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| For Academic Affairs and Research Use Only | |
| Proposal Number | LAC131 |
| CIP Code: |  |
| Degree Code: |  |

**New Emphasis, Concentration, Option, or Minor Proposal Form**

**[X] Undergraduate Curriculum Council**

**[ ] Graduate Council**

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

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| |  |  | | --- | --- | | Katherine Baker | 1/21/2022 |   **Department Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **COPE Chair (if applicable)** |
| |  |  | | --- | --- | | Temma Balducci | 1/21/2022 |   **Department Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Head of Unit (if applicable)** |
| |  |  | | --- | --- | | Warren Johnson 9/27/2022 |  |   **College Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Undergraduate Curriculum Council Chair** |
| |  |  | | --- | --- | | Gina Hogue | 9/28/2022 |   **College Dean** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Graduate Curriculum Committee Chair** |
| |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **General Education Committee Chair (if applicable)** | |  |  | | --- | --- | | Alan Utter | 10/17/2022 |   **Vice Chancellor for Academic Affairs** |

1. **Contact Person (Name, Email Address, Phone Number)**

Mindy Fulcher, Dept. of Art + Design, mfulcher@astate.edu, 870-761-2121

1. **Proposed Starting Date**

Fall 2023

1. **Title of degree program:**

Bachelor of Science in Digital Technology and Design

1. **Proposed name of new option/concentration/emphasis/minor:**

Artificial Intelligence (AI) Emphasis

1. **Reason for proposed action that includes rationale, goals, and student population served:**

The Digital Technology and Design degree provides students with a core education in Design Software Technology and Human Centered Design Theory combined with foundational programming logic. These skills develop students into creative problem solvers who also possess the necessary software skills to make an impact in a variety of Digital Technology and Design fields.  
We feel that there is a growing interest among students to learn about Artificial Intelligence and Machine Learning to become qualified for new careers within this emerging industry. We believe that this content would fit well within the Digital Technology and Design degree and attract new students to the University. This new concentration area will provide students with more advanced knowledge, skills, and portfolios in the field of Artificial Intelligence. By providing students with the ability to specialize in a specific area of Digital Technology/Design, we will develop stronger graduates who are better prepared for the career field.   
The Digital Technology and Design degree provides all students a core education in Design Software Technology and Human Centered Design Theory combined with foundational programming knowledge. Students in this degree then choose a concentration area to focus on. Students in this course will demonstrate in-demand industry needs through hands-on projects representing programming, problem solving, analytical and design thinking. Students will benefit in their career field through internship experience and a portfolio that demonstrates a high-level skillset in their chosen concentration area.   
**A-State: BS Digital Technology and Design (Artificial Intelligence) employment data and needs assessment research provided by Academic Partnerships.**   
**Region:** AR, TX, TN, LA, MS and MO   
**Conferrals** for BS – Informational Technology were 839 in 2020, up 83.6% since 2016.   
**Computer Systems Engineers/ Architects (field closely related to AI)**   
- Employment for Systems Engineers is projected to grow 25% over the next 10 years in the region  
 - In the last 12 months, 21,345 jobs were posted in the region.   
- Top 5 employers: Raytheon, Boeing, Accenture, Humana, Dell

1. **Provide the following:**
   1. Curriculum outline - List of courses in new option/concentration/emphasis/minor – Underline required courses

DIGI/ISBA 3023, Introduction to Machine Learning   
DIGI/ISBA 3063, Analysis and Design of AI  
DIGI/ISBA 4023, Design and Development of AI  
DIGI/ISBA 4033, AI Deployment Solutions   
ISBA 3033, Intermediate Programming   
MATH 2013, Math for Computational Intelligence

* 1. Total semester credit hours required for option/emphasis/concentration/minor

18

* 1. Student demand (projected enrollment) for program option

10-25 per year

1. **Will the new option/emphasis/concentration/minor be offered:**
   1. **Traditional/Face-to-face** No
   2. **Distance/Online** Yes
      1. **If yes, indicate mode of distance delivery, and the percentage of courses offered via this modality (<50%, 50-99%, or 100%).**

100%

* + 1. **If online, will it be offered through Global Initiatives/Academic Partnerships (AP)?**

YES

1. **Specify the amount of the additional costs required, the source of funds, and how funds will be used.**

If approved, AOS is planning to hire a new AI Instructor to teach courses within this concentration area.

