

SOUTH DAKOTA BOARD OF REGENTS

Academic and Student Affairs
Consent

AGENDA ITEM: 8 – D (2)

DATE: June 22-23, 2022

SUBJECT

**New Graduate Certificate Request – SDSU – Institutional Research and Assessment
in Higher Education**

CONTROLLING STATUTE, RULE, OR POLICY

[BOR Policy 2:23](#) – Program and Curriculum Approval

BACKGROUND / DISCUSSION

South Dakota State University (SDSU) requests authorization to offer a graduate certificate in Institutional Research and Assessment in Higher Education. The certificate will enable students to explore fundamental concepts in institutional research and assessment. Students will be introduced to knowledge and skills needed access, manage, analyze, and use data in today's complex higher education contexts. The certificate will be particularly applicable for students interested in working at a postsecondary institution in an institutional research or assessment office.

IMPACT AND RECOMMENDATION

SDSU plans to offer the certificate in Institutional Research and Assessment in Higher Education on campus and online. SDSU does not request new state resources. One new course will be required.

Board office staff recommends approval.

ATTACHMENTS

Attachment I – New Certificate Request Form: SDSU – Institutional Research and
Assessment in Higher Education

DRAFT MOTION 20220622_8-D(2):

I move to authorize SDSU to offer a graduate certificate in Institutional Research and Assessment in Higher Education, as presented.



SOUTH DAKOTA BOARD OF REGENTS ACADEMIC AFFAIRS FORMS

New Certificate

UNIVERSITY:	SDSU
TITLE OF PROPOSED CERTIFICATE:	Institutional Research and Assessment in Higher Education
INTENDED DATE OF IMPLEMENTATION:	2022-2023 Academic Year
PROPOSED CIP CODE:	13.0608
UNIVERSITY DEPARTMENT:	Mathematics & Statistics
BANNER DEPARTMENT CODE:	SMAS
UNIVERSITY DIVISION:	Jerome J. Lohr College of Engineering
BANNER DIVISION CODE:	3E

☒ **Please check this box to confirm that:**

- The individual preparing this request has read [AAC Guideline 2.7](#), which pertains to new certificate requests, and that this request meets the requirements outlined in the guidelines.
- This request will not be posted to the university website for review of the Academic Affairs Committee until it is approved by the Executive Director and Chief Academic Officer.

University Approval

To the Board of Regents and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.

Institutional Approval Signature

President or Chief Academic Officer of the University

5/3/2022

Date

1. Is this a graduate-level certificate or undergraduate-level certificate?

Undergraduate Certificate ☐

Graduate Certificate ☒

2. What is the nature/ purpose of the proposed certificate? Please include a brief (1-2 sentence) description of the academic field in this certificate.

South Dakota State University (SDSU) requests authorization to offer an Institutional Research and Assessment in Higher Education Certificate. The graduate certificate in Institutional Research and Assessment in Higher Education will enable students to explore fundamental concepts in institutional research and assessment. Students will be introduced to knowledge and skills needed to access, manage, analyze, and use data in today's complex higher education contexts. Data use for decision-making in higher education is critical for improving student success and institutional effectiveness. The certificate will be comprised of existing graduate courses in research methods and statistics, as well as a new course focused on the foundations of institutional research and assessment. The certificate will be particularly applicable for students interested in working at a postsecondary institution in an institutional research or assessment office.

SDSU does not request new state resources for the proposed certificate.

3. If you do not have a major in this field, explain how the proposed certificate relates to your university mission and strategic plan, and to the current Board of Regents Strategic Plan 2014-2020.

The graduate certificate in Institutional Research and Assessment supports the professional education mission of SDSU as provided in SDCL 13-581: *Designated as South Dakota's land grant university, South Dakota State University, formerly the state college of agriculture and mechanical arts, shall be under the control of the Board of Regents and shall provide undergraduate and graduate programs of instruction in the liberal arts and sciences and professional education in agriculture, education, engineering, home economics, nursing and pharmacy, and other courses or programs as the Board of Regents may determine.*

The proposed program also supports the goals stated in the South Dakota Board of Regents Strategic Plan 2014-2020:

Goal 1 – Student Success

- Increase the number of graduate degrees awarded.

Goal 2 – Academic Quality and Performance

- Continue to approve new graduate programs.

In addition, the IR & Assessment Certificate supports SDSU's Imagine 2023 strategic plan:¹

Achieve Excellence Through Transformative Education

- Attain academic excellence: Develop and grow high-quality and distinct academic programs designed to meet the needs of diverse students and market demands.

