

# Arizona State University

## Academic Strategic Plan Archive

### For 2018-2019 Planning



This document provides an archival record of the Arizona State University academic strategic plan submitted during the 2017-2018 academic year for 2018-2019 planning. The Arizona Board of Regents Academic Strategic Plans Policy (2-223) states that this institution is required to submit an annual strategic plan for approval, which includes new academic programs, certain program eliminations and organizational unit changes. Other changes are reviewed as part of ASU's internal academic plan.

Note: Inclusion in this document does not indicate that the program or change has been approved by the university. This document only notates programs and changes which were approved for the 2018-2019 planning process.

## **About this Document**

To navigate this version of the Academic Strategic Plan Archive, refer to the table of contents and the bookmarks provided. The table of contents provides a hyperlinked listing of resources in the order in which they appear in this document. Keyword searches may be employed as an additional means of locating resources within this document.

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**EXECUTIVE SUMMARY**

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**Item Name: New Program Requests**

- Action Item
- Committee Recommendation to Full Board
- First Read of Proposed Policy Change
- Information or Discussion Item

**Issue:** Arizona State University asks the committee to review and recommend for board approval the new program requests effective in the 2018-2019 catalog year

**Enterprise Strategic Plan**

- Empower Student Success and Learning
- Advance Educational Attainment within Arizona
- Create New Knowledge
- Impact Arizona
- Compliance
- Real property purchase/sale/lease
- Other: Academic Strategic Plan

**Statutory/Policy Requirements**

ABOR Policy 2-223.A, "The Academic Strategic Plan"

**Background/History of Previous Board Action**

As provided in the board policy, new program requests may be submitted throughout the year with the approval of the Academic and Student Affairs Committee.

**Discussion**

Arizona State University seeks to add new programs for implementation in the 2018-2019 Academic Year. This request is for new academic programs:

- Bachelor of Science in Digital Audiences
- Bachelor of Arts in Disability Studies
- Bachelor of Science in Population Health
- Bachelor of Arts in Education in Special Education
- Bachelor of Science in Computational Forensics

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- Master of Arts in World War II Studies
- Master of Arts in Political Psychology
- Master of Science in Auditory and Language Neuroscience
- Master of International Health Management
- Master of Science in Digital Audience Strategy
- Master of Science in Modern Energy Production and Sustainable Use
- Master of Science in Graphic Information Technology
- Professional Science Master's in Forensic Science

Degree planning at ASU is founded on the Charter: ASU is a comprehensive public research university, measured not by whom it excludes, but by whom it includes and how they succeed; advancing research and discovery of public value; and assuming fundamental responsibility for the economic, social, cultural and overall health of the communities it serves.

The new degree programs advance issues of health, education, information literacy, energy and science. In keeping with the 2017 Operational and Financial Review Enterprise Plan, the degree proposals are aligned strategically with our design aspirations to leverage our place, transform society, value entrepreneurship, include use-inspired research, enable student success, fuse intellectual disciplines, be socially embedded, and engage students with issues locally, nationally and internationally.

### **Requested Action**

Arizona State University asks the committee to review and recommend for board approval the new program requests for the degree programs listed above.

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**Arizona State University**  
**Proposed New Program Summary**

<b>Proposed New Programs</b>	<b>Degree</b>	<b>College/School</b>	<b>Location of Offering</b>
<b>Undergraduate Programs</b>			
Digital Audiences	BS	Walter Cronkite School of Journalism and Mass Communication	Downtown Phoenix
Disability Studies	BA	New College of Interdisciplinary Arts and Sciences	West
Population Health	BS	College of Health Solutions	Downtown Phoenix
Special Education	BAE	Mary Lou Fulton Teachers College	Tempe
Computational Forensics	BS	New College of Interdisciplinary Arts and Sciences	West
<b>Graduate Programs</b>			
World War II Studies	MA	College of Liberal Arts and Sciences	Tempe
Political Psychology	MA	College of Liberal Arts and Sciences	Tempe
Auditory and Language Neuroscience	MS	College of Health Solutions	Downtown Phoenix
International Health Management	MIHM	College of Health Solutions	Downtown Phoenix
Digital Audience Strategy	MS	Walter Cronkite School of Journalism and Mass Communication	Downtown Phoenix
Modern Energy Production and Sustainable Use	MS	Ira A. Fulton Schools of Engineering	Tempe
Graphic Information Technology	MS	Ira A. Fulton Schools of Engineering	Tempe
Forensic Science	PSM	New College of Interdisciplinary Arts and Sciences	West

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**ARIZONA STATE UNIVERSITY  
ACADEMIC PROGRAMS**

**Table 1 - Proposed New Programs**

Name of Proposed Degree (degree type and major), College/School, Location, Anticipated Catalog Year	Program Fee Required? (Yes or No)	Brief Description Justification and Identified Market Need (max 150 words)	Learning Outcomes and Assessment Plan (max 250 words)	Projected 3rd Year Enrollment
<b>New Undergraduate Degrees</b>				
Bachelor of Science in Digital Audiences  Walter Cronkite School of Journalism and Mass Communication  (Downtown Phoenix)  2018-2019	Yes	<p>Many organizations in public and private sectors have a critical and growing need to connect with audiences on digital and social media. Corporations, government agencies, community groups and nonprofits all need professionals who understand how to reach large online audiences to increase sales, advertising, donations, political support and community cohesion.</p> <p>This expertise is different from traditional public relations training. The Cronkite School's Bachelor of Science in Digital Audiences will prepare students to lead in this area.</p>	<p>Learning Outcome 1: Graduates of the program will be able to analyze quantitative digital performance data to track audience behavior.</p> <ul style="list-style-type: none"> <li>In MCO 438 Digital Audience Analysis, students must pass the Google Analytics certification exam, recognized across the communications industry as evidence of quantitative literacy and ability to use digital performance data to track audience behavior.</li> <li>In MCO 438 Digital Audience Analysis, students will complete five written assignments that require critical thinking in categorizing, synthesizing and inferring relationships from quantitative audience behavior data. Work will be graded against a rubric of professional standards of audience data analysis.</li> </ul>	150

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		<p>Through a data-driven, interdisciplinary approach, they will learn to measure, engage and grow audiences online and through social media. Online delivery will allow a diverse population of students to advance careers and deepen impact.</p> <p>This differs from our online Bachelor of Science in Mass Communication and Media Studies, which is a broad liberal arts degree. Through a focused set of core courses, this program will prepare students to succeed in this new and growing field.</p> <p>Market Need: The need for professionals with skills in this area is acute in the media industry. In research published by the Tow-Knight Center for Entrepreneurial Journalism in 2016, news organizations across the country identified "audience development and data" as one of the most sought-after skill sets for entry-level employees.</p> <p>However, the demand for digital audience skills extends beyond the</p>	<p>Learning Outcome 2: Graduates of the program will be able to use research to identify target audiences.</p> <ul style="list-style-type: none"> <li>● In MCO 439 Digital Audience Growth, students will use audience research and an awareness of global and cross-cultural diversity to identify target audiences for a capstone project. The Cronkite School will work with a team of outside experts to evaluate a random sample of projects against a rubric of professional standards for identification of target audiences.</li> <li>● In MCO 436 Audience Research and Behavior, students will produce written communication summarizing qualitative and quantitative digital audience research, drawing on principles of social science, ethics and the scientific method. Student work will be evaluated against a rubric of professional standards for this outcome.</li> </ul> <p>Learning Outcome 3: Graduates of the program will be able to create and distribute social media content with an intended impact on a target audience.</p> <ul style="list-style-type: none"> <li>● In the capstone course MCO 439 Digital Audience Growth, students will draw on principles of rhetorical strategy to create and distribute content for a targeted social media campaign. A team of outside experts will evaluate a random sample of capstone</li> </ul>	
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		<p>media industry. There were approximately 173,000 average monthly postings for related jobs in the past year, according to ASU's Emsi economic modeling tool. Companies posting these jobs ranged from Oracle Corporation and Accenture to Facebook and Google. For every three unique job postings, there was only one hire - underscoring unsatisfied market demand.</p> <p>We are already seeing this market demand translate into broad undergraduate student interest. The Cronkite School launched an online Minor in Digital Audiences this semester. More than 160 students completed the first course, and more than 30 declared the minor within a month of starting it. Of those, approximate two-thirds came from majors outside of the Cronkite School.</p> <p>The new Bachelor of Science in Digital Audiences will offer a diverse student population the opportunity to excel in this area. We do not know of another school offering an undergraduate degree in digital audiences, so</p>	<p>projects against a rubric of professional standards for effective social media content.</p> <ul style="list-style-type: none"> <li>● In the capstone course MCO 439 Digital Audience Growth, students will use the scientific method to test control and experimental treatments of social media content and make recommendations to further optimize impact. A team of outside experts will evaluate a random sample of projects against a rubric of professional standards for testing and optimizing effective social media content.</li> </ul> <p>Learning Outcome 4: Graduates of the program will be able to create and execute an audience growth strategy using digital platforms.</p> <ul style="list-style-type: none"> <li>● Drawing on coursework from throughout the program, students in the capstone course MCO 439 Digital Audience Growth, will develop, execute and measure effectiveness of a digital audience growth strategy for a client. A team of outside experts will evaluate a random sample of projects against a rubric of professional standards for audience growth strategies.</li> </ul> <p>Learning Outcome 5: Graduates of the program will be able to create and execute audience growth strategies that meet the highest standards of social science and journalistic ethics.</p>	
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		<p>students with the ASU bachelor of science will differentiate themselves from all other candidates in the market.</p>	<ul style="list-style-type: none"> <li>● Drawing on ethical frameworks embedded throughout the program, students in the capstone course MCO 439 Digital Audience Growth will present their digital audience strategy work in a recorded oral presentation that addresses their ethical choices. A team of outside experts will evaluate a random sample of capstone projects against a rubric of ethical standards for audience research and growth strategies.</li> </ul>	
<p>Bachelor of Arts in Disability Studies</p> <p>New College of Interdisciplinary Arts and Sciences</p> <p><i>School of Humanities, Arts, and Cultural Studies</i></p> <p>(West)</p> <p>2019-2020</p>	<p>No</p>	<p>The Bachelor of Arts in Disability Studies explores historical, linguistic, social, artistic, and policy dimensions of disability with the goal of advancing the social, cultural, and economic participation of people whose lives are impacted by disabilities and to ensure society benefits from their contributions. The degree combines theory and practice to prepare students to address exclusions, barriers, and misapprehensions regarding disabilities through education, knowledge of policies, and historical awareness. The new disability studies paradigm is one that utilizes an asset-based model that promotes self-reliance, independence, and focuses on the contributions</p>	<p>Learning Outcome 1: Graduates of the program will be able to synthesize biological, psychological and social dimensions of disability research in order to communicate to wider audiences the multi-dimensional elements of the disability experience.</p> <ul style="list-style-type: none"> <li>● In HRC 105 Introduction to Disability Studies, students will complete an interdisciplinary project that demonstrates the ability to summarize and interpret biological, psychological and social implications of disability research. The projects will be evaluated against a rubric of multidisciplinary research methods in disability studies.</li> <li>● In an upper division course, students will complete embedded assignments that synthesize biological,</li> </ul>	<p>50</p>

