)	Date 9/8/2021	Vice President for Research (Institution; as applicable)	Date 9/23/21
Graduate Dean or other official (Institution; as applicable)	Date 09/09/2021	Academic Affairs Program Manager, OSBE	Date 9/24/21
FVP/Chief Fiscal Officer (Institution)	Date 09/08/2021	Chief Academic Officer, OSBE	Date 9/27/21
Provost/VP for Instruction (Institution)	Date 09/10/2021	Chief Financial Officer, OSBE	Date
President	Date	SBOE/Executive Director Approval	Date

ATTACHMENT 1

Before completing this form, refer to Board Policy Section III.G., Postsecondary Program Approval and Discontinuance. This proposal form must be completed for the creation of each new program. All questions must be answered.

Rationale for Creation or Modification of the Program

1. **Describe the request and give an overview of the changes that will result.** Will this program be related or tied to other programs on campus? Identify any existing program that this program will replace.

   LCSC's Business & Computer Science Division is proposing a multidisciplinary degree. This degree would combine key concepts from Computer Science and Business courses. This degree program will utilize existing courses from each discipline including core business, cyber security and computer science courses.

2. **Need for the Program**. Describe the student, regional, and statewide needs that will be addressed by this proposal and address the ways in which the proposed program will meet those needs.

   Idaho's governor and its state board of education have made cyber security education a priority. According to The U.S. Bureau of Labor Statistics' Information Security Analyst's Outlook, cybersecurity jobs are among the fastest-growing career areas nationally. Employment of information security analysts is projected to grow 31 percent from 2019 to 2029, much faster than the average for all occupations. Demand for information security analysts is expected to be very high, as these analysts will be needed to create innovative solutions to prevent hackers from stealing critical information or causing problems for computer networks. (US Bureau of Labor Statistics)

   Management Analysts are #3 on the "Idaho Hot Jobs" report for 2019.
   (https://labor.idaho.gov/publications/hotjobs.pdf)

   a. **Workforce need:** Provide verification of state workforce needs that will be met by this program. Include State and National Department of Labor research on employment potential. Using the chart below, indicate the total projected annual job openings (including growth and replacement demands in your regional area, the state, and nation. Job openings should represent positions which require graduation from a program such as the one proposed. Data should be derived from a source that can be validated and must be no more than two years old.

      List the job titles for which this degree is relevant:

      1. Information Security Analyst
      2. Lead Software Security Engineer
      3. Chief Information Security Officer (CISCO)
      4. Security Architect
      5. Penetration Tester
      6. Information Security Crime Investigator/Forensics Expert

	State DOL	Federal DOL data	Other data source: (describe)

	data		
Local (Service Area)			
State		n/a	
Nation		131,000	

Information security analysts are listed on the BLS “fastest growing occupation” list and growth is projected to be at 31% annually. https://www.bls.gov/ooh/fastest-growing.htm

b. Student need. What is the most likely source of students who will be expected to enroll (full-time, part-time, outreach, etc.). Document student demand by providing information you have about student interest in the proposed program from inside and outside the institution. If a survey of s was used, please attach a copy of the survey instrument with a summary of results as **Appendix A.**

This degree will serve students interested in Business Management and Computer Science and Cybersecurity. It will prepare them for careers that require skills within all three areas.

c. Economic Need: Describe how the proposed program will act to stimulate the state economy by advancing the field, providing research results, etc.

The local, state and national economy will be stimulated by producing cyber management graduates. As the need for information security continues to grow and privacy within the digital age increases, this degree program will provide them with skilled graduates to fill their employment needs.

d. Societal Need: Describe additional societal benefits and cultural benefits of the program.

e. If Associate’s degree, transferability:

3. Program Prioritization

Is the proposed new program a result of program prioritization?

Yes_____ No__x___

If yes, how does the proposed program fit within the recommended actions of the most recent program prioritization findings.

4. Credit for Prior Learning

Indicate from the various cross walks where credit for prior learning will be available. If no PLA has been identified for this program, enter 'Not Applicable'.

N/A

5. Affordability Opportunities

Describe any program-specific steps taken to maximize affordability, such as: textbook options (e.g., Open Educational Resources), online delivery methods, reduced fees, compressed course scheduling, etc. This question applies to certificates, undergraduate, graduate programs alike.

The Bachelor of Science in Cyber Management program will include f2f and online courses housed in the institutional Canvas learning management system. This will allow students the flexibility of holding a full-time job while completing the program, thus keeping costs relatively low.

6. **Similar Programs.** Identify similar programs offered within Idaho and in the region by other in-state or bordering state colleges/universities.

Similar Programs offered <u>by Idaho public institutions</u> (list the proposed program as well)		
Institution Name	**Degree name and Level**	**Program Name and brief description if warranted**
Boise State University	**BAS**	Cyber Operations and Resilience
Similar Programs offered <u>by other Idaho institutions and by institutions in nearby states</u>		
Institution Name	**Degree name and Level**	**Program Name and brief description if warranted**

7. **Justification for Duplication with another institution listed above.** (if applicable). If the proposed program is similar to another program offered by an Idaho public institution, provide a rationale as to why any resulting duplication is a net benefit to the state and its citizens. Describe why it is not feasible for existing programs at other institutions to fulfill the need for the proposed program.

With each of Idaho's colleges focusing on a different aspect of cyber security, LC State's Cybersecurity Management degree is unique and will serve the LC Valley, the state of Idaho and beyond, meeting the needs of the students and employers in Idaho. The degree has been developed in collobaration with the other public institutions in Idaho to ensure there is no duplication of programs.

8. **Describe how this request supports the institution's vision and/or strategic plan.**

This degree aligns with LC State's core themes of Opportunity, Success, and Partnerships. This degree provides an additional opportunities for education in an in-demand field. This degree contributes to the success of LC State's students and includes substantial internship opportunities to create partnerships with the business community.

9. **Assurance of Quality.** Describe how the institution will ensure the quality of the program. Describe the institutional process of program review. Where appropriate, describe applicable

specialized accreditation and explain why you do or do not plan to seek accreditation.

All business core classes in this program are part of our external accrediting body, IACBE. Rigor will be maintained and learning outcomes reported annually to this body. Standardized exit exams will be administered in the senior capstone course. Students in this program will create a final project in the Computer Science capstone that will be assessed.

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

11. **Teacher Education/Certification Programs** All Educator Preparation programs that lead to certification require review and recommendation from the Professional Standards Commission (PSC) and approval from the Board.

    Will this program lead to certification?
    Yes_____ No___X__

    If yes, on what date was the Program Approval for Certification Request submitted to the Professional Standards Commission?

12. **Three-Year Plan: Is the proposed program on your institution's approved 5-year plan? Indicate below.**

    Yes ____ No X

    Proposed programs submitted to OSBE that are not on the five-year plan must respond to the following questions and meet at least one criterion listed below.

    a. **Describe why the proposed program is not on the institution's five year plan.** When did consideration of and planning for the new program begin?

       This program was first proposed in February 2021. It is on LC State's three year plan. Expediting this program's implementation will ensure we are meeting student and employer needs faster. This program should also assist with enrollment growth.

    b. **Describe the immediacy of need for the program**. What would be lost were the institution to delay the proposal for implementation of the new program until it fits within the five-year planning cycle? What would be gained by an early consideration?

       The governor and the SBOE have made cyber education a very high priority. Idaho's public institutions are encoaurged to get their programs up and running as quickly as possible. The need for trained cybersecurity professionals is immediate. Unemployment rates are at historic lows. Employers are finding it difficult to fill positions, especially those requiring technical and business skills. Expediting the implementation of this program will assist LC State in meeting it's core themes of opportunity, success, and partnership.

    Criteria. As appropriate, discuss the following:

    i. How important is the program in meeting your institution's regional or statewide program responsibilities? Describe whether the proposed program is in response to a specific industry need or workforce opportunity.

ii. Explain if the proposed program is reliant on external funding (grants, donations) with a deadline for acceptance of funding.
iii. Is there a contractual obligation or partnership opportunity to justify the program?
iv. Is the program request or program change in response to accreditation requirements or recommendations?
v. Is the program request or program change in response to recent changes to teacher certification/endorsement requirements?

Curriculum, Intended Learning Outcomes, and Assessment Plan

13. Curriculum for the proposed program and its delivery.

a. Summary of requirements. Provide a summary of program requirements using the following table.

Credit hours in required courses offered by the department (s) offering the program.	76
Credit hours in required courses offered by other departments:	0
Credit hours in institutional general education curriculum	37-39
Credit hours in free electives	7
Total credit hours required for degree program:	120

b. Curriculum. Provide the curriculum for the program, including a listing of course titles and credits in each.

CS 111	Computer Science I	4.00
CS 211	Computer Science II	4.00
CS 226	Introduction to Databases: SQL	3.00
CS 311	Algorithms and Data Structures	4.00
CS 480	Capstone Design Project	4.00
CS 492	Internship	4.00
BUS 311	Foundations Management Theory	3.00
BUS 360	Leadership	3.00
BUS 365	Business Law I	3.00
BUS 370	Pro.Op. Management	3.00
ECON 300	Statistical Methods	3.00
CYB 251	Networking I	4.00
CYB 252	Networking II	4.00
CYB 253	Networking III	4.00
CYB 254	Networking IV	4.00
CYB 271	Cybersecurity I	4.00
CYB 272	Cybersecurity II	4.00
CYB 273	Cybersecurity III	4.00
CYB 274	Cybersecurity IV	4.00
CYB 300	Cyber Ethics	3.00
CYB 360	Cybersecurity Management	3.00

c. Additional requirements. Describe additional requirements such as comprehensive

examination, senior thesis or other capstone experience, practicum, or internship, some of which may carry credit hours included in the list above.

14. Program Intended Learning Outcomes and Connection to Curriculum.

a. Intended Learning Outcomes. List the Intended Learning Outcomes for the proposed program, using learner-centered statements that indicate what will students know, be able to do, and value or appreciate as a result of completing the program.

The Cybersecurity Management program is designed to prepare students for industry. The Cyber Management major fuses the three components: a strong cybersecurity management base, computer programming, and business management. The curriculum is designed to be very focused on industry needs and skills. Students will take courses in networking, advanced cyber security and business.

The goal of the Cyber Management program is to provide students with learning experiences in both the classroom and laboratory so that they will be well-prepared to:

- Design and implement object-oriented and imperative programs;
- Understand algorithms and data structures;
- Understand relational databases, and network development;
- Understand online safety in the context of the wider world;

- Understand the different types of malware, including viruses and trojans, network security, and cryptography;
- Identity theft and risk management;
- Understand and explain the concepts, theories, and practices in the functional areas of business;
- Prepare professional oral and written forms of communication;
- Evaluate and apply information technology in support of management decision making.

15. Assessment plans

a. Assessment Process. Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program.

Students will be assessed in each course as well as their overall degree.

b. Closing the loop. How will you ensure that the assessment findings will be used to improve the program?

The business and computer science divisions advisory boards are solicited for feedback. Assessment results are examined semiannually by both division faculty.

c. Measures used. What direct and indirect measures will be used to assess student learning?

Earned course grades
Capstone course results

d. Timing and frequency. When will assessment activities occur and at what frequency?

In each course
Semi-annually for other measures

Enrollments and Graduates

16. Existing similar programs at Idaho Public Institutions. Using the chart below, provide enrollments and numbers of graduates for similar existing programs at your institution and other Idaho public institutions.

Existing Similar Programs: Historical enrollments and graduate numbers								
Institution and Program Name	**Fall Headcount Enrollment in Program**				**Number of Graduates From Program (Summer, Fall, Spring)**			
	FY__	FY__	FY__	FY__ (most recent)	FY__	FY__	FY__	FY__ (most recent)
BSU Cyber Operations and Resilience								

17. Projections for proposed program: Using the chart below, provide projected enrollments and number of graduates for the proposed program:

Proposed Program: Projected Enrollments and Graduates First Five Years											
Program Name:											
Projected Fall Term Headcount Enrollment in Program						**Projected Annual Number of Graduates From Program**					
FY21 (first year)	FY22	FY23	FY24	FY25	FY26	FY21 (first year)	FY22	FY23	FY24	FY25	FY26
16	18	22	24	24	26	0	0	11	12	15	20

18. Describe the methodology for determining enrollment and graduation projections. Refer to information provided in Question #2 "Need" above. What is the capacity for the program? Describe your recruitment efforts? How did you determine the projected numbers above?

19. Minimum Enrollments and Graduates.

a. Have you determined minimums that the program will need to meet in order to be

continued? What are those minimums, what is the logical basis for those minimums?

Since this degree takes no additional resources, 10 students could be considered sustainable.

b. What is the sunset clause by which the program will be considered for discontinuance if the projections or expectations outlined in the program proposal are not met?

Less than 8 students would cause the program to be cancelled.

Resources Required for Implementation – fiscal impact and budget

20. Physical Resources.

a. Existing resources. Describe equipment, space, laboratory instruments, computer(s), or other physical equipment presently available to support the successful implementation of the program.

Existing classroom space and LMS resources will be utilized for this proposed program.

b. Impact of new program. What will be the impact on existing programs of increased use of physical resources by the proposed program? How will the increased use be accommodated?

Very little impact is expected. No additional faculty will be required. The additional courses will be taught by existing faculty and also used by computer science and business students.

c. Needed resources. List equipment, space, laboratory instruments, etc., that must be obtained to support the proposed program. Enter the costs of those physical resources into the budget sheet.

No additional LC State resources are projected to be utilized.

21. Library resources

a. Existing resources and impact of new program. Evaluate library resources, including personnel and space. Are they adequate for the operation of the present program? Will there be an impact on existing programs of increased library usage caused by the proposed program? For off-campus programs, clearly indicate how the library resources are to be provided.

There will be no additional impact on existing library resources.

b. Needed resources. What new library resources will be required to ensure successful implementation of the program? Enter the costs of those library resources into the budget sheet.

Courses may have some additional students. The overall impact will be minimal.

22. Personnel resources

a. Needed resources. Give an overview of the personnel resources that will be needed to implement the program. How many additional sections of existing courses will be needed? Referring to the list of new courses to be created, what instructional capacity will be needed to offer the necessary number of sections?

Very little impact is expected. No additional faculty will be required. The additional courses will be taught by existing faculty and also used by computer science and business students. No additional sections of existing courses are required.

b. Existing resources. Describe the existing instructional, support, and administrative resources that can be brought to bear to support the successful implementation of the program.

Existing courses may have some additional students. The overall impact will be minimal.

c. Impact on existing programs. What will be the impact on existing programs of increased use of existing personnel resources by the proposed program? How will quality and productivity of existing programs be maintained?

No additional resources are anticipated for program implementation.

d. Needed resources. List the new personnel that must be hired to support the proposed program. Enter the costs of those personnel resources into the budget sheet.

No additional resources are anticipated for program implementation.

23. Revenue Sources

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

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

3. **Non-ongoing sources**:
   a. If the funding is to come from one-time sources such as a donation, indicate the sources of other funding. What are the institution's plans for sustaining the program when that funding ends?
   b. Describe the federal grant, other grant(s), special fee arrangements, or contract(s) that will be valid to fund the program. What does the institution propose to do with the program upon termination of those funds?

4. **Student Fees**:
   a. If the proposed program is intended to levy any institutional local fees, explain how doing so meets the requirements of Board Policy V.R., 3.b.

b. Provide estimated cost to students and total revenue for self-support programs and for professional fees and other fees anticipated to be requested under Board Policy V.R., if applicable.

24. Using the budget template provided by the Office of the State Board of Education, provide the following information:

- Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first **four** fiscal years of the program.
- Include reallocation of existing personnel and resources and anticipated or requested new resources.
- Second and third year estimates should be in constant dollars.
- Amounts should reconcile subsequent pages where budget explanations are provided.
- If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies).
- Provide an explanation of the fiscal impact of any proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

ATTACHMENT 1

Program Resource Requirements.

- Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first **four** fiscal years of the program
- Include reallocation of existing personnel and resources and anticipated or requested new resources.
- Second and third year estimates should be in constant dollars.
- Amounts should reconcile subsequent pages where budget explanations are provided.
- If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies).
- Provide an explanation of the fiscal impact of any proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

I. PLANNED STUDENT ENROLLMENT

	FY 21-22		FY 22-23		FY 23-24		FY 24-25	
	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount
A. New enrollments	16	16	18	18	22	22	24	24
B. Shifting enrollments								
Total Enrollment	16	16	18	18	22	22	24	24

II. REVENUE

	FY		FY		FY		FY	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
1. New Appropriated Funding Request								
2. Institution Funds								
3. Federal								
4. New Tuition Revenues from Increased Enrollments								
5. Student Fees								
6. Other (i.e., Gifts)								
Total Revenue	$0	$0	$0	$0	$0	$0	$0	$0

ATTACHMENT 1

Ongoing is defined as ongoing operating budget for the program which will become part of the base.
One-time is defined as one-time funding in a fiscal year and not part of the base.

III. EXPENDITURES

	FY _____		FY _____		FY _____		FY _____	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
A. Personnel Costs								
1. FTE								
2. Faculty								
3. Adjunct Faculty								
4. Graduate/Undergrad Assistants								
5. Research Personnel								
6. Directors/Administrators								
7. Administrative Support Personnel								
8. Fringe Benefits								
9. Other: _____								
Total Personnel and Costs	$0	$0	$0	$0	$0	$0	$0	$0

ATTACHMENT 1

	FY _____		FY _____		FY _____		FY _____	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
B. Operating Expenditures								
1. Travel								
2. Professional Services								
3. Other Services								
4. Communications								
5. Materials and Supplies								
6. Rentals								
7. Materials & Goods for Manufacture & Resale								
8. Miscellaneous								
Total Operating Expenditures	$0	$0	$0	$0	$0	$0	$0	$0

	FY _____		FY _____		FY _____		FY _____	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
C. Capital Outlay								
1. Library Resources								
2. Equipment								
Total Capital Outlay	$0	$0	$0	$0	$0	$0	$0	$0

	FY _____		FY _____		FY _____		FY _____	
D. Capital Facilities Construction or Major Renovation								
E. Other Costs								
Utilites								
Maintenance & Repairs								
Other _____								
Total Other Costs	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL EXPENDITURES:	$0	$0	$0	$0	$0	$0	$0	$0
Net Income (Deficit)	$0	$0	$0	$0	$0	$0	$0	$0

Budget Notes (specify row and add explanation where needed; e.g., "I.A.,B. FTE is calculated using…"):

I.A.B.	

ATTACHMENT 1

NIC NSA TO LC BS CYBERSECURITY MANAGEMENT

https://catalog.nic.edu/program-guidelines/network-security-administration-aas/

Bachelor of Science		
Course Number and Title	*Credits*	*NIC NSA*
General Education Core requirements indicated in bold.		
Written Communication ENGL 101	3	X
Written Communication ENGL 102	3	
Oral Communication COMM 101, 203, 204	3	
Mathematical WOK Math 143	3	X
Humanistic & Artistic WOK (one course from 2 categories) LITERATURE: ENGL 175, 257, 258, 261 ARTS: ART 100; HUM 101, 150; MUS 101, 102, 150, 151; THEA 101 LANGUAGE: NP 101, 102; SPAN 101, 102	6	
Scientific WOK CS 108 BIOF 100	7	
Social & Behavioral WOK ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285; PSYC 101, 205; SOC 101, 102; SS 184, 185	3	X
Social & Behavioral WOK (one from a second discipline) ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285 PSYC 101, 205; SOC 101, 102; SS 184, 185	3	
Diversity (choose one) ANTH 102, 120, 170, 360; COMM 345; ENGL 258, 474; GEOG 102 HIST 101, 102, 111, 112; HRPT 184; KIN 220; NP 101, 102; POLS 285; SOC 101; SPAN 101, 102 201, 202; SS 184	3	
Ethics/Values (choose one) ID 300 A-Z ID 301 – Experiential Learning	3	
CS 211 Computer Science II	4	
CS 311 Algorithms and Data Structures	4	
CS 480 Capstone Design Project	4	
CS 492 Internship	4	ATEC-117, CITE-289, CITE-296
BUS 311 Foundations Management Theory	3	
BUS 360 Leadership	3	
BUS 365 Business Law I	3	
BUS 370 Pro.Op. Management	3	
ECON 300 Statistical Methods	3	
CYB 300 Cyber Ethics	3	
CYB 360 Cybersecurity Management	3	
General Elective Credits	7	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	39	39 ***
Total	120	

* Students with a 37+ on SAT or 31+ on ACT don't need these two ENGL 101/102 classes

*** CITE 118, CITE 121, CITE 122, CITE 140, CITE 142, CITE 155, CITE 213, CITE 215, CITE 165, CITE 235, CITE 243, CITE 275, CITE 104, CITE 105, CITE 237, CITE 239 --- 39 credit hours…

ATTACHMENT 1

NIC CIT to LC BS Cybersecurity Management

https://catalog.nic.edu/program-guidelines/computer-information-technology-aas/#requirementstext

Bachelor of Science		
Course Number and Title	*Credits*	*NIC NSA*
General Education Core requirements indicated in bold.		
Written Communication ENGL 101	3	X
Written Communication ENGL 102	3	
Oral Communication COMM 101, 203, 204	3	
Mathematical WOK Math 143	3	X
Humanistic & Artistic WOK (one course from 2 categories) LITERATURE: ENGL 175, 257, 258, 261 ARTS: ART 100; HUM 101, 150; MUS 101, 102, 150, 151; THEA 101 LANGUAGE: NP 101, 102; SPAN 101, 102	6	
Scientific WOK CS 108 BIOF 100	7	
Social & Behavioral WOK ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285; PSYC 101, 205; SOC 101, 102; SS 184, 185	3	X
Social & Behavioral WOK (one from a second discipline) ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285 PSYC 101, 205; SOC 101, 102; SS 184, 185	3	
Diversity (choose one) ANTH 102, 120, 170, 360; COMM 345; ENGL 258, 474; GEOG 102 HIST 101, 102, 111, 112; HRPT 184; KIN 220; NP 101, 102; POLS 285; SOC 101; SPAN 101, 102 201, 202; SS 184	3	
Ethics/Values (choose one) ID 300 A-Z ID 301 – Experiential Learning	3	
CS 211 Computer Science II	4	
CS 311 Algorithms and Data Structures	4	
CS 480 Capstone Design Project	4	
CS 492 Internship	4	ATEC-117, CITE-295
BUS 311 Foundations Management Theory	3	
BUS 360 Leadership	3	
BUS 365 Business Law I	3	
BUS 370 Pro.Op. Management	3	
ECON 300 Statistical Methods	3	
CYB 300 Cyber Ethics	3	
CYB 360 Cybersecurity Management	3	
General Elective Credits	7	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	39	39 ***
Total	120	

* Students with a 37+ on SAT or 31+ on ACT don't need these two ENGL 101/102 classes

*** CITE-116, CITE-118, CITE-119, CITE-127, CITE-104, CITE-105, CITE-121, CITE-122, CITE-206, CITE-207, CITE-213, CITE-215, CITE-208, CITE-209, CITE-217, CITE-219 ---39 credit hours…

CEI – IAC to LC BS Cybersecurity Management

https://www.cei.edu/programs-of-study/business/information-assurance-and-cybersecurity

Bachelor of Science		
Course Number and Title	*Credits*	*NIC NSA*
General Education Core requirements indicated in bold.		
Written Communication ENGL 101	3	X
Written Communication ENGL 102	3	
Oral Communication COMM 101, 203, 204	3	X
Mathematical WOK Math 143	3	X
Humanistic & Artistic WOK	3	
Humanistic & Artistic WOK (one from a second discipline) LITERATURE: ENGL 175, 257, 258, 261 ARTS: ART 100; HUM 101, 150; MUS 101, 102, 150, 151; THEA 101 LANGUAGE: NP 101, 102; SPAN 101, 102	3	X
Scientific WOK CS 108 BIOF 100	7	
Social & Behavioral WOK ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285; PSYC 101, 205; SOC 101, 102; SS 184, 185	3	X
Social & Behavioral WOK (one from a second discipline) ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285 PSYC 101, 205; SOC 101, 102; SS 184, 185	3	X
Diversity (choose one) ANTH 102, 120, 170, 360; COMM 345; ENGL 258, 474; GEOG 102 HIST 101, 102, 111, 112; HRPT 184; KIN 220; NP 101, 102; POLS 285; SOC 101; SPAN 101, 102 201, 202; SS 184	3	
Ethics/Values (choose one) ID 300 A-Z ID 301 – Experiential Learning	3	
CS 211 Computer Science II	4	
CS 311 Algorithms and Data Structures	4	
CS 480 Capstone Design Project	4	
CS 492 Internship	4	
BUS 311 Foundations Management Theory	3	
BUS 360 Leadership	3	
BUS 365 Business Law I	3	
BUS 370 Pro.Op. Management	3	
ECON 300 Statistical Methods	3	
CYB 300 Cyber Ethics	3	
CYB 360 Cybersecurity Management	3	
General Elective Credits	7	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	39	39 ***
Total	120	