4. Provide a justification for the certificate program, including the potential benefits to students and potential workforce demand for those who graduate with the credential.

Nationally, every postsecondary institution employs trained institutional research and assessment professionals. They typically employ between 2-10 individuals in institutional research and assessment roles. These positions range from research data analysts to directors of institutional assessment to vice-presidents of institutional effectiveness. The skills needed for these positions include abilities to access, manage, analyze, and use data in today's complex higher education contexts. In addition, these positions support academic planning, decision making, accreditation, and assessment for academic institutions, while also maintaining reporting requirements for external agencies and organizations.

According to the U.S. Bureau of Labor and Statistics, computer and information research scientists expected rate of job growth is 22% (much faster than average).²The expected rate of job growth for mathematicians and statisticians is 33% (much faster than average).³For

¹ <https://www.sdstate.edu/imagine-2023-aspire-discover-achieve>

² Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Computer and Information Research Scientists, at <https://www.bls.gov/ooh/computer-and-information-technology/computer-and-information-research-scientists.htm> (visited February 27, 2022).

³ Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Mathematicians and Statisticians, at <https://www.bls.gov/ooh/math/mathematicians-and-statisticians.htm> (visited February 13, 2022).

Operations Research Analysts⁴ and Management Analyst⁵ expected rate of job growth is 25% and 14% respectively. Finally, Postsecondary Education Administrators expected rate of job growth is 8%.⁶ The Association for Institutional Research currently lists 64 job postings on their job board.⁷ HigherEd Jobs also lists 334 job listings in the areas of institutional research and planning.⁸ The Association for the Assessment of Learning in Higher Education (AALHE) listed 6 assessment positions posted in March, 16 in February, and 9 in January.⁹

5. Who is the intended audience for the certificate program (including but not limited to the majors/degree programs from which students are expected)?

Relying on the both in-person and online offerings, the graduate certificate in Institutional Research and Assessment in Higher Education will provide students with coursework and professional training for higher education careers as institutional research and assessment professionals. This interdisciplinary certificate is a collaborative program drawing students from mathematics and statistics, student affairs/higher education administration, and social sciences.

The Department of Mathematics and Statistics anticipates enrolling five students per year during the first three years and growing the certificate to fifteen students per year after five years. The department's estimates are based on a similar program at Ball State University. Their program admitted 34 students from 2019-2021. They generally expect to admit 10 new students per year and are expecting to double the size of their program in the next couple of years.

6. Certificate Design

A. Is the certificate designed as a stand-alone education credential option for students not seeking additional credentials (i.e., a bachelor's or master's degree)? If so, what areas of high workforce demand or specialized body of knowledge will be addressed through this certificate?

Practicing IR & Assessment professionals could pursue this certificate as a stand-alone education credential to enhance their knowledge in Institutional Research and Assessment. Colleges and universities have increasing institutional research and assessment needs. Higher education staff with a certificate in institutional research and assessment would have knowledge and skills to work in this area.

⁴ Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Operations Research Analysts, at <https://www.bls.gov/ooh/math/operations-research-analysts.htm> (visited February 05, 2022).

⁵ Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Management Analysts, at <https://www.bls.gov/ooh/business-and-financial/management-analysts.htm> (visited February 13, 2022).

⁶ Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Postsecondary Education Administrators, at <https://www.bls.gov/ooh/management/postsecondary-education-administrators.htm> (visited February 06, 2022).

⁷ Association for Institutional Research, Job Board, at <https://www.airweb.org/resources/job-board> (visited March 15, 2022).

⁸ HigherEd Jobs, Job Listings, at <https://www.higheredjobs.com/admin/search.cfm?JobCat=31> (visited March 15, 2022).

⁹ Association for the Assessment of Learning in Higher Education, ASSESS Listserv, at <https://www.aalhe.org/> (visited March 15, 2022).

B. Is the certificate a value added credential that supplements a student's major field of study? If so, list the majors/programs from which students would most benefit from adding the certificate.

Yes, this certificate would serve as a value-added credential to supplement a variety of data and research-related programs (e.g., Computational Science and Statistics, Counseling and Human Resource Development, Educational Administration, Data Science, Statistics, Economics, and Nursing). It will provide majors with additional knowledge and skills specific to a higher education setting. The certificate also provides an additional credential for job opportunities utilizing their professional training in institutional research and assessment.

C. Is the certificate a stackable credential with credits that apply to a higher level credential (i.e., associate, bachelor's, or master's degree)? If so, indicate the program(s) to which the certificate stacks and the number of credits from the certificate that can be applied to the program.

