Chaminade University
O F   H O N O L U L U

Instructor: Katrina Roseler   **Office Hours: T/R 9-11am**
Email: katrina.roseler@chaminade.edu   **Office Location: Brogan 126**
Phone: 808-440-4215

Required texts: None

Course Catalog Description: ED 324 Elementary Science Methods (3)—This course focuses on helping the classroom teacher uncover *big picture* concepts through inquiry-based science activities, then planning dynamic science units 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?**

Mission Statement:
The mission of the education division is to foster the education of teachers and leaders in education through programs based in the liberal arts tradition, Catholic Marianist's values, current research, and best practices.

Marianist Values:
1. Educate 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

CUH Core Competencies:
1. Written Communication
2. Oral Communication
3. Quantitative reasoning
4. Critical Thinking
5. Information Literacy

Program Learning Outcomes (PLOs)
1. Apply knowledge of learner development, learner differences, diverse students and the learning environment to optimize learning for Elementary students.
2. Describe 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.

Course Learning Outcomes:
1. Engage in and reflect upon personal engagement with science and engineering practices (Content and Skills)
2. Critique science/engineering teaching and learning experiences, lessons and resources (Teaching Reflection Activities, Article Critiques & Online resource critiques)
3. Develop science or engineering learning activities that are based on NGSS and research based approaches to science teaching and learning. (Unit Plan)
4. Engage in Professional Networks beyond course activities (Communities of Practice)

Alignment of Course Learning Outcomes

	CLO 1	**CLO 2**	**CLO 3**	**CLO4**
Marianist Values		Educate for service, justice & peace	Educate for adaptation and change	Integral Quality Education
CUH Core Competencies	Critical Thinking Written Communication	Critical Thinking Written Communication Information Literacy	Written Communication	Oral Communication Written Communication
Program Outcomes	2	2	1, 2	4

Course Requirements

Grading

Basis for Final Grade Students in this course will be evaluated in 4 areas. Learning is an iterative process which includes making mistakes, therefore, students will be provided feedback on their progress towards completion of the assessment items with opportunities to edit work that has been submitted.

Assessment Item	%	Description	CLO(s)
Content and Skills	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
Pedagogy	35	Pedagogical Discussions, Lesson/Unit Plan for K-6 students, Presentations, etc.	2, 3

Teaching Reflection Tasks	20	Teaching Reflections	2
Communities of Practice	10	Participation in one or more learning communities beyond this course.	4

Grade Dissemination Much of the evidence for learning in this course is written. Individualized and meaningful feedback on assignments may take 30 to multiple hours of time. In order to honor the time you invest in engaging in learning activities, so too should I invest time in the evaluation of that learning. My goal will be to return graded assignments within one week of the due date.

Course Policies

Course communication: CUH uses Canvas as the Learning Management System (LMS). Communication for this course including announcements, assignments and grades will be posted on Canvas.

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).

Grading scale

Percent	Grade
90 – 100%	A
80 – 89%	B
70 – 79%	C
60 – 69%	D
0 – 59%	F

Course Policies

Course communication
Communication for this course including announcements, assignments and grades will be posted on Canvas; Chaminade's Learning Management System. <mark>When communicating with me electronically, please identify the course you are referring to in the subject line (ED 324) of your e-mail.</mark> My goal is to respond to emails within 24 hours of receipt.

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.***

Rewrite/Resubmission Policy
Learning is an iterative process and multiple opportunities will be provided for students to revise their work. Students who wish to submit a revised assignment for an increased grade need to contact the instructor directly. Because course activities will include the process of revision, opportunities to rewrite and resubmit work will ONLY be provided on a case-by-case basis. **No rewrites will be provided on the final submission of the Signature Assignment** (i.e., Final unit plan).

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).

Group Work/Cooperative Learning Policy
Learning and engagement in science and engineering is a process that requires the interaction and support of others. In other words, knowledge is socially constructed. In order to support the learning of all students you will be expected to work cooperatively with others in this course. Your contribution to the online discussions supports your learning as well as the learning of others in this course.

Appropriate Technology (Smartphones/Laptops/Tablets).
Laptops, tablets and smartphones will be used during course activities to support individual and group learning activities. Students are encouraged to bring their devices in order to support their learning. However, students are urged to minimize functions that will detract from learning. Chaminade University student classroom policy indicates that cell phones are not to be used in class without instructor approval. Distractions that inhibit your ability to fully engage in learning should be minimized or eliminated. Every effort will be made to motivate your engagement in course activities, however distractions such as text messages, emails and posts on social media take away from your ability to learn as well as your contribution to others in the course. Please make a conscious decision to minimize or eliminate distractions of this nature.

Tentative Activities and Assignment Schedule

The first part of the course will focus on science content and skills, while the latter is focused on developing your science teaching pedagogy.

