PROPOSAL TO ESTABLISH A NEW GRADUATE CONCENTRATION

This form should be used for academic units wishing to propose a new concentration for existing graduate degrees. A concentration is a subspecialty within a degree and major. It indicates the fulfillment of a designated, specialized course of study, which qualifies the student with skills and training in one highly concentrated area of the major. Concentrations are formally-recognized educational designations (including the assignment of a university plan code for reporting/record-keeping purposes and appearance on the ASU transcript). Concentrations are distinguished from more informal academic distinctions such as “emphases,” “tracks,” “foci,” “options,” etc.

This proposal template should be completed in full and submitted to the University Provost’s Office at mail to: curriculumplanning@asu.edu. It must undergo all internal university review and approval steps including those at the unit, college, and university levels. A program may not be implemented until the Provost’s Office notifies the academic unit that the program may be offered.

**GRADUATE CONCENTRATION**

<table>
<thead>
<tr>
<th>College/School:</th>
<th>Ira A. Fulton Schools of Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Note:</strong> Program ownership is coded at the College/School level first and may not be a center, department or division apart from it.</td>
<td></td>
</tr>
<tr>
<td>Department/Division/School:</td>
<td>The Polytechnic School (CAPPSYCH)</td>
</tr>
<tr>
<td>Proposing faculty group (if applicable):</td>
<td>Human Systems Engineering (CAPPSYCH)</td>
</tr>
</tbody>
</table>

| Existing graduate degree and major under which this concentration will be established: | Master of Science (MS) in Human Systems Engineering |
| Name of proposed concentration: | Health Systems |
| Requested effective term and year: | Fall 2021 |
| (The first semester and year for which students may begin applying to the concentration) |

**Is a program fee required?**

No, a program fee is not required.

**Is the unit willing and able to implement the program if the fee is denied?**

Not applicable.

<table>
<thead>
<tr>
<th>Delivery method and campus or location options:</th>
<th>select all locations that apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Downtown Phoenix</td>
<td>□ Polytechnic</td>
</tr>
<tr>
<td>□ Both on-campus and □ ASU Online* - (check applicable campus(es) from options listed above)</td>
<td></td>
</tr>
<tr>
<td>□ ASU Online only (all courses online and managed by ASU Online)</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Once students elect a campus or Online option, students will not be able to move between the on-campus and the ASU Online options. Approval from the Office of the University Provost and Philip Regier (Executive Vice Provost and Dean) is required to offer programs through ASU Online. Please complete the ASU Online Offering form in Curriculum ChangeMaker to begin this request. Prior to completing the online Curriculum ChangeMaker form, please contact EdPlus at asuonline@asu.edu who can provide you with additional information regarding the online request process.

**PROPOSAL CONTACT**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Nancy Cooke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title:</td>
<td>Professor</td>
</tr>
<tr>
<td>Phone number:</td>
<td>480-727-5158</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:ncooke@asu.edu">ncooke@asu.edu</a></td>
</tr>
</tbody>
</table>

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Request to implement a new graduate concentration 11-6-17
PROPOSAL TO ESTABLISH A NEW GRADUATE CONCENTRATION

DEAN APPROVAL(S)

This proposal has been approved by all necessary unit and college/school levels of review, and the college/school(s) has the resources to offer this degree program. I recommend implementation of the proposed concentration.

Note: An electronic signature, an email from the dean or dean's designee, or a PDF of the signed signature page is acceptable.

College/School/Division Dean name: James S. Collofello

Signature: [Signature]
Date: 10/19/2020

Please note: Proposals for new concentrations also require the review and recommendation of approval from the University Graduate Council, Curriculum and Academic Programs Committee (CAPC), the Academic Senate (Information item only), and the Office of the Provost before they can be put into operation.

The final approval notification will come from the Office of the Provost.

1. OVERVIEW

Provide a brief description (no more than 150 words) of the new concentration (including the focus of the new concentration, relationship to other concentrations within this degree program, etc.).

The MS program in Human Systems Engineering with a concentration in Health Systems provides current and future managers with the technical expertise to lead efficient health care systems, by identifying needs through system modeling, field research and analytics to improve the health care systems. This concentration will also attune students to perform research and develop innovative approaches to transform health care from reactive to proactive systems, which reflect National Institute of Health initiatives.

The MS program in Human Systems Engineering with a concentration in Health Systems provides students with a deep understanding in applied cognitive science, foundations of human systems engineering, uses of simulation, health care devices and systems, patient safety, and process engineering. It also provides students with skills in applying human systems engineering research and methods. Students in this concentration will be able to conduct human systems engineering research, with a focus on health systems. Other concentrations in human systems engineering also provide students with a foundation in human systems engineering research, but apply the research and methods to different applications such as the user experience, aviation systems, or intelligent systems.

2. IMPACT ASSESSMENT

A. Explain the unit's need for the new concentration (e.g., market demand, research base, direction of the discipline, and interdisciplinary considerations). How will the new concentration complement the existing degree program, including enrollment, national ranking, etc.?

Health care is a growing sector of the economy, accounting for almost 18% of the U.S. Gross Domestic Product in 2017. Furthermore, the cost of health care in the U.S. is high and rising; $3.5 trillion, or $10,739 per person (cms.gov) in 2017. Recent changes to the health care landscape at the federal level have led to increasing demand for measurable increases in efficiency and effectiveness of care delivery. Because technology is still often viewed as a critical element of health system reform, e.g., such as the implementation of electronic medical records, these technologies will be deployed to manage, track and measure treatment effectiveness, patient satisfaction, provider reimbursement and process improvement – all of which require understanding of the human system and the complex processes involved in this work. Thus, Human Systems Engineering tools and techniques can create efficiencies in all aspects of care delivery where a human is involved, to improve system performance.
PROPOSAL TO ESTABLISH A NEW GRADUATE CONCENTRATION

It is difficult to track the role of human systems engineers in health care, because this specialty crosses several disciplines and occupations tracked by the Bureau of Labor Statistics, but employment of health care occupations is projected to grow 18 percent from 2016 – 2026, faster than the average for all occupations, adding about 2.4 million new jobs. This projected growth is mainly due to an aging population (bls.gov, “Healthcare Occupations”), leading to greater demand for health care services and for improved efficiency in health care systems. Related to human systems engineers in health care, employment of industrial engineers is projected to grow 10 percent from 2016 – 2026, which is also faster than average for all occupations (bls.gov, “Occupational Outlook Handbook – Industrial Engineers”), and for health and safety engineers, 9 percent growth is projected from 2016 - 2026, which is about as fast as average for all occupations.