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		<p>people with disabilities make to society, the workforce and their communities. A key objective of this degree is to impart the knowledge and skills needed to advance the personal and professional development, economic productivity and full participation of persons with disabilities in employment and society. Graduates will have the skills to work in such professions as business, government, education, university disability resource centers, human resource departments, recreational facilities, community and non-governmental organizations, and healthcare agencies. Majors will develop a professional-level digital portfolio of research to prepare for the job market.</p> <p>Market Need: According to the Census Bureau, as the population ages, the number of disabled people will grow by an estimated 21% between 2007 and 2030. By 2013, approximately 35 colleges and universities nationally offered graduate and undergraduate degrees, minors, and certificates in Disability Studies, the oldest</p>	<p>psychological and social dimensions of disability research, and the students will be able to communicate to wider audiences the multi-dimensional elements of the disability experience. The projects will be evaluated against an advanced rubric of multidisciplinary research methods in disability studies.</p> <p>Learning Outcome 2: Graduates of the program will be able to analyze, interpret and communicate existing assumptions about people with disabilities in order to inform policies at public and organizational levels.</p> <ul style="list-style-type: none"> <li>● Students will create an interdisciplinary project that analyzes historical and/or current public and organizational policies which inform social representation and treatment of persons with a disability. The projects will be assessed with a faculty-designed rubric that encompasses critical thinking, evaluation of evidence, and written communication.</li> <li>● Students will appraise biases found in policies, support their conclusions as to the effect those biases have in the treatment and social representations of persons with a disability, and defend their position with examples. The appraisals will be assessed with a faculty-</li> </ul>	
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		<p>institutions being CUNY, Syracuse University, and the University of Illinois at Chicago. The degree in Disability Studies is also an excellent option as a concurrent degree or minor. As reported by the New York Times, a degree in Disability Studies, when combined with another academic or professional path, leads to multiple employment opportunities where disabilities interface with other social, educational and rehabilitative areas. There is a growing list of prestigious universities offering a degree in Disability Studies. <a href="http://disabilitystudies.syr.edu/u/programs-list/">http://disabilitystudies.syr.edu/u/programs-list/</a></p>	<p>designed rubric that encompasses critical thinking, evaluation of evidence, and written communication.</p> <p>Learning Outcome 3: Graduates of the program will be able to analyze issues that influence and shape social institutions, professions, policies, and systems of representation and advocate for improvement, when appropriate.</p> <ul style="list-style-type: none"> <li>• Students will participate in a service learning internship that allows them to examine the social institutions, professions, policies, and systems of representation that serve the disability community. Student learning will be measured by qualitative pretest-posttest model of assessment of the service learning experience by supervisors and the student participant.</li> <li>• Students will prepare a learning report that identifies issues that have influenced and shaped the social institution, profession, policies, and systems of representation manifest in the service learning internship. The reports will be evaluated by rubrics developed by the faculty, in consultation with members of the</li> </ul>	
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			<p>agencies where the internships have occurred.</p> <p>Learning Outcome 4: Graduates of the program will be able to critically engage with problems experienced by people with disabilities and will seek to establish dialogue with the disability community to positively affect policies and programs within institutions, agencies, and organizations, public and private.</p> <ul style="list-style-type: none"> <li>● Students will participate in an ethnographic project that includes data collection and analysis to discover common themes as they relate to policies and programs that seek to engage the disability community. Students will be assessed using a VALUE rubric in quantitative reasoning and the evaluation of evidence.</li> <li>● Students will advance civil dialogue in complex social areas where disagreement on policies and practices related to people with disabilities occurs in an ethical, honest and judicious manner. The students will be assessed based on VALUE rubrics related to intercultural communication and ethics.</li> </ul>	
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			<p>Learning Outcome 5: Graduates of the program will be able to categorize, compare, interpret, and communicate a broad awareness of disability studies knowledge and its impact on a wide range of professions.</p> <ul style="list-style-type: none"> <li>Students will prepare a digital portfolio with scholarship, creative projects, and/or applied learning experiences, providing a holistic overview of each student's accomplishments and contributions to disability studies for a range of organizations, institutions and agencies. The portfolios will be assessed by a faculty-designed rubric that takes a comprehensive view of disability studies in professional settings.</li> </ul>	
<p>Bachelor of Science in Population Health</p> <p>College of Health Solutions</p> <p><i>School of Nutrition and Health Promotion</i></p> <p>(Downtown Phoenix)</p>	<p>Yes</p>	<p>The Bachelor of Science in Population Health integrates traditional public health and health care system approaches and reflects the rapidly changing health environment in the U.S. The Institute of Medicine has identified Population Health as a domain encompassing both public health and medical care, reflecting the nature of Population Health as</p>	<p>Learning Outcome 1: Graduates of the program will analyze and interpret data using industry standard tools to formulate recommendations regarding population health practices.</p> <ul style="list-style-type: none"> <li>In HCD 300 Biostatistics, students will complete embedded assignments in which they will make a recommendation to diminish a potential negative future outcome based on analysis of data sets derived from statistical theory as well as concepts and</li> </ul>	<p>150</p>

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<p>2019-2020</p>		<p>encompassing the health system that reflects not just "cell to society" but the broad array of relevant domains, including educational programs, governments, nonprofits, and corporate community. However, there are few academic programs that integrate health care delivery and public health domains. The new degree in Population Health provides greater flexibility in course offerings, which better reflects the complex systems that impact population health, and more accurately describes courses and focus of the program and school.</p> <p>Market Need: According to the Bureau of Labor Statistics, there will be a deficit of 250,000 community health workers by 2020. The availability of an undergraduate degree in Population Health will provide students with knowledge and expertise across fields and disciplines dedicated to improving population health. This academic program will train the next generation of experts who are able to integrate health care and public health practices</p>	<p>methods, such as the SPSS (statistical package for the social sciences) software application. This recommendation is assessed against a faculty-created rubric that addresses evaluation of evidence, quantitative reasoning, principles of science, problem solving, critical thinking, and effective communication.</p> <ul style="list-style-type: none"> <li>● In PBH 310 Epidemiology in Public Health, students will use critical thinking and data synthesis to interpret and infer relationships in a select embedded assignment. The relationships will be graded against a rubric of professional standards to analyze epidemiologic data problems and make decisions based on application of epidemiologic concepts and methods in a variety of settings.</li> </ul> <p>Learning Outcome 2: Graduates will be able to improve the health of populations by communicating evidence-based population health practices in the most appropriate formats to benefit diverse populations.</p> <ul style="list-style-type: none"> <li>● In PBH 100 Introduction to Public Health, students will research a specific health disparity and interview organizations working to reduce that disparity. Students will evaluate and synthesize information to formulate a reduction strategy which then be proposed to peers via a written paper and</li> </ul>	
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		<p>for the improvement of population health.</p>	<p>oral presentation. The students' work will be graded against a faculty-created rubric that addresses evaluation and communication of potential solutions for effective realization of change.</p> <ul style="list-style-type: none"> <li>● In HCD 310 Health Communication, students will formulate an information campaign consisting of print and digital media that focuses on communicating a specific aspect of health to appeal to a defined audience. The students will examine theoretical frameworks, communication techniques relevant to the social and cultural sensitivities of the audience, and different technologies including eHealth and mHealth to develop effective media to initiate change. The artifacts created for the campaign are evaluated against a faculty-created rubric that measure the student's ability to analyze the needs of a specific population and effectively communicate change strategies.</li> <li>● In the Health Field Experience, students will use the accumulation of academic projects across their undergraduate degree in their digital portfolios to implement a reflection paper that will serve as a foundation for success in their intended profession. This reflection is evaluated against a faculty-created rubric that assesses their ability to describe how the degree has shaped their</li> </ul>	
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			<p>understanding of the importance of ethical conduct in population health as well as the local and global impacts of population health.</p> <p>Learning Outcome 3: Graduates will apply their knowledge and experience of health values and ethics to create and ensure a health-related environment where patients' rights and privacy protected.</p> <ul style="list-style-type: none"> <li>● In PBH 444 Population Health Field Experience, students will complete a Health Insurance Portability and Accountability Act (HIPAA) risk assessment, designed to assure that in environments where protected patient information is accessible the student will not disclose that information. Students' understanding of complex patient and health care scenarios will be assessed against a professional rubric that addresses critical thinking in the evaluation of scenarios where protected information could be disclosed, understanding of medical ethics, and problem solving to propose solutions to health care system risks to patient privacy.</li> <li>● Students in PBH 444 spend part of their course time working in community and public health settings. Students will write a weekly blog to document their increasing awareness of the operational environment of their respective field(s) of service, and their ability to identify, analyze, and consider the requirements of operations affecting the</li> </ul>	
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			<p>mission of their host organization including ethics and values. The blog posts are measured against a faculty-created rubric demonstrating application of ethical thinking and the ability to identify social determinants associated with public health.</p> <p>Learning Outcome 4: Graduates will apply their knowledge of biological, psychological, and social/cultural factors to positively impact the complex systems that influence global population health</p> <ul style="list-style-type: none"> <li>● In the courses General Biology and Population Health Biology, students will complete embedded assignments in which they examine biological factors, such as epigenetic influences, that have impacted human health historically and currently in order to gain greater understanding of bioscience foundations required for improving population health globally. The understanding and interpretation of biological factors relevant to population health improvement will be assessed against a faculty-created rubric that addresses principles of scientific method, evaluation and interpretation of evidence including that related to biological foundations of human health as the basis for implementation in health-related organizations.</li> <li>● In the courses Health Behavior Theory and Social Determinants of Health and Health</li> </ul>	
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			<p>Behavior, students will complete embedded assignments in which they examine behavioral, social and cultural factors that have impacted health historically, and students will employ quantitative and qualitative research methods of complexity science. The understanding and interpretation of behavioral and social factors relevant to population health improvement will be assessed against a faculty-created rubric that addresses evaluation and interpretation of evidence, understanding principles of scientific method, and evaluation of evidence regarding the behavioral and social foundations of human health as the basis for competent implementation of that understanding in health-related organizations.</p> <ul style="list-style-type: none"> <li>● In the course Complex Systems in Global Population Health, students will employ quantitative and qualitative research methods of complexity science and communicate orally and in writing the interplay of biological, behavioral, social and environmental factors that both impact population health and serve as the foundation for problem solving to improve population health. Analyses will include exploration of historical factors that impact</li> </ul>	
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			<p>inertia, global cultures with sometimes competing interests, and the role of science as a foundation for population health decision-making. Students' understanding of complex and often non-linear complex relationships will be assessed against a faculty-created rubric that addresses critical thinking in the evaluation of evidence, understanding of scientific method, and problem solving to propose solutions to a major threat to population health.</p>	
<p>Bachelor of Arts in Education in Special Education</p> <p>Mary Lou Fulton Teachers College</p> <p><i>Division of Teacher Preparation</i></p> <p>(Tempe)</p> <p>2018-2019</p>	No	<p>This degree in Special Education serves as the foundational degree to development knowledge and skills to meet the educational needs of students with special needs. This degree is aligned with the Arizona State Standards and the standards and ethical practices of the Council for Exceptional Children. This bachelor's degree will also lead to specialized expertise for distinct concentrations emphasizing specific disability groups such as learning disabilities, emotional disturbance, mental retardation, visual impaired, etc.</p> <p>Market Need: Through this degree, students will be able to extend their knowledge of special education</p>	<p>Learning Outcome 1: Graduates will collaborate with general educators and service providers to provide effective instruction for exceptional children.</p> <ul style="list-style-type: none"> <li>• Observations evaluated with target indicators in the Mary Lou Fulton Teachers College Professionalism Rubric and embedded assignments measuring instructional planning provide evidence of addressing cultural and learning diversities of exceptional children.</li> <li>• Portfolio entries demonstrate progressive improvement based on professional standards in students' abilities to effectively communicate and collaborate with teachers and service providers.</li> </ul> <p>Learning Outcome 2: Graduates will demonstrate the ability to effectively conduct assessments that inform educational decisions for children with exceptionalities.</p>	60

