



# Chaminade University OF HONOLULU

## Course Syllabus

[Chaminade University Honolulu](#)

3140 Waialae Avenue - Honolulu, HI 96816

**Course Number:** EDUC 612

**Course Title:** Elementary Science Methods

**Department Name:** Education

**College/School/Division Name:** School of Education and Behavioral Sciences

**Term:** Winter 2023-24

**Course Credits:** 3

**Class Location:** Online

**Instructor Name:** Katrina Roseler

**Email:** [katrina.roseler@chaminade.edu](mailto:katrina.roseler@chaminade.edu) (link provided)

**Phone:** 808.440.4215

**Office Location:** Brogan 126

**Office Hours:** By Appointment

**Instructor Website:**

<https://chaminade.edu/education-behavioral-sciences/ed-behavioral-faculty/katrina-roseler/> (link provided)

### University Course Catalog Description

This course focuses on helping the teacher uncover big picture concepts through inquiry-based science activities, then planning dynamic science units for the elementary classroom based on these understandings. Successful candidates will acquire an understanding of big ideas in physical, life, earth, and space science; develop inquiry-based science skills; and learn how to plan and teach meaningful units and lessons for K-6 students..

### Essential Questions

1. How do we engage students in science and engineering practices?
2. How do we plan for science teaching and learning?

### Marianist Values

This class represents one component of your education at Chaminade University of Honolulu. An education in the Marianist Tradition is marked by five principles and you should take every opportunity possible to reflect upon the role of these characteristics in your education and development:

1. Education for formation in faith
2. Provide an integral, quality education
3. Educate in family spirit
4. Educate for service, justice and peace
5. Educate for adaptation and change

## Native Hawaiian Values

Education is an integral value in both Marianist and Native Hawaiian culture. Both recognize the transformative effect of a well-rounded, value-centered education on society, particularly in seeking justice for the marginalized, the forgotten, and the oppressed, always with an eye toward God (Ke Akua). This is reflected in the 'Olelo No'eau (Hawaiian proverbs) and Marianist core beliefs:

1. Educate for Formation in Faith (Mana) E ola au i ke akua ('Olelo No'eau 364) May I live by God
2. Provide an Integral, Quality Education (Na'auao) Lawe i ka ma'alea a kū'ono'ono ('Olelo No'eau 1957) Acquire skill and make it deep
3. Educate in Family Spirit ('Ohana) 'Ike aku, 'ike mai, kōkua aku kōkua mai; pela iho la ka nohana 'ohana ('Olelo No'eau 1200) Recognize others, be recognized, help others, be helped; such is a family relationship
4. Educate for Service, Justice and Peace (Aloha) Ka lama kū o ka no'eau ('Olelo No'eau 1430) Education is the standing torch of wisdom
5. Educate for Adaptation and Change (Aina) 'A'ohe pau ka 'ike i ka hālau ho'okahi ('Olelo No'eau 203) All knowledge is not taught in the same school

## Course Learning Outcomes

By the end of our course, students will be able to:

1. Engage in and reflect upon personal engagement with science and engineering practices (PLO2; S&E Activities).
2. Critique science/engineering teaching and learning experiences, lessons and resources (PLO 1; Teaching Reflection Assignments, Article Critiques & Online resource critiques).
3. Develop science or engineering learning activities and assessments from a foundation of NGSS as well as evidence-based approaches to science teaching and learning. (PLO 1, 2, & 3; Unit Plan).

## Program Outcomes (POs)

1. Synthesize knowledge of learner development, learner differences, diverse students and the learning environment to optimize learning for Elementary students
2. Evaluate central concepts, tools of inquiry and structures of the subject matter disciplines for Elementary students.
3. Utilize formative and summative assessments, to determine, select, and implement effective instructional strategies for Elementary students.
4. Analyze the history, values, commitments, and ethics of the teaching profession within the school community.
5. Explain the Marianist tradition of providing an integral, quality education within diverse learning communities.

