

SED 4800C - Science Methods for Adolescent and Young Adult Learners

Fall 2026 Syllabus, Section 01, CRN 40888,

Credit hours: 3

Instructor

Breanna Beaver

Email: bcbeaver@ysu.edu

Public Instructor Information

Instructor Title: Dr. Bre Beaver

Instructor Professional Qualifications:

Ph.D., Curriculum & Instruction: Science Education, Kent State University, 2023

P.B.A.C.C., American Meteorological Society DataStreme, California University of Pennsylvania, 2019

M.S., Environmental Science, Youngstown State University, 2017

B.S., Secondary Education Integrated Sciences, Youngstown State University, 2016

Instructor Office Location: BCOE 2210

Instructor Office Phone: 330-941-7230

Course Description

4800C. Science Methods for Adolescent and Young Adult Learners. Using NSTA/NCATE and Ohio content standards, candidates establish and maintain learning environments that provide diverse students with a holistic, interdisciplinary understanding of science. Background for teaching science, instructional strategies, classroom management, planning instruction, assessment, professional development, integration of content with inquiry emphasized. Field hours required. Prereq.: TELS Upper Division Status, SED 3706, TEMC 3707, 24 s.h. science. Coreq.: EDFN 3710. 3 s.h.

Course Readings

Group	Title	Author	ISBN
	no readings		

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Day	Date	Reading(s)	Proposed Topic	Due/To Prepare for Class
Tue	8/25	BB Materials	Class intro / syllabus	
Thu	8/27	BB Materials	Science Teachers / Organizations	
Tue	9/1	BB Materials	Science Standards	
Thu	9/3	BB Materials	Inquiry / 5E Field Review	Professional Mem. AC Proposa
Tue	9/8	BB Materials	Discrepant Events	
Thu	9/10	BB Materials	Nature of Science	
Tue	9/15	BB Materials	Culture	
Thu	9/17	BB Materials	Misconceptions & Media Literacy	
Tue	9/22	BB Materials	Lesson Planning & AL	
Thu	9/24	BB Materials	Planning & Assessing	

Tue	9/29	BB Materials	STEM Demos	STEM Demo
Thu	10/1	BB Materials	STEM Demos	
Tue	10/6	BB Materials	Unit Overview & Checklist	
Thu	10/8	BB Materials	Lab Safety / Lesson Prep	Safety Module
Tue	10/13	BB Materials	Place-Based Education	
Thu	10/15	BB Materials	Technology	Contextual Factors
Tue	10/20	BB Materials	Adventure Choice	Adventure Choice Presentation
Thu	10/22	BB Materials	Conferences	
Tue	10/27	BB Materials	Field	
Thu	10/29	BB Materials	Field	Single Plan
Tue	11/3	BB Materials	Field	
Thu	11/5	BB Materials	Field	Unit Draft
Tue	11/10	BB Materials	Field	
Thu	11/12	BB Materials	Field	Unit Plan
Tue	11/17	BB Materials	Field	
Thu	11/19	BB Materials	Field	
Tue	11/24		Field	
Thu	11/26		Field	
Tue	12/1		Video and Reflection	Field verification Video & Reflection Submit all fieldwork forms

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.