

CD M79: CA PRESCHOOL FOUNDATIONS AND FRAMEWORKS: SCIENCE

Originator

scoulter

College

Moorpark College

Discipline (CB01A)

CD - Child Development

Course Number (CB01B)

M79

Course Title (CB02)

CA Preschool Foundations and Frameworks: Science

Banner/Short Title

CA Foun/Fram Science

Credit Type

Credit

Start Term

Fall 2023

Catalog Course Description

Introduces the science domain of the California Preschool Learning Foundations and Frameworks including the strands of scientific inquiry, physical, life, and earth sciences and provides practical strategies for implementing the curriculum frameworks developed for this domain. Prepares those working with students in early care and education programs including transitional kindergarten, kindergarten, and early education classrooms.

Taxonomy of Programs (TOP) Code (CB03)

1305.00 - *Child Development/Early Care and Education

Course Credit Status (CB04)

D (Credit - Degree Applicable)

Course Transfer Status (CB05) (select one only)

B (Transferable to CSU only)

Course Basic Skills Status (CB08)

N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)

C - Clearly Occupational

Course Cooperative Work Experience Education Status (CB10)

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

Course Classification Status (CB11)

Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)

N - The Course is Not an Approved Special Class

Course Prior to Transfer Level (CB21)

Y - Not Applicable

Course Noncredit Category (CB22)

Y - Credit Course

Funding Agency Category (CB23)

Y - Not Applicable (Funding Not Used)

Course Program Status (CB24)

1 - Program Applicable

General Education Status (CB25)

Y - Not Applicable

Support Course Status (CB26)

N - Course is not a support course

Field trips

May be required

Faculty notes on field trips; include possible destinations or other pertinent information

Early childhood programs in the community pre-school; Resource and referral program in the County

Grading method

(L) Letter Graded

Alternate grading methods

(O) Student Option- Letter/Pass

(P) Pass/No Pass Grading

Does this course require an instructional materials fee?

No

Repeatable for Credit

No

Is this course part of a family?

No

Units and Hours

Carnegie Unit Override

No

In-Class

Lecture

Minimum Contact/In-Class Lecture Hours

17.5

Maximum Contact/In-Class Lecture Hours

17.5

Activity

Laboratory

Total in-Class

Total in-Class

Total Minimum Contact/In-Class Hours

17.5

Total Maximum Contact/In-Class Hours

17.5

Outside-of-Class**Internship/Cooperative Work Experience**

Paid

Unpaid

Total Outside-of-Class**Total Outside-of-Class****Minimum Outside-of-Class Hours**

35

Maximum Outside-of-Class Hours

35

Total Student Learning**Total Student Learning****Total Minimum Student Learning Hours**

52.5

Total Maximum Student Learning Hours

52.5

Minimum Units (CB07)

1

Maximum Units (CB06)

1

Student Learning Outcomes (CSLOs)**Upon satisfactory completion of the course, students will be able to:**

- | | |
|---|--|
| 1 | explain the roles of the California Preschool Learning Foundations and Frameworks in the education of young children and their relationship to the Desired Results Developmental (DRDP), California Common Core State Standards for kindergarten and Content Standards for California Public Schools (kindergarten). |
| 2 | plan environments and experiences, based on observation of children, to support children's development of scientific concepts. |
| 3 | describe how teachers can collaborate with parents and other caregivers to support children's understanding of scientific concepts. |

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

- | | |
|---|--|
| 1 | define the roles of the California Preschool Learning Foundations and Frameworks: Science in the education of young children and their relationship to the Desired Results Developmental (DRDP), California Common Core State Standards for kindergarten and Content Standards for California Public Schools (kindergarten). |
| 2 | apply knowledge of the science strands to select materials and plan meaningful experiences in the classroom to promote children's learning and use of scientific language and concepts. |
| 3 | describe opportunities to include scientific inquiry in daily routines and across all areas of the curriculum. |
| 4 | discuss the ways teachers collaborate with parents and other caregivers to support children in their development of scientific concepts. |

