**TO**: The Engineering Faculty

**FROM**: The Faculty of the Interdisciplinary Engineering Program

**RE**: New Engineering Concentration within an Existing Graduate Program

The Faculty of the Interdisciplinary Engineering team has approved the following new graduate Concentration from the College of Engineering. This action is now submitted to the Engineering Faculty with a recommendation for approval.

TITLE:

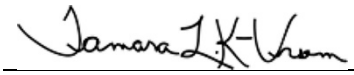
**Strategy and Defense Engineering**

DESCRIPTION:

A concentration in Strategy and Defense Engineering within the Interdisciplinary Engineering master's program prepares mid-career military and civilian leaders as leading decision-makers with and about critical future technologies that multiply the nation's defense and security.

RATIONALE:

The concentration addresses a significant US security and defense need, which fosters a culture of technological innovation and adoption among the nation's war-fighting and civilian leaders essential for supporting their mission. Further, the concentration is best positioned within the Interdisciplinary Engineering program because of its development by Engineering, Strategy, History, Military, and Social Science experts. It trains students in three domains: Technology and Engineering Innovation, Strategy and Defense Decision Making, and Leadership Skills and Values.



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## Target Audience

The Strategy and Defense Engineering concentration is designed for mid-career military and civilian leaders with professional or academic backgrounds in engineering.

**See next page for curriculum and degree requirements.**

## Strategy and Defense Concentration Curriculum

Core Strategy & Defense Engineering Courses: 6 credits
Other Required Strategy & Defense Engineering Courses: 6 credits
Electives: 18 credits – mix of engineering and, depending on student plan of study, some non-engineering courses available here

**Note re: Engineering Requirements:**

A minimum of 18 credits of engineering courses (prefixes AAE, BME, CE, ECE, IE, ME, etc.) are required to complete an interdisciplinary engineering degree.

Depending on how a student fulfills the 6 credits of 'Other Required Courses', they may be required to take all engineering courses for their 18 credits of electives.

Interdisciplinary Engineering Advisors are responsible for working with students to develop an electronic plan of study that ensures a minimum of 18 credits of engineering coursework are mapped out for each advisee.

**Courses with the SCLA prefix have been submitted to Curriculog for approval.**

## Details

| | |
|---|---|
| **Core Courses (6 credits)** | ***Core Strategy & Defense Courses (1 required; choose 1)***<br>SCLA 50500 Technology War and Strategy (required)<br><br>***And 1 of the following:***<br>SCLA 50700 Grand Defense Engineering Challenges<br>SCLA 50600 Space Strategy |
| **Other Required Courses (6 credits; choose 2)** | ***Related Strategy and Engineering Courses - Choose 2***<br>SCLA 53000 Strategic Defense Foresight and Leadership<br>SCLA 51000 Data and Science Strategic Storytelling<br>SCLA 51100 Ethical Reasoning in Defense Technology<br>IE 54500 Engineering Economic Analysis<br>IE 59000 Big Data Risk Analytics for Engineering Management and Public Policy<br>IE 54600 Economic Decisions in Engineering<br>ME 54100 Engineering Design: A Decision Based Perspective |
| **Electives (18 credits)** | Mix of engineering and some non-engineering courses available here * |
| **TOTAL** | **30 credits; a minimum of 18 of which must be engineering courses** |

* A minimum of 18 credits of engineering courses (prefixes AAE, BME, CE, ECE, IE, ME, etc.) are required to complete an interdisciplinary engineering degree. In some cases, students will take all engineering courses to meet the degree and electives requirements.

Curriculog entry will be created after the EFD is reviewed.