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		<p>practices to the various disabilities that serves in schools. Rather than producing generalists, this degree allows the flexibility to offer concentrations in the multiple disability areas that are served in schools. Currently, for example, schools are in need of distinct disability trained professionals. The concentrations will produce the type of highly qualified and effective teacher for that population.</p>	<ul style="list-style-type: none"> <li>● Critical thinking and decision making in assessment design and analysis are assessed through observations using targeted indicators in the System for Teacher and Student Advancement (TAP) Rubric.</li> <li>● Embedded assessments in courses measure students’ abilities to reason from quantitative and qualitative evidence and use data in educational decisions based on professional rubrics.</li> </ul> <p>Learning Outcome 3: Graduates will be able to provide differential instruction for children with various disabilities.</p> <ul style="list-style-type: none"> <li>● Observations scored with targeted System for Teacher and Student Advancement (TAP) Rubric and the Mary Lou Fulton Teachers College Professionalism Rubric indicators, conducted over multiple instructional sequences with K-12 children, provide evidence of problem solving, critical thinking, and the ability to integrate content standards across the curriculum.</li> <li>● Observations and embedded assignments supply evidence of scientifically based skills in specialty areas of disability, including Braille pedagogy and task-analysis.</li> </ul> <p>Learning Outcome 4: Graduates will be able to communicate effectively the educational progress of</p>	
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			<p>exceptional children to parents and other professionals.</p> <ul style="list-style-type: none"> <li>● Observations evaluated with targeted Mary Lou Fulton Teachers College Professionalism Rubric indicators provide evidence of students' abilities to communicate with multiple stakeholders regarding characteristics and needs of exceptional children.</li> <li>● Embedded assignments reflect discipline-related literacy skills in communication, and inquiry skills in identifying credible evidence and evaluating best practice research. Portfolio entries, evaluated with teacher-developed rubrics, demonstrate progressive improvement throughout the program.</li> </ul>	
<p>Bachelor of Science in Computational Forensics</p> <p>New College of Interdisciplinary Arts and Sciences</p> <p><i>School of Mathematical and Natural Sciences</i></p> <p>(West)</p> <p>2019-2020</p>	<p>No</p>	<p>The Bachelor of Science in Computational Forensics is multidisciplinary and encompasses physical, biological and social sciences with a focus on statistics and mathematics. Students investigate specific forensic problems using statistics, computing, and mathematics, with the main goal of advancing forensic knowledge and capabilities. Students will study and develop quantitative and computational methods that assist basic and applied research efforts in</p>	<p>Learning Outcome 1: Graduates of the program will design and implement robust statistical studies which includes the ability to think critically, evaluate data, and draw robust conclusions.</p> <ul style="list-style-type: none"> <li>● Students' ability to formulate and test scientific hypotheses will be assessed by faculty-designed rubrics for the hypothesis testing assignment in STP 281 Statistical Analysis for Researchers.</li> <li>● Students' ability to design and analyze scientific experiments will be assessed by faculty-designed rubrics for the final project in STP 310 Design/Analysis of Experiments.</li> </ul>	<p>50</p>

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		<p>forensic science, establish or prove scientific basis in investigative procedures, and support forensic examiner casework. Through modeling, computer simulation, and computer-based analysis and recognition, students will gain an in-depth understanding of the forensic science discipline, the scientific method, and the systematic approach to forensic sciences.</p> <p>Market Need: The Occupational Outlook Handbook (The Bureau of Labor Statistics, United States Department of Labor) lists forensic scientists growing "much faster than average" over the next eight years (through 2024). As market research, we have not identified any degree programs in computational forensics. However, articles by the National Institute of Standards and Technology together with a growing number of conferences and workshops (for example, <a href="http://www.icpr2016.org/site/session/7th-international-workshop-on-computational-forensics-iwcf-2016/">http://www.icpr2016.org/site/session/7th-international-workshop-on-computational-forensics-iwcf-2016/</a> and <a 186="" 538="" 841"="" 863="" href="https://www.samsi.info/programs-&lt;/a&gt;&lt;/p&gt; &lt;/td&gt; &lt;td data-bbox="> <p>Learning Outcome 2: Graduates of the program will implement a computing solution for data-driven problems in forensic science.</p> <ul style="list-style-type: none"> <li>• Students' ability to apply computing algorithms to solve problems will be assessed by successful completion (= functional program) of the programming assignment in ACO 240 Introduction to Programming Languages.</li> <li>• Students' ability to visualize big data sets implement predictive machine learning models, and draw robust conclusions from data will be assessed experiments will be assessed by faculty-designed rubrics for the final project in ACO 423 Data Science.</li> <li>• Students' ability to design, store, query, and critically analyze data will be assessed by faculty-designed rubrics for the practical exam in ACO 320 Database Systems.</li> </ul> <p>Learning Outcome 3: Graduates will demonstrate sufficient knowledge of, and the ability to effectively communicate regarding, current best practices of forensic science. Best practices are defined as the procedures by which forensic scientists self-evaluate, establish accurate laboratory/investigative procedures document work precisely, and assist the courts through reliable testimony.</p> <ul style="list-style-type: none"> <li>• The student's ability to develop and implement accurate laboratory procedure will</li> </ul> </a></p>	
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		<p>and-activities/research-related-courses/spring-2016-statistics-and-applied-mathematical-science-aspects-of-forensic-science-part-2/) suggests that the field is growing rapidly and will soon have a strong need. ASU has a strong reputation in Forensic Science, and this program will further enhance ASU's visibility in this field.</p>	<p>be assessed faculty-designed rubrics for the laboratory practical in FOR 286.</p> <ul style="list-style-type: none"> <li>The student's ability to communicate professionally in written and verbal form will be assessed by a mock crime scene project whereby they must document laboratory procedure and provide courtroom testimony in FOR 286 Principles of Forensic Science. Successful completion will be determined using a value rubric.</li> </ul> <p>Learning Outcome 4: Graduates of the Computational Forensics degree will be able to use mathematical techniques to analyze and describe digital images, and will be able to effectively communicate their findings.</p> <ul style="list-style-type: none"> <li>The student's ability to understand and critically analyze image processing will be assessed by faculty-designed rubrics for the final project of MAT 350 Techniques/Applications of Applied Math.</li> <li>The student's ability to describe the mathematical composition of digital images will be assessed through a final written assignment in MAT 350. Both the application of technique and the ability to communicate in written form will be evaluated by a value rubric.</li> </ul>	
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<b>New Graduate Degrees</b>				
<p>Master of Arts in World War II Studies</p> <p>College of Liberal Arts and Sciences</p> <p><i>School of Historical, Philosophical and Religious Studies</i></p> <p>(Tempe)</p> <p>2018-2019</p>	<p>Yes</p>	<p>A global conflict that impacted millions of people, World War II fundamentally reshaped the political and cultural landscape of our planet. Through advanced interdisciplinary study of World War II students explore the global nature of the conflict, the evolution of governance and political systems, and human responses to conflict, violence and genocide. Program coursework also helps students contextualize current events through study of the war’s historical, political, and cultural legacies. The knowledge and skills associated with such study are transferable to a variety of contexts, including education, military service, human rights work, public relations, diplomacy, international relations, and law.</p> <p>This interdisciplinary master’s program in World War II Studies leverages ASU’s online infrastructure and the world-class educational resources and instructional staff of both ASU and the National World War II Museum (NWM) in New Orleans.</p>	<p>Learning Outcome 1: Students will be able to identify, discuss, and summarize the causes of and major political, economic, and social issues associated with World War II.</p> <ul style="list-style-type: none"> <li>● Performance on paper in introduction to World War II course as assessed by the faculty-developed rubric including evaluation of evidence and awareness of history, the world and cultural diversity.</li> <li>● Evaluation of written section of comprehensive exam at the end of introduction to World War II course as assessed by the faculty-developed rubric including critical thinking and effective communication.</li> </ul> <p>Learning Outcome 2: Students will be able to identify, analyze, and explain the historical, political, and/or cultural connections between World War II and a current event.</p> <ul style="list-style-type: none"> <li>● Evaluation of performance on comparative assignment in World War II Today course (This course will be cross-listed across partner units) as assessed by the faculty-developed rubric including critical thinking and effective communication.</li> <li>● Evaluation of current events paper/project element (e.g. op-ed column or reflective essay in Capstone portfolio) utilizing faculty-</li> </ul>	<p>300</p>

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		<p>It invites new populations into higher education and engages issues of national and global relevance and importance.</p> <p>Market Need: The National World War II Museum has 147,000 paying members and serves 50,000+ visitors per month. They have identified demand among their members and the general public for advanced study in topics related to World War II. To that end, they have digitized thousands of assets and have developed summer training programs that serve approximately 40 teachers per year. The museum receives many more qualified applicants for its teacher training sessions than it can currently serve and has many more educational resources than it can currently exhibit.</p> <p>Based on demand for access to the museum resources and training programs, there appears to be a market for a fully online graduate program in World War II Studies. Target populations include life-long learners, K12 teachers, and</p>	<p>developed rubric including evaluation of evidence and awareness of history, the world and cultural diversity.</p>	
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		professionals who wish to hone transferable skills (critical thinking; analysis, communication, and collaboration skills; time and task management).		
<p>Master of Arts in Political Psychology</p> <p>College of Liberal Arts and Sciences</p> <p><i>School of Politics and Global Studies</i></p> <p>AND</p> <p><i>Department of Psychology</i></p> <p>(Tempe)</p> <p>2018-2019</p>	Yes	<p>The Master of Arts in Political Psychology will educate students in the psychological approach to politics, which brings to bear concepts and approaches to understand cognitive and emotional factors that influence decision-making, political attitudes and behavior, public opinion and political communication, as well as the role of persuasion and influence in political marketing. This degree will be housed in the new ASU facility in Washington, D.C. We will target professionals working for the government, political campaigns, lobbying firms, and nonprofits -- and those who wish to become such professionals -- who may take advantage of the application of psychological concepts and approaches to the substantive domain of politics. In this way, we are providing an additional set of skills to those who are involved in decisions</p>	<p>Learning Outcome 1: Students will be able to analyze and apply core concepts from political science and psychology in an interdisciplinary fashion.</p> <ul style="list-style-type: none"> <li>● Series of short papers performing analysis-integrating concepts from multiple disciplines. This will be assessed with a faculty-developed rubric of critical thinking and quantitative reasoning.</li> <li>● Internship course, final paper reflecting on the integration of academic and practical application experiences. This will be assessed with a faculty-developed rubric of effective communication.</li> </ul> <p>Learning Outcome 2: Students will be able to synthesize and evaluate the use of political psychology concepts and theories in explaining cognitive and emotional factors affecting decision making in a variety of settings.</p> <ul style="list-style-type: none"> <li>● Capstone course, short papers designed to synthesize knowledge on well-known decision-making errors and their consequences made by actors in a variety of settings. This will be</li> </ul>	30

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		<p>affecting our national and local communities consistent with the ASU Charter principles.</p> <p>Market Need: There is only one Master of Arts degree focused exclusively on political psychology in the United States, at Stony Brook University. Other programs typically offer concentrations within PhD programs in Political Science (e.g., Ohio State University, Washington State University, University of Minnesota). See the International Society of Political Psychology's resource page for a full listing: (<a href="http://www.ispp.org/resources/programs">http://www.ispp.org/resources/programs</a>). This is largely a reflection of the number of faculty working in this interdisciplinary area, which ASU has in its political science and psychology faculties. There is no program exclusively serving the Washington, D.C. area and no program with the capacity to deliver online education the way we do at ASU. We believe there will be significant demand by those working in D.C. to better understand the political psychology of decision-making, how voters digest</p>	<p>assessed with a faculty-developed rubric of critical thinking and evaluation of evidence.</p> <ul style="list-style-type: none"> <li>● Capstone course, final project where students will conduct in-depth evaluation of choices made in a complex decision making environment, such as the last few weeks of political campaign or the early stages of a military crisis. This will be assessed with a faculty-developed rubric of critical thinking and evaluation of evidence.</li> </ul>	
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		political information and diagnose "fake news," and many other related topics that have come to the fore recently.		
<p>Master of Science in Auditory and Language Neuroscience</p> <p>College of Health Solutions</p> <p><i>Department of Speech and Hearing Science</i></p> <p>(Downtown Phoenix)</p> <p>2018-2019</p>	Yes	<p>The proposed master's degree in Auditory and Language Neuroscience will provide students with training in neuroscience as they relate to auditory and language processing and human communication. Students will receive training in both basic and applied research techniques. They will complete two lab rotations and conduct research projects to gain expertise in neuropsychology, neurophysiology, neuroimaging, biological signal processing and psychoacoustic approaches to speech, language and hearing science research. ASU has a strong cohort of faculty members who focus on innovative approaches to the neuroscience of speech, language and hearing. This program will be appealing to a wide range of students from different training backgrounds (from psychology, speech and hearing science, neuroscience, bioengineering, etc.) who are interested in auditory</p>	<p>Learning Outcome 1: Students will demonstrate the ability to critically analyze and synthesize knowledge from the neuroscience research literature related to language and/or hearing.</p> <ul style="list-style-type: none"> <li>● Students will include a comprehensive and up-to-date literature review on current knowledge of neuroscience research in the areas of auditory or language function of interest in the Introduction section of their thesis or capstone paper that meets Lovitts' (2007) rating of "Very Good" or "Outstanding" as determined by each student's Thesis or Capstone Committee.</li> <li>● On a 5-point scale ("5=Excellent", "4=Good," "3=Adequate," "2=Low," and "1=little or none"), second-year students will select "5" or "4" to the following questions: <ul style="list-style-type: none"> <li>○ How would you rate your knowledge of current research findings in auditory and language neuroscience?</li> <li>○ How strong do you think your knowledge is regarding the current methodologies used in the fields of auditory and language neuroscience?</li> </ul> </li> </ul>	20