* Students with a 37+ on SAT or 31+ on ACT don't need these two ENGL 101/102 classes

*** CNT 114, CNT 150, BOT 150, BOT 151, CNT 123, CNT 171, CNT 224, CNT 290, CNT 291, BOT 216, CNT 292, CNT 293 ---39 Credit Hours…

CEI – ITS to LC BS Cybersecurity Management

https://www.cei.edu/programs-of-study/business/computer-networking

Bachelor of Science		
Course Number and Title	*Credits*	*NIC NSA*
General Education Core requirements indicated in bold.		
Written Communication ENGL 101	3	X
Written Communication ENGL 102	3	
Oral Communication COMM 101, 203, 204	3	X
Mathematical WOK Math 143	3	X
Humanistic & Artistic WOK	3	
Humanistic & Artistic WOK (one from a second discipline) LITERATURE: ENGL 175, 257, 258, 261 ARTS: ART 100; HUM 101, 150; MUS 101, 102, 150, 151; THEA 101 LANGUAGE: NP 101, 102; SPAN 101, 102	3	
Scientific WOK CS 108 BIOF 100	7	
Social & Behavioral WOK ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285; PSYC 101, 205; SOC 101, 102; SS 184, 185	3	X
Social & Behavioral WOK (one from a second discipline) ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285 PSYC 101, 205; SOC 101, 102; SS 184, 185	3	
Diversity (choose one) ANTH 102, 120, 170, 360; COMM 345; ENGL 258, 474; GEOG 102 HIST 101, 102, 111, 112; HRPT 184; KIN 220; NP 101, 102; POLS 285; SOC 101; SPAN 101, 102 201, 202; SS 184	3	
Ethics/Values (choose one) ID 300 A-Z ID 301 – Experiential Learning	3	
CS 211 Computer Science II	4	
CS 311 Algorithms and Data Structures	4	
CS 480 Capstone Design Project	4	
CS 492 Internship	4	
BUS 311 Foundations Management Theory	3	
BUS 360 Leadership	3	
BUS 365 Business Law I	3	
BUS 370 Pro.Op. Management	3	
ECON 300 Statistical Methods	3	
CYB 300 Cyber Ethics	3	
CYB 360 Cybersecurity Management	3	
General Elective Credits	7	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	39	39 ***
Total	120	

* Students with a 37+ on SAT or 31+ on ACT don't need these two ENGL 101/102 classes

*** CNT 114, CNT 150, BOT 150, BOT 151, CNT 123, CNT 142, CNT 171, CNT 224, CNT 225, CNT 271, BOT 216, CNT 226, CNT 270, ---39 Credit Hours…

CSI – *C&P* to LC BS Cybersecurity Management

https://csi.smartcatalogiq.com/2021-2022/Catalog/Business-and-Information-Systems-Department/Cybersecurity-and-Programming/Cybersecurity-and-Programming-Associate-of-Applied-Science

Bachelor of Science		
Course Number and Title	*Credits*	*NIC NSA*
General Education Core requirements indicated in bold.		
Written Communication ENGL 101	3	X
Written Communication ENGL 102	3	
Oral Communication COMM 101, 203, 204	3	X
Mathematical WOK Math 143	3	X
Humanistic & Artistic WOK	3	
Humanistic & Artistic WOK (one from a second discipline) LITERATURE: ENGL 175, 257, 258, 261 ARTS: ART 100; HUM 101, 150; MUS 101, 102, 150, 151; THEA 101 LANGUAGE: NP 101, 102; SPAN 101, 102	3	
Scientific WOK CS 108 BIOF 100	7	
Social & Behavioral WOK ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285; PSYC 101, 205; SOC 101, 102; SS 184, 185	3	X
Social & Behavioral WOK (one from a second discipline) ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285 PSYC 101, 205; SOC 101, 102; SS 184, 185	3	
Diversity (choose one) ANTH 102, 120, 170, 360; COMM 345; ENGL 258, 474; GEOG 102 HIST 101, 102, 111, 112; HRPT 184; KIN 220; NP 101, 102; POLS 285; SOC 101; SPAN 101, 102 201, 202; SS 184	3	
Ethics/Values (choose one) ID 300 A-Z ID 301 – Experiential Learning	3	
CS 211 Computer Science II	4	
CS 311 Algorithms and Data Structures	4	
CS 480 Capstone Design Project	4	
CS 492 Internship	4	CISW 298 or CISS 223
BUS 311 Foundations Management Theory	3	
BUS 360 Leadership	3	
BUS 365 Business Law I	3	
BUS 370 Pro.Op. Management	3	
ECON 300 Statistical Methods	3	
CYB 300 Cyber Ethics	3	
CYB 360 Cybersecurity Management	3	
General Elective Credits	7	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	39	39 ***
Total	120	

* Students with a 37+ on SAT or 31+ on ACT don't need these two ENGL 101/102 classes

*** CISW 111, CISW 125, CISS 107, CISS 212, CISS 213, CISW 126, CISS 131, CISS 212, CISS 216, CISW 128, CISW 217, CISS 236, CISW 240, CISW 250, CISW 245 --- 39 Credit hours…

CWI – Cybersecurity to LC BS Cybersecurity Management

https://cwi.edu/program/cybersecurity

Bachelor of Science		
Course Number and Title	*Credits*	*NIC NSA*
General Education Core requirements indicated in bold.		
Written Communication ENGL 101	3	X
Written Communication ENGL 102	3	
Oral Communication COMM 101, 203, 204	3	X
Mathematical WOK Math 143	3	X
Humanistic & Artistic WOK	3	
Humanistic & Artistic WOK (one from a second discipline) LITERATURE: ENGL 175, 257, 258, 261 ARTS: ART 100; HUM 101, 150; MUS 101, 102, 150, 151; THEA 101 LANGUAGE: NP 101, 102; SPAN 101, 102	3	
Scientific WOK CS 108 BIOF 100	7	
Social & Behavioral WOK ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285; PSYC 101, 205; SOC 101, 102; SS 184, 185	3	X
Social & Behavioral WOK (one from a second discipline) ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285 PSYC 101, 205; SOC 101, 102; SS 184, 185	3	
Diversity (choose one) ANTH 102, 120, 170, 360; COMM 345; ENGL 258, 474; GEOG 102 HIST 101, 102, 111, 112; HRPT 184; KIN 220; NP 101, 102; POLS 285; SOC 101; SPAN 101, 102 201, 202; SS 184	3	
Ethics/Values (choose one) ID 300 A-Z ID 301 – Experiential Learning	3	
CS 211 Computer Science II	4	
CS 311 Algorithms and Data Structures	4	
CS 480 Capstone Design Project	4	
CS 492 Internship	4	
BUS 311 Foundations Management Theory	3	
BUS 360 Leadership	3	
BUS 365 Business Law I	3	
BUS 370 Pro.Op. Management	3	
ECON 300 Statistical Methods	3	
CYB 300 Cyber Ethics	3	
CYB 360 Cybersecurity Management	3	
General Elective Credits	7	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	39	39 ***
Total	120	

* Students with a 37+ on SAT or 31+ on ACT don't need these two ENGL 101/102 classes

*** CSEC 110, CSEC 123, CSEC 125, CSEC 127, CSEC 129, CSEC 131, CSEC 246, CSEC 248, CSEC 252, CSEC 255, CSEC 257, CSEC 290 --- 39 Credit hours…

CWI – NA to LC BS Cybersecurity Management

https://search.cwi.edu/s/search.html?cat=top&collection=cwi-search&query=Network+Administrations+

Bachelor of Science		
Course Number and Title	*Credits*	*NIC NSA*
General Education Core requirements indicated in bold.		
Written Communication ENGL 101	3	X
Written Communication ENGL 102	3	
Oral Communication COMM 101, 203, 204	3	X
Mathematical WOK Math 143	3	X
Humanistic & Artistic WOK	3	
Humanistic & Artistic WOK (one from a second discipline) LITERATURE: ENGL 175, 257, 258, 261 ARTS: ART 100; HUM 101, 150; MUS 101, 102, 150, 151; THEA 101 LANGUAGE: NP 101, 102; SPAN 101, 102	3	
Scientific WOK CS 108 BIOF 100	7	
Social & Behavioral WOK ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285; PSYC 101, 205; SOC 101, 102; SS 184, 185	3	X
Social & Behavioral WOK (one from a second discipline) ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285 PSYC 101, 205; SOC 101, 102; SS 184, 185	3	
Diversity (choose one) ANTH 102, 120, 170, 360; COMM 345; ENGL 258, 474; GEOG 102 HIST 101, 102, 111, 112; HRPT 184; KIN 220; NP 101, 102; POLS 285; SOC 101; SPAN 101, 102 201, 202; SS 184	3	
Ethics/Values (choose one) ID 300 A-Z ID 301 – Experiential Learning	3	
CS 211 Computer Science II	4	
CS 311 Algorithms and Data Structures	4	
CS 480 Capstone Design Project	4	
CS 492 Internship	4	
BUS 311 Foundations Management Theory	3	
BUS 360 Leadership	3	
BUS 365 Business Law I	3	
BUS 370 Pro.Op. Management	3	
ECON 300 Statistical Methods	3	
CYB 300 Cyber Ethics	3	
CYB 360 Cybersecurity Management	3	
General Elective Credits	7	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	39	39 ***
Total	120	

* Students with a 37+ on SAT or 31+ on ACT don't need these two ENGL 101/102 classes

*** NADM 140, NADM 142, NADM 144, NADM 155, NADM 157, NADM 159, NADM 260, NADM 262, NADM 264, NADM 266, NADM 268, NADM 271 ---39 Credit Hours…

CSI – CNST to LC BS Cybersecurity Management

https://cwi.edu/program/cisco-networking-and-security-technologies

Bachelor of Science		
Course Number and Title	*Credits*	*NIC NSA*
General Education Core requirements indicated in bold.		
Written Communication ENGL 101	3	
Written Communication ENGL 102	3	
Oral Communication COMM 101, 203, 204	3	X
Mathematical WOK Math 143	3	X
Humanistic & Artistic WOK	3	
Humanistic & Artistic WOK (one from a second discipline) LITERATURE: ENGL 175, 257, 258, 261 ARTS: ART 100; HUM 101, 150; MUS 101, 102, 150, 151; THEA 101 LANGUAGE: NP 101, 102; SPAN 101, 102	3	
Scientific WOK CS 108 BIOF 100	7	
Social & Behavioral WOK ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285; PSYC 101, 205; SOC 101, 102; SS 184, 185	3	
Social & Behavioral WOK (one from a second discipline) ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285 PSYC 101, 205; SOC 101, 102; SS 184, 185	3	
Diversity (choose one) ANTH 102, 120, 170, 360; COMM 345; ENGL 258, 474; GEOG 102 HIST 101, 102, 111, 112; HRPT 184; KIN 220; NP 101, 102; POLS 285; SOC 101; SPAN 101, 102 201, 202; SS 184	3	
Ethics/Values (choose one) ID 300 A-Z ID 301 – Experiential Learning	3	
CS 211 Computer Science II	4	
CS 311 Algorithms and Data Structures	4	
CS 480 Capstone Design Project	4	
CS 492 Internship	4	
BUS 311 Foundations Management Theory	3	
BUS 360 Leadership	3	
BUS 365 Business Law I	3	
BUS 370 Pro.Op. Management	3	
ECON 300 Statistical Methods	3	
CYB 300 Cyber Ethics	3	
CYB 360 Cybersecurity Management	3	
General Elective Credits	7	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	39	39 ***
Total	120	

* Students with a 37+ on SAT or 31+ on ACT don't need these two ENGL 101/102 classes

*** CNST 124, CNST 127, CNST 129, CNST 135, CNST 230, CNST 238, CNST 240, CNST 242, CNST 244, CNST 248 --- 39 Credit Hours

CWI – CSS to LC BS Cybersecurity Management

https://cwi.edu/program/computer-support-specialist

Bachelor of Science		
Course Number and Title	*Credits*	*NIC NSA*
General Education Core requirements indicated in bold.		
Written Communication ENGL 101	3	X
Written Communication ENGL 102	3	
Oral Communication COMM 101, 203, 204	3	X
Mathematical WOK Math 143	3	X
Humanistic & Artistic WOK	3	
Humanistic & Artistic WOK (one from a second discipline) LITERATURE: ENGL 175, 257, 258, 261 ARTS: ART 100; HUM 101, 150; MUS 101, 102, 150, 151; THEA 101 LANGUAGE: NP 101, 102; SPAN 101, 102	3	
Scientific WOK CS 108 BIOF 100	7	
Social & Behavioral WOK ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285; PSYC 101, 205; SOC 101, 102; SS 184, 185	3	X
Social & Behavioral WOK (one from a second discipline) ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285 PSYC 101, 205; SOC 101, 102; SS 184, 185	3	
Diversity (choose one) ANTH 102, 120, 170, 360; COMM 345; ENGL 258, 474; GEOG 102 HIST 101, 102, 111, 112; HRPT 184; KIN 220; NP 101, 102; POLS 285; SOC 101; SPAN 101, 102 201, 202; SS 184	3	
Ethics/Values (choose one) ID 300 A-Z ID 301 – Experiential Learning	3	
CS 211 Computer Science II	4	
CS 311 Algorithms and Data Structures	4	
CS 480 Capstone Design Project	4	
CS 492 Internship	4	
BUS 311 Foundations Management Theory	3	
BUS 360 Leadership	3	
BUS 365 Business Law I	3	
BUS 370 Pro.Op. Management	3	
ECON 300 Statistical Methods	3	
CYB 300 Cyber Ethics	3	
CYB 360 Cybersecurity Management	3	
General Elective Credits	7	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	39	39 ***
Total	120	

* Students with a 37+ on SAT or 31+ on ACT don't need these two ENGL 101/102 classes

*** CSSP 103, CSSP 104, CSSP 106, CSSP 108, CSSP 109, CSSP 111, CSSP 114, CSSP 210, CSSP 212, CSSP 214, CSSP 220, CSSP 222, CSSP 224 --- 39 Credit Hours

CWI – SD to LC BS Cybersecurity Management

https://search.cwi.edu/s/search.html?cat=top&collection=cwi-search&query=Software+Development

Bachelor of Science		
Course Number and Title	*Credits*	*NIC NSA*
General Education Core requirements indicated in bold.		
Written Communication ENGL 101	3	X
Written Communication ENGL 102	3	
Oral Communication COMM 101, 203, 204	3	X
Mathematical WOK Math 143	3	X
Humanistic & Artistic WOK	3	
Humanistic & Artistic WOK (one from a second discipline) LITERATURE: ENGL 175, 257, 258, 261 ARTS: ART 100; HUM 101, 150; MUS 101, 102, 150, 151; THEA 101 LANGUAGE: NP 101, 102; SPAN 101, 102	3	
Scientific WOK CS 108 BIOF 100	7	
Social & Behavioral WOK ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285; PSYC 101, 205; SOC 101, 102; SS 184, 185	3	X
Social & Behavioral WOK (one from a second discipline) ANTH 102, 120, 170; ECON 201, 202; GEOG 102; HIST 101, 102, 111, 112; HRPT 184, 185; POLS 101, 237, 285 PSYC 101, 205; SOC 101, 102; SS 184, 185	3	
Diversity (choose one) ANTH 102, 120, 170, 360; COMM 345; ENGL 258, 474; GEOG 102 HIST 101, 102, 111, 112; HRPT 184; KIN 220; NP 101, 102; POLS 285; SOC 101; SPAN 101, 102 201, 202; SS 184	3	
Ethics/Values (choose one) ID 300 A-Z ID 301 – Experiential Learning	3	
CS 211 Computer Science II	4	
CS 311 Algorithms and Data Structures	4	
CS 480 Capstone Design Project	4	
CS 492 Internship	4	SWDV 293
BUS 311 Foundations Management Theory	3	
BUS 360 Leadership	3	
BUS 365 Business Law I	3	
BUS 370 Pro.Op. Management	3	
ECON 300 Statistical Methods	3	
CYB 300 Cyber Ethics	3	
CYB 360 Cybersecurity Management	3	
General Elective Credits	7	
Technical education credits from a technical associate degree (AAS or equivalent) awarded by a regionally accredited institution.	39	39 ***
Total	120	

* Students with a 37+ on SAT or 31+ on ACT don't need these two ENGL 101/102 classes

***SWDV 120, SWDV 125, SWDV 130, SWDV 135, SWDV 140, SWDV 143, SWDV 152, SWDV 210, SWDV 220, SWDV 235, SWDV 265, SWDV 271, SWDV 280 --- 39 Credit Hours

IDAHO STATE UNIVERSITY

SUBJECT

Online Bachelor of Science Degree Completion in Respiratory Therapy

APPLICABLE STATUTE, RULE, OR POLICY

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

BACKGROUND/DISCUSSION

The proposed Bachelor of Science in Respiratory Therapy degree completion program is designed for practicing associate degree clinicians who want to advance their careers in health care, organizational leadership, health care education, health administration, and research. The online format provides students access to a quality education without relocating. The Commission on Accreditation for Respiratory Care (the accrediting agency) has encouraged ISU's program to develop a bachelor's degree pathway for individuals with an associate degree.

The U.S. Bureau of Labor Statistics' Occupational Outlook projects 19% growth in employment of respiratory therapists between 2019 and 2029 in the State of Idaho. In addition to the strong demand for respiratory therapists, those with bachelor's degrees are often selected for various leadership roles in their places of employment.

Students with an Associate of Science (A.S.) in Respiratory Therapy from Idaho State University (ISU) can complete the bachelor's program in one year, as the A.S. degree is 90 credits. Students with associate degrees from other institutions will have their transcripts evaluated for appropriate placement, and in many cases will be able to use credit for prior experiential learning.

IMPACT

As a start-up program, the enrollment projections are 10 full-time and up to 14 part-time students annually. As the program grows, ISU intends to support more faculty with the online program fees. ISU associate of science graduates will be recruited during the first few years of the program. ISU will also focus on recruiting practicing respiratory therapists in the region who do not have a bachelor's degree.

An online program fee of $300 per credit will be charged in place of tuition. No other fees will be charged. In setting the program fees, the goal was to provide an affordable option to students while ensuring that revenue would cover the costs of the program. The fee is similar to that of BSU's online program fee for the Respiratory Care completion program. The total cost of the program is $8,700 for students who complete the Associate of Science in Respiratory Therapy at ISU.

From an academic and fiscal standpoint, the program needs to have a minimum of 10 graduates per year. One new full-time faculty member will be hired to teach the additional online courses. First year funding for the new faculty member will come from existing funds allocated to the Respiratory Therapy program. As enrollment grows, the online program fees will sustain the faculty line.

ATTACHMENTS

Attachment 1 – Online BS Degree Completion in Respiratory Therapy Proposal

BOARD STAFF COMMENTS AND RECOMMENDATIONS

ISU indicates that the American Association of Respiratory Care is encouraging and supporting all respiratory therapy programs to add a baccalaureate degree pathway for individuals with an associate degree. Additionally, as provided in the program proposal, the Commission on Accreditation for Respiratory Care (CoARC), the program's accrediting body, affirms there is a need for "increasing numbers of respiratory therapists with baccalaureate and graduate education to serve as educators, researchers, managers, clinical specialists and in other roles throughout the healthcare delivery system." (CoARC March 2019 Board Meeting).

The proposed program is in response to an accreditation visit conducted in Fall 2018, and will provide working practitioners in rural areas with opportunities to complete their baccalaureate program where they would not otherwise be able to under a traditional offering. The Respiratory Therapy program at the College of Technology was evaluated in accordance with ISU's program health assessment process. Scores fell into the second quintile and required a Program Health Action Plan. While the proposed online Bachelor of Science program is not a direct result of ISU's program health assessment, the baccalaureate option plays a significant role in their strategy to increase enrollment.

As noted by ISU, the program will provide a unique opportunity to attract former ISU students who live and work in Eastern/Southeast Idaho, Utah, Wyoming, and Montana. This will provide the university with potential partnerships with local clinicians and industry. It will also allow ISU faculty and students to engage in research activities related to respiratory therapy in their geographic region. The proposed program anticipates 20 initial enrollments, reaching 24 by the fifth year and graduating 10-22 students annually once the program is up and running. While ISU does not identify a minimum number for student enrollment needed to sustain the program, ISU does indicate a minimum of 10 graduates per year will be necessary to maintain the program. Should the program fall below 10 graduates per year, the program will look at enhancing marketing and recruiting initiatives. If the program continues to underperform, ISU will discontinue it.

ISU's proposed Bachelor of Science in Respiratory Therapy degree completion program is consistent with their Service Region Program Responsibilities and their current institution plan for Delivery of Academic Programs in Region V. As provided in Board Policy III.Z, no institution has the statewide program responsibility for respiratory care programs. Additionally, Policy III.Z does not apply to programs for

which 90% or more of all activity is required or completed online. Staff notes that Boise State University also offers a similar online Bachelor of Science completion program in Respiratory Care with a similar fee model. While Boise State's program provides flexible opportunities for students to complete a baccalaureate program online, ISU indicates that most ISU graduates are not choosing Boise State's advanced program and are staying at ISU to complete a BS in Health Science. ISU's proposed program will offer ISU graduates a different option toward completing the baccalaureate program in Respiratory Therapy with access to local industry partners, local clinical staff, and institution faculty, as provided in their program proposal. Both Idaho State and Boise State discussed potential duplication and impacts to Boise State's existing program; and while some concerns regarding duplication remain, Boise State understands this program will be beneficial for a cohort of students in eastern Idaho.

ISU also requests approval to assess an online program fee consistent with Board Policy V.R.3.b.(x). ISU proposes to charge $300 per credit for a total program cost of $8,700 for the 29 credits required, whether a student completes their A.S. at ISU or transfers with an A.S. or Associate of Applied Science. Based on the information for the online program fee provided in the proposal, staff finds that the criteria have been met for this program. Staff notes that the program plans to use open educational resources to reduce the cost for students. There will be no purchase of textbooks required. Additionally, in accordance with ISU PLA policy, eligible students will be able to apply credits for prior learning. ISU anticipates that many students will be practicing A.S. respiratory therapists who have earned degrees from transfer institutions.

The proposal completed the program review process and was recommended for approval by the Council on Academic Affairs and Programs on September 30, 2021, and was presented to the Instruction, Research, and Student Affairs Committee on October 7, 2021, and to the Business Affairs and Human Resources Committee on October 8, 2021. Board staff recommends approval.

BOARD ACTION

I move to approve the request by Idaho State University to create an Online Bachelor of Science in Respiratory Therapy, as presented in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

AND

I move to approve the request by Idaho State University to charge an online program fee of $300 per credit for the Bachelor of Science in Respiratory Therapy, in conformance with the program budget submitted to the Board in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

Institutional Tracking No. 2021-06

Idaho State Board of Education

Proposal for Academic Degree and Certificate Program

Date of Proposal Submission:	June 4, 2021
Institution Submitting Proposal:	Idaho State University
Name of College, School, or Division:	College of Technology
Name of Department(s) or Area(s):	Health Occupations

Official Name of the Program:	Respiratory Therapy (B.S. degree completion)					
Implementation Date:	August 1, 2022					
Degree Information:	Degree Level: Undergraduate		Degree Type: B.S.			
CIP code (consult IR /Registrar):	51.0908					
Method of Delivery: Indicate percentage of face-to-face, hybrid, distance delivery, etc.	50% Synchronous and 50% Asynchronous online					
Geographical Delivery:	Location(s)	Online	Region(s)			
Indicate (X) if the program is/has: (Consistent with Board Policy V.R.)		Self-Support fee		Professional Fee	X	Online Program Fee
Indicate (X) if the program is: (Consistent with Board Policy III.Z.)	X	Regional Responsibility		Statewide Responsibility		

Indicate whether this request is either of the following:

- [x] New Degree Program
- [ ] Undergraduate/Graduate Certificates (30 credits or more)
- [ ] Expansion of Existing Program
- [ ] Consolidation of Existing Program
- [ ] New Off-Campus Instructional Program
- [ ] Other (i.e., Contract Program/Collaborative)

College Dean (Institution)	Date	Vice President for Research (Institution; as applicable)	Date 6/28/2021
Graduate Dean or other official (Institution; as applicable)	Date 06/04/21	Academic Affairs Program Manager, OSBE	Date 6/29/2021
FVP/Chief Fiscal Officer (Institution)	Date 06/04/21	Chief Financial Officer, OSBE	Date 6/28/2021
Provost/VP for Instruction (Institution)	Date 06/10/21	Chief Academic Officer, OSBE	Date
President	Date	SBOE/Executive Director Approval	Date

Before completing this form, refer to Board Policy Section III.G., Postsecondary Program Approval and Discontinuance. This proposal form must be completed for the creation of each new program. All questions must be answered.