Comparable academic programs for Human Systems Engineering with strong research faculty in health systems include MS programs in Applied Psychology, Industrial and Systems Engineering, Occupational Health and Safety, or Biomedical Informatics at universities with medical teaching school facilities or collaborators, or medical research faculty, such as George Mason University, the University of Illinois at Urbana-Champaign, the University of Wisconsin-Madison, Rochester Institute of Technology, Ohio State University, State University of New York at Buffalo, and Texas A&M University. Related MS programs in Healthcare Systems Engineering are offered at Johns Hopkins, University of Central Florida, Penn State, and Loyola Marymount University. Washington University in St. Louis recently launched a new MS in health care operational excellence in 2017. However, ASU is uniquely positioned to offer an MS in Human Systems Engineering with a specific concentration in health systems, to provide expertise in understanding human behavior and system design, with a focus on the health care sector. This concentration differs from ASU’s Biomedical Informatics program in that the core courses of our Human Systems Engineering MS degree offer a strong foundation of generalizable skills in human subjects’ research and human-technology interaction design beyond the healthcare domain, with students in this concentration gaining additional domain knowledge in health care and health care applications.

Students are expected to come from a wide range of undergraduate programs that include cognitive science, psychology, industrial engineering, biomedical informatics, biomedical engineering, public health, and other health-related disciplines. Graduates would find employment in hospitals, human factors companies, the FDA or CDC, and medical device companies.

This concentration which focuses on research to address patient safety, improve hospital systems, home health care, and medical device usability is consistent with ASU’s mission to advance research and discovery of public value that is use-inspired. It is also interdisciplinary in nature, drawing from disciplines of cognitive science and engineering, as well as health care disciplines.

B. Please identify other related ASU programs and describe how the new concentration will complement these existing ASU programs? If applicable, statements of support from affected academic unit administrators should be included with this proposal submission.

The College of Health Solutions has a portfolio of graduate program offerings, including Biomedical Informatics and Science of Health Care Delivery. The MS Human Systems Engineering with a concentration in Health Systems has a unique and different approach. The College of Health Solutions has also agreed for many of their courses to be included in the concentration. These concentration courses include: BMI 605, BMI 613, BMI 616, BMI 618, HCD 502 and HCD 570.

A statement of support is included from CHS (see Appendix III).

The College of Health Solutions are distinct from the MS in Human Systems Engineering with a concentration in Health Systems in that the focus of the former is the health system itself and the focus of the new concentration is on human capabilities and limitations and how these human factors should be considered in health systems. They are complementary in the focus on systems and technology vs. a focus on the human in those systems.

C. Is this an interdisciplinary concentration? If yes, please address the relationship of the proposed concentration to other existing degree programs and any parallel or similar concentrations in those degree
3. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Attach a PDF copy of the assessment plan printed from the University Office of Evaluation and Educational Effectiveness assessment portal demonstrating UOEED’s approval of your assessment plan for this program. Visit the assessment portal at https://uoeee.asu.edu/assessment-portal or contact uoeed@asu.edu with any questions.

See Appendix II for Assessment Plan approved by UOEED.

4. CURRICULAR STRUCTURE

Please ensure that all new core course proposals have been submitted to the Provost’s office through the Curriculum ChangeMaker online course proposal submission system before this initiative is put on the University Graduate Council and CAPC agendas.

<table>
<thead>
<tr>
<th>Core Courses for the Degree</th>
<th>Ensure the core listed below is the same as for the standalone degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefix and Number</td>
<td>Course Title</td>
</tr>
<tr>
<td>HSE 520</td>
<td>Methods and Tools in Applied Cognitive Science</td>
</tr>
<tr>
<td>HSE 530</td>
<td>Intermediate Statistics for Human Systems Engineering</td>
</tr>
<tr>
<td>HSE 531</td>
<td>Data Analytics: Modeling Human Subjects Data</td>
</tr>
<tr>
<td>HSE 542</td>
<td>Foundations of Human Systems Engineering</td>
</tr>
<tr>
<td><strong>Section sub-total:</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required Concentration Courses</th>
<th>Students must take 6 credit hours from the following list</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefix and Number</td>
<td>Course Title</td>
</tr>
<tr>
<td>BMI 605</td>
<td>Health Information Systems and Applications</td>
</tr>
<tr>
<td>BMI 613</td>
<td>Workflow Analysis and Redesign in Health Systems Engineering</td>
</tr>
<tr>
<td>BMI 616</td>
<td>Clinical Decision Support and Evidence-Based Medicine</td>
</tr>
<tr>
<td>HCD 502</td>
<td>Health Care Systems and Design</td>
</tr>
<tr>
<td>HCD 570</td>
<td>Process Engineering</td>
</tr>
<tr>
<td>HCD 575</td>
<td>Leadership and Professionalism</td>
</tr>
<tr>
<td><strong>Section sub-total:</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective or Research Courses</th>
<th>(as deemed necessary by supervisory committee)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefix and Number</td>
<td>Course Title</td>
</tr>
<tr>
<td>HSE 592</td>
<td>Research</td>
</tr>
<tr>
<td>(Three credit hours required for those in thesis culminating experience; optional for all other students in the program)</td>
<td></td>
</tr>
</tbody>
</table>

(Adapted from the given content to fit the format and requirements)
Graduate level elective options will include 400- and 500-level HSE or HCD courses. Others will require approval from the program chair. Example: HSE 429 Product Design and Evaluation (3) or HCD 540 Process Engineering for Health Care Quality & Safety (3)