While there is some overlap between the certificate and existing programs this is not intended as a stackable certificate.

7. List the courses required for completion of the certificate in the table below (if any new courses are proposed for the certificate, please attach the new course requests to this form).

AAC Guideline 2.7 limits certificates to nine to twelve credit hours unless valid reasons exist to exceed the limit. SDSU requests an exception to the guideline to allow for the graduate certificate to require fifteen credits. The discipline standard typically requires at least fifteen credit hours. Comparable graduate certificates include Ball State University – 15 credits¹⁰, Florida State University – 15 credits¹¹, Indiana University Bloomington – 18 credits¹², Kent State University – 18 credits¹³, Pennsylvania State University – 15 credits¹⁴, Sam Houston State University – 15 credits¹⁵, University of Kentucky – 15 credits¹⁶, and UC San Diego – 18 credits¹⁷. SDSU's program is modeled after these similar programs by requiring the completion of coursework in research, statistics, and institutional research, along with a practicum or internship experience focused on institutional research or higher education assessment. The exception will allow the program to include the required depth of statistics and data analysis required for professionals in this field as well as an internship to apply this

¹⁰ Ball State University - Institutional Research Certificate

<https://www.bsu.edu/academics/collegesanddepartments/educational-psychology/academic-programs/graduate-certificates-and-licensure/institutional-research>

¹¹ Florida State University - Institutional Research Certificate <https://education.fsu.edu/ir>

¹² Indiana University Bloomington - Institutional Research Certificate
<https://education.indiana.edu/programs/graduate/certificate/institutional-research.html>

¹³ Kent State University - Institutional Research and Assessment Certificate
<https://www.kent.edu/ehhs/fla/eval/institutional-research-assessment-certificate>

¹⁴ Pennsylvania State University - Institutional Research Certificate
<https://bulletins.psu.edu/graduate/programs/certificates/institutional-research-graduate-credit-certificate-program/>

¹⁵ Sam Houston State University - Higher Education Assessment and Institutional Research Certificate
<http://catalog.shsu.edu/graduate-and-professional/college-departments/education/educational-leadership/higher-education-assessment-institutional-research-certificate/#curriculumtext>

¹⁶ University of Kentucky - Research Methods in Education Certificate <https://education.uky.edu/epe/research-methods/graduate-certificate/>

¹⁷ UC San Diego - Institutional Research Certificate <https://extension.ucsd.edu/courses-and-programs/institutional-research>

knowledge and skill in the higher education setting. This certificate will blend naturally and efficiently with existing programs such as the M.S. in Data Science and M.S. in Statistics. EDER 605 Foundation of Institutional Research and Assessment in Higher Education (3 cr.) is a new course that will provide the necessary foundation of skills and experiences to enter the field of institutional research or assessment.

Students may complete the certificate with fifteen credits if they choose a research or statistics and analytics courses that does not requires a prerequisite. The courses with prerequisites are part of current plans of study for majors in Data Science, Statistics, and Nursing.

SDSU has collaborated with Dakota State University and included INFS 762 Data Warehousing and Data Mining and INFS 764 Big Data Analytics in the Statistics & Analytics course list. These courses are part of the program requirements for the M.S. in Analytics and M.S. in Information Systems.

Prefix	Number	Course Title	Prerequisites for Course	Credit Hours	New (yes, no)
EDER	605	Foundations of Institutional Research and Assessment in Higher Education	None	3	Yes
STAT	794	Internship	None	3	No
		Research Methods - Select <u>one</u> course from the list below.	Refer to list	3	No
		Statistics & Analytics – Select <u>two</u> courses from the list below.	Refer to list	6	No
Subtotal				15	

Research Methods - Select one course from the list:

Prefix	Number	Course Title	Prerequisites for Course	Credit Hours	New (yes, no)
CHRD/ HDFS	602	Research & Evaluation in Counseling and Human Development	None	3	No
CMST	787	Research in Communication and Media	None	3	No
ECON	707	Research Methodology in Applied Economics	None	3	No
EDER	610	Introduction to Research	None	3	No
EDER	614	Advanced Education Research Design & Analysis	None	3	No
EDER	711	Educational Assessment	None	3	No
HNS	708	Applied Research and Evidence Based Analysis	None	3	No
MCOM	786	Conducting Professional Research	None	3	No
NURS	721	Assessment and Evaluation in Nursing Education	NURS 720 (3 cr.)	3	No
NURS	825	Qualitative Research Methods in Nursing	NURS 815 (3 cr.) and NURS 820 (3 cr.)	3	No