Rationale for Creation or Modification of the Program

1. **Describe the request and give an overview of the changes that will result.** What type of substantive change are you requesting? Will this program be related or tied to other programs on campus? Identify any existing program that this program will replace. If this is an Associate degree, please describe transferability.

Idaho State University Respiratory Therapy program has been graduating associate degree level respiratory therapy students since 2009. Recently, however, the American Association of Respiratory Care (AARC) has published a number of documents in support of all respiratory therapy programs adding a bachelor level degree as well. The AARC has stated, "We support the development of baccalaureate and graduate education in respiratory care and encourage respiratory therapists to pursue advanced levels of education."

The Commission on Accreditation for Respiratory Care (CoARC), the program's accrediting body, also supports advanced degrees. In a March 2019 CoARC board meeting, a statement was released emphasizing the need for baccalaureate degrees in respiratory care:

> We continue to recognize the prominent role played by associate degree respiratory care programs in addressing workforce needs. We also reaffirm our position that there is the need for increasing numbers of respiratory therapists with baccalaureate and graduate education to serve as educators, researchers, managers, clinical specialists, and in other roles throughout the healthcare delivery system. The CoARC continues to work with other stakeholders to develop alternative pathways, including degree advancement, to meet this goal. (Official CoARC Communication – CoARC March 2019 Board Meeting)

Furthermore, during accreditation visits, the Respiratory Therapy program has received strong encouragement to develop a bachelor's degree pathway for associate's degree graduates.

Therefore, in response to these changes in the regulatory environment, we propose a Bachelor of Science in Respiratory Therapy, a completion degree, that will emphasize leadership, administration, research, and education in a health care environment. The program is designed to serve practicing associate's degree clinicians who are looking to advance in the fields of academia, health care, organizational leadership, health administration, and research. This program will enhance the level and quality of care being provided to patients in Southeastern Idaho. Offering the proposed bachelor's degree in an online format affords students the opportunity for a quality education from a nationally recognized university without the requirement of relocating. The online environment also accommodates those students currently residing and working in rural communities in Eastern Idaho.

This completion program requires students to already have an associate's degree in a regionally accredited respiratory therapy or respiratory care program.

After students complete the A.S. at ISU, they can go out to work in the respiratory therapy field anywhere in the nation and still complete the B.S. entirely online. At the completion of the A.S. degree, graduates are eligible to take the National Board of Respiratory Care (NBRC) credentialing

exam. The curriculum for the proposed degree will consist of new courses developed by the Idaho State University Respiratory Therapy program. Completing the B.S. degree will allow graduates to advance into leadership roles such as Director of Respiratory Therapy.

2. **Need for the Program**. Describe evidence of the student, regional, and statewide needs that will be addressed by this proposal to include student clientele to be served and address the ways in which the proposed program will meet those needs.

    a. **Workforce and economic need:** Provide verification of state workforce needs that will be met by this program. Include job titles and cite the data source. Describe how the proposed program will stimulate the state economy by advancing the field, providing research results, etc.

The U.S. Bureau of Labor Statistics' (BLS) Occupational Outlook Handbook indicates employment of respiratory therapists is projected to grow 19 percent from 2019 to 2029 in the state of Idaho, much faster than the average. "Growth in the middle-aged and elderly population will lead to an increased incidence of respiratory conditions such as chronic obstructive pulmonary disease (COPD) and pneumonia. These respiratory disorders can permanently damage the lungs or restrict lung function" (BLS, 2021).

In addition to the high demand for respiratory therapists, those with bachelor's degrees are often first to be promoted into various types of leadership roles in the facilities in which they work. Results of the AARC 2017 Human Resource survey indicate that respiratory therapists with a bachelor's degree fill the majority of the department manager, instructor, and disease manager positions over those with an associate's degree. According to the BLS Handbook, health services manager positions with bachelor's degree level requirements are expected to increase by 32 percent from 2019 to 2029, much faster than all other occupations. AARC 2015 Human Resource survey indicated over 70% of directors support and prefer bachelor's degree RTs in the workforce.

In addition to the projected growth in respiratory therapy positions associated with the aging of the national population generally, these same aging factors will lead to additional growth in job opportunities specifically, as the number of current respiratory therapists enter retirement. (Creating a Vision for Respiratory Care in 2015 and Beyond, 2009)

This new Bachelor of Science in Respiratory Therapy will provide an opportunity for respiratory therapy students and practicing respiratory therapists in Idaho and other states to acquire this additional education in Southeast Idaho without having to relocate. This will create economic growth by strengthening the ability of respiratory therapists to climb the career ladder into leadership or other respiratory related health care roles. The continued acceleration of advances in medical and clinical treatments and procedures will require a workforce that is better educated and highly skilled in terms of clinical procedures, administrative functions, and leadership support.

Additionally, the 2017 study of human resources conducted by the American Association of Respiratory Care (AARC) showed that each step up in one's degree level was worth an average of $3,071 a year after controlling for other variables that influence compensation like experience, hours worked, and credentials. For those who were paid by the hour, each education level was valued an additional $1.48 per hour on average ($3,071 per year/52 weeks per year/40 hours per week). Institutions that did not compensate therapists for higher education levels were out of step with the norm.

If access to the jobs listed below were facilitated by higher educational levels, then the listed compensation differences would be projected. Each value in the list was the difference between the average annual compensation for a therapist in each position and the average ($52,758) for those in the staff therapist position:

- Clinical Specialist +$3,792
- Industry Representative +5,361
- Research Coordinator +$6,082
- Supervisor +$10,632
- Director +17,615.

Therefore, individuals who hold higher degrees can and should expect higher compensation. When a higher degree is coupled with a position tied to more selective criteria, then the expectation for higher compensation is further magnified.

b. Student Demand. What is the most likely source of students who will be expected to enroll (full-time, part-time, outreach, etc.). Provide evidence of student demand/ interest from inside and outside of the institution.

Of the 127 graduates from the Idaho State University associate's degree Respiratory Therapy program over the last decade, 25 percent have earned a bachelor's degree in a general health science area. This indicates a desire of our students to earn a bachelor's degree. The 75 percent who went to work without obtaining the four-year degree will potentially return to complete the B.S. in Respiratory Therapy. Additionally, Idaho hospitals also recruit associate's degree prepared therapists who have earned their degrees from out of state, thus increasing the potential market for the proposed B.S. degree by Idaho State University. And lastly, the program will undoubtedly attract some out-of-state students who plan to continue to reside in their own state because of the fully online delivery.

c. Societal Need: Describe additional societal benefits and cultural benefits of the program.

The United States Census released information in March 2018 that indicates our aging population is on a trajectory to outnumber the younger population. Idaho's population is aging faster than the nation's, with people 65 and older increasing by 19 percent in the last four years compared with 14.2 percent nationwide. Along with aging comes increased need for more well-trained and educated healthcare professionals to include respiratory therapists to assist with respiratory disease and medication management.

In 2015, the Commission on Accreditation for Respiratory Care (CoARC) stated "increasing numbers of respiratory therapists with advanced education are needed to serve as educators, researchers, managers, clinical specialists, and leaders throughout the healthcare delivery system." This is especially true in the State of Idaho. With the continued acceleration of advances in medical/clinical treatments and procedures, a workforce of better-educated and higher-skilled medical/clinical administrators and leaders is needed.

3. Program Prioritization

Is the proposed new program a result of program prioritization?

Yes__X___ No____

If yes, how does the proposed program fit within the recommended actions of the most recent program prioritization findings.

The Respiratory Therapy program scores fell into the second quintile of the program health at the College of Technology and required an action plan. This new online program will reach working practitioners in rural areas that are unable to participate in a face-to-face environment to finish the bachelor's degree. As enrollment increases, the program health scores will also increase. The program will be self sustainable since the online program fees will support the faculty line.

4. Credit for Prior Learning

Indicate from the various cross walks where credit for prior learning will be available. If no PLA has been identified for this program, enter 'Not Applicable'.

Students will be able to use the ISU PLA policy to earn credits for prior learning. We anticipate that many students will be practicing A.S. Respiratory Therapists who have earned degrees from transfer institutions. Since the ISU A.S. program is a three-year program, and most associate's degrees are two years in length, there are likely deficiencies in the non-ISU RT associate's degree courses related to their work experience that they could earn through PLA. Each student will be required to submit a portfolio, by instructor permission, that shows how course learning outcomes have been met. The portfolios will be evaluated by program faculty to determine eligibility for credit. PLA will be determined on a case-by-case basis.

5. Affordability Opportunities

Describe any program-specific steps taken to maximize affordability, such as: textbook options (e.g., Open Educational Resources), online delivery methods, reduced fees, compressed course scheduling, etc. This question applies to certificates, undergraduate, graduate programs alike.

Using the online delivery method provides accessibility to any interested degree-holding student, or practicing respiratory therapists. The online fees are less than our regional and national competitors. The program plans on using Open Educational Resources to reduce the cost for students. No text books will be required for purchase. Currently, BSU charges $9,800 for their completion program (30 credits) while ISU's total cost for the program (29 credits) is $8,700.

Enrollments and Graduates

6. Existing similar programs at Idaho Public Institutions. Using the chart below, provide enrollments and numbers of graduates for similar existing programs at your institution and other Idaho public institutions for the most past four years.

Instit.	Program Name	Fall Headcount Enrollment in Program				Number of Graduates From Program (Summer, Fall, Spring)			
		FY17	FY18	FY19	FY20 (most recent)	FY17	FY18	FY19	FY20 (most recent)

ISU	**AS in Respiratory Therapy**	37	30	29	21	16	11	12	12
BSU	**BS in Respiratory Care (RRT-BS)**	NA	245	267	313	NA	52	150	126

7. **Justification for Duplication** (if applicable). If the proposed program is similar to another program offered by an Idaho public higher education institution, provide a rationale as to why any resulting duplication is a net benefit to the state and its citizens. Describe why it is not feasible for existing programs at other institutions to fulfill the need for the proposed program.

The availability of this degree online from Idaho State University will influence more practicing respiratory therapists in Idaho to continue their education and obtain a B.S. in Respiratory Therapy. The online nature of this program may also appeal to associate's degree prepared therapists in many other states. Even though there is another online program offered in the state, our accrediting body is encouraging associate's degree programs to expand offerings to a baccalaureate degree. The proposed Bachelor of Science in Respiratory Therapy from Idaho State University is designed to help associate's degree graduates obtain their B.S. degree within one year vs. three to seven semesters as found with other colleges offering B.S. degrees in respiratory care. However, if graduates wish to work as respiratory therapists while completing the degree part-time, they also have the option to do so.

8. **Projections for proposed program:** Using the chart below, provide projected enrollments and number of graduates for the proposed program:

Proposed Program: Projected Enrollments and Graduates First Five Years									
Program Name: Bachelor of Science in Respiratory Therapy									
Projected Fall Term Headcount Enrollment in Program					**Projected Annual Number of Graduates From Program**				
FY23 (first year)	FY 24	FY 25	FY 26	FY 27	FY23 (first year)	FY24	FY25	FY26	FY27
20	22	22	24	24	10	16	18	20	22

9. **Describe the methodology for determining enrollment and graduation projections.** Refer to information provided in Question #2 "Need for the Program" above. What is the capacity for the program? Describe your recruitment efforts? How did you determine the projected numbers above?

As a start-up program, the enrollment projections are based on 10 full-time and up to 14 part-time students annually. This is a conservative projection. The methodology is based on the current enrollment in the face-to-face associate's degree program. We plan on starting conservatively because we will only be hiring one faculty. As the program grows, we intend to support more faculty with the

online program fees. ISU A.S. graduates will be recruited during the first few years of the program. We will also focus on recruiting practicing respiratory therapists in the region who do not have a bachelor's degree.

10. Minimum Enrollments and Graduates.

a. What are the minimums that the program will need to meet in order to be continued, and what is the logical basis for those minimums?

Idaho State University requires a minimum of 10 graduates per year to maintain program health.

b. If those minimums are not met, what is the sunset clause by which the program will be considered for discontinuance?

Should the program fall below 10 graduates per year, discussions will first take place regarding enhanced marketing and recruiting initiatives that should be considered. If the program continues to underperform, then program discontinuance measures will be implemented.

11. Assurance of Quality. Describe how the institution will ensure the quality of the program. Describe the institutional process of program review. Where appropriate, describe applicable specialized accreditation and explain why you do or do not plan to seek accreditation.

First, Regional Institutional Accreditation: Idaho State University is regionally accredited by the Northwest Commission on Colleges and Universities (NWCCU).

Second, the associate's degree in the Respiratory Therapy program is currently accredited by CoARC, and the B.S. degree will follow the same standards.

Third, the new B.S. will also be guided by and benefit from the Respiratory Therapy program's ongoing Technical Advisory Committee (TAC) which meets at least twice a year. The TAC is made up of various community and hospital-based respiratory care providers who are in key positions to ascertain that the respiratory therapy graduates have received an excellent and relevant educational experience. All three of these Continuous Quality Improvement initiatives will ensure program quality.

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

N/A

13. Teacher Education/Certification Programs All Educator Preparation programs that lead to certification require review and recommendation from the Professional Standards Commission (PSC) prior to consideration and approval of the program by the State Board of Education.

Will this program lead to certification?

Yes_____ No__X__

If yes, on what date was the Program Approval for Certification Request submitted to the Professional Standards Commission?

N/A

14. Three-Year Plan: If this is a new proposed program, is it on your institution's approved 3-year plan?

Yes__X___ No_____

If yes, proceed to question 15. If no:

a. Which of the following statements address the reason for adding this program outside of the regular three-year planning process.

Indicate (X) by each applicable statement:

	Program is important for meeting your institution's regional or statewide program responsibilities.
	The program is in response to a specific industry need or workforce opportunity.
	The program is reliant on external funding (grants, donations) with a deadline for acceptance of funding.
	There is a contractual obligation or partnership opportunity related to this program.
	The program is in response to accreditation requirements or recommendations.
	The program is in response to recent changes to teacher certification/endorsement requirements.

b. Provide an explanation for all statements you selected.

The respiratory program promotes the health mission for the university in the state of Idaho. This proposed Bachelor of Science in Respiratory Therapy program is designed to serve practicing associate's degree clinicians who are looking to advance in the fields of academia, health care, organizational leadership, health administration, and research. This program will enhance the level and quality of care being provided to patients. Offering the proposed bachelor degree in an online format affords students the opportunity for a quality education from a nationally recognized university without the requirement of relocating.

Educational Offerings: Curriculum, Intended Learning Outcomes, and Assessment Plan

15. Curriculum. Provide descriptive information of the educational offering.

a. **Summary of requirements.** Provide a summary of program requirements using the following table.

Credit hours in required courses offered by the department (s) offering the program.	71
Credit hours in required courses offered by other departments:	12

Credit hours in institutional general education curriculum	37
Credit hours in free electives	7 minimum for transfer students
Total credit hours required for degree program:	120

b. **Curriculum.** Provide the curriculum for the program, including credits to completion, courses by title and assigned academic credit granted.

Bachelor of Science in Respiratory Therapy, ISU AS Track	Credits
Entry requirements: A.S. in Respiratory Therapy from Idaho State University	
Lower division credits	22
Upper division credits	32
General Education credits	37
Total credits from A.S. in Respiratory Therapy	**91**
Semester one (Fall)	
RESP 4400 Multicultural Health Care	3
RESP 4410 Health Care Research	3
RESP 4420 Leadership in Health Professions	3
RESP 4430 Recent Advances in Respiratory Care	3
RESP 4440 Caring for an Aging Population	2
Total	**14**
Semester Two (Spring)	
RESP 4450 Ethics in Health Care	3
RESP 4460 Promoting Health Care Education	3
RESP 4470 Disaster Management in Health Care	3
RESP 4480 Current Issues in Respiratory Care	3
Total	**12**
RESP 4490 Respiratory Capstone Project	3

Degree Total	**120**

Bachelor of Science in Respiratory Therapy, Transfer Track (AS or AAS)	**Credits**
Entry requirements: AS or AAS in Respiratory Care or equivalent	
Lower division (excluding general education)	48 minimum
Upper division credits	7
General education credits (must meet Idaho State Board general education requirements)	36 minimum
Total credits from AS or AAS, plus any additional required credits (must be completed prior to admission to completion program).	**91**
Semester one (Fall)	
RESP 4400 Multicultural Health Care	3
RESP 4410 Health Care Research	3
RESP 4420 Leadership in Health Professions	3
RESP 4430 Recent Advances in Respiratory Care	3
RESP 4440 Caring for an Aging Population	2
Total	**14**
Semester Two (Spring)	
RESP 4450 Ethics in Health Care	3
RESP 4460 Promoting Health Care Education	3
RESP 4470 Disaster Management in Health Care	3
RESP 4480 Current Issues in Respiratory Care	3
Total	**12**
RESP 4490 Respiratory Capstone Project	3
Degree Total	**120**

Respiratory Therapists who have earned their associate of science degrees in respiratory therapy from another academic institution and are licensed/registered to practice will in most cases be eligible to enter the program without further Respiratory Therapy course preparation.

Transfer students' academic preparation will be evaluated course by course. Credit deficits may be made up through challenge examinations, prior learning assessment, or by taking a course. Transfer students from community colleges may be seven credits short in upper-division credits and will be required to take additional courses. Students will be advised individually and directed toward courses that will be in their best interest depending on their career goals.

For those who may have earned an Associate of Applied Science degree in Respiratory Care, an analysis of their out-of-state transcript will be undertaken to assure that they have completed the necessary prerequisite and general education courses in order to be successful.

c. **Additional requirements.** Describe additional requirements such as comprehensive examination, senior thesis or other capstone experience, practicum, or internship, some of which may carry credit hours included in the list above.

The last class in the program curriculum is a comprehensive capstone project. The capstone project is a deliverable project aimed at impacting community or institutional health utilizing any of the ideas discussed throughout the program. The project will be presented to the faculty and invited peers via a program-specific web-based conference. Students will be expected to produce a defensible presentation worthy of publication in either a peer-reviewed academic journal or submission to the American Association of Respiratory Care (AARC) summer forum conference.

16. Learning Outcomes: Expected Student Learning Outcomes and Connection to Curriculum.

a. Intended Learning Outcomes. List the Intended Learning Outcomes for the proposed program, using learner-centered statements that indicate what students will know, understand, and be able to do, and value or appreciate as a result of completing the program.

Student will be able to:

Learning Outcome #1
demonstrate cultural competency in all healthcare settings.

Learning Outcome #2
apply research design, methods, and analysis to answer a central research question relevant to the advancement of the field.

Learning Outcome #3
apply leadership theory within the context of both the educational and clinical environments.

Learning Outcome #4
use the appropriate educational theory within the context of adult, professional, and patient centered programs.

17. Assessment plans.

a. Assessment Process. Describe the assessment plan for student learning outcomes that will be used to evaluate student achievement and how the results will be used to

improve the program.

An assessment plan will be created to identify assessment activities and timelines to determine student achievement in the learning outcomes indicated above. Faculty will use both direct and indirect methods to collect data. As results are gathered, faculty will meet to analyze and discuss the outcomes. Strategies will be developed to implement changes in curriculum or teaching methodologies to strengthen student learning. Changes will be assessed at the next scheduled evaluation to see whether student learning improved.

a. Closing the loop. How will you ensure that the assessment findings will be used to improve the program?

First, assessment results will be presented to department faculty during planned meetings throughout the academic year. Faculty will implement new strategies to improve areas of weakness and evaluate outcomes after implementation.

Second, the Respiratory Therapy program will hold semi-annual TAC meetings to get input from professionals in the field and other constituents. Program changes including curriculum changes, revisions to student learning outcomes, results of assessment, and new strategies will be discussed. Advisory committee members will help the program identify areas of weakness and provide recommendations for improvement. Faculty will implement appropriate recommendations and will report back to the committee at future meetings.

b. Measures used. What direct and indirect measures will be used to assess student learning?

Direct measurements will include quizzes, tests, assignments, and capstone projects.

Indirect measurements will include student evaluations, graduate and employer surveys, exit surveys with students, and job placement.

c. Timing and frequency. When will assessment activities occur and at what frequency?

Course-specific assessments will occur throughout each course, as well as at the end of each course when offered. The department will informally review course-related data every semester and formally review program assessment data annually. The department will conduct exit surveys with students annually. The department will monitor capstone project submissions annually.

Resources Required for Implementation – fiscal impact and budget.
Organizational arrangements required within the institution to accommodate the change including administrative, staff, and faculty hires, facilities, student services, library; etc.

18. Physical Facilities and Equipment: Describe the provision for physical facilities and equipment.

a. **Existing resources**. Describe equipment, space, laboratory instruments, computer(s), or other physical equipment presently available to support the successful implementation of the program.

There is no dedicated space for the new faculty member, but there is office space adjacent to the Associate of Science program that has been requested. Existing equipment, laboratory, and classroom space used in the associate's degree does not need to be expanded since the bachelor's degree program is online.

b. **Impact of new program**. What will be the impact on existing programs of increased use of physical resources by the proposed program? How will the increased use be accommodated?

There will be a requirement of an additional office space for the new FTE needed for this program. No negative impact on existing programs is anticipated.

c. **Needed resources.** List equipment, space, laboratory instruments, etc., that must be obtained to support the proposed program. Enter the costs of those physical resources into the budget sheet.

Operating expenses associated with one additional faculty, related computer equipment, and office space will be requested.

19. **Library and Information Resources:** Describe adequacy and availability of library and information resources.

a. **Existing resources and impact of new program**. Evaluate library resources, including personnel and space. Are they adequate for the operation of the present program? Will there be an impact on existing programs of increased library usage caused by the proposed program? For off-campus programs, clearly indicate how the library resources are to be provided.

Existing library resources are sufficient.

b. **Needed resources**. What new library resources will be required to ensure successful implementation of the program? Enter the costs of those library resources into the budget sheet.

No other resources are required.

20. **Faculty/Personnel resources**

a. **Needed resources.** Give an overview of the personnel resources that will be needed to implement the program. How many additional sections of existing courses will be needed? Referring to the list of new courses to be created, what instructional capacity will be needed to offer the necessary number of sections?

A new full-time faculty member will be hired to teach the additional online courses.

b. Existing resources. Describe the existing instructional, support, and administrative resources that can be brought to bear to support the successful implementation of the program.

ISU, the College of Technology (COT), the Health Occupations Department (HO), and the existing Respiratory Therapy program have a wealth of instructional and administrative support resources available that will assure the successful implementation of the new BS in Respiratory Therapy.

On the program level, the Director of the Respiratory Therapy program is a knowledgeable college-level educator with years of experience providing online education, as well as hospital-based clinical care. This same director will be the mentor for the new faculty member hired to provide instruction in this new degree program and will be in an ideal position to oversee the creation of new course content, the on-boarding of the new faculty member, student recruitment efforts, new student admissions, instructional support, and evaluation of program and student outcomes.

On the department level, a number of the other HO faculty members are expert online instructors with specialty training in "Quality Matters," a national initiative to train online faculty and upgrade online curriculum and evaluation methodologies.

On the COT level, the college sponsors its own three-member Computer Support Services department that is always available to address any computer, software, or online difficulties that may arise, as well as provide additional training to all COT instructors.

And on the university level, ISU has created an excellent computer and instructional support organization campus-wide, the Instructional Technology Resource Center (ITRC), that sponsors a "Helpline" for immediate online instructor support and holds regular in-service trainings for both computer support and online educators.

c. Impact on existing programs. What will be the impact on existing programs of increased use of existing personnel resources by the proposed program? How will quality and productivity of existing programs be maintained?

There is no negative impact on existing programs. Quality and productivity of existing programs will be maintained through existing and new faculty.

d. Needed resources. List the new personnel that must be hired to support the proposed program. Enter the costs of those personnel resources into the budget sheet.

One FTE full-time respiratory therapy faculty.

21. Revenue Sources

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

First year funding for the new faculty member will come from existing university dollars allocated to the Respiratory Therapy program. As enrollment builds, the online program fees will sustain the faculty line.

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

Not applicable.

c) **Non-ongoing sources**:
   i. If the funding is to come from one-time sources such as a donation, indicate the sources of other funding. What are the institution's plans for sustaining the program when that funding ends?