<table>
<thead>
<tr>
<th>Culminating Experience(s)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.g. – Capstone course, portfolio, written comprehensive exam, applied project, thesis (must be 6 credit hours with oral defense), dissertation (must be 12 credit hours with oral defense)</td>
<td></td>
</tr>
<tr>
<td>Portfolio</td>
<td>0</td>
</tr>
<tr>
<td>HSE 593 Applied Project</td>
<td>6</td>
</tr>
<tr>
<td>HSE 599 Thesis</td>
<td>6</td>
</tr>
</tbody>
</table>

Culminating Experience(s) Section sub-total: 3-9

<table>
<thead>
<tr>
<th>Other Requirements</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.g. – internships, clinical requirements, field studies, foreign language exam as applicable</td>
<td></td>
</tr>
<tr>
<td>HSE 525 Health and Human Systems Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

Other Requirements Section sub-total: 0-6

<table>
<thead>
<tr>
<th>Total required credit hours</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30</td>
</tr>
</tbody>
</table>

1. List all required core courses and total credit hours for the core (required courses other than internships, thesis, dissertation, capstone course, etc.).
2. Omnibus numbered courses cannot be used as core courses.
3. Permanent numbers must be requested by submitting a course proposal to Curriculum ChangeMaker for approval.

A. Please describe the culminating experience(s) required for completion of the existing degree and major, and the proposed concentration (e.g., thesis, dissertation, comprehensive exams, capstone course, portfolio, applied project).

The culminating experience options will be consistent with the MS Human Systems Engineering program. The three culminating experience options include 1) a written thesis that is orally defended, 2) an industry-led applied project that is reported in writing and presented in a public forum (e.g., conference, brown bag seminar, Innovation Showcase), or 3) a portfolio that presents three projects from classes and reflections on them.

B. Please describe any other requirements for completion of the existing degree and major, and the proposed concentration (e.g., internships, clinical requirements, field studies, foreign language exam etc.).

N/A

5. COMPREHENSIVE EXAMS

(Please choose what is appropriate for the degree type selected)

A. Master’s Comprehensive Exam (when applicable), please select from the appropriate option.

N/A

6. COURSES

A. New Courses Required for Proposed Program: Provide course prefix, number, title, credit hours and brief description for any new courses required for this program.
HSE 525, Health and Human Systems Engineering (3)
This course is designed to introduce graduate students to different perspectives and techniques in medical human factors and health systems engineering to improve system design and system integration in health care. We cover basic principles in human-technology interaction, macroergonomics, and job design in the context of health care, health organizations, and health technologies. This course emphasizes synthesis of reading materials, problem scoping, and communication skills through writing and discussion.

7. ADMINISTRATION AND RESOURCES

A. Administration: How will the proposed concentration be administered (including recommendations for admissions, student advisement, retention etc.)? Describe the administering body in detail, especially if the proposed concentration is part of a larger interdisciplinary initiative. How will the graduate support staffing needs for this proposed concentration program be met?

The Polytechnic School graduate advising team will manage the admission evaluation process, student advisement, and outreach efforts. The Human Systems Engineering program chair and graduate faculty will be involved in the application evaluation process and provide recommendations to advising for processing.
B. **Projected Enrollment:** How many students will be admitted immediately following final approval of the concentration? What are enrollment projections for the next three years?

<table>
<thead>
<tr>
<th>3-YEAR PROJECTED ANNUAL ENROLLMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please utilize the following tabular format</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Number of Students</td>
</tr>
<tr>
<td>in concentration (Headcount)</td>
</tr>
</tbody>
</table>

C. **Resource requirements needed to launch and sustain the program:** Describe any new resources required for this concentration’s success such as new staff, new facilities, new library resources, new technology resources, etc. and include projected budget needs. If multiple units/programs will collaborate in offering this concentration, please discuss the resource contribution of each participating program. Letters of support must be included from all academic units that will commit resources to this concentration.

No additional resources are necessary

D. **Current Faculty:** Complete the table below for all current faculty members who will teach in the program.

<table>
<thead>
<tr>
<th>Name</th>
<th>Rank</th>
<th>Highest Degree</th>
<th>Area of Specialization/Expertise</th>
<th>Estimated Level of Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nancy Cooke</td>
<td>Professor</td>
<td>PhD</td>
<td>Human Systems Engineering, Aviation teamwork</td>
<td>High</td>
</tr>
<tr>
<td>Scotty Craig</td>
<td>Associate Professor and HSE Program Chair</td>
<td>PhD</td>
<td>Human Systems Engineering, cognitive science, educational technology, human-computer interactions</td>
<td>High</td>
</tr>
<tr>
<td>Rob Gray</td>
<td>Professor</td>
<td>PhD</td>
<td>Human Systems Engineering, perception-action</td>
<td>High</td>
</tr>
<tr>
<td>Erin Chiou</td>
<td>Assistant Professor</td>
<td>PhD</td>
<td>Human Systems Engineering, health systems</td>
<td>High</td>
</tr>
<tr>
<td>Sue Hallbeck</td>
<td>Adjunct Professor</td>
<td>PhD</td>
<td>Human Systems Engineering, healthcare</td>
<td>High</td>
</tr>
<tr>
<td>Ian Douglas</td>
<td>Professor of Practice</td>
<td>PhD</td>
<td>Human Systems Engineering, human factors, design thinking</td>
<td>Medium</td>
</tr>
<tr>
<td>Bradley Doebeling</td>
<td>Professor</td>
<td>MD</td>
<td>Health information technology, informatics, healthcare markets, public and community health</td>
<td>Low</td>
</tr>
<tr>
<td>Robert Greenes</td>
<td>Professor Emeritus</td>
<td>PhD, MD</td>
<td>Modeling of clinical decision-making, knowledge representation, human-computer interaction, workflow optimization</td>
<td>Low</td>
</tr>
<tr>
<td>Matthew Martin</td>
<td>Clinical Asst Professor</td>
<td>PhD</td>
<td>Mental health (adults), health and well-being, health communications, healthcare systems</td>
<td>Low</td>
</tr>
</tbody>
</table>
PROPOSAL TO ESTABLISH A NEW GRADUATE CONCENTRATION