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		<p>and language neuroscience. Graduates of the proposed master's program in Auditory and Language Neuroscience will be highly competitive for careers in academic research, clinical research, and technology settings.</p> <p>Market Need: This program will appeal to a wide range of students from different backgrounds (e.g., psychology, speech and hearing science, neuroscience, and bioengineering) who are interested in auditory and language neuroscience. There are approximately 36 master's programs in neuroscience in the U.S. (<a href="http://mastersportal.eu">http://mastersportal.eu</a>). This program will be unique because it will be the only one focused specifically on auditory and language processing as they relate to human communication.</p> <p>The proposed degree will prepare graduates to pursue diverse career opportunities:          (1) professional careers in academic research, clinical research, and technology settings;</p>	<p>Learning Outcome 2: Students will demonstrate competence in experimental design, data collection and analysis, and interpretation of neuroscience research related to language and/or hearing.</p> <ul style="list-style-type: none"> <li>● Students will have an abstract on which they are first author accepted to a regional, national, or international neuroscience (or neuroscience-related) conference.</li> <li>● Students will earn an 80% or higher on the cumulative final exam in SHS 542: Research Methods in Auditory and Language Neuroscience.</li> </ul>	
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		<p>(2) PhD programs in fields related to neuroscience, communication sciences, psychology, and bioengineering; and                  (3) medical school, especially for applicants with an interest in neurology and otolaryngology. This master's degree provides the graduates with increased marketability and experience with clinical and medical applications of their neuroscience-related expertise, a main focus of the White House Brain Research through Advancing Innovative Technologies (BRAIN) Initiative.</p>		
<p>Master of International Health Management                   College of Health Solutions   <i>School for the Science of Health Care Delivery</i>                   (Downtown Phoenix)                   2018-2019</p>	<p>Yes</p>	<p>The Master of International Health Management is a PLuS Alliance degree program offered by Arizona State University and University of New South Wales in Sydney, Australia. The curriculum crosses both privatized and public health care systems, ideal for those seeking a career in international health systems management. Students will complete core coursework in health care management and finance and comparative health systems. Students</p>	<p>Learning Outcome 1. Graduates will articulate the influence of international health systems design on individual and population health outcomes (ex: health care access and affordability).</p> <ul style="list-style-type: none"> <li>● HCD XXX / PHCM 9471 Comparative Health Care Systems - Essay comparing two healthcare systems. Essays will be evaluated using a faculty-committee developed rubric with sections for effective communication, evaluation of evidence, and awareness of history, the world and cultural diversity.</li> <li>● HCD XXX / PHCM 9471 Comparative Health Care Systems - Journal Club, What are some of</li> </ul>	<p>75</p>

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		<p>select a four-course stream focusing on health informatics, patient safety, health policy, health economics, hospital management, hospital infection control, or international development. Electives will further strengthen skills in areas of student interest.</p> <p>Market Need: In the U.S., employment of health managers is projected to grow 17 percent between 2014 and 2024. This is a significant growth market given the aging populations and the need for a workforce competent in informatics, leadership, and finance (<a href="https://www.bls.gov/news.release/ecopro.nr0.htm">https://www.bls.gov/news.release/ecopro.nr0.htm</a>). Per the World Health Organization's Workforce 2030 initiative, projections developed by World Health Organization and the World Bank (Annex 1) point to the creation of approximately 40 million new health and social care jobs globally to 2030 (14) and to the need for 18 million additional health workers, primarily in low-resource settings, to attain high and effective coverage of the broad range of health services necessary to</p>	<p>the reforms in health service delivery that have been implemented in a country or countries in the region within the past 5-10 years and what impact has this had on health systems- performance including health outcomes? Journals will be evaluated using a faculty-committee developed rubric with sections for effective communication and quantitative reasoning.</p> <p>Learning Outcome 2: Graduates will integrate evidence-based financial principles toward improved individual and population health outcomes (ex: leadership strategies in change management).</p> <ul style="list-style-type: none"> <li>● HCD XXX / PHCM 9471 Comparative Health Care Systems - Journal Club assignment. Select one high-income country and one low- or middle-income country and prepare a 1000 word essay comparing their healthcare systems in terms of financing. What are some of the key health financing reforms undertaken in the last 5-10 years? Journals will be evaluated using a faculty-committee developed rubric with sections for effective communication, quantitative reasoning, evaluation of evidence, and critical thinking.</li> <li>● HCD 532 Health Care Management and Finance - Management Analysis assessment. Assessments will be evaluated using a faculty-committee developed rubric with sections for</li> </ul>	
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		<p>ensure healthy lives for all. (<a href="http://www.who.int/hrh/resources/global_strategy_workforce2030_14_print.pdf?ua=1">http://www.who.int/hrh/resources/global_strategy_workforce2030_14_print.pdf?ua=1</a>). While the undergraduate degree in international public health addresses core competencies required for entry-level graduates in the field, this graduate degree focuses on skill sets required at the leadership and management level - policy, management, finance, safety, and development.</p>	<p>effective communication, quantitative reasoning, evaluation of evidence, critical thinking, and cultural diversity.</p> <p>Learning Outcome 3. Graduates will analyze the value of person- and population-centered health care in a changing global health care environment (ex: adapting to varying health care financing models).</p> <ul style="list-style-type: none"> <li>• HCD XXX / PHCM 9471 Comparative Health Care Systems - Journal Club assignment. Select one country in the world but not one that you have included in Assessment 1 or 2 and analyze the healthcare system in terms of human resources for health (HRH) development. Pay specific attention to: Whether in your view these reforms have improved the performance of the healthcare system and potentially health outcomes. Journals will be evaluated using a faculty-committee developed rubric with sections for effective communication, quantitative reasoning, evaluation of evidence, critical thinking, and global awareness.</li> </ul>	
<p>Master of Science in Digital Audience Strategy</p> <p>Walter Cronkite School of Journalism and Mass Communication</p>	<p>Yes</p>	<p>Most organizations in both the public and private sectors have a critical and growing need to connect with audiences on digital and social media. Corporations, advocacy groups, government agencies, community</p>	<p>Learning Outcome 1: Graduates of the program will be able to analyze quantitative digital audience data to evaluate performance of digital content.</p> <ul style="list-style-type: none"> <li>• In MCO 565 Digital Audience Analytics, students must pass the Google Analytics certification exam, a credential recognized</li> </ul>	<p>50</p>

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<p>(Downtown Phoenix)  2018-2019</p>		<p>groups, news organizations and nonprofits all need professionals who understand how to reach large online audiences in order to increase sales, advertising, donations, political support and community cohesion.</p> <p>But the expertise required to leverage online audiences is different from traditional training in marketing or public relations. The Cronkite School's new Master of Science in Digital Audience Strategy is designed to prepare students to be leaders in this area. Through a data-driven, interdisciplinary approach, they will learn to measure, engage and grow audiences online and through social media.</p> <p>Online delivery of the program will allow a diverse population of full-time students and working professionals to advance their careers and deepen their impact.</p> <p>Market Need: The rapid development of the digital audience strategy field (see Bachelor of Science in Digital Audience proposal) means that there</p>	<p>across the communications industry as evidence of ability to use digital performance data to analyze audience behavior.</p> <ul style="list-style-type: none"> <li>● In MCO 565 Digital Audience Analytics, students will complete five written assignments that require calculations and analysis of real audience behavior data to track performance of digital content. Student work will be graded against a rubric of professional standards of performance analysis.</li> </ul> <p>Learning Outcome 2: Graduates of the program will be able to use research to identify and reach target audiences.</p> <ul style="list-style-type: none"> <li>● In MCO 562 Digital Audience Acquisition and Search Engine Marketing, students must complete Google AdWords Professional certification, a credential recognized across the communications industry as evidence of professional ability to identify and reach target audiences using digital advertising research.</li> <li>● In MCO 564 Digital Audience Research and Behavior, students will complete five written assignments that require graduate-level analysis of quantitative and qualitative audience behavior data to identify target audiences. Student work will be evaluated using a rubric of professional standards for digital audience research analysis.</li> </ul>	
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		<p>are few veteran digital audience specialists prepared to lead teams and manage sophisticated digital audience strategies. In addition, we are unaware of any universities offering graduate degrees in digital audience strategy.</p> <p>The Master of Science in Digital Audience Strategy would prepare graduate students to be much-needed leaders in this area. The core digital audience curriculum prepares students to develop and execute large-scale digital audience strategy. Other required courses in media law, innovation and entrepreneurship prepare students to lead teams, develop business plans and manage digital content within legal frameworks. Through elective courses, students would develop additional expertise in areas such as finance, technology management and organizational behavior. The program as a whole offers students the opportunity to lead innovation and business development in the digital age.</p>	<p>Learning Outcome 3: Graduates of the program will be able to create, test, and distribute digital content that has an intended impact on a target audience.</p> <ul style="list-style-type: none"> <li>● In MCO 563 Social Media Campaigns and Engagement, students will earn Hootsuite Platform Certification, a credential recognized across the communications industry as evidence of professional ability to use the Hootsuite platform to produce and distribute social media content across social networks.</li> <li>● In the capstone course MCO 566 Digital Audience Management, students will draw on previous coursework to create, distribute, test, and measure content for a targeted social media campaign. A team of experts will evaluate a random sample of projects against a rubric of professional standards for effective social media content.</li> </ul> <p>Learning Outcome 4: Graduates of the program will be able to create and execute an audience growth strategy using digital platforms.</p> <ul style="list-style-type: none"> <li>● Students in the capstone course MCO 566 Digital Audience Management will earn Inbound Certification, a credential recognized across the communications industry as evidence of professional ability to develop digital audience strategy.</li> </ul>	
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			<ul style="list-style-type: none"> <li>• Drawing on coursework from across the program, students in the capstone course MCO 566 Digital Audience Management will create and execute an audience growth strategy for a client. A team of outside experts will evaluate a random sample of capstone projects against a rubric of professional standards for audience growth strategies.</li> </ul> <p>Learning Outcome 5: Graduates of the program will be able to create and execute audience growth strategies that meet the highest standards of social science and journalistic ethics.</p> <ul style="list-style-type: none"> <li>• Drawing on ethical frameworks embedded throughout the program, students in the capstone course MCO 566 Digital Audience Management will create, test and execute a digital audience strategy for a client and report on their work in a recorded oral presentation that addresses their ethical choices. A team of outside experts will evaluate a random sample of capstone projects against a rubric of ethical standards for audience research and growth strategies.</li> </ul>	
<p>Master of Science in Modern Energy Production and Sustainable Use</p>	<p>Yes</p>	<p>The School for Engineering of Matter, Transport and Energy will utilize its unique transdisciplinary expertise to provide graduate student training in fundamental science and engineering</p>	<p>Learning Outcome 1: For students in the thesis option: Students will be able to solve complex problems by integrating concepts and methods from materials science and engineering, mechanical engineering, and chemical engineering</p>	<p>30</p>