Not applicable.

   ii. Describe the federal grant, other grant(s), special fee arrangements, or contract(s) that will be valid to fund the program. What does the institution propose to do with the program upon termination of those funds?

Not applicable.

d) **Student Fees**:
   i. If the proposed program is intended to levy any institutional local fees, explain how doing so meets the requirements of Board Policy V.R., 3.b.

The proposed program will not levy any institutional local fees.

   ii. Provide estimated cost to students and total revenue for self-support programs and for professional fees and other fees anticipated to be requested under Board Policy V.R., if applicable.

The proposed program is requesting to use online program fees of $300 per credit instead of tuition. The total cost of the program is $8,700 for students who have completed the A.S. in Respiratory Therapy degree at ISU. This fee is similar to BSU's online program fee for the Respiratory Care completion program. No other fees will be charged.

The online program fee will be distributed to the college, central administration, and ITRC at the following rates: The program college will receive 60 percent ($180 per credit) to encourage growth in online programming and to pay for the FTE needed to administer the new curriculum. Central administration will receive 30 percent ($90 per credit) to support university infrastructure, and ITRC will receive 10 percent ($30 per credit) for technology support.

22. Using the excel budget template provided by the Office of the State Board of Education, provide the following information:

- Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first **four** fiscal years of the program.
- Include reallocation of existing personnel and resources and anticipated or requested new resources.
- Second and third year estimates should be in constant dollars.
- Amounts should reconcile subsequent pages where budget explanations are provided.
- If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies).
- Provide an explanation of the fiscal impact of any proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

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PROGRAM IDENTIFICATION	ISU #2021-06 Respiratory Therapy B.S. degree completion program

Program Resource Requirements. Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first four fiscal years of the program. Include reallocation of existing personnel and resources and anticipated or requested new resources. Second and third year estimates should be in constant dollars. Amounts should reconcile subsequent pages where budget explanations are provided. If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies). Provide an explanation of the fiscal impact of any proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

I. PLANNED STUDENT ENROLLMENT

	FY 2023		FY 2024		FY 2025		FY 2026		Cumulative Total	
	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount
A. New enrollments	16	20	8	11	8	11	8	12	40	54
B. Shifting enrollments			8	11	8	11	8	12	24	34
Total Enrollment	16	20	16	22	16	22	16	24	64	88

II. REVENUE

	FY 2023		FY 2024		FY 2025		FY 2026		Cumulative Total	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
1. New Appropriated Funding Request									$0.00	$0.00
2. Institution Funds									$0.00	$0.00
3. Federal									$0.00	$0.00
4. New Tuition Revenues from Increased Enrollments									$0.00	$0.00
5. Student Fees									$0.00	$0.00
6. Other: Online Program Fee	$132,000.00		$141,000.00		$141,000.00		$150,000.00		$564,000.00	$0.00
Total Revenue	$132,000.00	$0.00	$141,000.00	$0.00	$141,000.00	$0.00	$150,000.00	$0.00	$564,000.00	$0.00

Program Proposal Budget Template (Baccalaureate, Graduate, Doctorate) March 7, 2012 Page 1

On-going is defined as on-going operating budget for the program which will become part of the base.
One-time is defined as one-time funding in a fiscal year and not part of the base.

III. EXPENDITURES

	FY 2023		FY 2024		FY 2025		FY 2026		Cumulative Total	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
A. Personnel Costs										
1. FTE	1.00		1.00		1.00		1.00		4.00	0.00
2. Faculty	$60,000.00		$60,000.00		$60,000.00		$60,000.00		$240,000.00	$0.00
3. Adjunct Faculty	$0.00		$0.00		$0.00		$0.00		$0.00	$0.00
4. Graduate/Undergrad Assistants	$0.00		$0.00		$0.00		$0.00		$0.00	$0.00
5. Research Personnel	$0.00		$0.00		$0.00		$0.00		$0.00	$0.00
6. Directors/Administrators	$0.00		$0.00		$0.00		$0.00		$0.00	$0.00
7. Administrative Support Personnel	$0.00		$0.00		$0.00		$0.00		$0.00	$0.00
8. Fringe Benefits	$23,925.40		$23,925.40		$23,925.40		$23,925.40		$95,701.60	$0.00
9. Other:									$0.00	$0.00
Total Personnel and Costs	$83,925.40	$0.00	$83,925.40	$0.00	$83,925.40	$0.00	$83,925.40	$0.00	$335,701.60	$0.00

	FY 2023		FY 2024		FY 2025		FY 2026		Cumulative Total	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
B. Operating Expenditures										
1. Travel									$0.00	$0.00
2. Professional Services									$0.00	$0.00
3. Other Services									$0.00	$0.00

4. Communications									$0.00	$0.00
5. Materials and Supplies									$0.00	$0.00
6. Rentals									$0.00	$0.00
7. Materials & Goods for Manufacture & Resale									$0.00	$0.00
8. Miscellaneous									$0.00	$0.00
Total Operating Expenditures	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

	FY 2023		FY 2024		FY 2025		FY 2026		Cumulative Total	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
C. Capital Outlay										
1. Library Resources	$0.00		$0.00		$0.00		$0.00		$0.00	$0.00
2. Equipment									$0.00	$0.00
Total Capital Outlay	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
D. Capital Facilities Construction or Major Renovation	$0.00		$0.00		$0.00		$0.00		$0.00	$0.00
E. Information Technology Support	$0.00		$0.00		$0.00		$0.00		$0.00	$0.00
F. Other Costs										
1. Utilities									$0.00	$0.00
2. Maintenance & Repairs									$0.00	$0.00
3. Other: ______									$0.00	$0.00

Total Other Costs	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
TOTAL EXPENDITURES:	$83,925.40	$0.00	$83,925.40	$0.00	$83,925.40	$0.00	$83,925.40	$0.00	$335,701.60	$0.00
Net Income (Deficit)	$48,074.60	$0.00	$57,074.60	$0.00	$57,074.60	$0.00	$66,074.60	$0.00	$228,298.40	$0.00

Budget Notes (specify row and add explanation where needed; e.g., "I.A.,B. FTE is calculated using…"):

I.A.B.	The Online Program Fee reveune is based on 10 full time students completing 29 credits per year and the remaining 10-14 part time students completing 15 credits per year
	at $300 per credit.

IDAHO STATE UNIVERSITY

SUBJECT

Online Basic Technical Certificate in Cloud Computing

APPLICABLE STATUTE, RULE, OR POLICY

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

BACKGROUND/DISCUSSION

The proposed Basic Technical Certificate (BTC) in Cloud Computing will include courses in foundational cloud concepts, cloud developing, and cloud architecting, with the option to add courses in cloud operations, machine learning, and data analytics. Upon completion of the courses, participants will be able to test for industry certifications in Cloud Practitioning, Certified Developer, and Solutions Architect through the Amazon Web Services (AWS) Academy Cloud Developing. This BTC will create high-paying jobs for Idahoans, who can complete this work remotely. Cloud computing is an emerging employment field throughout Idaho and the U.S.

This certificate will be funded using an online program fee model, in lieu of tuition and other fees, in accordance with Board Policy V.R., subsection 3.b. The online program fee will initially be established at $300 per credit. The online program fee will cover costs associated with the program, including the development and delivery of new courses, which are designed to prepare students to successfully pass the AWS (Amazon Web Services) Certification exams.

IMPACT

The fiscal impact of the proposed program with the online program fee was estimated based on 12 new students (FTE) in the first year, 16 new students in the second year, and 20 new students in the third year. In setting the program fees, the goal was to provide an affordable option to students while ensuring that revenue would cover the costs of the program. From an academic and fiscal standpoint, the program needs to have a minimum enrollment of 12 students. Should this minimum not be reached, and partnerships still not yield the necessary participation, the program will be reevaluated for sustainability and need.

The program fee of $300/credit is competitive with similar programs at other institutions that charge fees ranging from $198/credit to $862/credit. No tuition or other fees will be charged. The total cost to a student for the 16-credit program would be $4,900.00, which includes the $4,800 program fee and $100.00 for other tools and equipment.

ATTACHMENTS

Attachment 1 – Online BTC in Cloud Computing Proposal

STAFF COMMENTS AND RECOMMENDATIONS

ISU's College of Technology proposes to add a Basic Technical Certificate in Cloud Computing within their existing Business Technology program. The proposed certificate will allow individuals to acquire industry certifications and will assist in strengthening industry partnerships.

The proposed certificate is consistent with their Service Region Program Responsibilities and their current institution plan for Delivery of Academic Programs in Region V. As provided in Board Policy III.Z, no institution has the statewide program responsibility for career technical programs. Additionally, Policy III.Z does not apply to programs for which 90% or more of all activity is required or completed online.

ISU is also requesting approval to assess an online program fee consistent with Board Policy V.R.3.b.(x). ISU proposes to charge $300 per credit for a total program cost of $4,800 for the 16 credits required. This includes $100.00 for equipment and tools for a total of $4,900. Based on the information for the online program fee provided in the proposal, staff finds that the criteria have been met for this program.

The proposal completed the program review process and was recommended for approval by the Council on Academic Affairs and Programs on September 30, 2021; and was presented to the Instruction, Research, and Student Affairs Committee on October 7, 2021, and to Business Affairs and Human Resources on October 8, 2021. Idaho Division of Career Technical Education recommends approval.

BOARD ACTION

I move to approve the request by Idaho State University to create an online Basic Technical Certificate in Cloud Computing, as presented in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

AND

I move to approve the request by Idaho State University to charge an online program fee of $300 per credit for the Basic Technical Certificate in Cloud Computing, in conformance with the program budget submitted to the Board in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

Idaho State Board of Education

Proposal for **Career & Technical Certificate/Degree** Program

Date of Proposal Submission: July 26, 2021

Institution Submitting Proposal:	Idaho State University
Name of College, School, or Division:	College of Technology
Name of Department(s) or Area(s):	Business and Support Services

Program Identification for Proposed New or Modified Program:

Official Name of the Program:	BTC in Cloud Computing
Implementation Date:	August 10, 2022
CIP code (consult IR /Registrar):	11.0902
Method of Delivery: Indicate percentage of face-to-face, hybrid, distance delivery, etc.	Fully online, with $300 per credit online program fee

Indicate whether this request is either of the following:

(●) **New Program (check all that apply)**
- [xx] Basic Technical Certificate
- [ ] Intermediate Technical Certificate
- [ ] Advanced Technical Certificate
- [ ] Associate of Applied Science Degree

( ) **Expansion of Existing Program (check all that apply)**
- [ ] Basic Technical Certificate
- [ ] Intermediate Technical Certificate
- [ ] Advanced Technical Certificate
- [ ] Associate of Applied Science Degree

( ) **Consolidation of Existing Program**

( ) **New Off-Campus Instructional Program**

( ) **Other (i.e., Contract Program/Collaborative)**

College Dean (Institution) — Date 07/26/21

FVP/Chief Fiscal Officer (Institution) — Date 07/26/21

Provost/VP for Instruction (Institution) — Date 07/27/21

President — Date

State Administrator, ICTE — Date 8/23/2021

SBOE/Executive Director Approval — Date

Todd J. Kilburn — 08/30/21

SBOE/Chief Financial Officer — Date

Before completing this form, refer to Board Policy Section III.G., Postsecondary Program Approval and Discontinuance. This proposal form must be completed for the creation or expansion of each new program. All questions must be answered.

Rationale for Creation or Modification of the Program

1. **Describe the request and give an overview of the changes that will result.** Will this program be related or tied to other programs on campus? Identify any existing programs that this program will replace.

   The Business Technology (BT) program in the Business/Support Services (BSS) Department at the College of Technology intends to begin a Basic Technical Certificate program in Cloud Computing. This Certificate will include courses in foundational cloud concepts, cloud developing, and cloud architecting, with the option to add courses in cloud operations, machine learning, and data analytics. Upon completion of the courses, participants will be able to test for industry certifications in Cloud Practitioning, Certified Developer, and Solutions Architect through the Amazon Web Services (AWS) Academy Cloud Developing. The program is not currently tied to or related to existing programs on campus, though we are hopeful that future partnerships and relationships can be identified and strengthened as the program is implemented.

2. **Workforce and economic need for the Program**. Describe the regional and statewide workforce needs that will be addressed by this proposal and address the ways in which the proposed program will meet those needs. Include job titles and cite the data source. Describe how the proposed program will stimulate the state economy by advancing the field, providing research results, etc.

   Cloud computing is an emerging employment field throughout Idaho, the US, and the world (https://www.globalknowledge.com/us-en/content/salary-report/it-skills-and-salary-report/).

   "AWS Certified Cloud Practitioner is the entry-level certification. It may serve as a first step for those seeking an associate or specialty certification. But it's also geared toward people in nontechnical areas, such as sales, management and finance, who work with AWS. The Cloud Practitioner certification covers AWS topics such as basic infrastructure, deployment and operation, key services, security and compliance, and billing and account management. After being certified, you should be able to obtain other certifications if you want to pursue a niche in AWS." *
   (https://www.usnews.com/education/learn-aws-guide). This Basic Technical Certificate will create high-paying jobs for Idahoans, who can complete this work remotely. ***Amazon Web Services (AWS) Academy Cloud Developing***

Enrollments and Graduates

3. **Projections for proposed program:** Using the chart below, provide projected enrollments and number of graduates for the proposed program:

Proposed Program: Projected Enrollments and Graduates First Five Years											
Projected Headcount Enrollment in Program						Projected Number of Graduates from Program					
FY23 1st year	FY24	FY25	FY26	FY27		FY23 1st year	FY24	FY25	FY26	FY27	
12	16	20	25	25		9	14	18	22	22	

4. **Describe the methodology for determining enrollment and graduation projections.** Refer to information provided in Question #2 "Need" above. What is the capacity for the program? How did you determine the projected numbers above?

Anticipated enrollment for the program is hard to estimate, as this is a first of its kind program in Idaho. However, communications from other AWS Academy programs throughout the Intermountain West suggest that enrollment trends for the next four years are likely to be in the range of 25 per session.

5. **Minimum Enrollments and Graduates.** What are the minimums that the program will need to meet in order to be continued, what is the time frame for meeting minimums, and what is the action that would result if minimums are not met?

The novelty and high wage potential of the field would suggest that enrollment and persistence in this program should be high. We anticipate that the initial program enrollment will begin with 12 students, and ramp up to a program maximum of 25 within 3 years. From an academic and fiscal standpoint, the program needs to have a minimum enrollment of 12 students. Should this minimum not be reached, the program will engage in more intensive recruitment programs and look for partnerships with other academic programs, such as the CoT ITS program. Should these partnerships still not yield the necessary participation, the program will be reevaluated for sustainability and need.

6. **Assurance of Quality.** Describe how the institution will ensure the quality of the program. Describe the institutional process of program review. Where appropriate, describe applicable specialized accreditation and explain why you do or do not plan to seek accreditation.

The program will partner with Amazon Academy, an educational support program of Amazon, LLC. While Amazon Academy does not currently offer an accreditation review program, all instructors must be certified Amazon Academy instructors before they can begin teaching any of the certification branches. In addition to this professional certification requirement, the Cloud Computing program will compile information to participate in the annual and 5-year internal program review process currently in place through the Office of Academic Affairs. The department chair, along with the Program Coordinator in Business Technology will oversee the implementation of these assessment activities, along with implementing and evaluating any action plans or other steps that are identified as being necessary during the review process.

7. **Three-Year Plan: If this is a new proposed program, is it on your institution's approved 3-year plan?**

(X) Yes ( ) No

If yes, proceed to question 8. If no:

a. **Which of the following statements best address the reason for adding this program outside of the regular three-year planning process.**

Indicate (X) by each applicable statement:

	Program is important for meeting your institution's regional program responsibilities.
	The program is in response to a specific industry need or workforce opportunity.
	The program is reliant on external funding (grants, donations) with a deadline for acceptance of funding.
	There is a contractual obligation or partnership opportunity related to this program.
	The program is in response to accreditation requirements or recommendations.

b. **Provide an explanation for all statements you selected.**

Educational Offerings: Curriculum, Intended Learning Outcomes, and Assessment Plan

8. **Curriculum. Provide descriptive information of the educational offering.**

a. **Summary of requirements.** Provide a summary of program requirements using the following table.

Credit hours in required courses offered by the department (s) offering the program.	16
Credit hours in institutional general education curriculum	0
Total credit hours required for program	16

The curriculum, as currently planned, includes creating a series of courses: Fundamentals of Cloud Computing, Cloud Developing, and Cloud Architecture. The BT program will create new courses to help introduce students to the cloud computing languages that will assist students in preparing for their AWS certifications as Cloud Practitioner, Solutions Architect - Associate, and Developer -

Associate. Proposals for these courses have been approved by the ISU Undergraduate Curriculum Council.

Cloud Computing Basic Technical Certificate Requirements *[all are new courses]*

BT 0160	Fundamentals of Cloud Computing	2 Cr
BT 0161	Introduction to Cloud Computing Languages I	3 Cr
BT 0162	Introduction to Cloud Computing Languages II	3 cr
BT 0163	Cloud Computing Architecture	4 Cr
BT 0164	Cloud Computing Operations	4 Cr
Total Credits		**16 Cr**

9. **Learning Outcomes: Expected Student Learning Outcomes and Connection to Curriculum.** List the Intended Learning Outcomes for the proposed program, using learner-centered statements that indicate what students will know, understand, and be able to do, and value or appreciate as a result of completing the program. **Attach an ICTE Program Profile (Attachment B).**

1. Define and explain the fundamental operations of cloud computing
2. Demonstrate an understanding of common programming languages and the differences between their use and applications.
3. Make decisions based on recommended architectural principles and best practices
4. Identify best practice for building secure applications
5. Identify best practice for deploying applications

a. **List any industry certifications students will be able to achieve during the duration of this program.**

This Basic Technical Certificate is aligned with the Amazon Web Services (AWS) Academy curriculum and will include courses in foundational cloud concepts, cloud developing, and cloud architecture, with the option to add courses in cloud operations, machine learning, and data analytics. Upon completion of the courses, participants will be prepared to take exams for industry certifications as Cloud Practitioner, Solutions Architect - Associate, and Developer - Associate.

10. **Assessment Plans**

a. **Assessment Process and Measures Used.** Describe the assessment plan for student

learning outcomes that will be used to evaluate student achievement and how the results will be used to improve the program. What direct and indirect measures will be used to assess student learning?

Program assessment will center on collecting evidence of student work and evaluating a sample of students and their capacity to meet or demonstrate course and program level learning outcomes on an annual basis. The initial results will establish a basis of expected student performance that can then act as a benchmark for future analysis and program review.

Direct assessment will center on collecting student results and performance on module-based quizzes related to specific course outcomes and assessing how student performance in these activities correlates to a cohort's overall capacity to satisfy the overall program learning outcomes associated with each course. In addition, performance on the Amazon precertification exam and certification exams will also be included in the annual assessment process.

Indirect assessment will examine the course syllabus, course sequencing, and time on task for each module to determine if changes need to be made in the instructional pacing of each course to improve student learning and overall performance.

The results of these annual assessments will be presented to an annual Technical Advisory Committee meeting, as per Idaho Division of Career Technical Education requirements, comprised of students, instructors, and industry partners and experts to determine how to address gaps in instruction or performance.

Overall Program Outcomes:

1. Define and explain the fundamental operations of cloud computing
2. Demonstrate an understanding of common programming languages and the differences between their use and applications.
3. Make decisions based on recommended architectural principles and best practices
4. Identify best practice for building secure applications
5. Identify best practice for deploying applications

Specific course outcomes have been identified and mapped to these overall programmatic outcomes. They include the following:

BT 0160 - Fundamentals of Cloud Computing: ***Define and explain the fundamental operations of cloud computing***

- Identify the global infrastructure components of Amazon Web Services (AWS)
- Demonstrate when to use Amazon Elastic Compute Cloud (Amazon EC2), AWS Lambda, and AWS Elastic Beanstalk
- Differentiate between Amazon Simple Storage Service (Amazon S3), Amazon Elastic Block Store (Amazon EBS), Amazon Elastic File System (Amazon EFS), and Amazon Simple Storage Service Glacier (Amazon S3 Glacier)
- Demonstrate when to use AWS database services, including Amazon Relational Database Service (Amazon RDS), Amazon DynamoDB, Amazon Redshift, and Amazon Aurora
- Explore key concepts related to Elastic Load Balancing, Amazon CloudWatch, and Amazon EC2 Auto Scaling

BT 0161 - Cloud Computing Languages I: ***Demonstrate an understanding of common programming languages and the differences between their use and applications.***

- Demonstrate competence in
  - Working with data types and variables
  - Coding control statements
  - Defining and using functions and modules
- Test and debug a program
- Demonstrate competence in
  - Working with lists and tables
  - File I/O
  - Handling exceptions
- Describe, compare, and contrast various language features.

BT 0162 - Cloud Computing Languages II: ***Demonstrate an understanding of common programming languages and the differences between their use and applications.***

- Design computer programs using the C++ programming language.
- Analyze examples of programs written in C++
- Evaluate C++ computer programs for strengths and weaknesses

BT 0163: Cloud Computing Architecture: ***Make decisions based on recommended architectural principles and best practices***

- Identify deployment and management options
- Create a cloud migration road map and plan
- Create a business continuity plan and achieve high availability
- Design architectures to decouple infrastructure and reduce interdependencies
- Differentiate between architectures for data processing and analytics, mobile back-ends, and video transcoding

BT 0164 - Cloud Computing Operations: ***Identify best practice for building secure applications; Identify best practice for deploying applications***

- Configure AWS Identity and Access Management for programmatic access
- Develop with DynamoDB
- Develop event-driven solutions with Lambda
- Configure solutions with API Gateway
- Develop solutions with SQS and SNS

Resources Required for Implementation – fiscal impact and budget

Organizational arrangements required within the institution to accommodate the change including administrative, staff, and faculty hires, facilities, student services, library; etc

11. **Physical Resources. Physical Facilities and Equipment:** Describe the provision for physical facilities and equipment.

    a. **Existing resources**. Describe equipment, space, laboratory instruments, computer(s), or other physical equipment presently available to support the successful implementation of the program.

The Cloud Computing program will be conducted completely online, eliminating the need for physical instructional space or equipment for student use. The Business Technology program has the necessary facilities and equipment necessary to support the presence of two new adjunct faculty should they choose to teach courses from ISU facilities, though this is not requisite for the successful implementation of the program. Current technology equipment will be sufficient to support the program, and bandwidth and network access normally provided to CoT program will also be sufficient for this program.

It is anticipated that any live or recorded online Instruction will take place through Zoom conferencing, and recent expansion of distance learning equipment due to COVID will work well to support these needs and will not require any additional acquisition of materials or equipment.

b. Impact of new program. What will be the impact on existing programs of increased use of physical resources by the proposed program? How will the increased use be accommodated?

As stated before, the proposed program will be conducted online, and therefore, will not have any direct impact on existing programs or facilities scheduling. Adequate office space is available should the adjunct instructors hired to teach the courses require it and current available computing equipment and network access will be more than adequate. There is no anticipation that this program will create any additional disruption or interruption of current instructional activities.

c. Needed resources. List equipment, space, laboratory instruments, etc., that must be obtained to support the proposed program. Enter the costs of those physical resources into the budget sheet.

It is expected that CoT already possesses the necessary equipment for the program to operate. Access to network bandwidth for this program will be in line with currently supported levels by ISU Netcomm. However, in a desire to be self-sustaining, there is the possibility that additional, unanticipated costs may arise. In addition, the program hopes to be able to transition from adjunct to more stable full-time instruction as soon as possible. As a result, the program proposes the use of an on-line program fee, in accordance with the Online Program Fee as defined in the Board Policy V.R.,3.a.x. We will charge $300 per credit hour in lieu of tuition. This fee is derived from the assessment of 5 different institutions that offer the same or similar degree type. There is a wide disparity between these programs and individual costs; some of this gap can be explained by the differences in educational markets, as well as the scope and depth of instruction. This proposed certificate program offers a broader scope, more in-depth instruction, and more credits (16 credits and 3 certifications - which are issued by AWS after passing exams), as well as the development and delivery of new courses in computer programming languages which are not included in any similar regional programs. The proposed $300 fee is in line with other similar programs around the country.

12. Faculty/Personnel resources

a. **Needed resources.** Give an overview of the personnel resources that will be needed to implement the program. How many additional sections of existing courses will be needed? Referring to the list of new courses to be created, what instructional capacity will be needed to offer the necessary number of sections?