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Degree</th>
<th>Description</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gregory Mayer</td>
<td>Professor of Practice</td>
<td>MD</td>
<td>Health communication, palliative care, operations management</td>
<td>Low</td>
</tr>
<tr>
<td>Jack Gilbert</td>
<td>Clinical Professor</td>
<td>EdD</td>
<td>Assessment and strengthening of everyday ethics through ethical pathways (culture, leadership, infrastructure, personal integrity), values-driven leadership, leading innovation</td>
<td>Low</td>
</tr>
</tbody>
</table>

E. Is there a graduate faculty structure for this concentration program that will differ from the original degree program graduate faculty structure *(for PhD programs only)*? If yes, please include the name of the graduate faculty group and whether they will participate in offering this concentration.

n/a

8. REQUIRED SUPPORTING DOCUMENTS

(Please label accordingly, i.e., Appendix or Attachment A, B, etc.)

Please include the following with your proposal:

A. Statements of support from all deans - See Appendix III

B. Impact statements of heads of impacted academic units (programs with similar names/content, utilizing courses, faculty, etc.) – See Appendix III
1. **Proposed name of concentration:** Health Systems

2. **Marketing description** *(Optional - 50 words maximum. The marketing description should not repeat content found in the program description.)*

   N/A

3. **Provide a brief program description** *(Catalog type (i.e. will appear in Degree Search) – no more than 150 words. Do not include any admission or curriculum information)*

   The MS program in Human Systems Engineering with a concentration in Health Systems provides current and future managers with the technical expertise to lead efficient health care systems, by identifying needs through system modeling, field research and analytics to improve the health care systems. This concentration will also attune students to perform research and develop innovative approaches to transform healthcare from reactive to proactive systems, which reflect National Institute of Health initiatives.

4. **Delivery/Campus Information Options:** On-campus only (ground courses and iCourses)

5. **Campus(es) where program will be offered:**

   ASU Online curriculum consists of courses that have no face-to-face content. iCourses are online courses for students in on-campus programs. iCourses may be included in a program, but may not comprise the entirety of a program. On-campus programs must have some face-to-face content

   Note: Office of the Provost approval is needed for ASU Online campus options.

   All other campus or location options *(please select all that apply)*:

   - [] ASU Online only *(all courses online and managed by ASU Online)*
   - [] Downtown Phoenix  
   - [] Polytechnic
   - [] Tempe
   - [] West
   - [] Other:

   *Note: Once students elect a campus or Online option, students will not be able to move between the on-campus and the ASU Online options. Approval from the Office of the University Provost and Philip Regier (Executive Vice Provost and Dean) is required to offer programs through ASU Online. Please complete the ASU Online Offering form in Curriculum ChangeMaker to begin this request. Prior to completing the online Curriculum ChangeMaker form, please contact EdPlus at asuonline@asu.edu who can provide you with additional information regarding the online request process.

6. **Admission Requirements**

   Applicants must fulfill the requirements of both the Graduate College and the Ira A. Fulton Schools of Engineering.

   Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in engineering, health, nutrition, psychology or related field, from a regionally accredited institution.

   Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program, or applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

   **All applicants must submit:**

   1. Graduate admission application and application fee
   2. Official transcripts
   3. GRE scores
   4. Letter of intent
PROPOSAL TO ESTABLISH A NEW GRADUATE CONCENTRATION

5. professional resume
6. three letters of recommendation
7. proof of English proficiency

Additional Application Information
Applicants whose native language is not English must provide proof of English proficiency regardless of current residency.

Global Launch at ASU offers an online alternative to standardized testing for international students who are seeking admission to ASU but need proof of English proficiency: https://learnenglish.asu.edu/online/admission.

A GRE waiver may be requested if the applicant received a bachelor’s degree in a related field from an accredited institution in the United States with a cumulative GPA of 3.0 or better. Applicants can also submit a GRE waiver request form if they have five years of full-time applicable professional experience. To request a waiver, applicants should email polygrad@asu.edu. An approved waiver does not guarantee admission.

7. Application Review Terms (if applicable session):
Indicate the first term and year in which applications will be opened for admission. Applications will be accepted on a rolling basis after that time.

Note: It is the academic unit’s responsibility to display program deadline dates on their website.

<table>
<thead>
<tr>
<th>Terms</th>
<th>Years</th>
<th>University Late Fee Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Fall (regular)</td>
<td>(year): 2021</td>
<td>July 1st</td>
</tr>
<tr>
<td></td>
<td>(year):</td>
<td>October 1st</td>
</tr>
<tr>
<td>☑ Spring (regular)</td>
<td>(year): 2022</td>
<td>December 1st</td>
</tr>
<tr>
<td></td>
<td>(year):</td>
<td>February 8th</td>
</tr>
<tr>
<td>☐ Summer (regular)</td>
<td>(year):</td>
<td>May 14th</td>
</tr>
<tr>
<td>☑ Summer B</td>
<td>(year):</td>
<td>May 14th</td>
</tr>
</tbody>
</table>

Note: Session B is only available for approved online programs.