Course Content

Lecture/Course Content

- **10% - Introduction to the California Preschool Learning Foundations: Science**
 - Purpose and use
 - Relationship to the California Common Core State Standards for kindergarten and Content Standards for California Public Schools (kindergarten)
 - Relationship to Desired Results Developmental Profile (DRDP)
- **30% - Science Strands**
 - Scientific inquiry
 - Physical science
 - Life science
 - Earth science
- **40% - Implementation of the Foundations and Frameworks**
 - Planning curriculum based on observation of children's interests, skills and abilities
 - Creating daily experiences and routines as a vehicle to provide diverse opportunities for children to learn and use scientific concepts
 - Selecting books, materials, supplies to provide science rich environments
 - Integrating scientific inquiry into daily routines and across all areas of the curriculum
- **10% - Supporting English language learners in developing English literacy skills while concurrently learning about science**
- **10% - Partnering with parents and other caregivers to include meaningful experiences designed to scientific understanding**

Laboratory or Activity Content

n/a

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):

Written expression
Skills demonstrations

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):

Essay exams
Film/video productions
Group projects
Individual projects
Journals
Objective exams
Oral analysis/critiques
Oral presentations
Portfolios
Problem-solving exams
Quizzes
Reports/papers
Research papers
Role playing
Simulations
Skills demonstrations
Written homework
Other (specify)
Classroom Discussion
Projects
Participation
Reports/Papers/Journals

Other

Video documentation of curriculum projects incorporating aspects of the complete planning cycle such as observation, planning, implementation, and evaluation/documentation.

Instructional Methodology

Specify the methods of instruction that may be employed in this course

Audio-visual presentations
 Case studies
 Class activities
 Class discussions
 Collaborative group work
 Computer-aided presentations
 Demonstrations
 Distance Education
 Field trips
 Group discussions
 Guest speakers
 Instructor-guided interpretation and analysis
 Instructor-guided use of technology
 Internet research
 Large group activities
 Lecture
 Modeling
 Observation
 Readings
 Role-playing
 Small group activities
 Web-based presentations
 Other (specify)

Specify other method of instruction

Video observation and analysis of Science curriculum experiences

Describe specific examples of the methods the instructor will use:

Instructor will use PowerPoint presentation, short videos, group activity, and classroom demonstration to explain course content. Instructor will bring students into the Child Development Center to conduct observations.

Representative Course Assignments

Writing Assignments

- Write a summary of appropriate background information pertinent to a given science concept such as gravity.
- Write an evaluation of an observed science activity.
- Write science curriculum plans based upon criteria established in the California Preschool Curriculum Framework.

Critical Thinking Assignments

- Develop and evaluate science activity plans incorporating developmentally, culturally and linguistically appropriate practices.
- Apply knowledge of the science strands to select materials and plan meaningful experiences in the classroom to promote children's learning and use of scientific language and concepts.
- Evaluate early childhood science curriculum based on state and national standards.

Reading Assignments

- Read a current Child Development journal article pertaining to course topics such as scientific inquiry, physical science, life science, or earth science.
- Read a current news article pertaining to course topics such as scientific inquiry, physical science, life science, or earth science.

Skills Demonstrations

- Role-play a conversation between a teacher and a child's caregiver(s).
- Role-play a conversation between a teacher and an administrator.
- Present analysis of a current news article on a course topic to the class.
- Present analysis of a current Child Development journal article on science in early childhood education.

Outside Assignments

Representative Outside Assignments

- Observe a classroom environment to evaluate ways that it supports children's scientific inquiry.
- Read professional journal articles on topics such as scientific inquiry and documentation.
- Develop lesson plans and science activities.