The proposed online program fee noted above would be sufficient to cover the cost of hiring two adjunct instructors to administer the program, as well as cover any necessary online instructional support. As the program reaches full operational enrollment capacity, the expectation would be to transition from temporary adjunct instruction to a full time instructor.

b. **Existing resources**. Describe the existing instructional, support, and administrative resources that will support the successful implementation of the program.

The proposed program is affiliated with the Business Technology program at the College of Technology. There is already sufficient administrative, technical, and instructional support afforded to this program. Adding an additional certification pathway will not encumber these support systems, nor burden existing faculty and staff unnecessarily.

c. **Impact on existing programs**. What will be the impact on existing programs of increased use of existing personnel resources by the proposed program? How will quality and productivity of existing programs be maintained?

There are no expected impacts on current programs or personnel. The program coordinator for Business Technology is confident that existing workloads will not be affected by the addition of the proposed adjunct instructors.

d. **Needed resources.** List the new personnel that must be hired to support the proposed program. Enter the costs of those physical resources into the budget sheet.

The proposed program will require the hiring of two adjunct instructors who will be able to satisfy Amazon Academy instructor requirements and certifications. The costs associated with these two instructors has been included in the budget document attached to this application. It is not anticipated that additional personnel costs will be required to support the ongoing operation of this program.

13. Revenue Sources

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

There is no anticipated need for any reallocation of existing funding streams or resources.

b. **New appropriation**. If a line item request is required to fund the program, indicate when the institution plans to submit the request to Idaho Career & Technical Education

or include in the legislative budget request.

There is no request for the creation of any new funding streams or resources.

c. **Non-ongoing sources**:

i. If the funding is to come from other, one-time sources such as a donation, indicate the sources of other funding. What are the institution's plans for sustaining the program when funding ends?

No external funding sources are anticipated or associated with this program at this time.

ii. Describe the federal grant, other grant(s), special fee arrangements, or contract(s) to fund the program. How does the institution propose to continue the program upon termination of those funds?

N/A

d. **Student Fees**: Provide estimated total semester cost to students, including all fees authorized under V.R.

The proposed program does include plans for the approval of an online program fee of $300 per credit in lieu of tuition, plus an additional $100 fee per student for tools and equipment. The total cost for a student to complete the certificate program is $4,900.

14. Using the budget template provided by the Office of the State Board of Education, provide the following information:

- Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first **four** fiscal years of the program.
- Include reallocation of existing personnel and resources and anticipated or requested new resources.
- Second- and third-year estimates should be in constant dollars.
- Amounts should reconcile subsequent pages where budget explanations are provided.
- If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies).
- Provide an explanation of the fiscal impact of any proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

IDAHO STATE UNIVERSITY
Resource Allocation and Impact Summary

PROGRAM IDENTIFICATION — **ISU #2021-08 COT Basic Technical Certificate (BTC) in Cloud Computing**

Program Resource Requirements. Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first four fiscal years of the program. Include reallocation of existing personnel and resources and anticipated or requested new resources. Second and third year estimates should be in constant dollars. Amounts should reconcile subsequent pages where budget explanations are provided. If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies). Provide an explanation of the fiscal impact of any proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

I. PLANNED STUDENT ENROLLMENT

	FY 2023		FY 2024		FY 2025		FY 2026		Cumulative Total	
	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount
A. New enrollments		12		16		20		25	0	73
B. Shifting enrollments									0	0
Total Enrollment	0	12	0	16	0	20	0	25	0	73

II. REVENUE

	FY 2023		FY 2024		FY 2025		FY 2026		Cumulative Total	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
1. New Appropriated Funding Request									$0.00	$0.00
2. Institution Funds									$0.00	$0.00
3. Federal									$0.00	$0.00
4. New Tuition Revenues from Increased Enrollments									$0.00	$0.00
5. Student Fees									$0.00	$0.00
6. Other: Online Program Fee $300/credit plus $100 tools/equipment	$58,800.00		$78,400.00		$98,000.00		$122,500.00		$357,700.00	$0.00
Total Revenue	$58,800.00	$0.00	$78,400.00	$0.00	$98,000.00	$0.00	$122,500.00	$0.00	$357,700.00	$0.00

IRSA

On-going is defined as on-going operating budget for the program which will become part of the base.
One-time is defined as one-time funding in a fiscal year and not part of the base.

III. EXPENDITURES

	FY 2023		FY 2024		FY 2025		FY 2026		Cumulative Total	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
A. Personnel Costs										
1. FTE									0.00	0.00
2. Faculty									$0.00	$0.00
3. Adjunct Faculty	$19,200.00		$19,200.00		$19,200.00		$19,200.00		$76,800.00	$0.00
4. Graduate/Undergrad Assistants									$0.00	$0.00
5. Research Personnel									$0.00	$0.00
6. Directors/Administrators									$0.00	$0.00
7. Administrative Support Personnel									$0.00	$0.00
8. Fringe Benefits									$0.00	$0.00
9. Other:									$0.00	$0.00
Total Personnel and Costs	$19,200.00	$0.00	$19,200.00	$0.00	$19,200.00	$0.00	$19,200.00	$0.00	$76,800.00	$0.00

	FY 2023		FY 2024		FY 2025		FY 2026		Cumulative Total	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
B. Operating Expenditures										
1. Travel									$0.00	$0.00
2. Professional Services									$0.00	$0.00

3. Other Services									$0.00	$0.00
4. Communications									$0.00	$0.00
5. Materials and Supplies									$0.00	$0.00
6. Rentals									$0.00	$0.00
7. Materials & Goods for Manufacture & Resale									$0.00	$0.00
8. Miscellaneous									$0.00	$0.00
Total Operating Expenditures	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

	FY 2023		FY 2024		FY 2025		FY 2026		Cumulative Total	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
C. Capital Outlay										
1. Library Resources									$0.00	$0.00
2. Equipment									$0.00	$0.00
Total Capital Outlay	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
D. Capital Facilities Construction or Major Renovation									$0.00	$0.00
E. Information Technology Support									$0.00	$0.00
F. Other Costs										
1. Utilities									$0.00	$0.00
2. Maintenance & Repairs									$0.00	$0.00
3. Other: _____									$0.00	$0.00

Total Other Costs	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
TOTAL EXPENDITURES:	$19,200.00	$0.00	$19,200.00	$0.00	$19,200.00	$0.00	$19,200.00	$0.00	$76,800.00	$0.00
Net Income (Deficit)	$39,600.00	$0.00	$59,200.00	$0.00	$78,800.00	$0.00	$103,300.00	$0.00	$280,900.00	$0.00

Budget Notes (specify row and add explanation where needed; e.g., "I.A.,B. FTE is calculated using..."):

I.A.B.	This program is a 16 credit Basic Technical Certificate that is delivered wholly online. The cost is $300/credit hour, plus $100 per student for tools/equipment; totaling $4900 for the entire program.
I.A.C.	There are no capital costs associated with the delivery of this online Basic Technical Certificate.

IDAHO STATE UNIVERSITY

SUBJECT

Online, Graduate Certificate in Listening and Spoken Language

APPLICABLE STATUTE, RULE, OR POLICY

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

BACKGROUND/DISCUSSION

The proposed, fully online Graduate Certificate in Listening and Spoken Language is designed to meet a growing need for professionals who understand the current needs of families and children who are deaf/hard of hearing (DHH) and have had the advantage of newborn hearing screening and access to advanced hearing technology (e.g., early intervention services). The certificate will provide graduates with expertise in early intervention, spoken language development (including assessment and intervention), literacy, universal design for learning, and interprofessional collaboration in mainstream educational environments. The certificate will also provide these professionals with an alternate, lower-cost path to licensure to serve DHH children.

According to the U.S. Bureau of Labor Statistics, increased demand is expected for special education teachers, including teachers for the deaf or hard of hearing, of approximately 20% over the next decade. However, states and school districts across the nation are facing shortages of teachers of the deaf and hard of hearing, and will be unable to meet this need.

This certificate will admit students who have a stand-alone degree in Deaf Education, Early Intervention, Speech-Language Pathology, and/or are general educators. The 27 credits of coursework will lead to licensure to serve children who are DHH. ISU faculty and programs are uniquely qualified to lead out in this area. Implementing this program paves the way for increased potential for external funding and future collaborative partnerships in Idaho to better train those who serve the needs of children and families.

IMPACT

An online program fee of $925 per credit will be charged in place of tuition. The fee includes the costs of administrative support, adjunct faculty, travel needed to coordinate externships and practical experiences, and supplies associated with running the program. No other fees will be charged. The total cost of the program is $24,975 for students who complete the Graduate Certificate in Listening and Spoken Language at ISU, which is approximately half the cost of other available options for professionals seeking licensure to serve DHH students.

The way the program has been structured (fees, courses, admin support, etc.) is

intended to "flex" with enrollment growth or decline; if smaller numbers enroll, costs would go down as well. The number of graduates is expected to range between 4 and 10 students on an annual basis.

ATTACHMENTS

Attachment 1 - GC in Listening and Spoken Language Proposal

BOARD STAFF COMMENTS AND RECOMMENDATIONS

The proposed graduate certificate is a partnership with the Regional Low Incidence Facilitators in Minnesota. ISU faculty, Dr. Kristina Blaiser, Associate Professor of ISU's Speech-Language Pathology program was approached by this group to collaborate in developing a program based on a need in their state. The certificate will meet a need for professionals to have an alternative path to licensure to serve children who are deaf and hard of hearing. Dr. Blaiser is working to make sure that each course is cross-walked to ensure students who successfully complete the coursework will be eligible for licensure in Minnesota. Currently Idaho does not have licensure laws in place for this type of certification. Given that there is an identified need in Minnesota where licensure laws are in place, ISU determined that pursuing this partnership with Minnesota would enable them to create a strong and sustainable program for present and future needs. Should immediate needs arise in Idaho, and licensure provisions be put in place, ISU will be able to direct additional recruitment efforts among Idaho's working professionals, utilizing grant funds, scholarships, and/or reduced fees for in-state students.

ISU anticipates an initial enrollment of four students in the first year, and approximately five students each year thereafter. ISU does not identify minimum numbers for student enrollment or graduates needed to sustain the program. This is primarily due to the structure that will provide for flexible enrollment growth or decline. If the program underperforms, ISU will discontinue it. Discontinuing the program would result in elimination of adjunct or overload contracts, as ISU does not have plans to hire additional full-time faculty for the proposed certificate. The proposed graduate certificate is consistent with ISU's three-year plan.

ISU also requests approval to assess an online program fee of $925 per credit for the graduate certificate consisting of 27 credits, which amounts to $24,975. ISU indicates that, while the cost is higher than traditional tuition and fees at their institution, the amount is significantly lower than other programs that are offered for this specialization throughout the nation. Based on the information for the online program fee provided in the proposal, staff finds that the criteria have been met for this program.

The proposal completed the program review process and was recommended for approval by the Council on Academic Affairs and Programs on September 30, 2021. It was presented to the Instruction, Research, and Student Affairs Committee on October 7, 2021, and to the Business Affairs and Human Resources Committee on October 8, 2021. Board staff recommends approval.

BOARD ACTION

I move to approve the request by Idaho State University to create a Graduate Certificate in Listening and Spoken Language as presented in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

AND

I move to approve the request by Idaho State University to charge an online program fee of $925 per credit for the Graduate Certificate in Listening and Spoken Language, in conformance with the program budget submitted to the Board in Attachment 1.

Moved by _____ Seconded by _____ Carried Yes _____ No _____

Institutional Tracking No. 2021-09

Idaho State Board of Education

Proposal for Academic Degree and Certificate Program

Date of Proposal Submission:	August 19, 2021
Institution Submitting Proposal:	Idaho State University
Name of College, School, or Division:	College of Health, School of Rehab. & Communication Sciences
Name of Department(s) or Area(s):	Communication Sciences & Disorders, Speech Language Pathology Program

Official Name of the Program:	Listening and Spoken Language					
Implementation Date:	August 2022					
Degree Information:	Degree Level: Graduate		Degree Type: Graduate Certificate			
CIP code (consult IR /Registrar):	51.0204					
Method of Delivery: Indicate percentage of face-to-face, hybrid, distance delivery, etc.	100% online					
Geographical Delivery:	Location(s)	fully online	Region(s)			
Indicate (X) if the program is/has: (Consistent with Board Policy V.R.)		Self-Support fee		Professional Fee	X	Online Program Fee
Indicate (X) if the program is: (Consistent with Board Policy III.Z.)	X	Regional Responsibility		Statewide Responsibility		

Indicate whether this request is either of the following:

- ☐ New Degree Program
- ☑ Undergraduate/Graduate Certificates (30 credits or more)
- ☐ Expansion of Existing Program
- ☐ Consolidation of Existing Program
- ☐ New Off-Campus Instructional Program
- ☐ Other (i.e., Contract Program/Collaborative

College Dean (Institution)	Date	Vice President for Research (Institution; as applicable)	Date
Graduate Dean or other official (Institution; as applicable)	Date 08/20/21	Academic Affairs Program Manager, OSBE	Date 9/8/2021
FVP/Chief Fiscal Officer (Institution)	Date 08/18/21	Chief Financial Officer, OSBE	Date 9/3/2021
Provost/VP for Instruction (Institution)	Date 08/20/21	Chief Academic Officer, OSBE	Date
President	Date	SBOE/Executive Director Approval	Date

Before completing this form, refer to Board Policy Section III.G., Postsecondary Program Approval and Discontinuance. This proposal form must be completed for the creation of each new program. All questions must be answered.

Rationale for Creation or Modification of the Program

1. **Describe the request and give an overview of the changes that will result.** What type of substantive change are you requesting? Will this program be related or tied to other programs on campus? Identify any existing program that this program will replace. If this is an Associate degree, please describe transferability.

   The 27-credit Listening and Spoken Language (LSL) Graduate Certificate Program is a collection of existing Communication Sciences & Disorders (CSD) and Special Education (SPED) courses that provides professionals with an *alternative path to licensure* to serve children who are Deaf/Hard-of-Hearing (DHH). These courses meet the growing need for professionals who understand the current needs of families and children who are DHH and have had the advantage of newborn hearing screening and access to advanced hearing technology (e.g., early intervention services). This program offers students expertise in early intervention, spoken language development (including assessment and intervention), literacy, universal design for learning, and interprofessional collaboration in mainstream educational environments.

   We recognize the need to make our educational resources and efforts accessible to Idaho professionals and community members. However, because additional time and groundwork is needed to align licensure and professional requirements in Idaho, residents of Idaho are not the initial target population (although Idaho residents could certainly enroll). However, by being proactive and creating a strong and sustainable program now, funded by appropriately set fees for out of state residents where immediate needs are evident and licensure laws in place, we anticipate being able to eventually focus additional recruitment efforts with our working professionals in Idaho, utilizing grant funds, scholarships and/or reduced fees for in-state students.

   Dr. Kristina Blaiser, faculty in our Speech-Language Pathology Program, was approached by a group of statewide low-incidence representatives from Minnesota based on her expertise working with pediatric populations who are Deaf/Hard-of-Hearing (DHH). In an effort to grow student enrollment, promote ISU's identity as a national leader in health care and education, and enhance community partnerships, we have developed this innovative program proposal to meet workforce, student, and societal needs (as detailed in the additional sections below).

   Our faculty and programs are uniquely qualified to lead out in this area. Implementing this program paves the way for increased potential for external funding and future collaborative partnerships in Idaho to better train those who serve the needs of children and families.

2. **Need for the Program**. Describe evidence of the student, regional, and statewide needs that will be addressed by this proposal to include student clientele to be served and address the ways in which the proposed program will meet those needs.

a. Workforce and economic need: Provide verification of state workforce needs that will be met by this program. Include job titles and cite the data source. Describe how the proposed program will stimulate the state economy by advancing the field, providing research results, etc.

This certificate program was developed based on a need for professionals to have an alternative path to licensure to serve children who are DHH, particularly those who use listening and spoken language as part of their communication repertoire. There is an ongoing need for asynchronous, online coursework for professionals who work full-time but still want to continue their education. There is a shortage of programs that offer Deaf Education, but this type of asynchronous, specialized learning opportunity is even more unique across the country. We project that we will have at least 4 students enrolled the first year, and approximately 5 students enrolled each year after that. We are starting conservatively but hope (and are optimistic) that enrollment will grow nationally based on communication with leaders across the country. As the Coordinator of the American Speech-Language Hearing Association's (ASHA's) Special Interest Group for Pediatric Hearing and Hearing Disorders, Dr. Blaiser has firsthand knowledge of professional needs across the country.

The program was developed in collaboration with the Regional Low Incidence Facilitators in Minnesota based on the need for this type of program (i.e., one that was inclusive of hearing technology, early intervention, spoken language assessment and intervention and offered online, asynchronous for working providers). The Director of this program is working closely to ensure that each of these courses are "cross walked" to ensure that students who have successfully completed the coursework will be eligible for licensure in the state of Minnesota. We believe that Minnesota is the first state (but not the last) that will be looking at this model for professional development to meet the ongoing needs of this low incidence population. Nationally, there is a shortage of Deaf Education Programs, and those that do exist offer a focus on an American Sign Language (ASL)-based communication modality. Given national changes in newborn hearing screening mandates and advanced hearing technology (such as hearing aids and cochlear implants), approximately 90% of families are choosing spoken language, creating a need for professional training in optimizing child outcomes in this specific communication modality.

b. Student demand. What is the most likely source of students who will be expected to enroll (full-time, part-time, outreach, etc.). Provide evidence of student demand/ interest from inside and outside of the institution.

This program will likely draw part-time students who are working professionals.

"According to the U.S. Bureau of Labor Statistics, there is expected to be an increased demand for special education teachers, including Teachers for the Deaf and Hard of Hearing of approximately 20 percent in the next decade. However, states and school districts across the nation are facing shortages of Teachers of the Deaf and Hard of Hearing, and will be unable to meet this need. While DHH student enrollment is on an

upward trend, and it is expected to grow by 3 million in the next decade which means we will have more deaf and hard of hearing students and fewer individuals are entering the teaching profession which contributes to the teacher shortage."
Source: https://www.deafjobwizard.com/post/overcoming-shortage-of-teachers-of-the-deaf-and-hard-of-hearing

c. **Societal Need**: Describe additional societal benefits and cultural benefits of the program.

Children who are DHH have the potential to meet the academic and communication milestones of their age-matched hearing peers when they are provided with full-time use of appropriately fit hearing technology and high quality early intervention by providers with high (and current) expectations. Providers who are trained to optimize hearing technology are necessary to realize the educational potential of children who use hearing aids and cochlear implants. ISU's CSD and SPED programs currently have the coursework needed to help support providers to provide this high quality instruction to children who are DHH, yet it is offered in different programs, through different degrees. By coordinating efforts and developing a cohesive program, we are able to better serve our communities, improve outcomes for children who are DHH, while growing and expanding ISU student enrollment.

3. Program Prioritization
Is the proposed new program a result of program prioritization?

Yes_____ No__**X**___

If yes, how does the proposed program fit within the recommended actions of the most recent program prioritization findings.

4. Credit for Prior Learning
Indicate from the various cross walks where credit for prior learning will be available. If no PLA has been identified for this program, enter 'Not Applicable'.

We will be admitting students who have a stand-alone degree in Deaf Education, Early Intervention, Speech-Language Pathology and/or are general educators. The coursework will lead to licensure to serve children who are DHH.

5. Affordability Opportunities
Describe any program-specific steps taken to maximize affordability, such as: textbook options (e.g., Open Educational Resources), online delivery methods, reduced fees, compressed course scheduling, etc. This question applies to certificates, undergraduate, graduate programs alike.

The ISU program is offering professionals an alternative pathway to licensure, outside of a typical degree that may/may not meet the needs of the employment system. Through this

innovative program, we are able to address this immediate (and widespread) need at approximately *half* the cost of what is currently available. In addition to making this program affordable, it is offered in an online, asynchronous manner (by experts in online learning) so students can keep working. In addition to these benefits, the coursework has been streamlined to focus on the immediate needs and requirements needed for licensure; we have eliminated extraneous courses that go beyond the core licensure requirements to create the most cost-effective model.

Enrollments and Graduates

6. **Existing similar programs at Idaho Public Institutions.** Using the chart below, provide enrollments and numbers of graduates for similar existing programs at your institution and other Idaho public institutions for the most past four years.

   N/A

Instit.	Program Name	Fall Headcount Enrollment in Program				Number of Graduates From Program (Summer, Fall, Spring)			
		FY__	FY__	FY__	FY__ (most recent)	FY__	FY__	FY__	FY__ (most recent)

7. **Justification for Duplication** (if applicable). If the proposed program is similar to another program offered by an Idaho public higher education institution, provide a rationale as to why any resulting duplication is a net benefit to the state and its citizens. Describe why it is not feasible for existing programs at other institutions to fulfill the need for the proposed program.

   N/A

8. **Projections for proposed program:** Using the chart below, provide projected enrollments and number of graduates for the proposed program:

Proposed Program: Projected Enrollments and Graduates First Five Years
Program Name: Listening and Spoken Language (LSL) Graduate Certificate

Projected Fall Term Headcount Enrollment in Program						Projected Annual Number of Graduates From Program					
FY23 (first year)	FY24	FY25	FY26	FY27		FY 23 (first year)	FY24	FY 25	FY 26	FY 27	
4	9	10	10	10		0	4	9	10	10	

9. Describe the methodology for determining enrollment and graduation projections. Refer to information provided in Question #2 "Need for the Program" above. What is the capacity for the program? Describe your recruitment efforts? How did you determine the projected numbers above?

We will be recruiting existing professionals (at first from Minnesota and then expanding to a national level, including Idaho) to participate in the program. We will be admitting students who have a stand-alone degree in Deaf Education, Early Intervention, Speech-Language Pathology and/or are general educators.

10. Minimum Enrollments and Graduates.

a. What are the minimums that the program will need to meet in order to be continued, and what is the logical basis for those minimums?

The way the program has been structured (fees, courses, admin support, etc) is intended to "flex" with enrollment growth or decline; if smaller numbers enroll, costs would go down as well. We would hope not to turn away any students due to low enrollment.

b. If those minimums are not met, what is the sunset clause by which the program will be considered for discontinuance?

We are not hiring additional full-time faculty for this program, so if this program were discontinued, we would eliminate adjunct or overload contracts.

11. Assurance of Quality. Describe how the institution will ensure the quality of the program. Describe the institutional process of program review. Where appropriate, describe applicable specialized accreditation and explain why you do or do not plan to seek accreditation.

We will collect surveys of student satisfaction and meet with state partners on an ongoing basis to determine if/how the program is meeting the needs. This type of formative program evaluation is built into the budget. We are not seeking accreditation but will be tracking the number of students who have successfully obtained licensure after completing the program. We will work with the Department of Institutional Effectiveness and Office of Assessment here at ISU.

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

N/A

13. Teacher Education/Certification Programs All Educator Preparation programs that lead to certification require review and recommendation from the Professional Standards Commission (PSC) prior to consideration and approval of the program by the State Board of Education.

Will this program lead to certification?

Yes_____ No_**X**___(although it is a certificate program, it leads to licensure, depending on state requirements)

If yes, on what date was the Program Approval for Certification Request submitted to the Professional Standards Commission?

14. Three-Year Plan: If this is a new proposed program, is it on your institution's approved 3-year plan?

Yes **X** No ____

If yes, proceed to question 15. If no:

a. Which of the following statements address the reason for adding this program outside of the regular three-year planning process.

Indicate (X) by each applicable statement:

	Program is important for meeting your institution's regional or statewide program responsibilities.
	The program is in response to a specific industry need or workforce opportunity.
	The program is reliant on external funding (grants, donations) with a deadline for acceptance of funding.
	There is a contractual obligation or partnership opportunity related to this program.
	The program is in response to accreditation requirements or recommendations.
	The program is in response to recent changes to teacher certification/endorsement requirements.

b. Provide an explanation for all statements you selected.

Educational Offerings: Curriculum, Intended Learning Outcomes, and Assessment Plan

15. Curriculum. Provide descriptive information of the educational offering.

a. Summary of requirements. Provide a summary of program requirements using the following table.

Credit hours in required courses offered by the department (s) offering the program.	21
Credit hours in required courses offered by other departments:	6
Credit hours in institutional general education curriculum	0
Credit hours in free electives	0
Total credit hours required for degree program:	27

b. Curriculum. Provide the curriculum for the program, including credits to completion, courses by title and assigned academic credit granted.

The program will include existing courses from CSD and SPED (listed in the table below). Only one course will be new, and we are submitting a new course proposal for the Literacy Course (CSD 6655).