**Bulletin Changes**

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| **Instructions** |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Please include a before (with changed areas highlighted) and after of all affected sections.**  **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.** |

**Undergraduate Bulletin 2022-2023**

[**https://catalog.astate.edu/content.php?catoid=3&navoid=77**](https://catalog.astate.edu/content.php?catoid=3&navoid=77)

**Department of Art + Design**

[Go to information for Department of Art + Design.](https://catalog.astate.edu/preview_entity.php?catoid=3&ent_oid=121&returnto=77)

**Bachelor of Arts**

•  [Art, Emphasis in Art History, BA](https://catalog.astate.edu/preview_program.php?catoid=3&poid=560&returnto=77)

**Bachelor of Fine Arts**

•  [Art , Emphasis in Studio Art, BFA](https://catalog.astate.edu/preview_program.php?catoid=3&poid=561&returnto=77)

•  [Art, Emphasis in Art Education, BFA](https://catalog.astate.edu/preview_program.php?catoid=3&poid=562&returnto=77)

•  [Graphic Design, BFA](https://catalog.astate.edu/preview_program.php?catoid=3&poid=570&returnto=77)

•  [Graphic Design, Emphasis in Digital Design, BFA](https://catalog.astate.edu/preview_program.php?catoid=3&poid=571&returnto=77)

**Bachelor of Science**

•  [Digital Technology and Design, Emphasis in Artificial Intelligence (AI), BS](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77)

•  [Digital Technology and Design, Emphasis in Digital Animation, BS](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77)

•  [Digital Technology and Design, Emphasis in Game Design, BS](https://catalog.astate.edu/preview_program.php?catoid=3&poid=563&returnto=77)

•  [Digital Technology and Design, Emphasis in Graphic Communications, BS](https://catalog.astate.edu/preview_program.php?catoid=3&poid=564&returnto=77)

•  [Digital Technology and Design, Emphasis in Information Design, BS](https://catalog.astate.edu/preview_program.php?catoid=3&poid=565&returnto=77)

•  [Digital Technology and Design, Emphasis in Mobile Application Development, BS](https://catalog.astate.edu/preview_program.php?catoid=3&poid=566&returnto=77)

•  [Digital Technology and Design, Emphasis in Social Media Management, BS](https://catalog.astate.edu/preview_program.php?catoid=3&poid=567&returnto=77)

•  [Digital Technology and Design, Emphasis in Virtual Reality Production, BS](https://catalog.astate.edu/preview_program.php?catoid=3&poid=568&returnto=77)

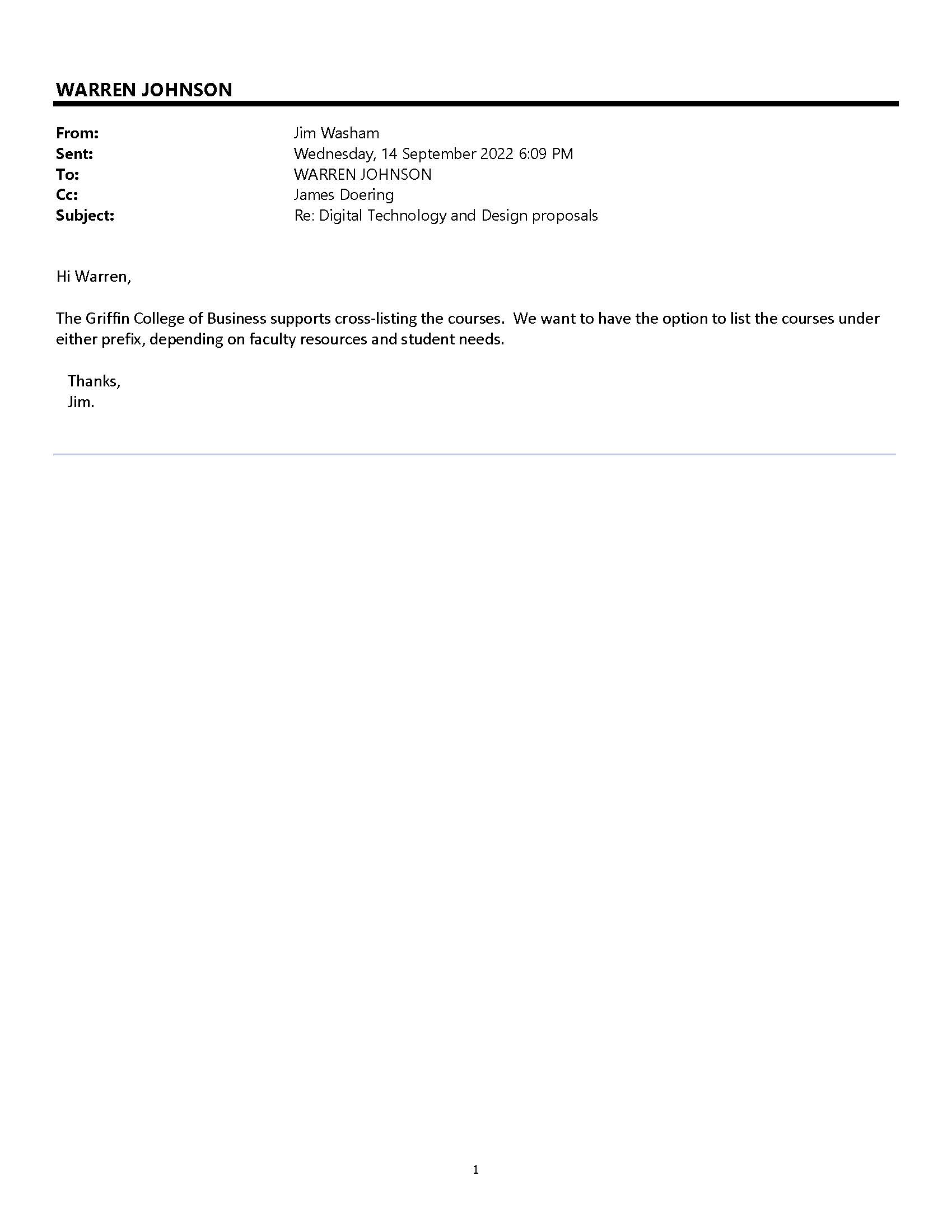
•  [Digital Technology and Design, Emphasis in Web Design, BS](https://catalog.astate.edu/preview_program.php?catoid=3&poid=569&returnto=77)