Articulation

Equivalent Courses at other CCCs

College	Course ID	Course Title	Units
Chabot College	ECD 33	Science: Preschool Foundations	1

District General Education

A. Natural Sciences

B. Social and Behavioral Sciences

C. Humanities

D. Language and Rationality

E. Health and Physical Education/Kinesiology

F. Ethnic Studies/Gender Studies

Course is CSU transferable

Yes

CSU Baccalaureate List effective term:

S2018

CSU GE-Breadth**Area A: English Language Communication and Critical Thinking****Area B: Scientific Inquiry and Quantitative Reasoning****Area C: Arts and Humanities****Area D: Social Sciences****Area E: Lifelong Learning and Self-Development****Area F: Ethnic Studies****CSU Graduation Requirement in U.S. History, Constitution and American Ideals:****IGETC****Area 1: English Communication****Area 2A: Mathematical Concepts & Quantitative Reasoning****Area 3: Arts and Humanities****Area 4: Social and Behavioral Sciences****Area 5: Physical and Biological Sciences****Area 6: Languages Other than English (LOTE)****Textbooks and Lab Manuals****Resource Type**

Textbook

DescriptionCohen, Lynn, and Sandra Waite-Stupiansky. *STEM in Early Childhood Education: How Science, Technology, Engineering, and Mathematics Strengthen Learning*. Routledge, 2019.**Resource Type**

Textbook

DescriptionHall, Megan Olivia. *Big Chemistry experiments for Little Kids: A first science book for ages 3 to 5*. Rockridge Press, 2021.**Resource Type**

Textbook

DescriptionHall, Megan Olivia. *Awesome Outdoor Experiments for Kids: 50+ Steam Science Projects and Why They Work*. Rockridge Press, 2021.**Resource Type**

Other Resource Type

DescriptionCalifornia Department of Education. California Preschool Program Guidelines. 2015, <http://www.cde.ca.gov/sp/cd/re/documents/preschoolprogdlns2015.pdf>. Accessed 14 Sept. 2022.

Resource Type

Other Resource Type

Description

California Department of Education. California Preschool Learning Foundations, Volume 3. 2012, <http://www.cde.ca.gov/sp/cd/re/documents/preschoolfoundationsvol3.pdf>. Accessed 14 Sept 2022.

Resource Type

Other Resource Type

Description

California Department of Education. *DRDP-K; Desired Results Developmental Profile – K*. 2015, http://www.drdpk.org/docs/DRDP2015K_Final_12032015.pdf. Accessed 14 Sept. 2022.

Resource Type

Other Resource Type

Description

California Department of Education. *Desired Results Developmental Profile (DRDP) – Preschool View*. 2015, <http://www.cde.ca.gov/sp/cd/ci/documents/drdp2015preschool.pdf>. Accessed 14 Sept 2022.

Resource Type

Other Resource Type

Description

California Department of Education. *California Preschool Curriculum Framework, Volume 3*. 2013, <http://www.cde.ca.gov/sp/cd/re/documents/preschoolframeworkvol3.pdf>. Accessed 14 Sept. 2022.

Resource Type

Other Resource Type

Description

California Department of Education. *California Common Core State Standards: English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects. 2013*, <http://www.cde.ca.gov/be/st/ss/documents/finalelaccsstandards.pdf>. Accessed 14 Sept 2022.

Library Resources

Assignments requiring library resources

Research using the Library's print and online resources via databases such as Exchange Press Articles on Demand and EBSCO ERIC.

Sufficient Library Resources exist

Yes

Example of Assignments Requiring Library Resources

Utilize library resources for a research paper on a topic in Physical or Earth Sciences.