Program admission deadlines website address: https://poly.engineering.asu.edu/academics/graduate-programs-overview/

8. Curricular Requirements:
Curricular Structure Breakdown for the Academic Catalog:
(To be completed by the Graduate College)

30 credit hours and a portfolio, or
30 credit hours and a thesis, or
30 credit hours including the required applied project course (HSE 593)
PROPOSAL TO ESTABLISH A NEW GRADUATE CONCENTRATION

Required Core (12 credit hours)
HSE 520 Methods and Tools in Applied Cognitive Science (3)
HSE 530 Intermediate Statistics for Human Systems Engineering (3)
HSE 531 Data Analytics: Modeling Human Subjects Data (3)
HSE 542 Foundations of Human Systems Engineering (3)

Concentration (6 credit hours)
BMI 605 Health Information Systems and Applications (3)
BMI 613 Workflow Analysis and Redesign in Health Systems Engineering (3)
BMI 616 Clinical Decision Support and Evidence-Based Medicine (3)
HCD 502 Health Care Systems and Design (3)
HCD 570 Process Engineering (3)
HCD 575 Leadership and Professionalism (3)

Electives and Research (0 - 9 credit hours)

Other Requirements (3 credit hours)
HSE 525 Health and Human Systems Engineering (3)

Culminating Experience (0 or 6 credit hours)
HSE 593 Applied Project (6) or
HSE 599 Thesis (6) or
Portfolio (0)

Additional Curriculum Information
For electives and research coursework, enrollment in HSE 592 Research for three credit hours is required for students completing a thesis, and optional for students completing the applied project or portfolio culminating experience. Students in all culminating experience options should contact the academic unit for an approved electives list.

Students completing a portfolio for the culminating experience must complete 9 credit hours of electives and research coursework.

Other requirement course HSE 525 is required for all students, but in some situations may be substituted with academic unit approval.

9. Allow 400-level courses: ☑ Yes ☐ No
   Note: No more than six credit hours of 400-level coursework may be included on a graduate student plan of study.

10. Keywords: List all keywords that could be used to search for this concentration. Keywords should be specific to the proposed concentration – limit 10 keywords.
    healthcare, health systems, human factors, health informatics, health technology, medical devices, engineering psychology, work systems, job design

11. Area(s) of Interest
   A. Select one (1) primary area of interest from the list below that applies to this program.
      ☐ Architecture & Construction ☑ Arts ☐ Interdisciplinary Studies
      ☑ Business ☐ Law & Justice ☐ Mathematics
      ☐ Communication & Media ☐ Psychology ☐ STEM
      ☐ Education & Teaching ☐ Engineering & Technology ☐ Science
   
   Request to implement a new graduate concentration 11-6-17
PROPOSAL TO ESTABLISH A NEW GRADUATE CONCENTRATION

B. Select one (1) secondary area of interest from the list below that applies to this program.

- Entrepreneurship
- Health & Wellness
- Humanities
- Social and Behavioral Sciences
- Sustainability
- Interdisciplinary Studies
- Law & Justice
- Mathematics
- Psychology
- STEM
- Science
- Social and Behavioral Sciences
- Sustainability

12. Contact and Support Information:

<table>
<thead>
<tr>
<th>Office Location - Building Code &amp; Room:</th>
<th>Wanner 101</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Search ASU map)</td>
<td></td>
</tr>
</tbody>
</table>

| Campus Telephone Number:               | 480-727-4723 |
| (may not be an individual’s number)    |             |

| Program Email Address:                 | polygrad@asu.edu |
| (may not be an individual’s email)      |               |

| Program Website Address:               | poly.engineering.asu.edu |
| (if one is not yet created, use unit website until one can be established) | |

| Program Director (Name):               | Nancy Cooke |
| Program Director (ASURITE):            | ncooke     |

| Program Support Staff (Name):          | Amy Riggs  awolsey  
|                                        | Meghan Vaughn mmackowi |
| Program Support Staff (ASURITE):       | Amy Riggs  awolsey  
|                                        | Meghan Vaughn mmackowi |

| Admissions Contact (Name):             | Amy Riggs  awolsey  
|                                        | Meghan Vaughn mmackowi |
| Admissions Contact (ASURITE):          | Amy Riggs  awolsey  
|                                        | Meghan Vaughn mmackowi |

13. Application and iPOS Recommendations: List the Faculty and Staff that will input admission/POS recommendations to Gportal and indicate their approval for Admissions and/or POS:

<table>
<thead>
<tr>
<th>NAME</th>
<th>ASURITE</th>
<th>ADMSN</th>
<th>POS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amy Riggs</td>
<td>awolsey</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Bernadette Teran</td>
<td>bteran</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Name</td>
<td>Username</td>
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</tr>
<tr>
<td>Blake Holder</td>
<td>bholder</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Meghan Vaughn</td>
<td>mmackowi</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
APPENDIX II

Assessment Plan

MS in Human Systems Engineering (Health Systems)

Mission

The Master of Science in Human Systems Engineering at ASU seeks to train students in the skills needed to improve our world by applying psychologically-based principles. As teachers and mentors, we provide our students a guided experience that trains them in the theories and methods of experimental psychology and cognitive science. As researchers, the program investigates how humans interact with both other humans and new innovations in technology. We seek to improve these interactions by advancing knowledge of underlying psychological processes and by providing innovations in system design and training to facilitate optimal interactions. In so doing, we embrace ASU’s goals of providing the highest quality of education possible to our students. We also help to answer ASU’s challenge of helping people lead healthier more fulfilled lives through the use of applied science and technology.

Goals

We embrace ASU’s goals of providing the highest quality of education possible to our students. We also help to answer ASU’s challenge of helping people lead healthier more fulfilled lives through the use of applied science and technology.

Outcome 1

Ability to apply the appropriate statistical analysis, address violations of assumptions (e.g., sphericity), & run the analysis using SPSS.

Concepts

Principles of scientific investigation, one-way and factorial designs, contrasts, post-hoc tests, interactions, mixed designs, power, computer applications.

Competencies

Analysis of healthcare systems; quantitative skills pertinent to the development of such systems.

Assessment Process: Students will be assessed through an exam 3 times a semester in HSE 530 and weekly through data analysis assignments in HSE 531. Instructors tailor future classes to target the weaker areas.

Measure 1

Student performance on assignment in HSE 530 (ANOVA) measured with a rubric.

Performance Criterion 1

95% of students will achieve mastery based on a faculty developed rubric.

Measure 2

Student Performance on assignment in HSE 531 (Data Analytics) measured with a rubric.

Performance Criterion 2

95% of students will achieve mastery based on a faculty developed rubric.

Outcome 2

Ability to apply the methods of human systems engineering to test a hypothesis or solve an applied problem.
MS in Human Systems Engineering (Health Systems)

Concepts
Principles of scientific investigation and methods and theories of human-systems engineering, healthcare applications, medical products, and human performance in healthcare systems.