Statistics & Analytics – Select two courses from the list:

Prefix	Number	Course Title	Prerequisites for Course	Credit Hours	New (yes, no)
ECON	705	Econometrics	None	3	No
HSC	631	Biostatistics I	None	3	No
HSC	731	Biostatistics II	HSC 631 (3 cr.)	3	No
STAT	515	R Programming	CSC 150 (3 cr.) or INFO 101 (3 cr.)	3	No
STAT	541	Statistical Methods II	None	3	No
STAT	545	Nonparametric Statistics	STAT 281 (3 cr.) or STAT 381 (3 cr.) or STAT 382 (3 cr.)	3	No
STAT	551	Predictive Analytics	STAT 686 (3 cr.) and [STAT 515 (3 cr.) or STAT 600 (3 cr.)]	3	No
STAT	553	Applied Bayesian Statistics	MATH 125 (4 cr.) and STAT 482 (3 cr.) and [STAT 514 (3 cr.) or STAT 515 (3 cr.)]	3	No
STAT	601	Modern Applied Statistics I	STAT 541 (3 cr.) and STAT 600 (3 cr.)	3	No
STAT	602	Modern Applied Statistics II	STAT 601 (3 cr.)	3	No
STAT	686	Regression Analysis I	MATH 515 (3 cr.) and STAT 684 (3 cr.)	3	No
STAT	687	Regression Analysis II	STAT 686	3	No
INFS	762	Data Warehousing and Data Mining (DSU)	INFS 605 (3 cr.) and INFS 760 (3 cr.)	3	No
INFS	774	Big Data Analytics (DSU)	None	3	No
NURS	830	Quantitative Methods in Nursing Research	HSC 631 (3 cr.), NURS 815 (3 cr.), and NURS 820 (3 cr.)	3	No

8. Student Outcome and Demonstration of Individual Achievement.

Board Policy 2:23 requires certificate programs to “have specifically defined student learning outcomes.

A. What specific knowledge and competencies, including technology competencies, will all students demonstrate before graduation? *The knowledge and competencies should be specific to the program and not routinely expected of all university graduates.*

Students completing this certificate will:

- Examine fundamental knowledge and skills for conducting institutional research and assessment in higher education.
- Use appropriate data management and data analysis techniques to summarize data and interpret results.
- Apply good practices of institutional research, assessment, and survey design to collect information related to institutional effectiveness, student outcomes, and compliance reporting.

B. Complete the table below to list specific learning outcomes – knowledge and

competencies – for courses in the proposed program in each row.

Individual Student Outcome	Program Courses that Address the Outcomes			
	Foundations of IR & Assessment in Higher Education	Research Methods	Statistics & Analytics	Internship
Examine fundamental knowledge and skills for conducting institutional research and assessment in higher education.	X			X
Use appropriate data management and data analysis techniques to summarize data and interpret results.		X	X	X
Apply good practices of institutional research, assessment, and survey design to collect information related to institutional effectiveness, student outcomes, and compliance reporting.	X	X		X

9. Delivery Location.

Note: The accreditation requirements of the Higher Learning Commission (HLC) require Board approval for a university to offer programs off-campus and through distance delivery.

A. Complete the following charts to indicate if the university seeks authorization to deliver the entire program on campus, at any off campus location (e.g., USD Community College for Sioux Falls, Black Hills State University-Rapid City, Capital City Campus, etc.) or deliver the entire program through distance technology (e.g., as an on-line program)?

	Yes/No	<i>Intended Start Date</i>
On campus	Yes	2022-2023 Academic Year

	Yes/No	<i>If Yes, list location(s)</i>	<i>Intended Start Date</i>
Off campus	No		

	Yes/No	<i>If Yes, identify delivery methods</i> <i>Delivery methods are defined i.</i>	<i>Intended Start Date</i>
Distance Delivery (online/other distance delivery methods)	Yes	015 – Internet Asynchronous – Term Based Instruction 018 – Internet Synchronous	2023-2024 Academic Year
Does another BOR institution already have authorization to offer the program online?	No	If yes, identify institutions:	

B. Complete the following chart to indicate if the university seeks authorization to deliver more than 50% but less than 100% of the certificate through distance learning (e.g., as

an on-line program)? *This question responds to HLC definitions for distance delivery.*

	Yes/No	If Yes, identify delivery methods	Intended Start Date
Distance Delivery (online/other distance delivery methods)	No		