## Model Code of Ethics for Educators (MCEE)

The Model Code of Ethics for Educators is intertwined throughout the various activities within this course, as well as the other courses you will take within this program. The responsibility to profession, of professional competence, to our students, to the school, and with the use of technology are integral to all aspects of this course. **Principle II: Responsibility for Professional Competence has the greatest alignment with activities in this course.**

- A.2 Incorporating into one's practice state and national standards, including those specific to one's discipline
- A.3. Advocating for equitable educational opportunities for all students
- A.5 Reflecting upon and assessing one's professional skills, knowledge and competency on an ongoing basis

C.1 Increasing students' access to the curriculum, activities and resources in order to provide a quality and equitable educational experience.

### Alignment of Course Learning Outcomes

	<b>CLO 1</b>	<b>CLO 2</b>	<b>CLO 3</b>
<b>Marianist Values</b>	Educate for adaptation and change	Provide an Integral Quality Education	Educate for service, justice & peace Educate for adaptation and change
<b>Program Outcomes</b>	2	1	1, 2, 3

### Course Prerequisites

There are no prerequisites for EDUC 612.

### Required Learning Materials

There are no required texts for this course. All videos and reading materials will be provided through Canvas

**Course Website:** <https://chaminade.instructure.com/courses> (link provided).

### Regular and Substantive Interaction

#### Assignment Feedback

Once assignments are submitted, you will typically receive feedback in Canvas using rubrics and comments or Google Doc through the use of comments. Feedback and associated grades will be provided within one week of submission. Once received, you are expected to read and integrate the provided feedback into subsequent assignments.

#### Discussions

Program reflection: I will regularly participate in the canvas discussion boards related to program reflection. My participation in these discussions will align with the due dates set for those discussions.

Investigations: I will contribute to investigation discussions after peers have been provided adequate time to provide feedback to one another. This feedback will be provided after the final due date, but still within one week of submission.

#### Announcements

I will use announcements each week to communicate synthesized ideas about course assignments and discussions as well as to share any updates.

### Technical Assistance for Canvas Users:

- Search for help on specific topics or get tips in [Canvas Students](#)
- [Live chat with Canvas Support for students](#)
- Canvas Support Hotline for students: +1-833-209-6111
- Watch this [video to get you started](#)
- [Online tutorials](#): click on “Students” role to access tutorials
- Contact the Chaminade IT Helpdesk for technical issues: [helpdesk@chaminade.edu](mailto:helpdesk@chaminade.edu) or call (808) 735-4855

### Tutoring and Writing Services

Chaminade is proud to offer free, one-on-one tutoring and writing assistance to all students. Tutoring and writing help is available on campus at Kōkua ‘Ike: Center for Student Learning in a variety of subjects (including, but are not limited to: biology, chemistry, math, nursing, English, etc.) from trained Peer and Professional Tutors. Please check [Kōkua ‘Ike’s website](#) for the latest times, list of drop-in hours, and information on scheduling an appointment. Free online tutoring is also available via TutorMe. Tutor Me can be accessed 24/7 from your Canvas account. Simply click Account – Notifications – TutorMe. For more information, please contact Kōkua ‘Ike at [tutoring@chaminade.edu](mailto:tutoring@chaminade.edu) or 808-739-8305.

### Assessment

Assessment Item	%	Description	CLO(s)
Science/ Engineering Activities	35	You will be evaluated on the development of your thoughts regarding different scientific/engineering ideas. These ideas will be evaluated based on your contributions to your Investigation Journal, Presentations, etc.	1
Pedagogical Activities	65	Pedagogical Discussions, Teaching Reflection, Lesson/Unit Plan for K-6 students, Presentations, etc.	2, 3

### Grading Scale

Letter grades are given in all courses except those conducted on a credit/no credit basis. Grades are calculated from the student’s daily work, class participation, quizzes, tests, term papers, reports and the final examination. They are interpreted as follows:

- A Outstanding scholarship and an unusual degree of intellectual initiative
- B Superior work done in a consistent and intellectual manner
- C Average grade indicating a competent grasp of subject matter
- F Failed to grasp the minimum subject matter; no credit given

## Course Policies

### Late Work Policy

Deadlines are created in order to allow students time to process and collaborate on assignments as well as allow the instructor an opportunity to evaluate participation and engagement. When the deadline for an assignment has passed and a student has failed to engage in the required learning activity with his/her colleagues, that

opportunity/experience cannot be recreated or revisited. ***If an assignment is submitted late, without prior notification and agreement with the instructor, the assignment will not receive full credit.***

### Grades of "Incomplete"

If students are unable to complete the course due to circumstances beyond their control, the instructor will consider offering a grade of "incomplete". This will provide the student with 90 days beyond the end of the term to complete all outstanding course requirements. Please note that a grade of "incomplete" must be discussed with the instructor before the end of the term. If a student does not contact the instructor by the end of the term to discuss the possibility of an incomplete, they will be awarded the grade they have earned to that point.

