

General Studies Request Form

Consult the [General Studies Request Overview and FAQ](#) for more information and quick answers.

New permanent numbered courses must be submitted to the workflow in [Kuali CM](#) before a General Studies request is submitted here. The General Studies Council will not review requests ahead of a new course proposal being reviewed by the Senate.

Proposal Contact Information

Submitter Name	Submitter Email	Submitter Phone Number
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Medha Dalal	medha.dalal@asu.edu	480 727 1617
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College/School	Department/School
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College of Integrative Sciences and Arts (CLS)	School of Applied Sciences and Arts (CASA)
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Submission Information

Type of submission:

New Request (Course or topic does not hold this designation)

Requested Effective Date

Spring 2024

ASU Request

Is this request for a permanent course or a topic?

Permanent Course

Subject Code	Course Number	Units/Credit Hours
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STS	102	3
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Course Information

Courses approved for General Studies require mandatory review every five years.

Course Title

Engineering for All

Course Catalog Description

Challenges students to uncover hidden valuable connections among a variety of disciplines while creatively seeking and solving problems in teams. Students learn and practice skills for how groups function and identify innovation while addressing the tensions between our inherent drives to seek and solve, to share and to sell.

Is this a crosslisted course?

No

Is this course offered by another academic unit?

No

General Studies

Requested Designation

HU - Humanities, Arts and Design

HU: Humanities, Arts and Design

Rationale and Objectives

The humanities disciplines are concerned with questions of human existence and meaning, the nature of thinking and knowing, with moral and aesthetic experience. The humanities develop values of all kinds by making the human mind more supple, critical, and expansive. They are concerned with the study of the textual and artistic traditions of diverse cultures, including traditions in literature, philosophy, religion, ethics, history, and aesthetics. In sum, these disciplines explore the range of human thought and its application to the past and present human environment. They deepen awareness of the diversity of the human heritage and its traditions and histories, and they may also promote the application of this knowledge to contemporary societies.

The study of the arts and design, like the humanities, deepens the student's awareness of the diversity of human societies and cultures. The arts have as their primary purpose the creation and study of objects, installations, performances, and other means of expressing or conveying aesthetic concepts and ideas. Design study concerns itself with material objects, images and spaces, their historical development, and their significance in society and culture. Disciplines in the arts and design employ modes of thought and communication that are often nonverbal, which means that courses in these areas tend to focus on objects, images, and structures and/or on the practical techniques and historical development of artistic and design traditions. The past and present accomplishments of artists and designers help form the student's ability to perceive aesthetic qualities of artwork and design.

The Humanities, Arts and Design are an important part of the General Studies program, for they provide an opportunity for students to study intellectual and imaginative traditions and to observe and/or learn the production of artwork and design. The knowledge acquired in courses fulfilling the Humanities, Arts and Design requirement may encourage students to investigate their own personal philosophies or beliefs and to understand better their own social experience. In sum, the Humanities, Arts and Design core area enables students to broaden and deepen their consideration of the variety of human experience.

[Revised March 2021]

Note: The following types of courses are **excluded** from the "HU" designation, even though they might give some consideration to the humanities, arts and design:

1. Courses devoted primarily to developing skill in the use of a language.
2. Courses devoted primarily to the acquisition of quantitative or experimental methods.
3. Courses devoted primarily to teaching skills.

"HU" courses must meet *either 1, 2, or 3 and* at least one of the criteria under 4 in such a way as to make the satisfaction of these criteria **a central and substantial portion** of the course content.

Select which "HU" criteria this course meets.

1. Emphasizes the study of values; the development of philosophies, religions, ethics or belief systems; and/or aesthetic experience.
2. Concerns the interpretation, critical analysis, or creation of written, aural, or visual texts; and/or the critical analysis (not summary or memorization) of historical development of textual traditions.
3. Concerns the interpretation, critical analysis, or engagement with aesthetic practices; and/or the critical analysis (not summary or memorization) of historical development of artistic or design traditions.

"HU" Criteria 1

Emphasizes the study of values; the development of philosophies, religions, ethics or belief systems; and/or aesthetic experience.

Identify the submitted documentation that provides evidence.

Curriculum Summary and Syllabus

How does this course meet the spirit of this criteria? Using specific language and concrete examples, identify how the course pedagogy (including assignments, lectures, and readings) meet the criteria.

Learning outcomes listed under 'Discover Engineering' and 'Engineering in Society' in the curriculum summary.