Competencies
Analysis of healthcare systems; quantitative skills pertinent to the development of such systems.

Assessment Process: Students will be assessed in HSE 542 four times through the semester using design challenges. These challenge problems will be evaluated by the instructor using a rubric. Also, in HSE 520 students will be assessed 19 times through the semester by the instructor using a rubric. Instructors tailor future classes to target the weaker areas.

Measure 1
Student performance on assignments in HSE 520 (Methods and Tools in Applied Cognitive Science)

Performance Criterion 1
95% of students will show mastery of class concepts on the final class paper based on faculty created course concept rubric.

Measure 2
Student performance on assignments in HSE 542 (Foundations of Human Systems Engineering)

Performance Criterion 2
95% of students will demonstrate mastery of class concepts based on their mean score on four design challenges throughout the class. A rubric designed by the instructor will guide the grading of the design challenges.

Outcome 3
Ability to conduct independent research to address problems in the space of human performance in healthcare systems.

Concepts
Principles of scientific investigation and methods and theories of human-systems engineering, healthcare applications, medical products, and human performance in healthcare systems.

Competencies
Analysis of healthcare systems; quantitative skills pertinent to the development of such systems.

Assessment Process: Students will be assessed by their advisor and committee members (thesis option) once in the semester at the defense of the culminating experience. Performance on the culminating experience will drive additional changes to the program and in particular, to the milestones for achieving the culminating experience.

Measure 1
Students demonstrate competency in their defense of his or her thesis or applied project or portfolio based on a faculty developed rubric.
Performance Criterion 1
100% of students will show mastery of concepts as measured on a faculty developed rubric.

Measure 2
Students demonstrate competency in their culminating projects based on a faculty developed rubric in the space of humans teaming and interacting with Healthcare teams and Healthcare systems.

Performance Criterion 2
100% of students will show mastery of class concepts as measured on a faculty developed rubric.
Hello,

Attached is the following proposal:

**Ira A. Fulton Schools of Engineering**

*The Polytechnic School*

Establishment of a graduate concentration

**MS in Human Systems Engineering (Health Systems)**

Best,

*Sergio F. Quiros*

Specialist Senior, Academic and Student Affairs

Ira A. Fulton Schools of Engineering

Arizona State University

Tempe, AZ 85287-8109

Phone: 480/727-5770

Email: Sergio.Quiros@asu.edu
The College of Global Futures is happy to support this proposal.

Christopher Boone  
Dean, College of Global Futures  
Professor, School of Sustainability

The College of Global Futures embraces ASU’s mission as being a comprehensive public research university, measured not by whom it excludes, but rather 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. We support and foster a culture of inclusiveness, tolerance, and respect that promotes equal opportunity and diversity among faculty, staff, and students and through our engagement with diverse communities within and beyond the University.


Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed MS in Human Systems Engineering (Health Systems) concentration. This degree program is offered by The Polytechnic School.

Please let me know if you have any questions or concerns.

Jim

James S. Collofello  
Vice Dean for Academic and Student Affairs  
Professor of Computer Science and Engineering  
School of Computing Informatics and Decision Systems Engineering  
Ira A. Fulton Schools of Engineering  
Arizona State University
Dear Jim,

The College sees no impact in our programs and supports your proposed concentration. The School of Human Evolution and Social Change has some courses that you may want to consider encouraging students to take:

ASB 510 Health: Social and Biocultural Theories
ASB 505 Medical Anthropology
ASB 512 Social Science Applications in Community Health
ASB 502 Health of Ethnic Minorities
ASM 545 Principles of Human Genetics
ESS 513 Institutions
ESS 514 Urban and Environmental Health

Best,
Fabio

Fabio Augusto Milner, PhD
Associate Dean of Graduate Initiatives
Assistant Director, SA Levin MCMC Center
The College of Liberal Arts and Sciences
Director of Mathematics for STEM Education
School of Mathematical and Statistical Sciences
Arizona State University

[Address and contact information]

From: Fabio Milner <milner@asu.edu>
Date: Tuesday, January 5, 2021 at 15:39
To: Sergio Quiros <sergio.quiros@asu.edu>
Cc: James Collofello <JAMES.COLLOFELLO@asu.edu>, Jeremy Helm <JEREMY.HELM@asu.edu>, Fabio Milner <milner@asu.edu>
Subject: Re: MS in Human Systems Engineering (Health Systems) - Graduate College Review

Dear Sergio and Jim,

I’ll get back to you as soon as I hear from the grad directors/chiefs in the units involved in those programs that Grad College names in their message to you.

Best,
Fabio
Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed MS in Human Systems Engineering (Health Systems) concentration. This degree program is offered by The Polytechnic School.

Please let me know if you have any questions or concerns.

Jim
James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering
Arizona State University
College of Integrative Sciences and Arts

From: Duane Roen
To: Sergio Quiros, James Collofello, Jeremy Helm
Cc: Sergio Collofello <JAMES.Collofello@asu.edu>, Jeremy Helm <Jeremy.Helm@asu.edu>
Subject: RE: MS in Human Systems Engineering (Health Systems) - Graduate College Review
Date: Monday, January 4, 2021 3:44 PM

A follow-up note from Andy Mara: “This new degree looks good to me. I would love to support this in any way we can. We’ve got a few faculty who work in health who could serve on committees, if they are needed.”

From: Duane Roen
Sent: Monday, January 4, 2021 3:44 PM
To: Sergio Quiros <Sergio.Quiros@asu.edu>
Cc: James Collofello <JAMES.Collofello@asu.edu>, Jeremy Helm <Jeremy.Helm@asu.edu>
Subject: RE: MS in Human Systems Engineering (Health Systems) - Graduate College Review

Sergio, Jim, and Jeremy,

CISA is happy to support FSE’s proposal for an MS in Human Systems Engineering (Health Systems).

I don’t see any impact on any CISA programs.

Happy new year!