CSD 6691 Foundations of Listening and Spoken Language (3 credits)
CSD 6620 Early Language Development and Disorders (3 credits)
CSD 5570 Advanced Topics for Educational Audiology (3 credits)
SPED 5523 Instructional Design (3 credits)
CSD 6691 Telepractice (3 credits)
CSD 6602 Clinical Practicum (3 credits)
SPED 5529 Multiple Disabilities (3 credits)
CSD 6655 Literacy Development (PROPOSED) (3 credits)
CSD 6652 Auditory Language Development (3 credits)

TOTAL: 27 Credits

c. Additional requirements. Describe additional requirements such as comprehensive examination, senior thesis or other capstone experience, practicum, or internship, some of which may carry credit hours included in the list above.

Students will not participate in a thesis or capstone project but will have three hours of practicum experience in rotations in their state. The Project Director will (with funds embedded within the cost/credit) will work to identify specific sites for practicum within the student's home state.

16. Learning Outcomes: Expected Student Learning Outcomes and Connection to Curriculum.

a. Intended Learning Outcomes. List the Intended Learning Outcomes for the proposed program, using learner-centered statements that indicate what students will know, understand, and be able to do, and value or appreciate as a result of completing the program.

- Understand how to optimize full-time use of well-fit hearing technology through communication and collaborative services,
- Administer and share comprehensive assessment results from hearing and/or communication skills as the foundation for a comprehensive intervention plan with high expectations,
- Implement an intensive individualized, family-centered intervention plan in person or via telepractice (with distance learning technologies), and
- Communicate assessment and intervention plans with an interdisciplinary team of parents, families, and community stakeholders

17. Assessment plans.

a. Assessment Process. Describe the assessment plan for student learning outcomes that will be used to evaluate student achievement and how the results will be used to improve the program.

- We will track the number of applicants/highly qualified applicants each year as well as how the applicants heard about the program.
- We will measure students' progress through the program as well as the timeliness of completion.
- We will survey employers and the state stakeholders to evaluate the effectiveness of the program and the program's ability to meet the educational and family needs.
- We will use formative and summative assessment measures to examine student's growth in the learning outcomes outlined above.
- We will survey students at the completion of their program to evaluate the strengths and address the weaknesses of the program.

Resources Required for Implementation – fiscal impact and budget.

Organizational arrangements required within the institution to accommodate the change including administrative, staff, and faculty hires, facilities, student services, library; etc.

18. Physical Facilities and Equipment: Describe the provision for physical facilities and equipment.

a. Existing resources. Describe equipment, space, laboratory instruments, computer(s), or other physical equipment presently available to support the successful implementation of the program.

We will be using existing equipment (computers, technology, Moodle, ITRC, Qualtrics, Zoom) to support the online, asynchronous program.

b. Impact of new program. What will be the impact on existing programs of increased use of physical resources by the proposed program? How will the increased use be accommodated?

We don't foresee any negative impacts. However, from a positive perspective, as a result of the additional income from the LSL Program, there are greater opportunities for updates for the technology currently used.

c. **Needed resources.** List equipment, space, laboratory instruments, etc., that must be obtained to support the proposed program. Enter the costs of those physical resources into the budget sheet.

Any additional equipment (or ongoing equipment needs/updates) have been built into the budget.

19. **Library and Information Resources:** Describe adequacy and availability of library and information resources.

a. **Existing resources and impact of new program**. Evaluate library resources, including personnel and space. Are they adequate for the operation of the present program? Will there be an impact on existing programs of increased library usage caused by the proposed program? For off-campus programs, clearly indicate how the library resources are to be provided.

Because this is an entirely online program, there will be no impact on library space. Library personnel will potentially be asked to support requests or questions from students.

b. **Needed resources**. What new library resources will be required to ensure successful implementation of the program? Enter the costs of those library resources into the budget sheet.

None.

20. **Faculty/Personnel resources**

a. **Needed resources.** Give an overview of the personnel resources that will be needed to implement the program. How many additional sections of existing courses will be needed? Referring to the list of new courses to be created, what instructional capacity will be needed to offer the necessary number of sections?

We plan on adding LSL cohort sections to existing courses and/or offering adjunct contracts for courses as needed. The cost for these additional sections is included in the fee/credit proposed on the budget form. This will offer two advantages: 1) to increase communication/cohesion within the LSL cohort, 2) to provide support for

instructors for their additional effort.

b. Existing resources. Describe the existing instructional, support, and administrative resources that can be brought to bear to support the successful implementation of the program.

Instructors will not need to create new courses or materials for the cohort. We have added additional pro-rated administrative support and time for the Program Director into the budget to account for recruitment, advising, coordination and clinical placement.

c. Impact on existing programs. What will be the impact on existing programs of increased use of existing personnel resources by the proposed program? How will quality and productivity of existing programs be maintained?

The goal is to add a cohort of students with minimal impact on existing faculty/programs as possible. This is possible because the courses included in the proposed program are either electives and/or low enrollment.

d. Needed resources. List the new personnel that must be hired to support the proposed program. Enter the costs of those personnel resources into the budget sheet.

We have two adjunct faculty included in the budget as well as funds associated with offering additional sections of the existing courses. The program director is a current faculty member who has specialized in serving children who are DHH and is experienced in administrative roles.

Starting Year 2, we have added in funding for continuing education, licensure, and professional development costs for program faculty ($2000/year), and equipment, office supplies, mailings, and small equipment purchase ($1000/year).

21. Revenue Sources

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

N/A

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

N/A

c) **Non-ongoing sources**:

i. If the funding is to come from one-time sources such as a donation, indicate the sources of other funding. What are the institution's plans for sustaining the program when that funding ends?

N/A

ii. Describe the federal grant, other grant(s), special fee arrangements, or contract(s) that will be valid to fund the program. What does the institution propose to do with the program upon termination of those funds?

N/A

d) **Student Fees**:

i. If the proposed program is intended to levy any institutional local fees, explain how doing so meets the requirements of Board Policy V.R., 3.b.

As shown in the Budget form, we will be charging students $925/credit for a 27-credit program (or $24,975 for the entire certificate program). This will be an online program fee. While the cost per credit is higher than traditional tuition and fees at ISU, the amount is significantly lower than other programs that are offered for this specialization, plus it has the added flexibility of an asynchronous program that leads to licensure while the student is able to stay employed. This is a high need area, yet there are few programs nationally that offer this specialized coursework.

The $925/credit includes all of the costs associated with the courses and running the program. This includes the costs associated with a program director to oversee and coordinate the program (20% time allocated each year), a technology budget, adjunct faculty and overload contracts for teaching additional sections of existing courses, travel (as needed to coordinate externships and practical experiences) and supplies associated with running the program. Funding the program appropriately is extremely important to ensure quality and sustainability.

The program was developed in collaboration with the Regional Low Incidence Facilitators in Minnesota based on the need for this type of program. The costs associated with this program are approximately $20,000 less than their other option and the Program Director of this program is working closely to ensure that each of these courses are "cross walked" to ensure that students who have successfully completed the coursework will be eligible for licensure in the state of Minnesota. We believe that Minnesota is the first state (but not the last) who will be looking at this model for professional development to meet the ongoing needs of this low incidence population.

ii. Provide estimated cost to students and total revenue for self-support programs and

for professional fees and other fees anticipated to be requested under Board Policy V.R., if applicable.

We intend to implement an online program fee of $925 per credit in lieu of tuition, if approved. No other fees or tuition will be charged.

The total cost to students is $24,975 for the 27-credit certificate program.

For year one, we have a negative net income (-$21,274); however, the following years we have a positive net income stream of $5,297, $9,703, $7,431 each of the following years.

22. Using the excel budget template provided by the Office of the State Board of Education, provide the following information:

- Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first **four** fiscal years of the program.
- Include reallocation of existing personnel and resources and anticipated or requested new resources.
- Second and third year estimates should be in constant dollars.
- Amounts should reconcile subsequent pages where budget explanations are provided.
- If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies).
- Provide an explanation of the fiscal impact of any proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

Program Resource Requirements.

- Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first **four** fiscal years of the
- Include reallocation of existing personnel and resources and anticipated or requested new resources.
- Second and third year estimates should be in constant dollars.
- Amounts should reconcile subsequent pages where budget explanations are provided.
- If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies).
- Provide an explanation of the fiscal impact of any proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

I. PLANNED STUDENT ENROLLMENT

	FY 2023		FY 2024		FY 2025		FY 2026	
	FTE	Headcount	FTE	Headcount	FTE	Headcount	FTE	Headcount
A. New enrollments		4		5		5		5
B. Shifting enrollments				4		5		5
Total Enrollment	0	4	0	9	0	10	0	10

II. REVENUE

	FY 2023		FY 2024		FY 2025		FY 2026	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
1. New Appropriated Funding Request								
2. Institution Funds								
3. Federal								
4. New Tuition Revenues from Increased Enrollments								
5. Student Fees	$66,600.00		$116,550.00		$124,875.00		$124,875.00	
6. Other (i.e., Gifts)								

Total Revenue	$66,600	$0	$116,550	$0	$124,875	$0	$124,875	$0

Ongoing is defined as ongoing operating budget for the program which will become part of the base.
One-time is defined as one-time funding in a fiscal year and not part of the base.

III. EXPENDITURES

	FY 2023		FY 2024		FY 2025		FY 2026	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
A. Personnel Costs								
1. FTE	0.2		0.2		0.2		0.2	
2. Faculty	$0.00		$0.00		$0.00		$0.00	
3. Adjunct Faculty	$25,000.00		$30,450.00		$30,913.50		$31,840.91	
4. Graduate/Undergrad Assistants	$0.00		$0.00		$0.00		$0.00	
5. Research Personnel	$0.00		$0.00		$0.00		$0.00	
6. Directors/Administrators	$17,841.91		$18,377.16		$18,928.48		$19,496.33	
7. Administrative Support Personnel	$10,000.00		$10,300.00		$10,609.00		$10,927.27	
8. Fringe Benefits	$13,955.93		$14,868.11		$15,266.90		$15,724.91	
9. Other: _____								
Total Personnel and Costs	$66,798	$0	$73,995	$0	$75,718	$0	$77,989	$0

	FY 2023		FY 2024		FY 2025		FY 2026	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
B. Operating Expenditures								
1. Travel	$3,500.00		$3,500.00		$3,500.00		$3,500.00	
2. Professional Services								
3. Other Services			$2,000.00		$2,000.00		$2,000.00	
4. Communications								
5. Materials and Supplies			$1,000.00		$1,000.00		$1,000.00	
6. Rentals								
7. Materials & Goods for Manufacture & Resale								
8. Miscellaneous								
Total Operating Expenditures	$3,500	$0	$6,500	$0	$6,500	$0	$6,500	$0

	FY 2023		FY 2024		FY 2025		FY 2026	
	On-going	One-time	On-going	One-time	On-going	One-time	On-going	One-time
C. Capital Outlay								
1. Library Resources								
2. Equipment								
Total Capital Outlay	$0	$0	$0	$0	$0	$0	$0	$0

		FY 2023		FY 2024		FY 2025		FY 2026	
D. Capital Facilities Construction or Major Renovation									
E. Other Costs									
	Utilites								
	Maintenance & Repairs								
Other	Online Fee Distribution	$17,575.74		$30,757.55		$32,954.51		$32,954.51	
1)	ISU Central	$8,704.62		$15,233.09		$16,321.16		$16,321.16	
2)	ITRC/eISU	$8,871.12		$15,524.46		$16,633.35		$16,633.35	
	Total Other Costs	$17,576	$0	$30,758	$0	$32,955	$0	$32,955	$0
	TOTAL EXPENDITURES:	$87,874	$0	$111,253	$0	$115,172	$0	$117,444	$0
	Net Income (Deficit)	-$21,274	$0	$5,297	$0	$9,703	$0	$7,431	$0

Budget Notes (specify row and add explanation where needed; e.g., "I.A.,B. FTE is calculated using…"):

II.5	Per credit charge is $925. Total cost to sudents is $24,975
III.7	Administrative support personnel are part-time employees
III.B.3	$2,000 for online delivery software, continuing education costs, licensure costs, and professional development
III.B.5	$1,000 for printing & office supplies, mailings to students & clinical sites, small equipment (i.e. scanners), etc.

SUBJECT

Established Program to Stimulate Competitive Research (EPSCoR) Annual Report

REFERENCE

August 2016	EPSCoR provided their annual report to the Board
October 2017	EPSCoR provided their annual report to the Board
October 2018	EPSCoR provided their annual report to the Board
October 2019	EPSCoR provided their annual report to the Board
October 2020	EPSCoR provided their annual report to the Board

APPLICABLE STATUTE, RULE, OR POLICY

Idaho State Board of Education Governing Policies & Procedures, Section III.W. Higher Education Research

BACKGROUND/DISCUSSION

The Established Program to Stimulate Competitive Research (EPSCoR) is a federal-state partnership designed 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 led by a state committee composed of 16 members, appointed by the Board, 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 Idaho EPSCoR program and ensures program goals and objectives are met. The Idaho EPSCoR office and the Idaho EPSCoR Project Director are located at the University of Idaho. Partner institutions are Boise State University and Idaho State University.

The purpose of EPSCoR awards is to provide support for lasting improvements in a state's academic research infrastructure and its research and education capacity in areas that support state and university Science and Technology Strategic Plans. Idaho EPSCoR activities include involvement in K-12 teacher preparation and research initiatives and projects ranging from undergraduate research through major state and regional research projects.

Consistent with Board Policy III.W.2.d., EPSCoR has prepared an annual report regarding current EPSCoR activities that details all projects by federal agency source, including reports of project progress from the associated external Project Advisory Board (PAB).

ATTACHMENTS

Attachment 1 – EPSCoR Annual Report
Attachment 2 – GEM3 Year 3 PAB Final Report

STAFF COMMENTS AND RECOMMENDATIONS

A full presentation and discussion of the EPSCoR Annual Report was provided to the Instruction, Research, and Student Affairs Committee on October 7, 2021.

BOARD ACTION

This item is for informational purposes only.

Idaho Established Program to Stimulate Competitive Research (EPSCoR): *Annual Report - 2021*

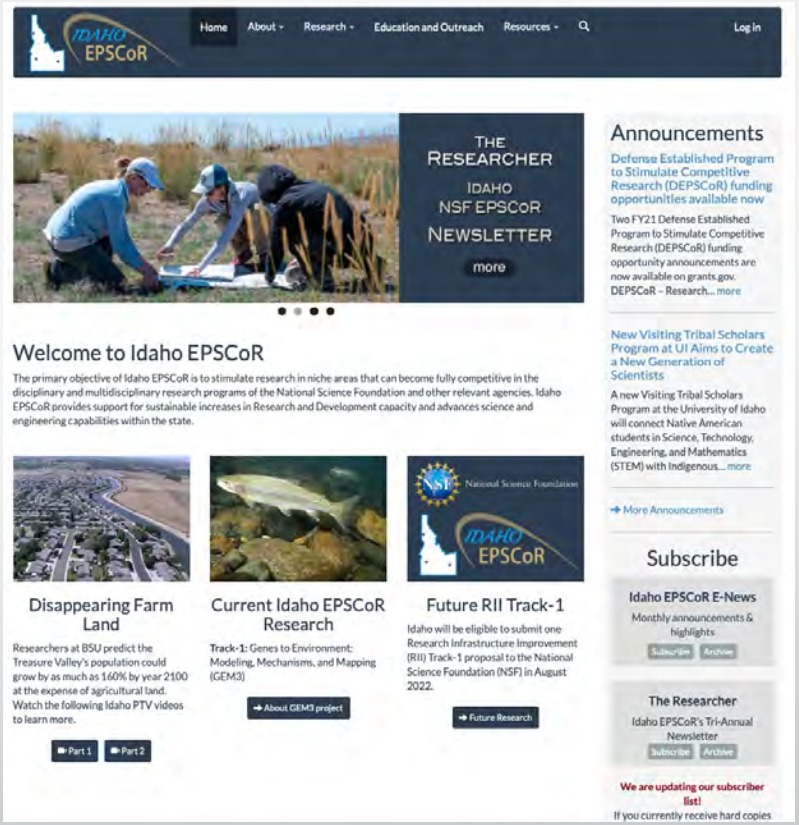
Laird Noh, Idaho EPSCoR Committee Chairman
Andrew Kliskey, Project Director
Rick Schumaker, Assistant Project Director

Idaho State Board of Education, IRSA
October 7, 2021

2021 Annual Report

www.idahoepscor.org

- EPSCoR/IDeA National Context
- NSF RII Track-1 "GEM3"
- Success Stories
- RII Track-1 Planning



IDAHO EPSCoR

University of Idaho

Idaho State University

Boise State University

Federal Funding for All Eligible States

Agency	FY19 Enacted	FY20 Enacted	FY21 Enacted	FY22 Budget Request	FY22 Coalition Goals	FY22 House Appropriations Committee	FY22 Senate Appropriations Committee
NSF	$175.60	$190.0	$200.0	$239.60	$220.0	$227.0	
NIH	$361.60	$386.6	$396.6	$410.50	$415.0	$415.0	
DOE	$20.0	$25.0	$25.0	$25.0	$25.0	$25.0	
USDA	$62.3*	$63.8*	$65.0*	$105.0	15% Language	$67.5*	
NASA	$21.0	$24.0	$26.0	$26.0	$32.0	$26.0	
DOD	$12.0	$12.0	$17.0	$0	$25.0	$5.0	
Total	**$652.5**	**$701.4**	**$729.6**	**$806.1**	**$717.0 + USDA**	**$765.5**	

Dollars in Millions.
Source: EPSCoR/ IDeA Coalition

IDAHO EPSCoR

Awards to Idaho

- ✓ RII Track-1, Track-2, Track-4
- ✓ INBRE, COBRE
- ✓ Infrastructure
- ✓ Multiple awards
- ✓ Research, Core

Active EPSCoR/IDeA Awards in Idaho

Agency	Title	Years	Institution(s)	Award Amount
NSF	Track-1: Linking Genome to Phenome to Predict Adaptive Responses of Organisms to Changing Landscapes	2018-23	U of I (w/ Boise State, Idaho State)	$20,000,000
NSF	**Track-2: Developing a Circular Bio-Based Framework For Architecture, Engineering and Construction Through Additive Manufacturing**	**2021-26**	**U of I**	**$3,974,309**
NSF	Track-2: Leveraging Big Data to Improve Prediction of Tick-Borne Disease Patterns and Dynamics	2020-24	U of I, NV, NH	$6,000,000
NSF	Track-2: Genomics Underlying Toxin Tolerance (GUTT): Identifying Molecular Innovations that Predict Phenotypes of Toxin Tolerance in Wild Vertebrate Herbivores	2018-22	Boise State (w/ NV, WY)	$6,000,000
NSF	Track-2: Using Biophysical Protein Models to Map Genetic Variation to Phenotypes	2017-21	U of I (w/ VT, RI)	$6,000,000
NSF	Track-2: A Multiscale, Multiphysics Modeling Framework for Genome-to Phenome Mapping via Intermediate Phenotypes	2018-22	KY, SC (w/ U of I)	$6,000,000

IDAHO EPSCoR

Active EPSCoR/IDeA Awards in Idaho

Agency	Title	Years	Institution(s)	Award Amount
NSF	Track-4: Investigating Evolutionary Innovations through Metagenomics	2017-21	Boise State	$131,000
NSF	Track-4: Using in-cell NMR to follow 13C-fluxomics in living cells	2017-21	Boise State	$194,000
NSF	Track-4: A Multi-omic Approach Towards an Understanding of the Environmental Implications of Antibiotics on Soil Processes	2018-21	U of I	$216,000
NSF	Track-4: Mechanical Regulation of Intra-Nuclear Mechanics and Gene Transcription	2019-21	Boise State	$213,571
NSF	Track-4: Optimizing the Chemistry of Heterointerfaces in Photovoltaics: A Combination of Electronic Structure Calculations and Machine Learning Approach	2019-21	U of I	$152,050
NSF	**Collaborative Research: Cultivating Indigenous Research Communities for Leadership and Education in STEM (CIRCLES)**	**2020-22**	**U of I**	**$76,051**

IDAHO EPSCoR

Active EPSCoR/IDeA Awards in Idaho

Agency	Title	Years	Institution(s)	Award Amount
NIH	Idaho INBRE^	2019-24	U of I	$17,664,267
NIH	COBRE: Matrix Biology	2014-24	Boise State	$20,815,235
NIH	COBRE: Center for Modeling Complex Interactions	2015-25	U of I	$21,600,000
NIH	COBRE: Emerging and Re-emerging Infectious Disease~	2016-21	IVREF	$10,000,000
NIH	~Identification and Dynamics of SARS-CoV-2 Sequence Variants in Idaho	2021	IVREF	$576,000
NIH	^SARS-CoV-2 variant surveillance using viral genome sequencing and analyses	2021	U of I	$737,106
DOE	Understanding Interfacial Chemistry and Cation Order-Disorder in Mixed-Phased Complex Sodium Metal Oxide Cathodes for Sodium Ion Batteries	2018-21	Boise State	$750,000
DOE	**DNA-Controlled Dye Aggregation – A Path to Create Quantum Entanglement**	**2019-23**	**Boise State**	**$8,000,000**

IDAHO EPSCoR

Active EPSCoR/IDeA Awards in Idaho

Agency	Title	Years	Institution(s)	Award Amount
NASA RID	Research Infrastructure Development 2019-2022	2019-22	U of I	$450,000
NASA Research	Space-Grade Flexible Hybrid Electronics	2017-21	Boise State	$848,000
NASA Research	Plasma-Jet Printing Technology for In-Space Manufacturing and In-Situ Resource Utilization	2019-22	Boise State	$749,841
NASA Research	CryoIdaho: Building Idaho's Cryosphere Research Community through Analysis of Terrain Effects on Snow and Ice Meltwater Fluxes	2021-23	Boise State	$750,000
NASA - Rapid	**Water Delivery and Gas Exchange Crop Stress Analysis for Space Exploration**	**2021-22**	**U of I**	**$36,359**
NASA - Rapid	**High-Temperature 3-D SiC Integrated Circuit Chip Packaging for Venus Surface Exploration**	**2021-22**	**U of I**	**$100,000**

Active EPSCoR/IDeA Awards in Idaho

Agency	Title	Years	Institution(s)	Award Amount
USDA	5 of 10 AFRI awards in FY19 plus*	Various	U of I, Boise State	$1,578,423
USDA	***Creating a new bioeconomy for dairies to increase nutrient recycling, enhance productivity of crops, & stimulate prosperity in rural America**	**2020-25**	**U of I**	**$10,000,000**
USDA	8 of 20 AFRI awards in FY20	Various	U of I, Boise State	$3,004,362

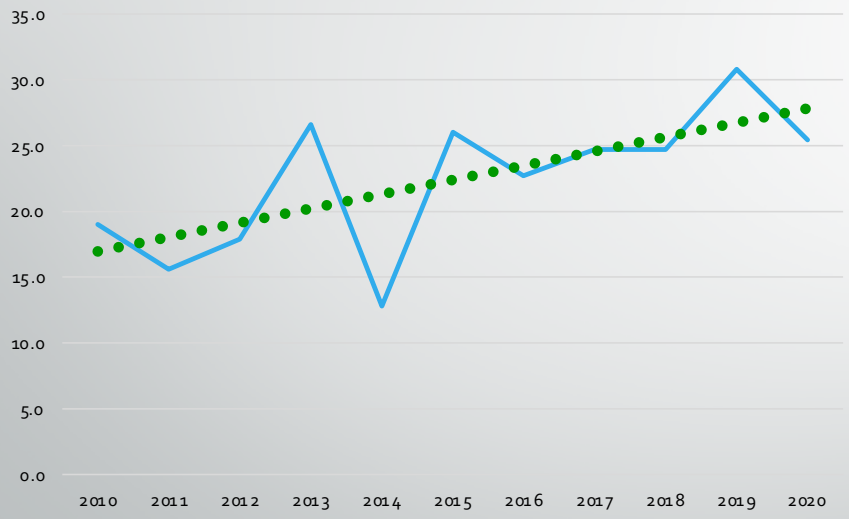
Co-Funded NSF Awards to Idaho

	# Awarded	EPSCoR Co-fund $	Project total $
FY16	5	$1,236,549	$3,117,085
FY17	3	$629,029	$1,258,583
FY18	6	$1,209,066	$3,200,014
FY19	3	$513,723	$1,586,814
FY20	10	$1,773,777	$3,727,664
Total	**27**	**$5,362,144**	**$12,890,160**

IDAHO EPSCoR

Idaho's Research Competitiveness at NSF

Idaho's Total NSF funding ($M)



Idaho's share of total NSF funding, excluding EPSCoR RII (FY15-19)

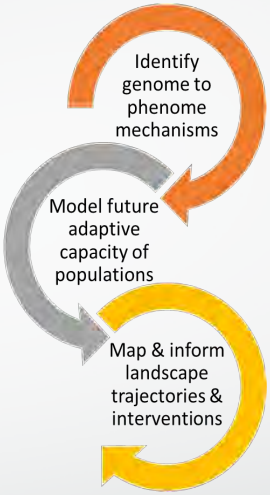
0.27%

Total NSF funding to Idaho (FY20) = $25.4M,

36% increase from 2012

IDAHO EPSCoR

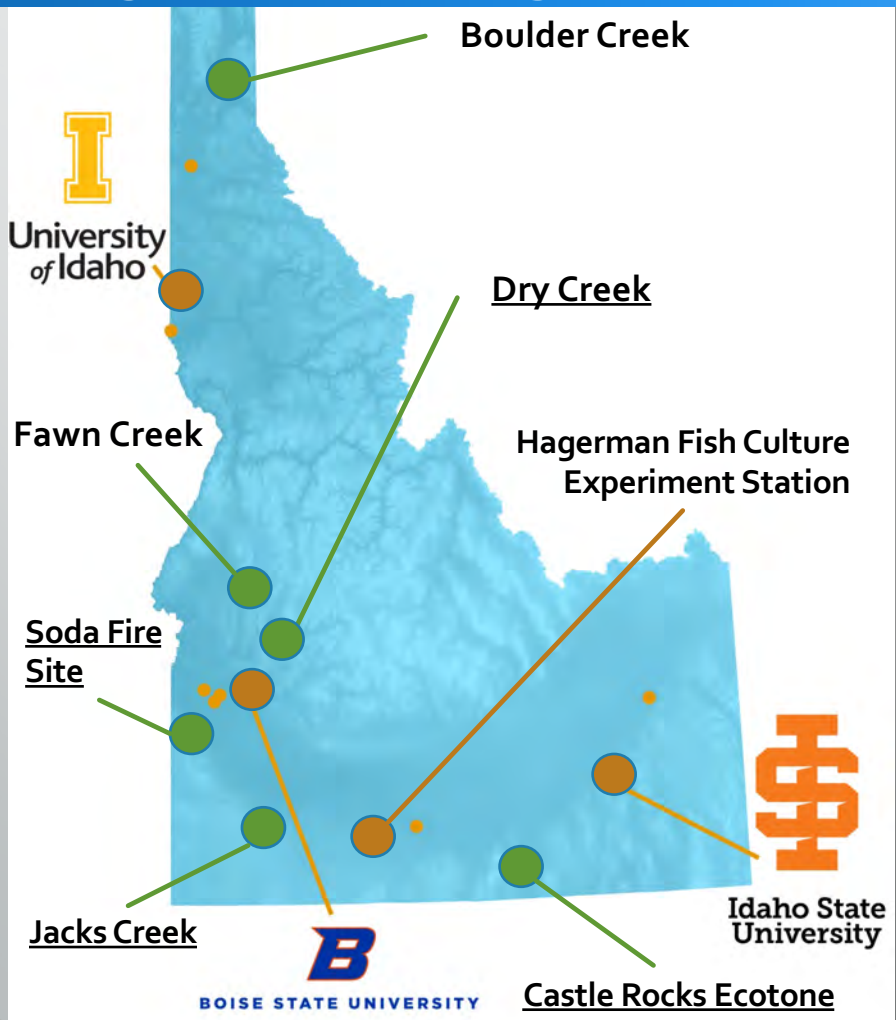
Idaho Track-1 RII: "GEM3" *Genes to Environment: Modeling, Mechanisms, and Mapping* - Oct 2018 – Sep 2023



Idaho will lead the nation with thriving, collaborative, and inclusive research to discover and predict how plants, animals, and people interact and adapt to changing environments, resulting in the sustainable management of natural resources.