Following modules and topics listed under the syllabus emphasize development of ethics and beliefs:

1. Engineering in society
 - 1 - Welcome, introductions, classroom safety
 - 2 - Engineering is everywhere: Evolution of audio technology
 - 3 - Multidisciplinary connections: Product archeology (group activity)
 - 4 - Engineering in daily life: Shoe sole design (group activity)
2. Engineering is human-centered
 - 5 - Design thinking
 - 6 - Ethics in design: Play pump case study
 - 7 - United Nations sustainable development goals and engineering grand challenges
 - 8 - Exploring the dimensions of teamwork

Please provide detailed evidence of how this course meets this criteria (i.e. where in the syllabus or other course materials).

Following outcomes listed under Curriculum Summary emphasize understanding of values:

- Recognize the value of engineering for all regardless of one's potential career.
- Explain and apply ethical considerations when exploring an engineering problem.
- Recognize and investigate the world's greatest challenges and the role that engineering plays in solving these challenges (e.g., Engineering Grand Challenges, UN Sustainability goals, etc.).-

-Integrate diverse disciplinary thinking and expertise to inform design solutions that add value to society.

See also the following course learning outcomes listed under the syllabus that emphasize ethics and beliefs:

- Engage with and discover how engineering connects with a variety of disciplines.
- Understand the impact and ethical implications of engineering/design in and on society.
- Use self-reflection to identify personal motivations, strengths, interests, and skills.

"HU" Criteria 2

Concerns the interpretation, **critical analysis**, or creation of written, aural, or visual texts; and/or the **critical analysis (not summary or memorization)** of historical development of textual traditions.

Identify the submitted documentation that provides evidence.

Syllabus, Assignments and Sample Reading

How does this course meet the spirit of this criteria? Using specific language and concrete examples, identify how the course pedagogy (including assignments, lectures, and readings) meet the criteria.

Throughout the course students develop and apply professional skills, including communication and critical thinking.

Please provide detailed evidence of how this course meets this criteria (i.e. where in the syllabus or other course materials).

Following modules and topics listed under the syllabus:

- 4. Engineering is responsive
 - 13 - Understanding stakeholder roles
 - 14 - Systems thinking
 - 15 - Pre-benchmarking: Analytical hierarchy process, Decision matrix
 - 16 - Community partner project introduction and team formations
- 5. Engineering is creative
 - 17 - Meet the community partner/client
 - 18 - Ideation
 - 19 - Critical evaluation of ideas with research
 - 20 - Benchmarking and Integration
 - 21 - Modeling and visualization, Sketching and drawing

Including a couple of sample assignments that ask students to engage in critical analysis:

Individual Assignment 3: : Ethics Case Study: Play Pump Design

Group Assignment 9: Interview Follow-up, Secondary Research, and Decision-making

"HU" Criteria 3

Concerns the interpretation, critical analysis, or engagement with aesthetic practices; and/or the **critical analysis (not summary or memorization)** of historical development of artistic or design traditions.

Identify the submitted documentation that provides evidence.

Curriculum Summary, Syllabus, and Assignments

How does this course meet the spirit of this criteria? Using specific language and concrete examples, identify how the course pedagogy (including assignments, lectures, and readings) meet the criteria.

Learning outcomes 'Engineering in Society' and 'Engineering Design' under curriculum summary

Please provide detailed evidence of how this course meets this criteria (i.e. where in the syllabus or other course materials).

See Class Activities - Design thinking and Prototyping listed under the syllabus

See Individual Assignment 2: Good and Not so Good Design Critique

"HU" Criteria 4

In addition, an "HU" course must meet one or more of the following requirements. Select all that apply.

b. Concerns aesthetic systems and values, especially in literature, arts, and design.

c. Emphasizes aesthetic experience and creative process in literature, arts, and design.

"HU" Criteria 4B Information

Concerns aesthetic systems and values, especially in literature, arts, and design.

Identify the submitted documentation that provides evidence.

Assignments and Curriculum Summary

How does this course meet the spirit of this criteria? Using specific language and concrete examples, identify how the course pedagogy (including assignments, lectures, and readings) meet the criteria.

Following course outcomes listed under curriculum summary concern societal systems and values:

-Students recognize the value of engineering for all regardless of one's potential career.

-Students integrate diverse disciplinary thinking and expertise to inform design solutions that add value to society.