Best,

Duane

Duane Roen
Dean, College of Integrative Sciences and Arts
Vice Provost, Polytechnic campus
Arizona State University
Mail Code: 2780
7271 E. Sonoran Arroyo Mall
Mesa, AZ 85212-6415
P: 480-727-1415

From: Sergio Quiros
Sent: Monday, January 4, 2021 2:39 PM
To: Duane Roen <Duane.Roen@asu.edu>
Cc: James Collofello <JAMES.Collofello@asu.edu>, Jeremy Helm <Jeremy.Helm@asu.edu>
Subject: FW: MS in Human Systems Engineering (Health Systems) - Graduate College Review

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed MS in Human Systems Engineering (Health Systems) concentration. This degree program is offered by The Polytechnic School.

Please let me know if you have any questions or concerns.

Jim
James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering
Arizona State University
Dear Jim and Sergio:

Happy New Year!

Thunderbird is pleased to support the MS in Human Systems Engineering (Health Systems) offered by CIDSE at Fulton Engineering. We wish you all the success in this new program!

Lena

---

From: Lena Booth  
To: Sergio Quiros  
Cc: Sanjeev Khagram  
Subject: FW: MS in Human Systems Engineering (Health Systems) - Graduate College Review  
Date: Monday, January 4, 2021 2:39 PM

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed MS in Human Systems Engineering (Health Systems) concentration. This degree program is offered by The Polytechnic School.

Please let me know if you have any questions or concerns.

Jim

James S. Collofello

Vice Dean for Academic and Student Affairs  
Professor of Computer Science and Engineering  
School of Computing Informatics and Decision Systems Engineering  
Ira A. Fulton Schools of Engineering  
Arizona State University
Hi Jim,

We have reviewed this information and support the establishment of the MS in Human Systems Engineering (Health Systems).

Please let me know if you need any additional information.

Best,
Amy

---

Begin forwarded message:

From: Sergio Quiros <Sergio.Quiros@asu.edu>
Date: January 4, 2021 at 3:39:40 PM CST
To: Amy Hillman <AMY.HILLMAN@asu.edu>, James Collofello <JAMES.Collofello@asu.edu>, Jeremy Helm <JEREMY.HELM@asu.edu>
Cc: Sergio Quiros <Sergio.Quiros@asu.edu>, James Collofello <JAMES.Collofello@asu.edu>, Jeremy Helm <JEREMY.HELM@asu.edu>
Subject: FW: MS in Human Systems Engineering (Health Systems) - Graduate College Review

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed MS in Human Systems Engineering (Health Systems) concentration. This degree program is offered by The Polytechnic School.

Please let me know if you have any questions or concerns.
James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering
Arizona State University
Good Morning,

I am copying The Polytechnic School in this email to let them know that you are interested in collaborating.

Thank you,

Sergio Z. Quiros
Specialist Senior, Academic and Student Affairs
Ira A. Fulton Schools of Engineering
Arizona State University
Tempe, AZ 85287-8109
Phone: 480/727-5770
Email: Sergio.Quiros@asu.edu

Dr. Quiros:

The College of Health Solutions is pleased to support your proposal to develop a MS in Human Systems Engineering (Health Systems). As you know, we have a MS degree in the Science of Health Care Delivery. We would appreciate your consideration of electives from that program (https://chs.asu.edu/programs/science-health-care-delivery-ms), particularly HCD 502 (Health Care Systems and Design), and HCD 570 (Process Engineering). Best of luck!

Warm regards and stay safe,

Deborah
DEBORAH L. HELITZER, Sc.D.
Dean and Professor
College of Health Solutions
Arizona State University
Email: deborah.helitzer@asu.edu
Phone: 602.496.2511
For information or appointments, please contact Daniel Eckstrom (Daniel.Eckstrom@asu.edu)
Dr. Helitzer,

The Graduate College is asking for your academic units response to the for our proposed MS in Human Systems Engineering (Health Systems) concentration. They have indicated the proposal cannot move forward on the university review process unless we provide a statement of support from your academic unit.

Please let us know if you have any questions or concerns.

Thank you,

Sergio Z. Quiros
Specialist Senior, Academic and Student Affairs
Ira A. Fulton Schools of Engineering
Arizona State University
Tempe, AZ 85287-8109
Phone: 480/727-5770
Email: Sergio.Quiros@asu.edu

---

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed MS in Human Systems Engineering (Health Systems) concentration. This degree program is offered by The Polytechnic School.

Please let me know if you have any questions or concerns.

jim

James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering
Arizona State University
Dear Sergio – thank you for asking me to review your proposal for MS Human Systems Engineering (Health Systems). I apologize for my tardiness in responding. I now realize there were three separate requests and I only initially responded to one. I was able to discuss this proposal with our faculty and program directors. We see no duplication nor direct conflict with courses and programs offered in the Edson College. We do request your consideration for including the following Edson Courses as electives in the MS Degree in Human Systems Engineering – Health Systems.

HCI 538  Innovation and the Individual
HCI 540  Applying Principles of Evidence Based Practice
HCI 542  Systems Thinking
HCI 550  Health Care Policy and Innovation
HCI 561  Innovation Methods

On behalf of the Edson College of Nursing and Health Innovation we support your proposal. Best to you as you continue through the University Approval Process.

Kathy
Katherine (Kathy) Kenny, DNP, RN, ANP-BC, FAANP, FAAN
Associate Dean of Academic Affairs
Clinical Professor

Edson College of Nursing and Health Innovation
Arizona State University
500 North 3rd Street | Phoenix, AZ 85004
Ph: 602.496.1719  katherine.kenny@asu.edu
https://nursingandhealth.asu.edu

Dr. Kenny,

The Graduate College is asking for your academic units response to the for our proposed MS in Human Systems Engineering (Health Systems) concentration. They have indicated the proposal cannot move forward on the university review process unless we provide a statement of support from your academic unit.

Please let us know if you have any questions or concerns.
Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed MS in Human Systems Engineering (Health Systems) concentration. This degree program is offered by The Polytechnic School.