GEM3
Genes by Environment
Modeling · Mechanisms · Mapping

GEM3: Sagebrush Living Laboratories



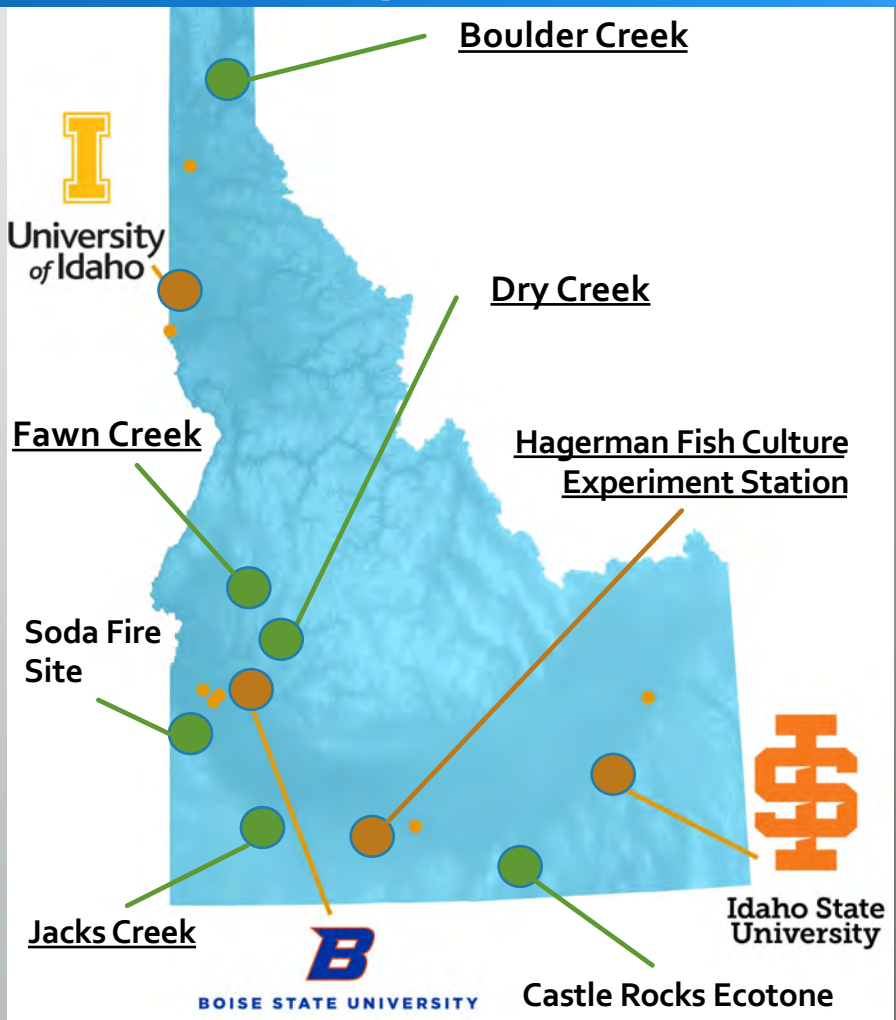
Living laboratory locations

- Physical + Built laboratories
- Natural laboratories (field sites, common gardens)

IDAHO EPSCoR

GEM3 Genes by Environment Modeling · Mechanisms · Mapping

GEM3: Trout Living Laboratories



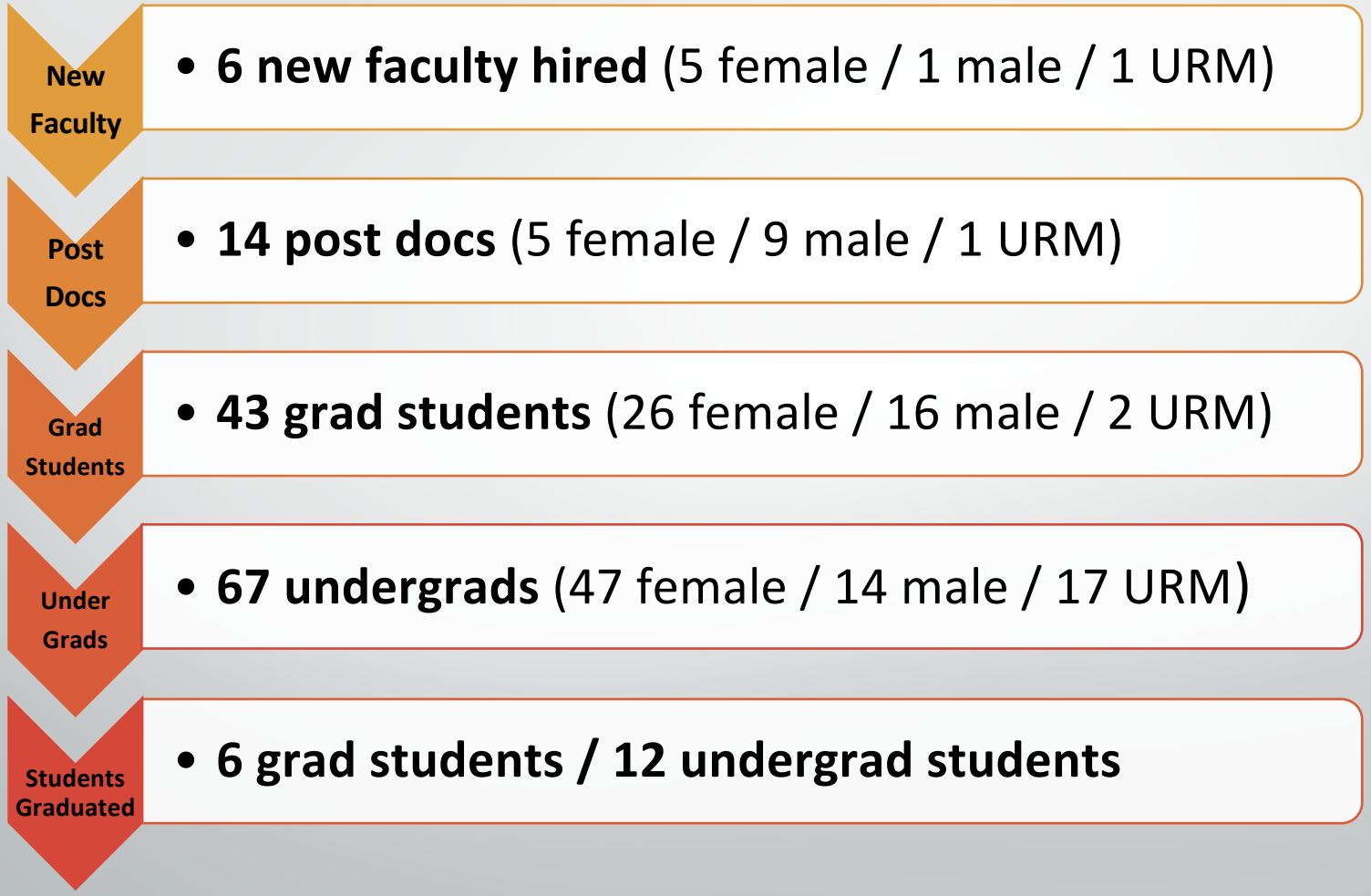
Living laboratory locations

- Physical + Built laboratories
- Natural laboratories (field sites, common gardens)

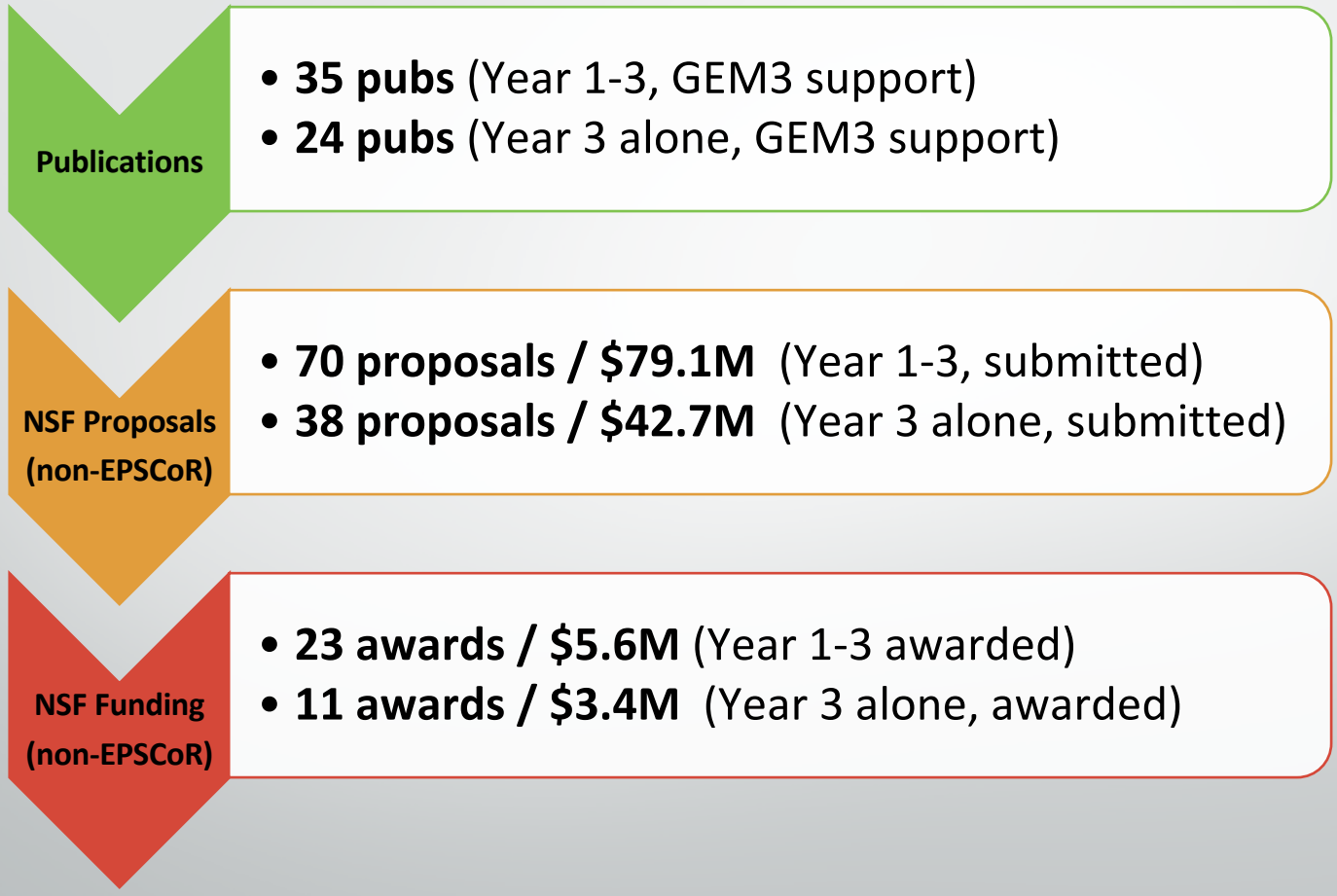
IDAHO EPSCoR

GEM3 Genes by Environment Modeling · Mechanisms · Mapping

GEM3 Project Outputs



GEM3 Project Outputs



GEM3 Project Outputs

- Boise State
- U of Idaho
- Idaho State

RESTORATION ECOLOGY
The Journal of the Society for Ecological Restoration
SER SOCIETY FOR ECOLOGICAL RESTORATION

REVIEW ARTICLE | Full Access

Integrating genomics in population models to forecast translocation success

Travis Seaborn, Kimberly R. Andrews, Cara V. Applestein, Tyler M. Breech, Molly J. Garrett, Andrii Zaiats, T. Trevor Caughlin

First published: 24 March 2021 | https://doi.org/10.1111/rec.13395

Abstract

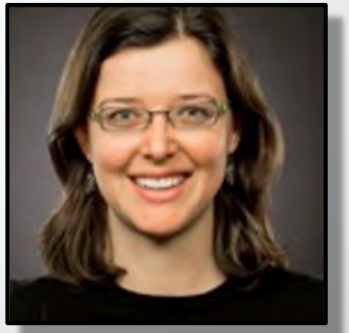
Whole-genome sequencing is revolutionizing our understanding of organismal biology, including adaptations likely to influence demographic performance in different environments. Excitement over the potential of genomics to inform population dynamics has prompted multiple conservation applications, including genomics-based decision-making for translocation efforts. Despite interest in applying genomics to improve translocations, there is a critical research gap: we lack an understanding of how genomic differences translate into population dynamics in the real world. We review how genomics and genetics data could be used to inform organismal performance, including examples of how adaptive and neutral loci have been quantified in a translocation

GEM3 Project Outputs

Award Abstract # 2025250
Collaborative Research: MTM 2: Using successional dynamics, biogeography, and experimental communities to examine mechanisms of plant-microbiome functional interactions

NSF Org:	EF Emerging Frontiers
Awardee:	
Initial Amendment Date:	August 25, 2020
Latest Amendment Date:	October 13, 2020
Award Number:	2025250
Award Instrument:	Standard Grant
Program Manager:	Mamta Rawat EF Emerging Frontiers BIO Direct For Biological Sciences
Start Date:	January 1, 2021
End Date:	December 31, 2024 (Estimated)
Total Intended Award Amount:	
Total Awarded Amount to Date:	$441,649.00
Funds Obligated to Date:	
History of Investigator:	Leonora Bittleston (Principal Investigator) leonorabittleston@boisestate.edu
Awardee Sponsored Research Office:	Boise State University 1910 University Drive Boise ID US 83725-0001

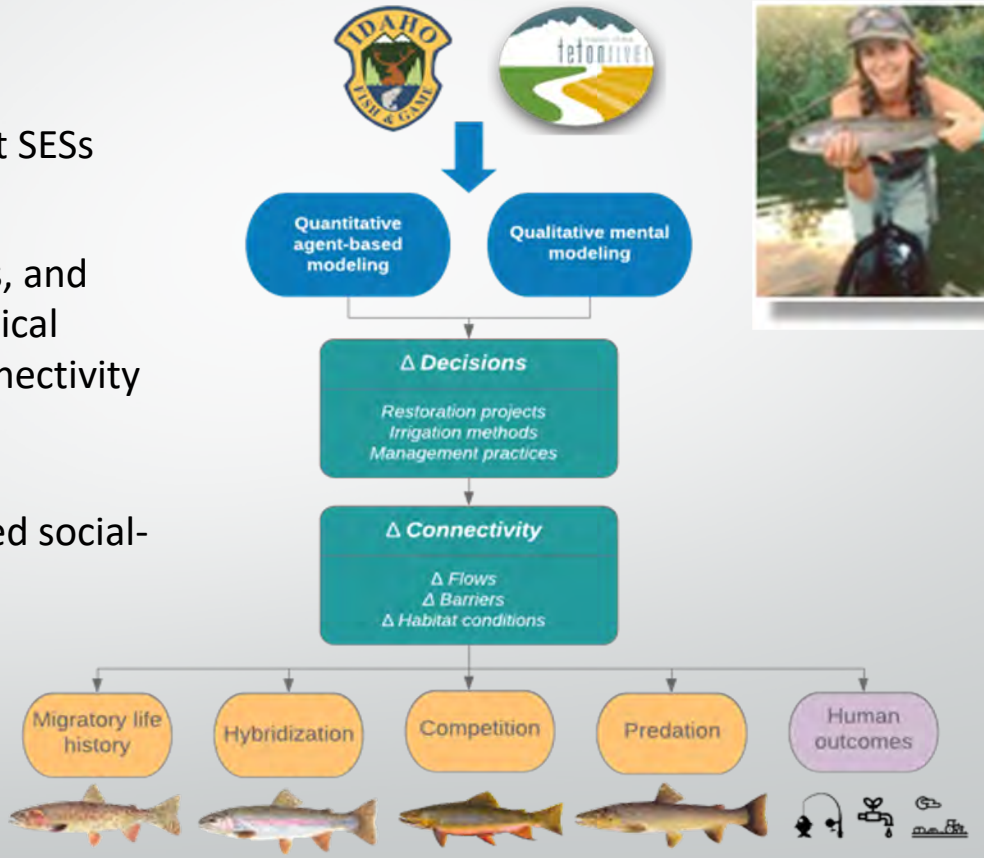
GEM3 New Hire



Leonora Bittleston
Ecological Genomics Modeling, BSU

GEM3 Graduate research – Lizzie Jossie (ISU)

- **Research problem:** Effects of connectivity conservation on Yellowstone Cutthroat Trout SESs
- **Data:**
  - 21 interviews with managers, farmers, and fishing guides about the social-ecological outcomes of re-establishing river connectivity
  - Legacy YCT life history data
- **Analysis:** Connectivity scenarios and modeled social-ecological outcomes in CDMetaPop



GEM3 Workforce Development and Education

(VIP) Vertically Integrated Project courses

- Offered a GEM3 VIP at each university
- Hired GEM3 Community College Liaison

Total: 73 students
Over 60% female
About 15% URM

Boise State University
-Environmental Sustainability
-Genome 2 Phenome
-Mapping Sagebrush Restoration

Idaho State University
-Quantifying Phenotypic Diversity in Sagebrush and Trout

University of Idaho
-Modeling the Change in Distributions due to Climate Change

GEM3 Integration of Research and Education

Summer Authentic Research Experiences (SARE)

Promote diverse participation and success in GEM3-related STEM fields.

- Paid research positions
- Seeks underrepresented minority (URM) students
- Provides an intensive laboratory & field experience
- Creates bridge between academic years
- 36 Students placed in 2021 (including 6 PUI/13 URM)

Aubrey Osorio, BSU SARE Student

GEM3 Genes by Environment Modeling · Mechanisms · Mapping

GEM3 Partnerships: Stakeholder Advisory Groups

- MS student projects
- PhD projects
- Scenario development
- Seed grants
- Access to legacy data and joint data collection
- Long-term relationships can create synergies!

IDAHO EPSCoR

GEM3 Genes by Environment Modeling · Mechanisms · Mapping

GEM3 – Alignment with Idaho's S & T Plan

Contribution to Idaho S&T Goals:

- Increase research and collaboration among Idaho universities and colleges to advance research strengths and opportunities pertaining to critical issues in Idaho and the Nation
- Create research and development opportunities that strengthen the relationship between state universities and the private sector
- Contribute to the economic development of the State of Idaho
- Enhance learning and professional development through research and scholarly activity.

Contribution to Idaho S&T Priorities:

- *Natural Resource Utilization and Conservation*

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GEM3 Genes by Environment Modeling · Mechanisms · Mapping

EPSCoR – Idaho RII Track-1 Planning

Research Theme: *Resilience for natural resource security and critical infrastructure*

Progress

- Spring 2021: Strategic planning exercise with Idaho EPSCoR Committee
- Spring – Summer 2021: Theme development via statewide listening, brainstorming, and collaboration workshops
- Summer 2021: solicitation for research innovation briefs - 8 papers received and externally reviewed

Timeline

- Fall 2021: finalize research topic
- Winter 2021-2022: assemble proposal writing team
- Spring 2022: complete first proposal draft
- Summer 2022: complete final proposal
- August 2022: submit proposal
- Spring – Summer 2023: Notification of outcome
- Fall 2023: start new Track-1 if awarded

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GEM3 Genes by Environment Modeling · Mechanisms · Mapping

Idaho's NSF EPSCoR – Building Research Competitiveness

IDAHO EPSCoR

https://www.idahoepscor.org

GEM3
Genes by Environment
Modeling · Mechanisms · Mapping

https://www.idahogem3.org

https://www.nsf.gov/od/oia/programs/epscor/

IDAHO NSF EPSCOR PROJECT ADVISORY BOARD (PAB) REPORT ON THE IDAHO EPSCOR RESEARCH INFRASTRUCTURE IMPROVEMENT TRACK-1 COOPERATIVE AGREEMENT

(#IIA-1757324)

YEAR THREE

DECEMBER 2020

TABLE OF CONTENTS

INTRODUCTION

The RII project "Linking Genome to Phenome to Predict Adaptive Responses of Organisms to Changing Landscapes" was funded by the National Science Foundation (NSF) Established Program to Stimulate Competitive Research (EPSCoR) and led to the Idaho Research Infrastructure Improvement (RII) Track-1 Cooperative Agreement. The project is referred to as *GEM3* for *Genes to Environment: Modeling, Mechanisms, and Mapping*. The Idaho EPSCoR Project Advisory Board (PAB) met virtually December 8-10, 2020 as part of the *GEM3* annual meeting to hear progress toward the goals set forth in the Strategic Plan, which was updated in October 2020. The theme of the meeting was "Collaboration, Integration, Convergence," and the meeting was structured around those three areas. The PAB was asked to provide objective feedback on the progress to date as compared to the milestones for year three, as well as progress on the recommendations and responses to the NSF Reverse Site Visit (RSV) report. A roster of current PAB members is provided in Appendix A.