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<p>Ira A. Fulton Schools of Engineering</p> <p><i>School for Engineering of Matter, Transport and Energy</i></p> <p>(Tempe)</p> <p>2018-2019</p>		<p>principles, and thereby facilitate the generation of human capital of those who can address grand challenges associated with future energy production and storage, and in sustainable use. The Master of Science in Modern Energy Production and Sustainable Use will prepare students by combining the technical knowledge to enable complex energy systems, the skills, and the knowledge of interdisciplinary problem solving. A student completing this degree will be able to show real-world, proven capabilities in complex energy systems and interdisciplinary thinking thereby receiving credentials demonstrating their level of achievements.</p> <p>Market Need: The U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy shares that as new energy technologies are developed and introduced for commercial use, they will create new jobs for American workers strengthening U.S. energy security, environmental quality and economic vitality (<a href="https://energy.gov/eere/education/explore-clean-energy-careers-0">https://energy.gov/eere/education/explore-clean-energy-careers-0</a>).</p>	<ul style="list-style-type: none"> <li>● Thesis Paper/Report – Thesis will be evaluated using a rubric developed by a faculty committee. Thesis will be evaluated for written communication, literature review, methods, and problem solving.</li> <li>● Thesis Presentation – Thesis will be presented to and evaluated by faculty committee. Rubric for evaluation will cover oral communication, presentation of complex interpretations, and ability to respond effectively to questions from the committee.</li> <li>● Content from thesis published in peer reviewed journal.</li> </ul> <p>Learning Outcome 2: For students in applied project option: Students will be able to identify and interpret literature across multiple disciplines that applies to a defined Energy Production and Sustainable Use problem</p> <ul style="list-style-type: none"> <li>● Applied Project Portfolio/Paper - Will use a rubric to assess student's mastery skills sought by employers in the energy production and storage. Rubric covers an array of skill areas which employers will desire, including: Materials synthesis, materials characterization, manufacturing, device fabrication, product development, and quality control. Applied project will be required to demonstrate proficiency of at least one of these areas based on Rubric.</li> </ul>	
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		<p>These workers needed to be trained in a variety of transdisciplinary areas from renewable energy generation and storage, energy-saving materials and manufacturing and sustainable transportation.</p>	<p>Learning Outcome 3: All Students will be able to articulate a problem in the field of Energy Production and Sustainable Use and delineate a scientific path to solve or study the problem.</p> <ul style="list-style-type: none"> <li>● Mid-Point Review Presentation - Presentation will be evaluated by faculty committee using a rubric covering survey of literature, oral communication, problem statement synthesis, practicality of proposed path, and ability to respond to questions.</li> </ul>	
<p>Master of Science in Graphic Information Technology</p> <p>Ira A. Fulton Schools of Engineering</p> <p><i>The Polytechnic School</i></p> <p>(Polytechnic)</p> <p>2018-2019</p>	<p>Yes</p>	<p>The Master of Science in Graphic Information Technology prepares students for management and leadership positions in visual design, with the emphasis in technologies used for cross-media distribution. The program is highly flexible, and the courses offered provide students with a working knowledge of the technology and management required of the graphics industries.</p> <p>Market Need: This Master of Science degree will replace the existing Master of Science in Technology with a concentration in Graphic Information Technology. It is in high demand, and currently it has 55</p>	<p>Learning Outcome 1: Investigate current industry standards and apply to cross-media solutions.</p> <ul style="list-style-type: none"> <li>● GIT 537 writing assignment five, which is a five-page research paper. Paper will be evaluated using a rubric with sections related to writing at a graduate level, including spelling, grammar, sentence structure, comprehension of topic, appropriate academic writing and appropriate research.</li> <li>● Culminating project (applied project, master's thesis, portfolio). Evaluated using a faculty developed rubric covering the industry standards and media sections.</li> <li>● GIT 500 data collection assignment. Project will be evaluated using a rubric with sections related to the creation of surveys for data collection, including nominal, ordinal, ratio,</li> </ul>	<p>75</p>

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		<p>students enrolled with 11 accelerated (4+1) students admitted for the Spring semester. This degree prepares graduates for management positions in diverse visual design industries, such as Internet and Web development, usability and user experience, planning and evaluation of cross-media content creation and output, digital media production, and commercial and technical photography and video.</p>	<p>and interval scales, and closed and open-ended questions.</p> <p>Learning Outcome 2: Construct user-centered design solutions.</p> <ul style="list-style-type: none"> <li>● GIT 537 writing assignments. Assignments will be evaluated using a rubric with sections related to writing at a graduate level, including spelling, grammar, sentence structure, comprehension of topic, appropriate academic writing, problem solving, and design.</li> <li>● Culminating project (applied project, master's thesis, portfolio). Evaluated using a faculty developed rubric, more specifically, display design section.</li> <li>● GIT 500 processing and displaying data assignment. Project will be evaluated using a rubric with sections related to processing of collected data and designing attractive, comprehensible graphics to communicate collected data to users of research studies.</li> </ul> <p>Learning Outcome 3: Identify and analyze industry relevant research and communicate results effectively and in a professional manner.</p> <ul style="list-style-type: none"> <li>● GIT 537 writing assignments. Assignments will be evaluated using a rubric with sections related to comprehension of topic, synthesis of literature, and results discussion.</li> </ul>	
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			<ul style="list-style-type: none"> <li>● Culminating project (applied project, master's thesis, portfolio). Evaluated using a faculty-developed rubric, more specifically, focused on the results and discussion sections.</li> <li>● GIT 500 research proposal assignment. Proposals will be evaluated using a rubric with sections related to presenting the problem, performing a literature review and proposing a study and methodology.</li> </ul>	
<p>Professional Science Master's in Forensic Science</p> <p>New College of Interdisciplinary Arts and Sciences</p> <p><i>School of Mathematical and Natural Sciences</i></p> <p>(West)</p> <p>2019-2020</p>	<p>No</p>	<p>This program provides working professionals with an understanding of forensic science practice and laboratory management issues with respect to advanced scientific methodologies, laboratory practices and the criminal justice system. It involves specialized coursework in chemistry, biology, quantitative methods, statistics, organizational psychology and cyber investigations applications and forensic science laboratory management. Students will learn about the various roles for forensic scientists in the legal system and help them discover which roles they might pursue through careers in advanced forensic science practices, laboratory management, or through additional graduate training. This</p>	<p>Learning Outcome 1: Graduates will demonstrate leadership skills and the ability to manage organizations, particularly those operating in the disciplinary area of Forensic Science.</p> <ul style="list-style-type: none"> <li>● Leadership project in the course SGM XXX Strategic Leadership - Students will examine and critically analyze the leadership style of the leader of an organization with which they are familiar, and assess their own leadership strengths and weaknesses. Students will be evaluated via faculty rubric in the areas of critical assessment of leadership style, and effective written communication.</li> <li>● Organizational structure project in the course SGM XXX Organizations and Management - Students will examine an existing organization and design a restructure. Students will be evaluated via faculty rubric in the areas of critical assessment of leadership style, and effective written communication.</li> </ul>	<p>30</p>



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		<p>program offers a blend of science and management courses essential for promotion in this discipline. While this degree will not make its graduates eligible for any specific discipline licensure or certification for practice, a recent panel at the National Academy of Forensic Scientist annual meeting called this degree as the preferred degree, opposed to a traditional master's or doctoral degree.</p> <p>Market Need: There are currently only four professional science master's programs nationally that have a specific focus on forensic science and ASU would be the highest-ranked institution to offer such a degree. Combined with ASU's reputation in the field, the presence of an already highly successful Bachelor of Science in Forensic Science, this program will further enhance ASU's visibility and leadership in this burgeoning field. The Occupational Outlook Handbook (Bureau of Labor Statistics, United States Department of Labor) lists forensic scientists growing "much faster than average" through 2024.</p>	<p>Learning Outcome 2: Students will be able to evaluate and apply current best practices of forensic science, and demonstrate the procedure(s) by which forensic scientists self-evaluate. This will include application of the scientific method that underlies research in forensic science.</p> <ul style="list-style-type: none"> <li>● Practical exam in the course FOR 410/5XX Professional Practices - The students' responses to scenarios or situations will be assessed with a rubric evaluating the appropriate selection and application of Forensic Science practices/techniques, and the depth of self-evaluation.</li> <li>● Pre- and Post-test on scientific research methodology in the course FOR 4xx/5xx Quantitative Methods in Forensic Sciences. This course provides direct instruction on the scientific method, hypothesis testing, statistical analysis, and inductive and deductive reasoning. These will form the major sections of the faculty-designed exam, which will be administered at the start, and again at the end of the course, (a final score of 80% or better is required on the post test).</li> </ul> <p>Learning Outcome 3: Graduates will apply contemporary problem-solving theory to address specific industry management needs in the forensic sciences, and be able to effectively communicate their</p>	
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		<p>There is also increasing competition for higher level supervisory and administrative positions in the medical and clinical laboratory setting, and graduate training is essential to success in obtaining these types of positions. This program will be very attractive to working professionals as there are no lab courses or residential component and students will be able to complete the curriculum in one calendar year.</p>	<p>application(s) in written and verbal form to a wide audience.</p> <ul style="list-style-type: none"> <li>● Applied project poster/paper - The project will be faculty approved and include an industry partner and external evaluator. The students' success will be determined by their ability to demonstrate mastery in written and graphic communication, problem solving, scientific principles, as well as the ability to identify and resolve an industry-specific need.</li> <li>● Applied project oral presentation - The students' success will be determined by their ability to demonstrate mastery in oral communication, ability to respond to questions, as well as the ability to identify, describe and resolve an industry-specific need.</li> </ul> <p>Learning Outcome 4: Graduates will describe in written form the scope and responsibilities of the modern field of forensic science, and describe the roles of forensic scientists in the larger legal system.</p> <ul style="list-style-type: none"> <li>● Culminating written exam– Short and long-form responses to “History and Context” questions. Rubric will cover effectiveness of written communication, and historical awareness.</li> <li>● Culminating written exam - Short and long-form responses to “Scope and Responsibilities” questions. Rubric will cover effectiveness of written communication, and</li> </ul>	
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			awareness of the scope and responsibilities of the field of Forensic Science	
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**Table 2 - High Demand Programs Proposed for Elimination**

<b>Program</b>	<b>College/School (location)</b>	<b>Justification/Brief Description (max 100 words)</b>	<b>Impact on Current Students (max 100 words)</b>
NONE			

**EXECUTIVE SUMMARY**

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**ARIZONA STATE UNIVERSITY  
 ACADEMIC ORGANIZATIONAL UNITS**

**Table 1 - Proposed New Academic Units**

<b>Proposed Unit and Effective Date</b>	<b>Level (College, School, or Department)</b>	<b>Location (College, School, etc. where it will be located)</b>	<b>Brief Description (max 50 words)</b>	<b>Justification/need (max 100 words)</b>	<b>New Resources, if any, and Source* <i>Savings/Efficiencies Gained</i></b>
NONE					

**Table 2 - Proposed Mergers or Elimination Units**

<b>Unit</b>	<b>Requested Action</b>	<b>Justification/Brief Description of the proposed action (max 100 words)</b>	<b>Impact on Current Students (max 50 words)</b>	<b>Expected fiscal impact</b>
NONE				

**EXECUTIVE SUMMARY**

**Item Name: Request for New Academic New Program for Arizona State University (ASU)**

- Action Item
- Committee Recommendation to Full Board
- First Read of Proposed Policy Change
- Information or Discussion Item

**Issue:** Arizona State University asks the committee to review and recommend for board approval the new program requests effective in the 2018-2019 catalog year

**Enterprise Strategic Plan**

- Empower Student Success and Learning
- Advance Educational Attainment within Arizona
- Create New Knowledge
- Impact Arizona
- Compliance
- Real property purchase/sale/lease
- Other: Academic Strategic Plan

**Statutory/Policy Requirements**

ABOR Policy 2-223.A, "The Academic Strategic Plan"

**Background/History of Previous Board Action**

As provided in the board policy, new program requests may be submitted throughout the year with the approval of the Academic and Student Affairs Committee.

**Discussion**

Arizona State University seeks to add new programs for implementation in the 2018-2019 Academic Year. This request is for new academic programs:

- Bachelor of Fine Arts in Film and Media Production
- Bachelor of Science in Astronomical and Planetary Sciences
- Bachelor of Science in Data Science

**Contact Information:**

Mark Searle, Provost

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Shelley McGrath, ABOR

602-229-2529

shelley.mcgrath@azregents.edu

**EXECUTIVE SUMMARY**

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Degree planning at ASU is founded on the Charter: ASU is a comprehensive public research university, measured not by whom it excludes, but by whom it includes and how they succeed; advancing research and discovery of public value; and assuming fundamental responsibility for the economic, social, cultural and overall health of the communities it serves.