Please let me know if you have any questions or concerns.

jim

James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering
Arizona State University
Hello. The Herberger Institute supports your proposed concentration. We also would like you all to explore adding a few of our classes to your approved elective list:

For folks interested in designing real-time media systems for movement and physical-activity based health systems Arts, Media and Engineering offers:

AME 520 Understanding Activity
AME 532 Media Synthesis

We also believe that DSC 598 Medical Product Design in The Design School would be a useful elective.

Good luck with the processes!

with appreciation, Stephani

Stephani Etheridge Woodson
Interim Associate Dean of Students
Herberger Institute for Design and the Arts
The FDT Evelyn Smith Professor | School of Music, Dance and Theatre
Director, Design and Arts Corps | herbergerinstitute.asu.edu/design-and-arts-corps
She/Her/Hers

---

COVID-19 Resources for Students

---

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed MS in Human Systems Engineering (Health Systems) concentration. This degree program is offered by The Polytechnic School.

Please let me know if you have any questions or concerns.

jim
James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering
Arizona State University

---
Good afternoon,

The College of Law has reviewed the attached proposal for an MS in Human Systems Engineering (Health Systems) concentration and supports this proposal. Please let us know if you need anything additional.

Best,
Tamara

Tamara Herrera
Associate Dean of Academic Affairs
Clinical Professor of Law
Sandra Day O'Connor College of Law
Arizona State University
111 E. Taylor Street
Phoenix, Arizona 85004-4467
tamara.herrera@asu.edu
480-727-7194

---

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed MS in Human Systems Engineering (Health Systems) concentration. This degree program is offered by The Polytechnic School.

Please let me know if you have any questions or concerns.

Jim
James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering
Arizona State University
Dear Sergio.

New College has no concerns. Thank you. Patty

Patricia Friedrich, PhD

Dr. Friedrich,

The Graduate College is asking for your academic units response to the for our proposed **MS in Human Systems Engineering (Health Systems)** concentration. They have indicated the proposal cannot move forward on the university review process unless we provide a statement of support from your academic unit.

Please let us know if you have any questions or concerns.

Thank you,

Sergio Quiros

Specialist Senior, Academic and Student Affairs
Ira A. Fulton Schools of Engineering
Arizona State University
Tempe, AZ 85287-8109
Phone: 480/727-5770
Email: Sergio.Quiros@asu.edu

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed **MS in Human Systems Engineering (Health Systems)** concentration. This degree program is offered by The Polytechnic School.
Please let me know if you have any questions or concerns.

jim
James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering
Arizona State University
Hi Sergio,

The Watts College is happy to support your proposed MS in Human Systems Engineering (Health Systems) concentration.

William Terrill, PhD
Arizona State University
Associate Dean, Watts College of Public Service and Community Solutions
Professor, School of Criminology & Criminal Justice
Co-Editor, Policing: A Journal of Policy & Practice

On Mon, Jan 4, 2021 at 2:40 PM Sergio Quiros <Sergio.Quiros@asu.edu> wrote:

Sent on behalf of Dr. James S. Collofello

Hello,

I am writing to request an impact/support letter (email will suffice) for our proposed MS in Human Systems Engineering (Health Systems) concentration. This degree program is offered by The Polytechnic School.

Please let me know if you have any questions or concerns.

Jim
James S. Collofello
Vice Dean for Academic and Student Affairs
Professor of Computer Science and Engineering
School of Computing Informatics and Decision Systems Engineering
Ira A. Fulton Schools of Engineering
Arizona State University
(NEW GRADUATE INITIATIVES)

PROPOSAL PROCEDURES CHECKLIST

Academic units should adhere to the following procedures when requesting new curricular initiatives (degrees, concentrations or certificates).

☐ Obtain the required approval from the Office of the Provost to move the initiative forward for internal ASU governance reviews/approvals. Please see the academic strategic plan website at: https://provost.asu.edu/curriculum-development.

☐ Submit any new courses that will be required for the new curricular program to the Curriculum ChangeMaker online course approval system for review and approval.

  ▪ Additional information can be found at the Provost’s Office Curriculum Development website: Courses link
  ▪ For questions regarding proposing new courses, send an email to: courses@asu.edu

☐ Prepare the applicable proposal template and operational appendix for the proposed initiative.

☐ Obtain letters or memos of support or collaboration (if applicable).

  ▪ When resources (faculty or courses) from another academic unit will be utilized
  ▪ When other academic units may be impacted by the proposed program request
  ▪ If the program will have an online delivery option support will be required from the Provost’s office and ASU Online. (Please complete the ASU Online Offering form in Curriculum ChangeMaker to begin this request.)

☐ Obtain the internal reviews/approvals of the academic unit.

  ▪ Internal faculty governance review committee(s)
  ▪ Academic unit head (e.g. Department Chair or School Director)
  ▪ Academic unit Dean (will submit approved proposal to the curriculumplanning@asu.edu email account for further ASU internal governance reviews (as applicable, University Graduate Council, CAPC and Senate)

Additional Recommendations

All new graduate programs require specific processes and procedures to maintain a successful degree program. Below are items that the Graduate College strongly recommends that academic units establish after the program is approved for implementation.

☐ Establish satisfactory academic progress policies, processes and guidelines – Check within the proposing academic unit and/or college to see if there are existing academic progress policies and processes in place. If none have been established, please go to http://graduate.asu.edu/faculty_staff/policies and scroll down to the academic progress review and remediation processes (for faculty and staff) section to locate the reference tool and samples for establishing these procedures.

☐ Establish a Graduate Student Handbook for the new degree program – Students need to know the specific requirements and milestones they must meet throughout their degree program. A Graduate Student Handbook provided to students when they are admitted to the degree program and published on the website for the new degree gives students this information. Include in the handbook the unit/college satisfactory academic progress policies, current degree program requirements (outlined in the approved proposal) and provide a link to the Graduate Policies and Procedures website. Please go to http://graduate.asu.edu/faculty_staff/policies to access Graduate Policies and Procedures.