NSF EPSCoR funded this 60-month award in October 2018 at $20 million over five years. The State of Idaho has committed to contribute $4 million in additional funds towards the project over the five-year period. The University of Idaho (UI) is the fiscal agent for the award, and Boise State University (BSU) and Idaho State University (ISU) receive funding through subcontracts. Dr. Andy Kliskey is the Idaho EPSCoR/IDeA Project Director (PD) and the Principal Investigator (PI) for the RII Track-1 Cooperative Agreement. Co-Principal Investigators are Dr. Christopher Caudill (University of Idaho), Dr. Jennifer Forbey (Boise State University), and Dr. Colden Baxter (Idaho State University).

This report is intended to provide feedback to help the GEM3 project team as they work toward the goals and objectives of Year 3 as outlined in their Strategic Plan. This report is comprised of three parts: notable strengths of the project, challenges and recommendations, and conclusions.

STRENGTHS

The leadership structure has been expanded to include co-leads at each of the three universities and in each of the "three M's"--Mechanisms, Mapping, and Modeling. This is seen as a positive move. The leadership is clearly doing excellent work in coordinating activities and communication, prioritizing projects, and inspiring the entire team. The "30,000-foot, 10,000-foot, and 5,000-foot" diagrams representing convergence frameworks were a helpful component of the presentations, and much-improved integration of the work of the various research groups was evident. The quality of several of the presentations by postdocs and junior faculty was excellent.

The gender diversity in the leadership of GEM3 is very positive, reinforced by the numbers of females among the faculty, postdocs, grad students, and undergraduate researchers. The successes of the Summer Authentic Research Experiences (SARE) Program in attracting Shoshone-Bannock student participants were notable. SARE has also had diverse participation, with 71% of the recipients being female and 59% URM in the Summer of 2020.

The translation of GEM3 science into Spanish is a significant contribution to broadening its potential impacts and motivating non-native English speakers' interest in STEM. UI is in the final stages of hiring a Visiting Tribal Scholar for an up-to-two-year appointment. While less ambitious than a permanent faculty position, it is clearly achievable and will have a significant impact.

The addition of a Primarily Undergraduate Institution (PUI) faculty member as an interface to the PUI's around the state appears likely to improve the adoption of GEM3-developed activities and recruitment of participants into STEM activities to which they might not otherwise be exposed.

The interaction with stakeholder groups appears to have gone extremely well before the pandemic hit, and to be experiencing a revival as many have learned to deal with new forms of interaction in the pandemic environment. The idea of "decolonizing" as extendable not only to political history, but also to science, was a good addition to GEM3.

The progress in the modeling working groups is excellent. It appears to be reaching the stage where they could provide diagrams closer to the data-flow or pipeline diagrams that the RSV report called for, rather than simply block diagrams of the projects being pursued. It was clear, for example, from Chris Caudil's presentation introducing the Trout/Sage Integration Working Group, that they are asking exactly the right kinds of questions to allow model integration, rather than simply focusing on a set of independent models. This includes what is being measured as well as both the inputs and outputs for key components.

The PAB's recommendations regarding the redesign of the rainbow trout (RBT) common garden experiments to include at least diel temperature variation has been implemented. A further step has been taken in conducting temperature choice experiments by which an experimental individual trout is able to move between different temperature environments. A clever aspect of this experiment is that it is dynamically adaptive, with water temperature being adjusted according to where the trout spends most time, allowing further refinement of estimation of temperature preferences. That is a significant and commendable response to the PAB input. We encourage later experiments to continue with the PAB recommendations for adding extreme events into the experimental design - e.g., simulated multi-day heat waves. Building upon earlier experiments by conducting heat wave treatments with fish that have been kept in different environments (e.g., at different temperatures, and/or at constant vs. variable temperatures), this could generate not only interesting results but also point to differences in vulnerabilities of different populations to heat waves depending upon their recent environmental history. Such results would have clear management implications (e.g., estimation of most resilient vs. most vulnerable populations to climate change).

The modeling activity is beginning in earnest, and this workshop and other meetings are helping to connect the data generators with the data consumers (e.g., modelers). It will be important for both groups to be kept in close touch, to motivate future experiments to fill holes in the data required for modeling, and to maximize the utilization of the data to improve the models.

The efforts and progress in broadening participation were both impressive, including efforts to assure their adoption across all three universities. There was real progress in mentorship training of faculty members regarding their researchers. While the DEI chart did not show meeting goals in all areas, and some of the goals were still relatively modest, the goals were met in some areas, and significant and actionable plans were presented to broaden future participation. In the face of the roadblocks imposed by the pandemic, by the state's House Bill 440, and the Presidential Executive Order, the progress was impressive. Looking, for example, at the new hires of faculty and postdocs, the gender representation was absolutely stellar, and some progress was made in other diversity, although some losses of diverse personnel also occurred. It seems evident that Donna Llewellyn is doing an excellent job in keeping Broadening Participation goals in prominent view across GEM3, and that, despite the barriers, it is having an impact.

The two groups - Sagebrush and RBT - have come a long way in just a year and have become much more cogent, while also having broadened their research focus to better integrate and support the 3 M's. They are beginning to talk to each other more, and the current "integration" Working Group seems to be a good step forward to increase their communication and ensure the research has cross-boundary interest and significance.

The sagebrush genetics group has progressed admirably, especially given their set-backs with the loss of much of the cultures due to COVID restrictions. The literature mining tool is an excellent product on its own, as well as having given an enormous boost in identifying potentially interesting genes.

The leadership was very responsive to the input of the PAB with respect to acquiring more expertise in hydrological modeling. The new research being done in this area shows a lot of promise in helping to integrate the RBT and Sagebrush research groups - e.g., via impacts of fire.

The G2PMineR software developed in GEM3 appears to have been very useful already and to have broad applicability even beyond GEM3. Its automation of an otherwise extremely labor-intensive process could be an important step in helping GEM3 to meet some of its mechanism-related goals.

CHALLENGES & RECOMMENDATIONS

Integration and Synthesis: A key challenge is that the project needs both integration and synthesis. Integration is the act or process of uniting different themes, and synthesis is the combining of diverse concepts into a coherent whole. As the Idaho EPSCoR project grows broader and more complex in personnel, topics, and methods, the challenge is not only integration but also synthesis. The project should focus both on integration and synthesis in upcoming years. The exciting synthetic products that can come from GEM3 will be important ways to define success as the project proceeds to completion.

The progress in the modeling working groups appears to be reaching the stage where they could provide diagrams closer to the data-flow or pipeline diagrams that the RSV report called for, rather than simply diagrams showing the projects being pursued.

Stakeholder Engagement: The reality of the involvement of the stakeholders is evident in the divergence of prioritization of the various goals and objectives that is emerging. While that represents a challenge to decision-making, it is also a positive in showing that the stakeholders are actively engaged and may be willing to consider the eventual outputs of the research.

Agent Based Models: Understanding of the nature of Agent Based Models (ABMs) seems not to be universal among GEM3 participants, but it is important that all understand what is required for a phenomenon to be included in an ABM, and what kinds of conclusions can arise from agent based modeling. More training on this topic would be good for the team, perhaps in GEM3 seminars.

Sagebrush Genetics: The sagebrush genetics group has progressed well and now has an exciting set of candidate genes to target, but it will still be challenging to sort through them and determine which will give the most bang for the buck with respect to project goals.

Broadening Participation: Regarding broadening participation and Diversity, Equity, and Inclusion efforts, the PAB encourages continued pursuit and advancement of the broadening participation goals to meet the strategic targets of the award, including diversification of the faculty. We encourage continued expansion of the excellent ongoing work through increasing participation in inclusive mentoring education (e.g., by making it a requirement in order to receive funding, etc.), expanding assessment for climate/inclusion in research projects (e.g., student assessment of mentors, etc.), and inclusive pedagogy approaches for digital environments (e.g., building community through peer mentoring, etc.).

Tribal Faculty: At ISU, the more ambitious project to establish a Shoshone-Bannock Cooperative Tribal Faculty position, as a full-time, permanent faculty position is currently stalled for financial reasons at the university level. The PAB urges ISU leadership to give this position priority for establishment as soon as financial improvements allow.

PAB encourages continued pursuit and advancement of the broadening participation goals to fulfill the obligations of the National Science Foundation award, including diversification of the faculty. We encourage continued expansion of the excellent ongoing work through increasing participation in inclusive mentoring education, expanding assessment for climate/inclusion in research projects, and inclusive pedagogy approaches for digital environments.

CONCLUSIONS

The PAB observed excellent progress during this third project year. Strengths of the project include the diversity of the participants, increased collaboration across the three M's of the project, and progress toward integrating the research areas. Recommendations include focusing on both integration and synthesis in the research areas and providing additional ABM training. The PAB also strongly supports the Tribal faculty position progress at UI and ISU and urges ISU administration to prioritize the Tribal faculty line.

APPENDIX A. PROJECT ADVISORY BOARD MEMBERS

Name	Affiliation
Clifford Dahm	Professor Emeritus of Biology, University of New Mexico; Former Lead Scientist, California Delta Science Program
Jason Dunham	Supervisory Research Ecologist/Professor, USGS; Courtesy Faculty Appointment, Department of Fisheries & Wildlife-Aquatic Ecology, Oregon State University
Erik Goodman	Executive Director, BEACON Center for the Study of Evolution in Action; Professor of Electrical and Computer Engineering and of Mechanical Engineering and of Computer Science and Engineering, Michigan State University
Michael Khonsari	Dow Chemical Endowed Chair, Professor of Mechanical Engineering, Louisiana State University; Project Director, LA EPSCoR PD; Associate Commissioner for Sponsored Research and Development Programs, Louisiana Board of Regents
Christine Ortiz	Morris Cohen Professor of Materials and Science and Engineering; Bio; Biotechnology; Nanotechnology; Polymers; Massachusetts Institute of Technology
Camille Parmesan	Professor, CNRS Ecology Institute (SETE), Moulis, France; NMA Chair in Public Understanding of Marine Science & Human Health, School of Biological & Marine Sciences, Plymouth University, U.K.; Department of Geological Sciences, University of Texas at Austin, U.S.A.
Anna Waldron (PAB chair)	Associate Project Director, Missouri EPSCoR; Owner, Waldron Educational Consulting, LLC

SUBJECT

Idaho Math Transitions Network Update

REFERENCE

September 2017	Board adopted the Governor's Higher Education Task Force recommendations, which includes Complete College America 'Game Changer' strategies, including the Math Pathways strategy.
December 2017	Board reviewed implementation of Complete College America "Game Changer" strategies and the effectiveness of initiatives supported by CCI funding, including the Math Pathways strategy.
August 2018	Board provided with overview regarding Idaho's selection as a Momentum Pathways state by Complete College America

BACKGROUND/DISCUSSION

The Idaho Mathematics Transition Network (MTN) began at a convening of the Conference Board of Mathematics Sciences in Reston, VA during May 2019, with the purpose of addressing issues and engaging the necessary parties in creating solutions to modernize high school mathematics education. Across the nation, high school mathematics courses focus on a calculus-based curriculum, which does not presently align to the math pathways in higher education. Modernizing the high school mathematics curriculum will involve aligning high school math course pathways to college mathematics programs and the use of mathematics in Idaho industries. The MTN is working toward providing high school juniors and seniors choices for and success in math courses aligned to their chosen career paths.

The Steering Committee includes postsecondary math faculty from each institution of higher education in Idaho, high school mathematics teacher-leaders and administrators from each Region, and staff from the State Department of Education, the Idaho Division of Career Technical Education, and the Office of the State Board of Education. The overarching goals of the Idaho MTN include:

- Providing recommendations on redefining local criteria constituting success in high school and college mathematics.
- Identifying strategies for the effective delivery of transitional math instruction in high school and college in order to provide multiple pathways for students to achieve success in mathematics.
- Increasing the success of transitional mathematics through facilitation of communication among academic and non-academic stakeholders.
- Providing recommendation on improving content, assessment, and instruction so as to better serve students and increase their success in high school and college mathematics, subject to standards set by the Board in administrative rule or by local governing boards.

- Providing recommendation aligning high school and college mathematics courses and expectations based on the academic and career pathways of students to enable success throughout their postsecondary career and beyond.

The Math Transition Network is focused on supporting a successful transition mathematics education from a student's junior year of high school to their junior year of college.

ATTACHMENTS

Attachment 1 – Idaho Math Transitions Network Update

BOARD STAFF COMMENTS AND RECOMMENDATIONS

The MTN developed a set of planned action steps for Fiscal Year 2021. The attached update provides a progress report on each of these planned action steps, as well as next steps for Fiscal Year 2022.

This update was presented to and discussed with the Instruction, Research and Student Affairs Committee on October 7, 2021.

BOARD ACTION

This item is for informational purposes only.

ATTACHMENT 1

2021 UPDATE ON THE IDAHO MATH TRANSITIONS NETWORK

To: Kurt Liebich, President, Idaho State Board of Education

Sherri Ybarra, Superintendent of Public Instruction

Cc: Matt Freeman, Executive Director, Office of the State Board of Education

Todd Driver, Director of Content and Curriculum, State Department of Education

From: Math Transitions Network Steering Committee

Committee Facilitators:

TJ Bliss, Chief Academic Officer, Office of the State Board of Education

Cathy Beals, Mathematics Coordinator, State Department of Education

High Education Representatives:

Ann Abbott, Senior Instructor, University of Idaho

Susan Adeylotte, Associate Professor, College of Western Idaho

Joe Champion, Associate Professor, Boise State University

Ron Cresswell, Chair Mathematics Department, College of Southern Idaho

Kimberly Gores, Assistant Professor Math, North Idaho College

Randa Kress, Senior Instructor Math, Idaho State University

Spencer Payton, Mathematics Instructor, Lewis-Clark State College

Betsey Pitts, Instructor, College of Eastern Idaho

K-12 Representatives:

Chet Andes, Idaho Division of Career Technical Education

Tom Albertson, Superintendent, Lake Pend Oreille School District Region 1

Lanna Proctor, Teacher, Deary High School, Region 2

Jerod Morehouse, Teacher, Timberline High School, Region 3

L.T. Erickson, Curriculum Director, Twin Falls School District, Region 4

Jennie McClain, Teacher, Malad High School Region 5

Levi Jaynes, District Math Coordinator and High School Principal, Jefferson School District, Region 6

ATTACHMENT 1

What is the Math Transitions Network?

The Idaho Mathematics Transition Network (MTN) began at a convening of the Conference Board of Mathematics Sciences in Reston, VA during May 2019, with the purpose of addressing issues and engaging the necessary parties in creating solutions to modernize high school mathematics education. Across the nation, high school mathematics courses focus on a calculus-based curriculum, which does not presently align to the use of mathematics in Idaho colleges and careers. Modernizing the high school mathematics curriculum will involve aligning high school math course pathways to college mathematics programs and the use of mathematics in Idaho industries. The MTN is working toward providing high school juniors and seniors choices for and success in math courses aligned to their chosen career paths.

The Steering Committee includes postsecondary math faculty from each institution of higher education in Idaho, high school mathematics teacher-leaders and administrators from each Region, and staff from the State Department of Education, the Division of Career and Technical Education, and the Office of the State Board of Education. The overarching goals of the Idaho MTN include:

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- Identifying strategies for the effective delivery of transitional math instruction in high school and college in order to provide multiple pathways for students to achieve success in mathematics.
- Increasing the success of transitional mathematics through facilitation of communication among academic and non-academic stakeholders.
- Providing recommendations on improving content, assessment, and instruction so as to better serve students and increase their success in high school and college mathematics.
- Providing recommendations on appropriately aligning high school and college mathematics courses and expectations based on the academic and career pathways of students to enable success throughout their postsecondary career and beyond.

Focus Statement

The Math Transitions Network is focused on supporting a successful transition in mathematics education from a student's junior year of high school to their junior year of college.

2020-21 Planned Action Steps

This section reports progress on each of the 2020-2021 planned action steps.

1. **Solicit input from stakeholders about mathematics transitions through Regional meetings and surveys, with a particular emphasis on multiple pathways for student achievement.**
   - The MTN wrote and administered a survey for Idaho High Schools. Key findings from 77 of 260 high schools:
     - 67.6% of responding high schools are interested in moving toward offering more integrated, applied math courses for juniors and seniors aligned to college and career pathways.

- 61% of responding high schools use a traditional Algebra 1 – Geometry – Algebra 2 course sequence for their high school math pathway.
- 76.6% of responding high schools are offering trigonometry and/or pre-calculus as an elective for juniors and seniors.
- 1.3% of responding high schools are offering a course in data science as a math elective for juniors and seniors.
- 3.9% of responding high school are offering the dual credit course Math in the Modern Society as an elective for juniors and seniors.
- 75.3% of responding high schools have had no professional development on integrating computer science into math courses.
- 53.2% of responding high schools would be interested in participating in a long-term, intensive professional development project (3 to 5 years) focused on creating a research-based high school mathematics program.

- Offered a one credit, virtual professional development course through Northwest Nazarene University (NNU) on Catalyzing Change in Idaho High School Math for high school educators and leaders that engaged 89 participants in readings and conversations. From these conversations and the course evaluations, we identified areas of needed support for Idaho high schools and planned two professional development courses for 2021-22 school year. Key points from course evaluation data include:
  - 94% of 54 responders strongly agreed or agreed that they gained a better understanding of the need to restructure high school math programs from the course.
  - 94% of responders strongly agreed or agreed that they enjoyed collaborating with teachers from across the state.
  - Eliminating tracking practices based on math ability and connecting math instruction to industry needs were identified as the two areas that high schools needed the most support for implementing.
  - Qualitative data provided suggestions on how the MTN can support high schools in future work. Suggestions included:
    - Needs to be a statewide effort; classroom teachers cannot lead systemic change alone
    - Example units and curriculum using applied math projects
    - Data science courses curriculum and professional development
    - Cross-walk Idaho Math Content Standard with CTE Standards
    - Professional development on strategies and intervention systems to eliminate ability tracking
    - More resources and information on connections between high school math and use in Idaho industries and careers
    - Offer statewide math courses for small high schools that cannot provide a variety of courses for juniors and seniors

- Build a collection of resources
- Reduce the number of high school math standards to provide more focus and show examples of a variety of courses aligned to standards
- Regional task groups

- Established a partnership with Idaho Council of Teachers of Mathematics (ICTM) to set up membership through them.
- Established a connection to the Stem Action Center through the Stem Ecosystem Career Pathway Exploration work group.

2. **Build knowledge of potential solutions and policy recommendations.**
   - Analyzed Idaho policies in mathematics related to high school and college mathematics and noted areas schools may need support. Did not see a need for any policy changes at this time.
   - Studied high school math pathways work from other states- Ohio, Virginia, Utah, Oregon
3. **Draft recommendations for improving mathematics transitions in Idaho.**
   Created a rough draft of a *Guidance for Idaho High Schools* document
4. **Seek input from stakeholders about the draft recommendations.**
   Not completed because the document is still in draft form and not ready for review.
5. **Synthesize the draft recommendations for consideration by OSBE.**
   Developed proposal for funding of professional development for school leaders and math educators.

Additional work completed in 2020-21

- Added Steering Committee members to represent K-12 education interests from all educational regions.
- Clarified the charge in 2021 Update on the Idaho Math Transitions Network document.
- Created a Project Plan for 3, 6, 9 months.
- Created graphics on slides to clarify the vision.
- Received support for this work from the Superintendent of Public Instruction and members of the Instruction, Research and Student Affairs Committee of the State Board of Education.
- Connected the Idaho Regional Math Centers (IRMC) to the work and added time and support for the work in the FY21 RMC contracts.
- Established connections with the Idaho Division of Career Technical Education (CTE) and added a steering committee member from that division.
- Explored Ohio's mentoring program as a way of supporting high schools through a process of transforming their mathematics course pathways.

Next Steps for 2021-22

1) Offer two, one-credit professional development courses through NNU for high school math educators and leaders in follow up to the Catalyzing Change in High School Mathematics course.

Course 1: *Catalyzing Change in High School Mathematics: Algebra for All*

This course will focus on strategies for helping all students succeed in Algebra 1 in their freshman year without sorting students into courses by ability. The course will teach the developmental trajectory of algebraic understanding and strategies for differentiation. It will also discuss successful practices for providing intervention for students who struggle to pass Algebra I at the high school level.

Course 2: *Catalyzing Change in High School Mathematics: What is Data Science?*

This course will focus on building awareness of how data is used in Idaho industries for high school mathematics educators. It will help them define data science and show connections between the Idaho Content Standards for Mathematics and data science. It will also provide teaching strategies and resources.

2) Host regional math networking dinners

The MTN will partner with ICTM, the Regional Math Centers and Imagine Math to host a networking dinner in each region. These dinners will update regional mathematics leaders and industry partners on the work of the MTN and engage them in conversations designed to solicit input.

3) Create communication assets

The SDE will work with Regional Math Center staff to create communication tools such as an infographic and a slide deck and add information and resources about the MTN to the SDE mathematics webpage.

4) **Request additional funding**

The MTN is exploring funding options to add a secondary regional math specialist for each region to support Idaho high schools interested in transforming their mathematics courses and pathways.

5) Create a guidance document and a crosswalk that shows how the Idaho Mathematics Content Standards align to Career and Technical Education Standards in different career clusters.

Participants in the Catalyzing Change course expressed interest in a document that would help them integrate showing mastery of mathematics standards into Career and Technical Education courses.

6) Finish SDE guidance document on high school mathematics.

This document is in draft form and will be completed and posted on the SDE Mathematics webpage.

7) Create a consistent statewide system of placement into college mathematics courses based on current evidence-based practices.

Staff at the Dana Center from University of Texas have agreed to help facilitate this project by providing resources and expertise from similar work with dozens of states working to improve high school mathematics pathways.

SUBJECT

Recognition of Commission on Osteopathic College Accreditation

REFERENCE

February 2016	Board approved Idaho State University (ISU) to execute a collaborative affiliation agreement with the Idaho College of Osteopathic Medicine, LLC (ICOM).
August 2016	Board approved execution of a Ground Lease for ICOM to build its medical education building on the ISU Meridian campus.
February 2017	Board approved amendment of ISU's six-year plan and authorized ISU to begin engineering and cost-estimating for expansion of the Anatomy and Physiology (A/P) Lab Building Addition on the ISU Meridian campus.
August 2017	Board approved License Agreement between ISU and ICOM for the use of A/P Lab space.
April 2017	Board authorized ISU to enter into an Institution Review Board MOU with ICOM and to proceed with negotiations on an IRB Authorization Agreement.
October 2017	Board approved amendment to the License Agreement for Space between ISU and ICOM for use of the ISU A/P Lab space.
December 2020	Board received a progress report on ICOM's growth and advancement in the Treasure Valley.

APPLICABLE STATUTE, RULE, OR POLICY

Section 33-2401(1), Idaho Code

Idaho Administrative Code, IDAPA 08.01.11.100, Recognition of Accreditation Organizations

Idaho Administrative Code, IDAPA 08.01.11.200, Registration of Postsecondary Educational Institutions

BACKGROUND/DISCUSSION

Idaho College of Osteopathic Medicine (ICOM) has operated as a registered proprietary school since 2017. In accordance with IDAPA 08.01.11.200.02.d, ICOM may register as a postsecondary educational institution once it obtains full accreditation by an accreditation organization that is recognized by the Board. ICOM is presently in pre-accreditation status with the Commission on Osteopathic College Accreditation (COCA) and anticipates a final ruling to obtain full accreditation status in April 2022. ICOM's first class will graduate in May 2022.

Pursuant to IDAPA 08.01.11.100, "the Board recognizes regional and national accreditation organizations that are recognized by and in good standing with the United States Department of Education, which accredit entire colleges and

universities, and which do not accredit only courses or courses of study (such as specialized accreditation organizations)."

The United States Department of Education lists COCA as a programmatic accreditor that is recognized for the accreditation of freestanding, single purpose institutions in addition to the accreditation of specialized programs at larger institutions. ICOM is a freestanding, single purpose institution.

IMPACT

Board recognition of COCA as an accrediting organization for purposes of registration of postsecondary educational institutions will allow ICOM, once fully accredited, to register as a postsecondary educational institution that may grant degrees in Idaho. This recognition must be confirmed prior to May 2022 to allow ICOM to award to its first graduating class. Recognition of the accrediting organization will make any program accredited by COCA eligible for registration in Idaho.

BOARD STAFF COMMENTS AND RECOMMENDATIONS

Staff recommends that the Board confirm its recognition of COCA as an accrediting organization for purposes of registration of postsecondary educational institutions.

BOARD ACTION

I move to confirm Board recognition of the Commission on Osteopathic College Accreditation as an accrediting organization for purposes of registration of postsecondary educational institutions.

Moved by _____ Seconded by _____ Carried Yes _____ No _____