The new degree programs advance issues of culture, science and the use of big data. They leverage our place, transform society, value entrepreneurship, include use-inspired research, enable student success, fuse intellectual disciplines, are socially embedded, and engage students with issues locally, nationally and internationally.

**Requested Action**

Arizona State University asks the committee to review and recommend for board approval the new program requests for the degree programs listed above.

**EXECUTIVE SUMMARY**

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**Arizona State University**  
**Proposed New Program Summary**

<b>Proposed New Programs</b>	<b>Degree</b>	<b>College/School</b>	<b>Location of Offering</b>
<b>Undergraduate Programs</b>			
Film and Media Production	BFA	Herberger Institute for Design and the Arts	Tempe
Astronomical and Planetary Sciences	BS	College of Liberal Arts and Sciences	Tempe
Data Science	BS	College of Liberal Arts and Sciences	Tempe

**EXECUTIVE SUMMARY**

**Arizona State University  
 ACADEMIC PROGRAMS**

**Table 1 - Proposed New Programs**

Name of Proposed Degree (degree type and major), College/School, Location, Anticipated Catalog Year	Program Fee Required?	Brief Description Justification and Identified Market Need	Learning Outcomes and Assessment Plan	Projected 3rd Year Enrollment
<b>New Undergraduate Degrees</b>				
Bachelor of Fine Arts in Film and Media Production  Herberger Institute for Design and the Arts  <i>School of Film, Dance and Theater</i>  (Tempe)  2019-2020	Yes	The Bachelor of Fine Arts in Film and Media Production is a hands-on creative production and pre-professional degree program including courses about the function of film, media and television in the world; ethical filmmaking practices; interdisciplinary collaboration; and the responsibility of the media artist in society. This program in film production will promote inclusivity and accessibility through the emphasis of the connection between film and media artists, the communities they represent and the audiences they serve.	<p><b>Learning Outcome 1:</b> Graduates of the program will demonstrate an understanding of ethical filmmaking practices and the value of professional leadership.</p> <p><b>Concepts:</b> Ethics of filmmaking, fair labor practices and leadership.</p> <p><b>Competencies:</b> The protocols and standards of ethical and professional filmmaking, including fair labor practices and ethical leadership relating to behavior, hiring and casting practices.</p> <p><b>Assessment Methods:</b> Student projects will be assessed with a faculty designed ethics rubric used in FMP 250 Ethics Survey, developed in</p>	275



**EXECUTIVE SUMMARY**

		<p>The need for innovative, skilled and efficient digital storytellers has never been greater. From viral videos to web series; from commercials to corporate presentations; from on-demand binge-worthy series and bold independent films to global blockbusters, filmmaking and the media need dynamic, original, and impactful content now more than ever. Graduates of this program will have the visual storytelling skills required to convey information in our increasingly media driven society.</p> <p>Market Need: The Bureau of Labor Statistics predicates a strong 12% growth over 10 years for producers and directors; 16% for film and video editors; and 6% for camera operators in film, television and digital media. The Occupational Information Network (O*NET) projects a 9% U.S. and 15% Arizona 10-year growth for producers and directors; 2% U.S. and 19% Arizona for writers and authors; and 6% U.S. and 18% Arizona for public relations specialists. Related support positions will also see a strong growth as organizations, businesses</p>	<p>accordance with industry standards, incorporating ethics and leadership.</p> <p>The curriculum will be refined based on measures indicating student ability to recognize the ethical issues in film and media production, apply accurate perspectives and concepts to the issues, consider the implications of actions in relation to the application of these perspectives and concepts, and defend adequately their positions.</p> <p><b>Learning Outcome 2:</b> Graduates of the program will demonstrate an understanding of the value of collaboration across the visual and performing arts.</p> <p><b>Concepts:</b> Collaboration and group communication.</p> <p><b>Competencies:</b> Listening, feedback, cooperation, the understanding of context and culture, and appreciation of difference.</p> <p><b>Assessment Methods:</b> In FMP 300 Focus on Film, final projects will be assessed with a faculty designed rubric that incorporates collaboration across modalities such as dance, theatre, music, visual arts and digital culture.</p> <p>The curriculum will be refined based on measures indicating student ability to collaborate with others</p>	
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**EXECUTIVE SUMMARY**

		<p>and communities across the social spectrum increase their informational outreach through film and media production due to less expensive technology and a decentralized industry. These circumstances have spurred major growth and expansion with over 30,000 full-time job postings on indeed.com under “media production,” “video production,” and “film production” (with less than 1/6 in Los Angeles or New York).</p> <p>According to the National Association of Theatre Owners (NATO), global box office receipts totaled over \$38 billion in 2016, an increase of 2% from previous years, and the number of screens worldwide grew by 8%. Over 1.3 billion tickets were sold in 2016 in the U.S., nearly one and a half times the number of tickets sold to theme parks and the four major professional sports combined. The six major studios spend about \$5 billion a year on feature film production and, combined with the major television networks, spend approximately \$10 billion a year on television and series production.</p>	<p>across art forms in the production of short films and live event programming through effective communication and creative collaboration.</p> <p><b>Learning Outcome 3:</b> Graduates of the program will be able to synthesize research and think critically about research from communities across the social spectrum and in diverse subjects from politics to education, health care to sustainability, scientific research to the arts, in the making, viewing and study of film media.</p> <p><b>Concepts:</b> Critical understanding of film and media, shared narrative as a foundation for civil discourse, and audience interpretation.</p> <p><b>Competencies:</b> Analysis of images, actions and subjects from television and films within a context of societal evolution and shifting interpretation. Knowledge of contemporary culture and cultural history; traditions of storytelling and narrative; elements of live performance; the relationship between the artist, the work of art, and the viewer; and the ability to analyze work for both quality and substance.</p> <p><b>Assessment Methods:</b> In FMP 250 Ethics Survey and THF 220 Principles of Dramatic Analysis, projects are evaluated against a faculty developed critical thinking rubric, and in</p>	
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**EXECUTIVE SUMMARY**

		<p>New players are also emerging in the marketplace for original content. The newest investor is Apple, which will spend \$4.2 billion by 2022. In 2018, Amazon is projected to spend nearly \$5 billion on original content, while Netflix announced they will spend nearly \$8 billion.</p>	<p>the FMP 480 and 481 Film Production Capstones, projects will be assessed against a faculty developed rubric emphasizing the application of critical thinking skills in the creation of film and media.</p> <p>The curriculum will be refined based on measures indicating student ability to gather and interpret information to evaluate narratives, create art based on empathic narrative and principles of visual design and composition, and establish the relationship of the artist to subject and audience.</p> <p><b>Learning Outcome 4:</b> Graduates of the program will be able to conceive, develop, revise, and present a unique and personal creative work that reflects the student's artistic style, technical skills and professional vision.</p> <p><b>Concepts:</b> Creativity, originality and coherent aesthetic form.</p> <p><b>Competencies:</b> The conception and execution of an original film or media product; technical skill in mediated communication; the articulation of a professional vision; and the transformation of ideas into coherent mediated forms.</p> <p><b>Assessment Methods:</b> A faculty developed rubric that assesses the connection of students</p>	
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**EXECUTIVE SUMMARY**

			<p>to the audiences they represent and the communities they serve through the exhibition of original creative film or media works. Portfolios will be assessed by a faculty committee with a faculty determined rubric that includes an assessment of acquired competencies, and the creation and presentation of narratives in novel and unique ways that adhere to the student’s goals and intentions.</p> <p>The curriculum will be refined based on measures indicating student ability to exhibit work through student organization film festivals, faculty showcase screenings and local or regional film festivals. Ability to produce a creative portfolio that highlights the students’ most significant accomplishments and articulates each student’s creative goals as well as the specific skills and practices required of digital storytelling (screenwriting, directing, producing, cinematography, editing, and sound recording and design).</p>	
<p>Bachelor of Science in Astronomical and Planetary Sciences  College of Liberal Arts and Sciences</p>	<p>Yes</p>	<p>The Bachelor of Science in Astronomical and Planetary Sciences offered by the faculty of the School of Earth and Space Exploration provides a broad educational background in earth and space sciences along with cross-disciplinary work in related and</p>	<p><b>Learning Outcome 1:</b> Graduates of the program will be able to apply astronomical concepts and principles of physical science to articulate, discuss and explicate core disciplinary concepts in astronomy and planetary sciences.</p>	<p>300</p>

**EXECUTIVE SUMMARY**

<p><i>School of Earth and Space Exploration</i></p> <p>(Tempe)</p> <p>2019-2020</p>		<p>complementary fields such as physics, geology, biological sciences, sustainability, education and technical writing. The degree will integrate traditional work in astronomical and planetary sciences, mathematics and physics with content from a cross-section of related disciplines to produce well-rounded graduates. Students graduating with this degree program will possess strong foundations in an array of basic skills attractive to employers, including scientific literacy, quantitative reasoning, written communication, problem-solving and critical and analytical thinking.</p> <p>Market Need: According to the American Astronomical Society (<a href="https://aas.org/learn/careers-astronomy">https://aas.org/learn/careers-astronomy</a>), students with undergraduate degrees in astronomical sciences are in demand with organizations that need talent in “instrumentation, remote sensing, spectral observations and computer applications to unusual problems.” Astronomical and planetary science studies have enjoyed consistent</p>	<p><b>Concepts:</b> The origin, structure and history of the universe; how stars are formed and how they evolve; and quantitative reasoning.</p> <p><b>Competencies:</b> Understanding of the history and properties of light, instrumentation, and study of the solar system; mathematics; basic modeling; and knowledge of design elements of telescopes and astronomical measurements.</p> <p><b>Assessment Methods:</b> Acquisition of core concepts will be evaluated in assessments scored according to a faculty designed rubric in AST 112 Introduction to Stars, Galaxies and Cosmology and AST 114 Astronomy Laboratory II, drawing from core skills in AST 111 and AST 113. Progressive assessment based on a sequential, faculty designed rubric includes quantitative literacy in AST 321 Introduction to Planetary and Stellar Astrophysics, and the accuracy of modeling in AST 322 Introduction to Galactic and Extragalactic Astrophysics.</p> <p>The curriculum will be refined based on measures indicating student ability to apply basic principles of cosmology to integrate observations regarding the structure and evolution of stars, star clusters and galaxies; ability to apply physical laws to explore the properties and evolution of stars and planets in</p>	
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**EXECUTIVE SUMMARY**

		<p>popularity since the mid-twentieth century. More recently, news stories of space technology and exploration have sparked a renewed interest among people of all ages. This degree will also prepare students for a wide variety of other endeavors, including career paths in secondary education, planetarium and museum work, science writing, observation equipment and technology sales, and educational tourism. With only a handful of similar programs available, a degree in a frontier of science with the flexibility to serve a diverse body of students with widely varying goals will find a receptive employment market.</p>	<p>assignments and a guided research project using introductory computer programming.</p> <p><b>Learning Outcome 2:</b> Graduates of the program will be able to use written and oral communication to engage in scientifically-grounded civil discourse and accurately communicate the scientific process and recent results of research in astronomy and planetary science to both lay and technical audiences.</p> <p><b>Concepts:</b> Scientific communication, informed discourse, and audience analysis.</p> <p><b>Competencies:</b> Effective use of language, oral and written, in explaining complex scientific information to multiple audiences.</p> <p><b>Assessment Methods:</b> In AST 275 Scientific Communication, a faculty designed rubric will be used to assess oral and written communication skills in multiple contexts with both lay and technical audiences, and in AST 321 Introduction to Planetary and Stellar Astrophysics, a faculty designed rubric will be used to assess student ability to communicate clearly theoretical concepts and supporting observations of astronomical and planetary sciences.</p>	
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**EXECUTIVE SUMMARY**

			<p>The curriculum will be refined based on measures indicating student ability to create communication messaging appropriate to different audiences, and ability to promote civil discourse on science and the history of the universe.</p> <p><b>Learning Outcome 3:</b> Graduates of the program will be able to manage, evaluate and interpret datasets to solve quantitative problems and test hypotheses within an astronomical context utilizing modern computing methods.</p> <p><b>Concepts:</b> Advanced modeling, experimental design and the application of software in the context of astronomical and planetary sciences.</p> <p><b>Competencies:</b> Use of the scientific method to design experiments that generate data informing conceptual approaches and potential obstacles to development solutions for assigned projects; developing software in an interpreted language (e.g. Python) to solve assigned problems related to astronomy and planetary sciences.</p> <p><b>Assessment Methods:</b> In SES 350 Engineering Systems and Experimental Problem Solving, achievements in engineering systems, computational tools, advanced modeling and deductive reasoning will be assessed using a</p>	
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**EXECUTIVE SUMMARY**