[**https://catalog.astate.edu/preview\_program.php?catoid=3&poid=1986&returnto=77**](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **[add program, place emphasis in alphabetical order]**

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| |  |  |  |  | | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | |  | | --- | | **Digital Technology and Design, Emphasis in Artificial Intelligence (AI), BS** | |  |   Return to {$returnto_text} Return to: [Programs by Department](https://catalog.astate.edu/content.php?catoid=3&navoid=77) | |   **This program is offered through A-State Online and is not available to traditional (on-campus) students.**  A complete 8-semester degree plan is available at <https://www.astate.edu/info/academics/degrees/> |
| **UNIVERSITY REQUIREMENTS:**  See [University General Requirements for Baccalaureate degrees](https://catalog.astate.edu/content.php?catoid=3&navoid=67#university-general-requirements-for-all-baccalaureate-degrees)  **FIRST YEAR MAKING CONNECTIONS COURSE:**   * [UC 1013 - Making Connections](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3**   **GENERAL EDUCATION REQUIREMENTS:**   * See [General Education Curriculum for Baccalaureate Degrees](https://catalog.astate.edu/preview_program.php?catoid=3&poid=447)  **Sem. Hrs: 35**   **Students with this major must take the following:**   * [MDIA 1003 - Mass Communications in Modern Society](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3** * [PSY 2013 - Introduction to Psychology](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3** * [POSC 2103 - Introduction to United States Government](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3**   **Six hours from the following:**   * [ART 2503 - Fine Arts-Visual](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3** * [MUS 2503 - Fine Arts-Music](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3** * [THEA 2503 - Fine Arts-Theatre](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3**   **DIGITAL TECHNOLOGY AND DESIGN REQUIREMENTS:**  Grade of “C” or better required for all GRFX Requirements, including prerequisites.   * [ENG 3023 - Creative Writing](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3** * [GRFX 1113 - Design Literacy](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3** * [GRFX 2783 - Human Centered Design](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3** * [GRFX 4603 - Graphic Design Internship](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3** * [GRFX 4773 - Design Build](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3** * [GRFX 4793 - Digital Technology and Design Portfolio](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3** * [ISBA 1503 - Microcomputer Applications](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3** * [ISBA 2033 - Programming Fundamentals](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3** * [PSY 3613 - Cultural Psychology](https://catalog.astate.edu/preview_program.php?catoid=3&poid=1986&returnto=77) **Sem. Hrs:** **3**   **Sub-total: 27**  **EMPHASIS IN Artificial Intelligence (AI):**   * DIGI/ISBA 3023 - Introduction to Machine Learning **Sem. Hrs: 3** * DIGI/ISBA 3063 - Analysis and Design of AI **Sem. Hrs: 3** * DIGI/ISBA 4023 - Design and Development of AI **Sem. Hrs: 3** * DIGI/ISBA 4033 - AI Deployment Solutions **Sem. Hrs: 3** * ISBA 3033 - Intermediate Programming **Sem. Hrs: 3** * MATH 2013 - Math for Computational Intelligence **Sem. Hrs: 3**   **Sub-total: 18**  **ELECTIVES:**  Electives (at least 15 hours must be upper level) **Sem. Hrs: 37**  **TOTAL REQUIRED HOURS: 120** |