Week	Science investigation activities	CLO
1	1. Introductions 2. Investigation (TBD)	1
2	1. Investigation (TBD) 2. Communities of Practice	1, 4
3	1. Investigation (TBD)	1
4	1. Science Content and Skills Debrief discussion 2. Research-based approaches to science teaching and learning 3. UbD/Backward Design	2, 3
5	1. The 5E model 2. Navigating the NGSS	2, 3
6	1. NGSS and the Common Core State Standards 2. Learning Objectives 3. Teaching Reflection 4. Communities of Practice	2, 3, 4
7	1. Assessment in Science 2. Rubrics 3. Teaching Reflection	3
8	1. Lesson/Activity Planning 2. Technology for science learning	2, 3
9	1. Lesson/Activity Planning Feedback 2. Unit Learning Supports 3. Teaching Reflection	2, 3
10	1. Unit Plan Draft 2. Teaching Reflection 3. Communities of Practice	2, 3, 4
11	1. NOS and ways of knowing 2. Unit Plan Feedback	3
12	1. Unit Plan Critique 2. Teaching Reflection	2, 3
13	1. Unit Plan Presentations & Feedback 2. Teaching Reflection 3. Communities of Practice	2, 3, 4
14	1. Unit Plan Revisions	3

15	1. Course Reflection 2. Teaching Reflection	2, 3

.**University Policies**

Title IX Compliance

Title IX of the Education Amendments of 1972 and its implementing federal regulations prohibits discrimination on the basis of sex or gender in the University's programs and activities. Institutions that receive federal assistance from the Department of Education must operate in a nondiscriminatory manner. Higher Education issues addressed by Title IX include:

- Recruitment, admission and counseling
- Financial assistance
- Athletics
- Sex-based harassment
- Education of pregnant and parenting students
- Employment
- Single-sex education

Chaminade University of Honolulu recognizes the inherent dignity of all people. Chaminade University is committed to providing an educational and work environment that is free from sexual misconduct and harassment in any form including, but not limited to, sex or gender discrimination, including sexual misconduct such as sexual harassment and sexual assault, stalking, and domestic and dating violence. These behaviors are harmful to the well-being of our community members, the learning/working environment, and collegial relationships among our students, faculty, and staff. All forms of prohibited conduct under this policy are regarded as serious University offenses, and violations will result in discipline, including the possibility of separation from Chaminade University. State and federal laws also address conduct that may meet Chaminade University's definitions of prohibited conduct, and criminal prosecution may take place independently of any disciplinary action instituted by Chaminade University.

Notice of Nondiscrimination

Chaminade University's compliance with Title IX is implemented in the context of the University's broader Nondiscrimination/Anti-harassment Policy and Grievance Procedures, which advises the University community of prohibited discriminatory and harassing conduct by Community Members, as well as the resources and processes for addressing and resolving complaints of discrimination, harassment and/or violation of University policy.

Chaminade University does not discriminate because of race, color, national origin, religion, sex, age, disability (mental or physical), genetic information, pregnancy, gender identity/expression, sexual orientation, ancestry, marital status, arrest or court record status, National Guard participation, victim of domestic or sexual violence status, breastfeeding, or any other protected status. Full details of the University's anti-discrimination policy can be viewed in Volume III, Section 3.1 of the Policy Manual

ADA Accommodations

Chaminade University of Honolulu offers accommodations for **all actively enrolled** students with disabilities in compliance with Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990, and the ADA Amendments Act (2008).

Students are responsible for contacting Kokua 'Ike: Center for Student Learning to schedule an appointment. Verification of their disability will be requested through appropriate documentation and once received it will take up to approximately 2-3 weeks to review them. Appropriate paperwork will be completed by the student before notification will be sent out to their instructors. Accommodation paperwork will not be automatically sent out to instructors each semester, as the student is responsible to notify Kokua 'Ike via email at ada@chaminade.edu each semester if changes or notifications are needed.

Academic Conduct:

Any community must have a set of rules and standards of conduct 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.

For further information, please refer to the Student Handbook

Plagiarism: "Plagiarism is the offering of work of another as one's own. Plagiarism is a serious offense and may include, but is not limited to, the following:
1. Complete or partial copying directly from a published or unpublished source without proper acknowledgement to the author. Minor changes in wording or syntax are not sufficient to avoid charges of plagiarism. Proper acknowledgement of the source of a text is always mandatory.
2. Paraphrasing the work of another without proper author acknowledgement.
3. Submitting as one's own original work (however freely given or purchased) the original exam, research paper, manuscript, report, computer file, or other assignment that has been prepared by another individual.

Grades of "Incomplete": The current university policy concerning incomplete grades will be followed in this course. Incomplete grades are given only in situations where unexpected emergencies prevent a student from completing the course and the remaining work can be completed the next semester. Your instructor is the final authority on whether you qualify for an incomplete. Incomplete work must be finished within 90 days of the end of the semester or the "I" will automatically be recorded as an "F" on your transcript.