### Writing Policy

All written work is to be word-processed, proofread, and solely the work of the author. Written work should demonstrate mastery of grammar, punctuation, spelling and syntax expected of college level students. If you need writing assistance, please seek help from Student Support Services and [Kokua ike - \(Tutoring Center\)](#).

### Instructor and Student Communication

Communication for this course including announcements, assignments and grades will be posted on Canvas; Chaminade's Learning Management System. **When communicating with me electronically, please identify the course you are referring to in the subject line (EDUC 612) of your e-mail.** My goal is to respond to emails within 24 hours of receipt although weekends and holidays may take longer.

### Tentative Activities and Assignment Schedule

The first part of the course will be focused on your engagement in science & engineering practices (i.e., content), while the second half is focused on science teaching pedagogy.

Week	Content activities	Pedagogical activities	CLOs
1	1. Forces of Flight - Start Investigation 2. Paper Airplane Design & Test	1. Essential features of a good science lesson or unit	1, 2
2	1. How things fly - Center of Gravity & Bernoulli 2. Paper Airplane Design & Test		1
3	1. How things fly - How living things fly 2. Comparing Airplane design and things that fly in nature		1
4	1. How things fly Summative assessment (Scientific Poster)	1. Paper airplane investigation debrief 2. What are the essential features of a good science lesson or unit	1, 2
5		1. <a href="#">Understanding by Design</a> (UbD) 2. Navigating the <a href="#">NGSS</a> 3. Teaching Reflection - Science for all	2, 3
6		1. Teaching reflection - NGSS	2, 3

		<ol style="list-style-type: none"> <li>2. <a href="#">Learning Objectives</a></li> <li>3. Science Learning has Layers</li> </ol>	
7		<ol style="list-style-type: none"> <li>1. <a href="#">Assessment in science</a></li> <li>2. The 5E instructional Model</li> <li>3. Teaching Reflection - Assessment</li> </ol>	2, 3
8		<ol style="list-style-type: none"> <li>1. <a href="#">Rubrics</a></li> <li>2. Technology for science learning</li> <li>3. Unit plan draft</li> </ol>	2, 3
9	1. <a href="#">Nature of Science</a>	<ol style="list-style-type: none"> <li>1. Unit Plan Critique</li> <li>2. Teaching Reflection - Valuing student ideas</li> <li>3. Unit Visual Elements</li> </ol>	1, 2, 3
10		<ol style="list-style-type: none"> <li>1. Unit Plan revisions</li> <li>2. Final Teaching Reflection</li> <li>3. Course Reflection</li> </ol>	2, 3

### Disability Access

If you need individual accommodations to meet course outcomes because of a documented disability, please speak with me to discuss your needs as soon as possible so that we can ensure your full participation in class and fair assessment of your work. Students with special needs who meet criteria for the Americans with Disabilities Act (ADA) provisions must provide written documentation of the need for accommodations from Kōkua 'Ike: Center for Student Learning by the end of week three of the class, in order for instructors to plan accordingly. If a student would like to determine if they meet the criteria for accommodations, they should contact the Kōkua 'Ike Coordinator at (808) 739-8305 for further information ([ada@chaminade.edu](mailto:ada@chaminade.edu)).

### Title IX Compliance

Chaminade University of Honolulu recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct, physical and/or psychological abuse will NOT be tolerated at CUH. If you have been the victim of sexual misconduct, physical and/or psychological abuse, we encourage you to report this matter promptly. As a faculty member, I am interested in promoting a safe and healthy environment, and should I learn of any sexual misconduct, physical and/or psychological abuse, I must report the matter to the Title IX Coordinator. If you or someone you know has been harassed or assaulted, you can find the appropriate resources by visiting Campus Ministry, the Dean of Students Office, the Counseling Center, or the Office for Compliance and Personnel Services.