Please provide detailed evidence of how this course meets this criteria (i.e. where in the syllabus or other course materials).

Individual Assignment 1: Conceptions and Identity

Individual Assignment 3: Ethics Case Study: Play Pump Design

Individual Assignment 6: Finding Customer Value and Defining the Problem

"HU" Criteria 4C Information

Emphasizes aesthetic experience and creative process in literature, arts, and design.

Identify the submitted documentation that provides evidence.

Curriculum Summary and Syllabus

How does this course meet the spirit of this criteria? Using specific language and concrete examples, identify how the course pedagogy (including assignments, lectures, and readings) meet the criteria.

Learning outcome 'Engineering Design'

Please provide detailed evidence of how this course meets this criteria (i.e. where in the syllabus or other course materials).

The following outcomes listed under curriculum summary emphasize creative process in design:

- Uncover a problem that can be solved with a potentially new product or process.
- Evaluate solution alternatives and select a final design by considering assumptions, trade offs, criteria, and constraints.
- Create a prototype.
- Create and implement a testing plan to evaluate the performance of design solutions.
- Apply iteration to improve engineering designs.

Following class topics listed under Syllabus emphasize the creative process of engineering design:

- 5. Engineering is creative
- 17 - Meet the community partner/client
- 18 - Ideation
- 19 - Critical evaluation of ideas with research
- 20 - Benchmarking and Integration
- 21 - Modeling and visualization, Sketching and drawing
- 22 - Community partner/client meeting – Proposal presentations
- 23 - Project planning with client feedback

Attach a sample syllabus for this course or topic, including the list of any required readings.

[STS102 Syllabus v2.pdf](#)

Attach the table of contents from any required textbook(s).

No Response

Attach any other materials that would be relevant or helpful in the review of this request.

[STS102 Curriculum Summary.pdf](#)

Form Submission - Proposer

Submitted for Approval | Proposer

Vicki Asato - August 17, 2023 at 11:07 AM (America/Phoenix)

Department Approval

Sent Back

Kielii Lilavois

Christina Villa

Rachel Diepenbrock

Cynthia Rose

Manuel Aviles-Santiago

Trisha Eardley - August 17, 2023 at 12:02 PM (America/Phoenix)

Hi Vicki- Could we add the reading samples and assignment PDF that Medha sent? -Trisha

Form Submission - Proposer

Submitted for Approval | Proposer

Vicki Asato - August 17, 2023 at 12:09 PM (America/Phoenix)

Department Approval

Approved

Kielii Lilavois

Christina Villa

Rachel Diepenbrock

Cynthia Rose

Manuel Aviles-Santiago

Trisha Eardley - August 17, 2023 at 12:12 PM (America/Phoenix)

Only 1 PDF could be attached. Submitter has additional reading and assignment info as needed.

Provost's Office Review

Approved

Kaitlyn Dorson - September 1, 2023 at 11:34 AM (America/Phoenix)

April Randall

Humanities, Arts and Design Committee Review

Acknowledgement Requested

Catherine Saucier

Megan Foutz

Michelle Saint - September 25, 2023 at 8:15 PM (America/Phoenix)

We recommend Revise & Resubmit. The course's topic is appropriate for the HU designation, and the stated learning objectives in the Course Summary document are appropriate. More information is required in order to show that the HU-relevant material is a central and substantial aspect of the course. Additionally, more information is required to show that students will be engaged in critical analysis, as opposed to other forms of problem-solving. Please resubmit with more information about the assignments in which students engage in critical analysis. The specific instructions to these assignments, along with a grade break-down indicating the percentage of the final score these assignments account for.

Mina Suk

General Studies Council Meeting

Approved

Kaitlyn Dorson - September 1, 2023 at 3:07 PM (America/Phoenix)

April Randall

Registrar Notification

Notification Sent

Courses Implementation - September 1, 2023 at 3:07 PM (America/Phoenix)

Implementation

Sent Back

Rebecca Klein - September 1, 2023 at 4:23 PM (America/Phoenix)

Sent back per request

Lauren Bates

Alisha Von Kampen

General Studies Council Meeting

Waiting for Approval

Kaitlyn Dorson

April Randall

Registrar Notification

Notification

Courses Implementation

Implementation

Approval

Rebecca Klein

Lauren Bates

Alisha Von Kampen

Proposer Notification

Notification

Vicki Asato

Permanent Course Notification

Notification

Tanaya Dempsey