			<p>common rubric developed by faculty in the discipline.</p> <p>The curriculum will be refined based on measures indicating student ability to apply computer and mathematical modeling to work in relativity, cosmology and the structure and dynamics of galaxies and the interstellar medium; and ability to design experiments using the scientific method with results based on collaborative effort.</p> <p><b>Learning Outcome 4:</b> Graduates of the program will demonstrate the ability to work collaboratively in interdisciplinary groups to solve scientific problems.</p> <p><b>Concepts:</b> Research design, scientific knowledge, collaboration and small group communication.</p> <p><b>Competencies:</b> Writing a research proposal, asking questions from a scientific perspective, and problem solving in astronomical and planetary sciences.</p> <p><b>Assessment Methods:</b> In SES 350 Engineering Systems and Experimental Problem Solving, a faculty rubric that measures integration of core and advanced theory and methods in the astronomical and planetary sciences will be used to assess student work, and capstone</p>	
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**EXECUTIVE SUMMARY**

			<p>projects will be evaluated against a faculty developed rubric of professional standards in astronomical and planetary sciences, group communication, information literacy and problem solving.</p> <p>The curriculum will be refined based on measures indicating student ability to develop a research question or proposal for a design project using skills and knowledge gained in progressive course work; and student team ability to employ collaborative and communication skills to critically assess project needs, assign tasks to individual members and create a successful design solution.</p>	
<p>Bachelor of Science in Data Science</p> <p>College of Liberal Arts and Sciences</p> <p><i>School of Mathematical and Statistical Sciences</i></p> <p>(Tempe)</p> <p>2019-2020</p>	<p>Yes</p>	<p>Modern science and technology use sophisticated mathematical and computational tools to extract patterns from large, complex and often unordered data sets. Machine learning and data mining are invaluable technologies with applications as diverse as detecting fraudulent online credit-card transactions, understanding the dynamics of social movements and personalizing medical treatments based on an individual's unique genetic profile. In accordance with ASU's charter to advance research and</p>	<p><b>Learning Outcome 1:</b> Graduates of the program will be able to think critically while analyzing data sets to make action-oriented ethical recommendations for societal change.</p> <p><b>Concepts:</b> Critical thinking, ethics and social knowledge based on large data sets.</p> <p><b>Competencies:</b> Interpretation of data, data problem solving and effective communication.</p> <p><b>Assessment Methods:</b> In DAT 200 Data Science and Society, students will be assessed against a faculty developed rubric that covers quantitative reasoning, problem solving and</p>	<p>200</p>

**EXECUTIVE SUMMARY**

		<p>discovery of public value, this proposed degree program is a collaborative effort by programs across the College of Liberal Arts and Sciences' Divisions of Natural Sciences and Social and Behavioral Sciences and Ira Fulton Schools of Engineering to offer an interdisciplinary Bachelor of Science degree in Data Science.</p> <p>The mathematical core will consist of linear algebra, statistical inference and classification, data mining, machine learning and associated computer methods. Additionally, the degree will have a significant related area of emphasis requiring students to complete coursework in an application area that utilizes data science and to apply learned techniques to real-world data. Combining skills in data mining and management with training in ethics and an ability to articulate complex information will produce graduates capable of participating productively in public discourse on pressing concerns facing today's world. The School of Mathematical and Statistical Sciences is uniquely</p>	<p>effective communication on the presentation of data. In the Data Science capstone course, students will be assessed against a faculty developed rubric on ethical problem solving, effective communication, critical thinking, and evaluation of evidence.</p> <p>The curriculum will be refined based on measures indicating student ability to think critically and make societal recommendations about real-life data sets; ability to identify a real-world problem; evaluate numerous data sets using learned data programming languages about credibility; and ability to interpret the findings to make ethical recommendations for future action.</p> <p><b>Learning Outcome 2:</b> Graduates of the program will be able to critically engage with real-world data problems relative to their chosen emphasis area of either natural or social sciences through data programming.</p> <p><b>Concepts:</b> Programming principles, computer science and its use in data-driven problem solving, predictive analytics and mathematical reasoning.</p> <p><b>Competencies:</b> Mathematical reasoning, data science research methods, data programming and using data to predict outcomes.</p>	
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**EXECUTIVE SUMMARY**

		<p>positioned to lead the development of this innovative collaboration.</p> <p>Market Need: Glassdoor.com ranks data scientist at the top of its 50 Best Jobs in America. It reports that the average annual salary for data scientists in the Phoenix area is \$103,540 and that the national average is \$128,549. The average starting salary is \$83,500. The McKinsey Global Institute projects that the demand for deep analytical talent in the United States could be 50 to 60 percent greater than its projected supply by 2018.</p> <p>Glassdoor:  <a href="https://www.glassdoor.com/Salaries/phoenix-data-scientist-salary-SRCH_IL.0,7_IM678_KO8,22.htm">https://www.glassdoor.com/Salaries/phoenix-data-scientist-salary-SRCH_IL.0,7_IM678_KO8,22.htm</a></p> <p>McKinsey:  <a href="https://www.mckinsey.com/assets/doctcom/homefeatures/bigdata/mck_q_bigdata_rollover.html">https://www.mckinsey.com/assets/doctcom/homefeatures/bigdata/mck_q_bigdata_rollover.html</a></p>	<p><b>Assessment Methods:</b> In DAT 200 Data Science and Society, presentations will be assessed against a faculty designed rubric incorporating mathematical reasoning, critical thinking and problem solving. In DAT 402 Machine Learning, projects will be assessed with a faculty rubric that covers validity of the created model program, effective communication and mathematical reasoning.</p> <p>The curriculum will be refined based on measures indicating student ability to create a computer program that can discover and identify patterns in a data set related to the student’s chosen emphasis area, ability to make predictions and recommendations for a real-world problem, and ability to show how data science methods can influence the outcomes in both positive and negative fashions.</p> <p><b>Learning Outcome 3:</b> Graduates of the program will be able to develop team oriented skills while utilizing diverse programming languages and statistical processes to interpret results of their own data collection.</p> <p><b>Concepts:</b> Diversity in programming languages, interpretation of data and small group communication.</p>	
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**EXECUTIVE SUMMARY**

			<p><b>Competencies:</b> Effective collaboration, utilization of real-world data sets to solve complex problems, the use of statistical models and proper testing methodologies to provide insight into real-world problems.</p> <p><b>Assessment Methods:</b> In DAT 301 Exploring Data in R and Python, students will complete a series of four embedded assignments that will be assessed against a faculty developed rubric that focuses on problem solving, effective communication and statistical reasoning. In DAT 401 Statistical Modeling and Inference for Data Science, final student projects will be assessed by a faculty developed rubric that focuses on mathematical reasoning, collaboration and data problem solving.</p> <p>The curriculum will be refined based on measures indicating student ability to utilize real-world data sets in a team setting to interpret, evaluate and present recommended solutions to real-world problems; ability to work in groups and apply principles of critical thinking, statistical models, and methodologies for testing results.</p> <p><b>Learning Outcome 4:</b> Graduates of the program will be able to critique data interpretations provided by real-world sources and make critical inferences regarding the validity of provided data.</p>	
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**EXECUTIVE SUMMARY**

			<p><b>Concepts:</b> Data validity, inferences, ethical dilemmas and deduction.</p> <p><b>Competencies:</b> Criticism and evaluation of multiple data sets, assessment of reliability and validity, deductive reasoning, and sound recommendations based on data.</p> <p><b>Assessment Methods:</b> In DAT 200 Data Science and Society, students will complete an embedded assignment which will be assessed with a faculty developed rubric that focuses on ethical problem solving, deductive reasoning, and creative thinking. In the Data Science capstone course, students will submit a portfolio of work that will be evaluated against a faculty designed holistic rubric that incorporates mathematical reasoning, ethics, critical thinking and thoroughness.</p> <p>The curriculum will be refined based on measures indicating student ability to critique external data sources, ability to apply interpretations and recommendations of real-world data sets, and ability to make determinations on data validity and any ethical dilemmas present in data sets.</p>	
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March 5, 2018

To: Eileen I. Klein, President  
From: Shelley McGrath, President for Academic and Student Affairs *SM*  
Subject: Request for Academic Program Transfer

Per ABOR Policy 2-223-B.9.c Arizona State University requests to transfer the following:

- Bachelor of Arts in Education in Educational Studies, Division of Teacher Preparation, Mary Lou Fulton Teachers College, to Division of Educational Leadership and Innovation, Mary Lou Fulton Teachers College

Please indicate your approval by signing in the space provided below. A copy of your approval will be sent to Arizona State University

Thank you.

Approved: *Eileen I. Klein*  
Eileen I. Klein, President

Date: *6 March 2018*

Attachment

**REGENTS**

Chair Bill Ridenour, *Paradise Valley* • Ron Shoopman, *Tucson* • Ram Krishna, *Yuma* • Jay Heiler, *Paradise Valley*  
Rick Myers, *Tucson* • Larry Penley, *Phoenix* • Lyndel Manson, *Flagstaff* • Kartin Taylor Robson, *Phoenix*

**STUDENT REGENTS:** Vianney Careaga, *UA* • Aundrea DeGravina, *ASU*

**EX-OFFICIO:** Governor Doug Ducey • Superintendent of Public Instruction Diane Douglas

**ENTERPRISE EXECUTIVE COMMITTEE**

Board President Eileen I. Klein • ASU President Michael M. Crow • NAU President Rita Cheng • UA President Robert Robbins

March 5, 2018

To: Eileen I. Klein, President

From: Shelley McGrath, Vice President for Academic and Student Affairs *SM*

Subject: Request for Academic Program Name Change

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Per ABOR Policy 2-223-B.9.b, Arizona State University requests to change the following:

- Bachelor of Science in Health Innovation to Bachelor of Science in Health Entrepreneurship and Innovation ✓
- Doctor of Philosophy in Sociological Inquiry to Doctor of Philosophy in Sociology ✓
- Master of Advanced Study in American Media and Popular Culture to Master of Advanced Study in Film and Media Studies ✓
- Master of Science in Program Evaluation to Master of Science in Program Evaluation and Data Analytics ✓
- Doctor of Education in Educational Administration and Supervision to Doctor of Education in Learning Systems Leadership ✓
- Master of Education in Educational Technology to Master of Education in Learning Design and Technologies ✓
- Master of Science in Computational and Natural Science to Master of Science in Biological Data Science ✓

**REGENTS**

Chair Bill Ridenour, *Paradise Valley* • Ron Shoopman, *Tucson* • Ram Krishna, *Yuma* • Jay Heiler, *Paradise Valley*  
Rick Myers, *Tucson* • Larry Penley, *Phoenix* • Lyndel Manson, *Flagstaff* • Karrin Taylor Robson, *Phoenix*

STUDENT REGENTS: Vianney Careaga, *UA* • Aundrea DeGravina, *ASU*

EX-OFFICIO: Governor Doug Ducey • Superintendent of Public Instruction Diane Douglas

**ENTERPRISE EXECUTIVE COMMITTEE**

Board President Eileen I. Klein • ASU President Michael M. Crow • NAU President Rita Cheng • UA President Robert Robbins

Please indicate your approval by signing in the space provided below. A copy of your approval will be sent to Arizona State University.

Thank you.

