

# ARTS-244: KILN DESIGN

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## Effective Term

Fall 2026

## CC Approval

12/05/2025

## AS Approval

12/11/2025

## BOT Approval

12/18/2025

## COCI Approval

02/19/2025

## SECTION A - Course Data Elements

### CB04 Credit Status

Credit - Degree Applicable

### Discipline

Minimum Qualifications	And/Or
Art (Master's Degree)	

### Subject Code

ARTS - Arts

### Course Number

244

### Department

Arts

### Division

Arts and Humanities (ARAH)

### Full Course Title

Kiln Design

### Short Title

Kiln Design

### CB03 TOP Code

1002.30 - Ceramics

### CB08 Basic Skills Status

NBS - Not Basic Skills

### CB09 SAM Code

E - Non-Occupational

### Rationale

Non-substantive update.

## SECTION B - Course Description

### Catalog Course Description

A course for students who wish to gain knowledge and experience in the principles, designs, and construction of kilns. Historic and contemporary kiln styles, firing methods and theories will be explored. Instruction on loading and firing the wide variety of existing studio kilns is included.

## SECTION C - Conditions on Enrollment

### Open Entry/Open Exit

No

### Repeatability

Not Repeatable

### Grading Options

Letter Grade or Pass/No Pass

### Allow Audit

Yes

## Requisites

### Advisory Prerequisite(s)

Completion of ARTS-140 or ARTS-141 with a minimum grade of C.

## SECTION D - Course Standards

### Is this course variable unit?

No

### Units

3.00

### Activity Hours

108

### Outside of Class Hours

54

### Total Contact Hours

108

### Total Student Hours

162

## Distance Education Approval

### Is this course offered through Distance Education?

No

## SECTION E - Course Content

### Student Learning Outcomes

**Upon satisfactory completion of the course, students will be able to:**

1. Create kiln designs and actual kilns that focus on function and economy while utilizing historic and contemporary references, theories and materials.
2. Evaluate kiln designs utilizing proper technical and conceptual terminology while engage in discussions about kilns.
3. Safely handle, maintain and identify materials, studio facilities and equipment while working with others.

### Course Objectives

**Upon satisfactory completion of the course, students will be able to:**

1. Appreciate the development and styles of ceramic kilns from various time periods and cultures.
2. Understand the principles and terminology of kiln design in order to present a design and carry out kiln construction.
3. Analyze available work in order to successfully load and fire ceramic kilns.

4. Participate in the group studio kiln project undertaken in the course.
5. Create kiln designs that build on historic and contemporary ceramic practices and traditions.

### Course Content

1. Understand and identify different developments in kiln design and construction
  - a. primitive kilns
  - b. north African and middle eastern up-draft kilns
  - c. kilns of Asia and other down draft and updraft kilns
  - d. specialty kilns, contemporary, and industrial kilns
2. Understand and apply principles associated with kiln design
  - a. Primitive refractory construction
  - b. Modern refractory construction
  - c. Apply scaled kiln design drawings
  - d. Calculate BTUs required for various kiln
  - e. Calculate fuel and air volumes for various kilns
3. Evaluate and Create kilns and kiln designs
  - a. Principles of kiln design
  - b. Applied physics (Bernoulli's principle)
  - c. Applied geometry (Pythagorean Theorem, Arches)
  - d. Create scaled kiln design plans

### Methods of Instruction

#### Methods of Instruction

Types	Examples of learning activities
Lecture	This studio arts class will be taught with ongoing integrated lab and lecture. Students will receive hands-on group demonstrations as well as one-on-one instruction, demonstration and direction.  Lectures and demonstrations will often if not always be accompanied by visual aids and/or real hands-on experience. Further, students will learn by interacting with the materials and process inherent in kiln building and the ceramic process in general
Lab	Instructor-guided lab time to apply concepts and skills to course content through guided exercises. Lab time will include both one-on-one and group instruction. Includes the construction of at least one kiln.
Observation and Demonstration	Kiln design and construction demonstrations covering techniques, concepts, and material applications.
Field Trips	Students in this course will view kilns in the napa valley college studio. Opportunities to view other kilns in the professional contexts of working ceramics studios may be included.
Other	Student presentations on historic and contemporary kilns from a diverse range of cultures.

### Methods of Evaluation

#### Methods of Evaluation

Types	Examples of classroom assessments
Exams/Tests	Tests and exams may be used to ensure each student is able to identify, understand and practically apply specific processes and techniques relevant to kiln building and firing.
Projects	Student self evaluations, peer evaluations and instructor critique will be used to evaluate each project. Class participants may be given the opportunity to improve, elements and or redo each project before the end of the term and the final review of all projects as a whole within the "course portfolio."
Class Participation	The instructor will evaluate each student's participation in the major studio kiln projects. Further each student's participation in loading firing and record keeping of various firings will be evaluated.

## Assignments

### Reading Assignments

Selected readings from student proposals, textbook, class handouts, periodicals or library collections.

For example:

1. Students will read instructor-provided handouts (from "The Kiln Book") on kiln formats, concepts and terminology relative to different firing needs and desires.
2. Students will research a historic kiln style.

### Writing Assignments

Written critical analysis.

For example:

1. Write a three-paragraph essay analyzing the strengths and weaknesses of a kiln we are building or that already exists at the studio.
2. A written self-evaluation of course work with an emphasis on the firing processes and techniques used to fire various ceramic objects. .

### Outside-of-Class Assignments

Completion of ongoing group and individual work.

For example:

1. Participate in the ongoing creative process of designing and building a kiln and or repairing an existing kiln.
2. Create work that shows improvement in craft and creativity while using this body of work to experiment with different types of kilns and kiln firings.

## SECTION F - Textbooks and Instructional Materials

### Material Type

Textbook

### Author

Olsen, Frederick L

### Title

The Kiln Book

### Edition/Version

4th

### Publisher

Dorrance Publishing Company

### Year

2023

### ISBN #

979-8887294520

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## SECTION G - Diversity, Equity and Inclusivity

**How does your course and/or course outline of record reflect strategies for accommodating and engaging diverse student populations, advancing equitable outcomes, and fostering inclusion for all students?**

This course will engage students in the study of various ceramic producing cultures. Further, course materials, supplies and handouts will be available for all at the ceramics studio.

### Course Codes (Admin Only)

#### CB00 State ID

CCC000207252

#### CB10 Cooperative Work Experience Status

N - Is Not Part of a Cooperative Work Experience Education Program

**CB11 Course Classification Status**

Y - Credit Course

**CB13 Special Class Status**

N - The Course is Not an Approved Special Class

**CB23 Funding Agency Category**

Y - Not Applicable (Funding Not Used)

**CB24 Program Course Status**

Program Applicable

**Allow Pass/No Pass**

Yes

**Only Pass/No Pass**

No