### Attendance Policy

The following attendance policy is from the 2019-2020 Academic Catalog (p. 54-55). Faculty members should also check with their divisions for division-specific guidelines.

Students are expected to attend regularly all courses for which they are registered. Student should notify their instructors when illness or other extenuating circumstances prevents them from attending class and make arrangements to complete missed assignments. Notification may be done by emailing the instructor's Chaminade email address, calling the instructor's campus extension, or by leaving a message with the

instructor's division office. It is the instructor's prerogative to modify deadlines of course requirements accordingly. Any student who stops attending a course without officially withdrawing may receive a failing grade.

Unexcused absences equivalent to more than a week of classes may lead to a grade reduction for the course. Any unexcused absence of two consecutive weeks or more may result in being withdrawn from the course by the instructor, although the instructor is not required to withdraw students in that scenario. Repeated absences put students at risk of failing grades.

Students with disabilities who have obtained accommodations from the Chaminade University of Honolulu Tutor Coordinator may be considered for an exception when the accommodation does not materially alter the attainment of the learning outcomes.

Federal regulations require continued attendance for continuing payment of financial aid. When illness or personal reasons necessitate continued absence, the student should communicate first with the instructor to review the options. Anyone who stops attending a course without official withdrawal may receive a failing grade or be withdrawn by the instructor at the instructor's discretion.

### **Student Conduct Policy**

Campus life is a unique situation requiring the full cooperation of each individual. For many, Chaminade is not only a school, but a home and a place of work as well. That makes it a community environment in which the actions of one student may directly affect other students. Therefore, each person must exercise a high degree of responsibility. Any community must have standards of conduct and rules by which it operates. At Chaminade, these standards are outlined so as to reflect both the Catholic, Marianist values of the institution and to honor and respect students as responsible adults. All alleged violations of the community standards are handled through an established student conduct process, outlined in the Student Handbook, and operated within the guidelines set to honor both students' rights and campus values.

Students should conduct themselves in a manner that reflects the ideals of the University. This includes knowing and respecting the intent of rules, regulations, and/or policies presented in the Student Handbook, and realizing that students are subject to the University's jurisdiction from the time of their admission until their enrollment has been formally terminated. Please refer to the Student Handbook for more details. A copy of the Student Handbook is available on the Chaminade website under Student Life.

For further information, [please refer to the Chaminade Catalogue](#).

### **Schedule**

Include a schedule for all class meetings which includes dates and topics to be covered. You may also want to include readings, assignments, and holidays or non-instructional days.

### **Credit Hour Policy**

The unit of semester credit is defined as university-level credit that is awarded for the completion of coursework. One credit hour reflects the amount of work represented in the intended learning outcomes and verified by evidence of student achievement for those learning outcomes. Each credit hour earned at Chaminade University should result in a minimum of 45 hours of engagement, regardless of varying credits, duration, modality, or degree level. This equates to one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester. Terms that have alternative lengths, such as 10 week terms, should have an equivalent amount of faculty instruction and out-of-class student work to meet each credit hour. Direct instructor engagement and out-of-class work result in total student engagement time of 45 hours for one credit. The number of engagement hours may be higher, as needed to meet specific learning outcomes.

*Specific Credit Situations*

The minimum 45 hours of engagement per credit hour can be satisfied in fully online, internship, or other specialized courses through several means, including (a) regular online instruction or interaction with the faculty member and fellow students and (b) academic engagement through extensive reading, research, online discussion, online quizzes or exams; instruction, collaborative group work, internships, laboratory work, practica, studio work, and preparation of papers, presentations, or other forms of assessment. This policy is in accordance with federal regulations and regional accrediting agencies.

*How This Course Meets the Credit Hour Policy - You are expected to engage in 12-15 hours of learning activities each week for this course.*

<b>Assignment Group</b>	<b>Hous of Engagement</b>
<b>Science/ Engineering Activities</b>	40.5
<b>Pedagogical Activities</b>	81
<b>Other Activities (Introduction, Syllabus Quiz, etc.)</b>	15
<b>Total Hours of Engagement</b>	135.5