Approved:   
Eileen I. Klein, President

Date: 6 March 2018

Attachment



**EXECUTIVE SUMMARY**

**ARIZONA STATE UNIVERSITY  
 ACADEMIC PROGRAM CHANGES**

**Table 1: Proposed Rename of Existing Degrees**

Current Program	College/School (location)	Action Requested	Brief Description, Justification and Identified Market Need	Impact on Current Students
<b>Rename Existing Undergraduate Degree</b>				
Bachelor of Science in Health Innovation	College of Nursing and Health Innovation  (Downtown Phoenix)	Rename program to:  Bachelor of Science in Health Entrepreneurship and Innovation	<p>Health innovation students find solutions to health-related problems and often seek opportunities to bring their ideas to market. In an email to the university faculty on April 2, 2017, President Crow emphasized the need to "further develop innovation and entrepreneurship in all ASU programs and schools from the arts, to the humanities, to nursing, journalism etc." We have responded by adding coursework on entrepreneurship and launching an entrepreneurship lab. The addition of entrepreneurship to the name of our degree will attract additional students and enhance collaborative efforts of our college with the resources of ASU's entrepreneurship and innovation programs.</p> <p>Market Need: With the significant disruptions around health (including policy, technology and finance), innovation leadership is critical. Students in our long-standing Master of Healthcare Innovation are typically credentialed practitioners who are seeking advanced training in innovation. The BS in Health Innovation students, however, are most often not seeking credentialing routes to becoming practitioners in the field. As a result, they are trained in innovation leadership but do not have as clear of a pathway for employment. To strengthen this degree option, the addition of entrepreneurship adds both entrepreneurial and intrapreneurial skill sets in business modeling, customer development, marketing and funding, that are transferable and marketable for graduates. This will positively change the employment opportunities for students, but also enhance visibility for our degrees which will aid recruitment.</p>	Current students are not expected to be impacted but may choose to take new courses on health entrepreneurship as elective coursework. We anticipate this name change will positively increase enrollment in our degree on all campuses it is offered.

**EXECUTIVE SUMMARY**

<b>Rename Existing Graduate Degrees</b>				
<p>Doctor of Philosophy in Sociological Inquiry</p>	<p>College of Liberal Arts and Sciences</p> <p>School of Social and Family Dynamics</p> <p>(Tempe)</p>	<p>Rename program to:</p> <p>Doctor of Philosophy in Sociology</p>	<p>This name change is requested to strengthen the ability to recruit students and to align the degree title with the program. There is an ongoing effort to rebuild doctoral programs in sociology. Changing the title back to the core disciplinary title will help in this effort and will facilitate student recruitment. The revised name is consistent with the standard name of PhD programs in the field of sociology. The name change will make the degree more intelligible to students.</p> <p>Market Need: The American Sociological Association study of employment trends between 2009 and 2015 found a steady increase in both tenure-track and non-tenure-track positions. During the timeframe, there was an increase of 186 tenure-track positions. A survey of employers revealed a 90% acceptance rate, and 35% said they had between 50-100 applicants. Thirty percent said they had fewer than 50 applicants, and 16% reported between 100-149 applicants. Between 2012 and 2015, there was an increase of 50 non-tenure track positions, 40 postdocs and fellowships and 100 sociological practice positions. Non-academic jobs are harder to quantify, but it is estimated that about a third of sociologists with a Doctor of Philosophy are employed in government, research and policy firms or non-profits. An increasing need for doctoral students with strong analytic methods skills also improves their marketability.</p>	<p>There is no impact on students. There are not any active students in the program.</p>
<p>Master of Advanced Study in American Media and Popular Culture</p>	<p>College of Liberal Arts and Sciences</p> <p>Department of English</p> <p>(Tempe)</p>	<p>Rename program to:</p> <p>Master of Advanced Study in Film and Media Studies</p>	<p>Originally, the Master of Advanced Study in American Media and Popular Culture name was devised to intersect with the activities of the Center for Film, Media and Popular Culture. However, Film Media and Studies has never had a working relationship with the Center. A name change to film and media studies aligns us with the names of other Master of Arts programs in the field such as Emory (Master of Arts in Film Studies), UCLA (Master of Art in Film and Media Studies), and Iowa (Master of Art in Film Studies). Finally, the phrase 'popular culture' is no longer commonly used and carries an air of trivialness.</p>	<p>Current students will benefit from a more marketable name. The name change will help recruitment.</p>

**EXECUTIVE SUMMARY**

			<p>Market Need: Due to increasing online graduate degree options, ground graduate enrollment has declined around the country. To capture further enrollment and to respond to increased recruiting by employers of new hires holding master's degrees for positions that used to only require a bachelor's degree, we propose a name change of the Master of Advanced Studies degree in Film and Media Studies to replace the current program name of American Media and Popular Culture. Film and Media Studies is a more universally recognized and respected name in the United States with greater cultural and economic currency for prospective students and employers. The premier ground master's programs in this area University of Southern California, University of Texas-Austin, New York University, and those listed above all share similar program name. As one of only a few online master's program, ASU can better tap into a market of those students looking for such a degree.</p>	
<p>Master of Science in Program Evaluation</p>	<p>College of Public Service and Community Solutions  (Downtown Phoenix)</p>	<p>Rename program to:  Master of Science in Program Evaluation and Data Analytics</p>	<p>The proposed name change from program evaluation to program evaluation and data analytics will supplement a proposed curriculum change to better align and reflect the curriculum, which will combine the best of two worlds: statistical training in causal analysis, econometric techniques, and research design that serves as the foundation of evidence-based management and program evaluation; and data science courses that prepare students to work with complex datasets, effectively visualizing and communicating results, and participating in the data science ecosystem of open source software and collaboration.</p> <p>Market Need: Data analytics is a marketable and lucrative skill set with considerable market demand. For example, a recent McKinsey report predicted that "by 2018 the U.S. would face a shortage of 140,000 to 190,000 workers with deep analytical skills and of 1.5 million managers and analysts with big data skills."  <a href="http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/big-data-the-next-frontier-for-innovation">http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/big-data-the-next-frontier-for-innovation</a>)</p>	<p>There will be no impact on current students, as they will complete their current degree programs.</p>

**EXECUTIVE SUMMARY**

			<p>The predictions in the report have held true as job listings requesting data science training have been growing rapidly, as evidenced by data on key terms on postings available on Indeed.com. A quick analysis of trends related to the terms "data science" and "data analysis" compared to traditional public affairs fields of "policy analysis" and "program evaluation" show how demand for data analytics is increasing while demand for program evaluation is flat.</p>	
<p>Doctor of Education in Educational Administration and Supervision</p>	<p>Mary Lou Fulton Teachers College  Division of Educational Leadership and Innovation  (Tempe)</p>	<p>Rename program to:  Doctor of Education in Learning Systems Leadership</p>	<p>The current title, educational administration and supervision, had a reputation for a type of education doctorate that is high-acceptance, low-quality, and low-graduation. It was also poorly targeted; admissions applications have been closed.</p> <p>The proposed name would signal a premier education doctoral program for administrators who bring education systems to the highest level of performance. The program focuses on system-level skills often omitted from leadership programs: advanced data analysis appropriate for leaders, ethical decision-making in conflict, analysis of problems that are not easily resolved, collaboration with leaders of other systems, performance-based organization of critical subsystems, strategic views of talent and HR systems, and systems-level design thinking.</p> <p>Market Need: The target audience includes administrators in K-12 systems, higher education, and community organizations who either currently serve in or wish to obtain high-level positions. There are 1500 local public K-12 school districts in southwestern states, 3000 including Texas and Oklahoma, and more than 4200 public school agencies including all types (charters, state-controlled, etc.) (Digest of Education Statistics, 2015). There are 170 public community colleges in Southwestern states, 246 including Texas and Oklahoma (Digest of Education Statistics, 2015). Each system has not only a chief executive but 3-10 cabinet-level leaders who are potential students in this program.</p>	<p>Eight students remain in the program; all were admitted before 2011 and have sufficient time to finish their program before the degree re-titling. The new title will separate new students from the reputation of the current program; this is of significant benefit in the state</p>

**EXECUTIVE SUMMARY**

			Salaries for system leaders (examples): K-12 superintendent mean salary \$125,096; Southwestern deputy/assoc superintendents: \$119,113 ( <a href="http://www.aasa.org/content.aspx?id=3030">http://www.aasa.org/content.aspx?id=3030</a> ) Community college CEO median salary of \$185,000 ( <a href="http://www.aacc.nche.edu/Publications/Briefs/Documents/CEOSurvey_05012016.pdf">http://www.aacc.nche.edu/Publications/Briefs/Documents/CEOSurvey_05012016.pdf</a> ).	
Master of Education in Educational Technology	Mary Lou Fulton Teachers College  Educational Leadership and Innovation  (Tempe)	Rename program to:  Master of Education in Learning Design and Technologies	The Master of Education in educational technology has been re-engineered to focus on the design of learning with technologies. The proposed name change to Master of Education in learning design and technology better reflects the program. We have been told by practitioners (including hiring managers) that this new focus is an appropriate direction for professional preparation, and the degree title should be changed to fit the new character of the program.  Market Need: 1) Demonstrated market need: 122 current online students, including 52 new students in fall 2017 (Source: Enrollment Tracking dashboard, August 18, 2017). The last several cohorts had less than 10 students each.  2) Internal market research, especially discussions with hiring authorities in EdPlus and other units who have a close connection to instructional technology labor pools.	The name change is likely to improve marketability of graduates. There is no impact on current online students as the program was revised for online delivery in fall 2016. Seven Tempe-campus students who were admitted under the old curriculum have been provided individual paths to graduate before the proposed new degree name becomes effective.
Master of Science in Computational and Natural Science	New College of Interdisciplinary Arts and Sciences School of Mathematical and Natural Sciences	Rename program to:  Master of Science in Biological Data Science	In planning the Master of Science in computational and natural sciences, we created a program in which statistical methods and biological data are emphasized as much as the computational aspects, thus allowing us to pull equally from all units in School of Mathematical and Natural Sciences (biology, math, statistics, applied computing). Biological data, statistics, and computational aspects are infused throughout each semester of the degree program. Additionally, prerequisite knowledge in each subject is not assumed. Our open and inclusive degree design is better described by	There will be no impact as the program has not yet been approved through university governance.

**EXECUTIVE SUMMARY**

	(West)		<p>"biological data science." The name change will also be more descriptive for potential applicants.</p> <p>Market Need: Large biological datasets are becoming commonplace in both medical industries and academic research. Having the ability to analyze and understand how these datasets view statistical and computational techniques has become increasingly important. The degree program also focuses on the joint training of biologists and computational scientists to effectively generate and store these large datasets for better ease of data mining, etc. Conferences are now being organized around this title (e.g., <a href="https://meetings.cshl.edu/meetings.aspx?meet=DATA&amp;year=16">https://meetings.cshl.edu/meetings.aspx?meet=DATA&amp;year=16</a>). A 2013 article in Nature ("Biology: The big challenges of big data," 498:255-260) describes a situation in which biologists and computer scientists are needing to work together to "uncork new bottlenecks." This degree brings the fields together for training at a master's degree level.</p>	
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**Table 2: Non-High Enrollment Program Disestablishments**

College/School (location)	Current Degree Name, Plan Code and CIP Code	Action Requested (e.g., rename or disestablish) including recommended date for the action.	Brief Description and Justification	Impact on Current Students
None Submitted				

**EXECUTIVE SUMMARY**

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**ARIZONA STATE UNIVERSITY  
 ACADEMIC ORGANIZATIONAL CHANGES**

**Table 1: Modified Academic Organizations**

College/School	Department/School Current Name	Action Requested	Brief Description and Justification	Impact on Current Students	Fiscal Impact	Proposed Effective Term
None Submitted						

**Table 2: Proposed Moves of Academic Programs**

Current Program	College/School (location)	Action requested	Justification/Brief Description	Impact on Current Students
<b>Undergraduate Programs To Be Moved</b>				
Bachelor of Arts in Education in Educational Studies	Mary Lou Fulton Teachers College  Division of Teacher Preparation  (Tempe)	Move program:  From: Division of Teacher Preparation, Mary Lou Fulton Teachers College  To: Division of Educational Leadership and Innovation, Mary Lou Fulton Teachers College	Educational studies is a non-certification program for students who are not preparing to become certified teachers. It is the only non-initial-certification undergraduate degree offered in Teacher Preparation and fits more comfortably within the degree offerings of the Division of Educational Leadership and Innovation, where programs are mostly outside of initial certification. The Teachers College leadership believes the program belongs with all other non-initial-certification programs.	None. The content and title of the degree remains identical.