10. Additional Information:

Admission Requirements

GRE: Not required

TOEFL: 71 Internet-based

TOEFL Essentials: 7.5

IELTS: 6.0

Duolingo: 100

Appendix A
New Course Request



SOUTH DAKOTA BOARD OF REGENTS
ACADEMIC AFFAIRS FORMS
New Course Request

SDSU	College of Education & Human Sciences / School of
Institution	Education, Counseling & Human Development
Dennis D. Hedge	4/27/2022
Institutional Approval Signature	Date

Section 1. Course Title and Description

Prefix & No.	Course Title	Credits
EDER 605	Foundations of Institutional Research and Assessment in Higher Education	3

Course Description
This course helps students explore knowledge and skills needed for a career in institutional research or assessment.

Pre-requisites or Co-requisites

Prefix & No.	Course Title	Pre-Req/Co-Req?
None		

Registration Restrictions

None

Section 2. Review of Course

2.1. Will this be a unique or common course?

☒ **Unique Course**

Prefix & No.	Course Title	Credits
EDER 515	Educational Assessment	2

Provide explanation of differences between proposed course and existing system catalog courses below:

There are several courses with the term 'assessment'. These courses tend to focus on assessment in k-12 education or assessment within a particular field – not higher education assessment. There are no courses that specifically address Institutional Research in Higher Education content.

Section 3. Other Course Information

3.1. Are there instructional staffing impacts?

☒ No. Schedule Management, explain below: Course will be taught by personnel from the SDSU Office of Institutional Research and Assessment. No additional teaching load will be placed on instruction staff in the School of Education, Counseling & Human Development or the College of Education and Human Sciences.

3.2. Existing program(s) in which course will be offered: Institutional Research and Assessment in Higher Education Certificate

3.3. Proposed instructional method by university: D – Discussion/Recitation

3.4. Proposed delivery method by university: 001 – Face to Face Term Based Instruction, 015 – Internet Asynchronous – Term Based Instruction, 018 – Internet Synchronous

3.5. Term change will be effective: Fall 2022

3.6. Can students repeat the course for additional credit? ☐ Yes, total credit limit: ☒ No

3.7. Will grade for this course be limited to S/U (pass/fail)? ☐ Yes ☒ No

3.8. Will section enrollment be capped? ☒ Yes, max per section: 20 ☐ No

3.9. Will this course equate (i.e., be considered the same course for degree completion) with any other unique or common courses in the common course system database in

Colleague and the Course Inventory Report? ☐ Yes ☒ No

3.10. Is this prefix approved for your university? ☒ Yes ☐ No

Section 4. Department and Course Codes (Completed by University Academic Affairs)

4.1. University Department Code: SECH

4.2. Proposed CIP Code: 13.0608

Is this a new CIP code for the university? ☐ Yes ☒ No

**NEW COURSE REQUEST
Supporting Justification for On-Campus Review**

Jana Hanson	Jana Hanson	1/6/2022
Request Originator	Signature	Date
Kurt Cogswell	Kurt Cogswell	2/15/2022
Department Chair	Signature	Date
Suzette Burckhard	Suzette Burckhard	2/28/2022
School/College Dean	Signature	Date
Jay Trenhaile	Jay Trenhaile	12/3/2021
Department Chair	Signature	Date
Matt Vukovich	Matt Vukovich	12/9/2021
School/College Dean	Signature	Date

- Provide specific reasons for the proposal of this course and explain how the changes enhance the curriculum.
EDER 605 Foundation of Institutional Research and Assessment in Higher Education will be a required course for the proposed graduate certificate in Institutional Research and Assessment. This course helps students explore knowledge and skills needed for a career in institutional research or assessment.
- Note whether this course is: ☒ Required ☐ Elective
- In addition to the major/program in which this course is offered, what other majors/programs will be affected by this course?
None
- If this will be a dual listed course, indicate how the distinction between the two levels will be made.
N/A
- Desired section size 20
- Provide qualifications of faculty who will teach this course. List name(s), rank(s), and degree(s).
Jana Hanson, Ph.D.
- Note whether adequate facilities are available and list any special equipment needed for the course.
No special equipment. Adequate facilities are available.
- Note whether adequate library and media support are available for the course.
There is adequate library and media support available.
- Will the new course duplicate courses currently being offered on this campus?
☐ Yes ☒ No

10. If this course may be offered for variable credit, explain how the amount of credit at each offering is to be determined.
N/A