Distance Education Addendum

Definitions

Distance Education Modalities

- Hybrid (1%–50% online)
- Hybrid (51%–99% online)
- 100% online

Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

Regular Effective/Substantive Contact

Hybrid (1%–50% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Regular use of asynchronous discussion boards encourages various types of interaction and critical thinking skills among all course participants. Questions and topics posed will allow students to discuss, compare and contrast, identify, and analyze elements of the course outcomes. Other discussion boards may be used for Q&A and general class discussion by students and the instructor to facilitate student success and strengthen student learning outcomes.
E-mail	E-mail, class announcements, and various learning management system tools such as “Message Students Who” and “Assignment Comments”, will be used to regularly communicate with all students on matters such as clarification of class content, reminders of upcoming assignments and/or course responsibilities, to provide prompt feedback to students on coursework to facilitate student learning outcomes, or to increase the role of an individual educator in the academic lives of a student. Students will be given multiple ways to email the instructor through both the learning management system inbox and faculty provided email account.
Face to Face (by student request; cannot be required)	The instructor may hold weekly, scheduled office hours for students to be able to meet and discuss course materials or individual progress. Students can request additional in-person or web conferencing meetings with the instructor as needed. Faculty may encourage online students to form “study groups” in person or online. Note: For hybrid classes, face-to-face class time will provide opportunities for students to discuss amongst themselves (in groups or pairs) and ask questions about the material to facilitate SLOs and course outcomes.
Other DE (e.g., recorded lectures)	Faculty may use a variety of ADA compliant tools and media integrated within the learning management system to help students reach SLO competency. Tools may include: Recorded Lectures, Narrated Slides, Screencasts, Instructor created content, MC Online Library Resources, Canvas Peer Review Tool, Canvas Student Groups (Assignments, Discussions), Websites and Blogs, Multimedia (YouTube, Films on Demand, 3CMedia, Khan Academy, etc.)
Synchronous Dialog (e.g., online chat)	Instructor may provide a set time each week to be available for synchronous chat and be available in the discussion board to answer questions in live time.
Telephone	Instructor may provide a phone number for the students where they can leave a voicemail and expect a call back within 24 hours.
Video Conferencing	Video tools such as Zoom can be used to provide live synchronous or asynchronous sessions with students. ADA compliance will be upheld with Closed Captioning during the session or of the recorded session. Video Conferences will be used to facilitate SLOs and student-to-student group meetings will also be encouraged.

Hybrid (51%–99% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Regular use of asynchronous discussion boards encourages various types of interaction and critical thinking skills among all course participants. Questions and topics posed will allow students to discuss, compare and contrast, identify, and analyze elements of the course outcomes. Other discussion boards may be used for Q&A and general class discussion by students and the instructor to facilitate student success and strengthen student learning outcomes.
E-mail	E-mail, class announcements, and various learning management system tools such as “Message Students Who” and “Assignment Comments”, will be used to regularly communicate with all students on matters such as clarification of class content, reminders of upcoming assignments and/or course responsibilities, to provide prompt feedback to students on coursework to facilitate student learning outcomes, or to increase the role of an individual educator in the academic lives of a student. Students will be given multiple ways to email the instructor through both the learning management system inbox and faculty provided email account.
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100% online Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Regular use of asynchronous discussion boards encourages various types of interaction and critical thinking skills among all course participants. Questions and topics posed will allow students to discuss, compare and contrast, identify, and analyze elements of the course outcomes. Other discussion boards may be used for Q&A and general class discussion by students and the instructor to facilitate student success and strengthen student learning outcomes.

E-mail	E-mail, class announcements, and various learning management system tools such as “Message Students Who” and “Assignment Comments”, will be used to regularly communicate with all students on matters such as clarification of class content, reminders of upcoming assignments and/or course responsibilities, to provide prompt feedback to students on coursework to facilitate student learning outcomes, or to increase the role of an individual educator in the academic lives of a student. Students will be given multiple ways to email the instructor through both the learning management system inbox and faculty provided email account.
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Examinations

Hybrid (1%–50% online) Modality

On campus
Online

Hybrid (51%–99% online) Modality

On campus
Online

Primary Minimum Qualification

CHILD DEV/ECE

Review and Approval Dates

Department Chair

09/01/2022

Dean

09/06/2022

Technical Review

09/15/2022

Curriculum Committee

9/20/2022

DTRW-I

MM/DD/YYYY

Curriculum Committee

MM/DD/YYYY

Board

MM/DD/YYYY

CCCCO

MM/DD/YYYY

Control Number

CCC000587062

DOE/accreditation approval date

MM/DD/YYYY