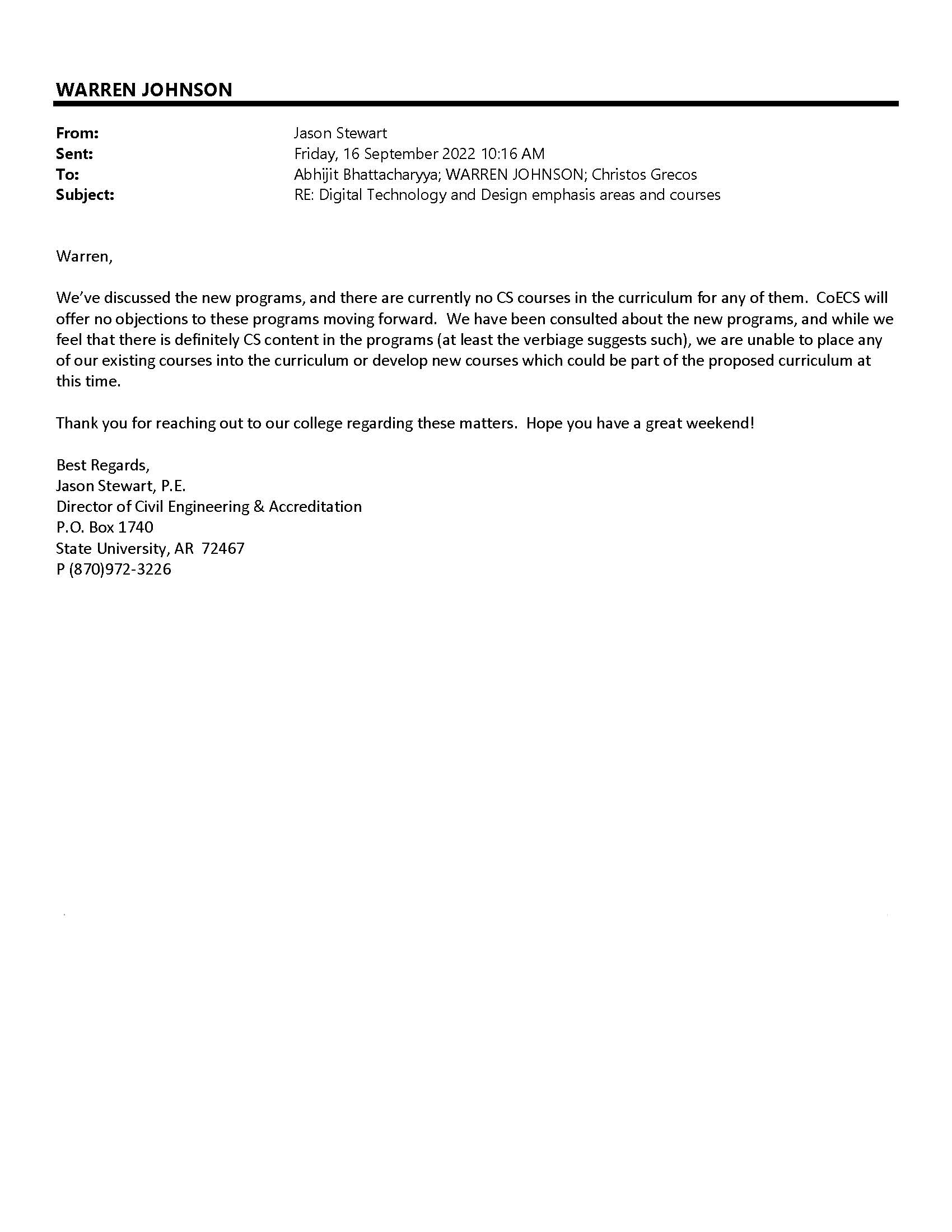
**Appendix A**

**Approval of Cross-listing from the Griffin College of Business**

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**Appendix B**

**Approval of program from College of Engineering and Computer Science**

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