

## COURSE APPROVAL DOCUMENT

Southeast Missouri State University

Department: Elementary, Early and Special Education

Course No. CE364

Title of Course:

Date: September 21, 2018

Methods of Teaching Math, Science and Social Studies in Early Childhood and Elementary Education

Please check:  New  
 Revision

### I. Catalog Description (Credit Hours of Course):

Research based strategies for implementation of integrated Math, Science, Social Studies curriculum in Early Childhood Education / Elementary Education (2 credit hours)

### II. Prerequisite(s):

Admission to the Teacher Education Program

CE 370 Language Acquisition of the Young Child

US 105 American History I

PS 103 US Political Systems

BS 118 Introduction to Process Science for Elementary Teachers

BS 218 Biological Science: A Process Approach

MA 228 Geometry and Measurement for Educators

EC 101 Economic Problems and Policies

PH 218 Physical Science: A Process Approach

UI 308 Cultural and Physical Landscapes of the World: A Geographical Analysis

### Co-requisite(s):

CE 330 Classroom Management and Environmental Organization

CE 365 Observation, Assessment and Data Analysis

CE 366 Curriculum, Theory and Program Management

CE 368 Early Childhood Field Experience

### III. Purposes or Objectives of the Course:

Teacher Candidates will:

- A. Plan integrated lessons (Math, Science and Social Studies) that reflect children's development and learning characteristics including English Language Learners, difficulties in the content, disabilities or developmental delays and exceptional abilities.
- B. Uses effective strategies and tools, including technology, based on research and knowledge of the basic concepts, processes, and skills related to Math, Social Studies and Science.
- C. Uses a variety of developmentally appropriate teaching and approaches, including technology, that promote children to think critically, problem solve and be motivated to solve problems in Math and Science.
- D. Uses developmentally appropriate learning experiences and resources, including technology, for promoting children's understanding of basic concepts and academic language in Math, Social Studies and Science.
- E. Apply knowledge of approaches for integration of Math, Social Studies and Science with other content areas, i.e. language and literacy, the arts, and physical activity, based on children's previous experiences and knowledge.
- F. Uses appropriate National and State standards, including appropriate early learning standards in lesson plans.

### IV. Course Learning Outcomes

- A. Plan integrated lessons (Math, Science and Social Studies) that reflect children's development and learning characteristics including difficulties in the content, disabilities or developmental delays and exceptional abilities.
- B. Apply knowledge of approaches for integration of Math, Social Studies and Science with other content areas based on children's previous experiences and knowledge.

C. Uses appropriate National and State standards, including appropriate early learning standards in lesson plans.

V. Names of Faculty Qualified to Teach the Proposed Course:

- A. Dr. Sharon J. Dees
- B. Dr. Julie A. Ray
- C. Ms. Brooke Uchtmann
- D. Ms. Laura Johnson
- E. Dr. Susan Davis

VI. Course Content or Outline (Indicate number of class hours per unit or section):

Covered in week: (in one hour increments)	Topic	Course Hours
1, 5, 7, 9	Basic concepts, processes and skills in Math, Social Studies and Science	4
3, 6, 8, 10, 11	Evidenced based math, science, and social studies instructional strategies including Developmentally Appropriate Practices	5
11, 12, 13	Learning characteristics including English Language Learners, difficulties in the content, disabilities or developmental delays and exceptional abilities	3
5, 7, 9	Critical thinking and problem solving in math, science and social studies instruction	3
6, 8, 10	Academic Language in Math, Science and Social Studies	3
4, 12, 14, 15,	Resources, tools, technology in math, science and social studies instruction	4
1, 2, 3, 4	Integration of content areas (math, science, social studies with language and literacy, the arts, physical activity)	4
2, 13, 14, 15	National and State Standards including Early Learning Standards in math, science and social studies	4
	<b>Total</b>	30

Attach the following:

- copy of example class syllabus and course schedule.
- memo from Library Dean assessing available and needed library holdings and resources.
- memo(s) from Department Chairs in affected departments stating possible issues and/or conflicts are resolved.

Signature: Julie Ray  
Chair

Date: 10/29/18

Signature: Shogun Adunsi  
Dean

Date: 10/29/18

# COURSE APPROVAL DOCUMENT

## Reference Sheet

**Department:** Elementary, Early and Special Education  
**Course No.:** CE364  
**Title of Course:** Methods of Teaching Math, Science and Social Studies in Early Childhood and Elementary Education

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Research based strategies for implementation of integrated Math, Science, Social Studies curriculum in Early Childhood Education / Elementary Education (2 credit hours)

### II. Prerequisite(s):

Admission to the Teacher Education Program  
CE 370 Language Acquisition of the Young Child  
US 105 American History I  
PS 103 US Political Systems  
BS 118 Introduction to Process Science for Elementary Teachers  
BS 218 Biological Science: A Process Approach  
MA 228 Geometry and Measurement for Educators  
EC 101 Economic Problems and Policies  
PH 218 Physical Science: A Process Approach  
UI 308 Cultural and Physical Landscapes of the World: A Geographical Analysis

### Co-requisite(s):

CE 330 Classroom Management and Environmental Organization  
CE 365 Observation, Assessment and Data Analysis  
CE 366 Curriculum, Theory and Program Management  
CE 368 Early Childhood Field Experience

### III. Purposes or Objectives of the Course (optional):

Teacher Candidate will:

- A. Plan integrated lessons (Math, Science and Social Studies) that reflect children's development and learning characteristics including English Language Learners, difficulties in the content, disabilities or developmental delays and exceptional abilities.
- B. Uses effective strategies and tools, including technology, based on research and knowledge of the basic concepts, processes, and skills related to Math, Social Studies and Science.
- C. Uses a variety of developmentally appropriate teaching and approaches, including technology, that promote children to think critically, problem solve and be motivated to solve problems in Math and Science.
- D. Uses developmentally appropriate learning experiences and resources, including technology, for promoting children's understanding of basic concepts and academic language in Math, Social Studies and Science.
- E. Apply knowledge of approaches for integration of Math, Social Studies and Science with other content areas, i.e. language and literacy, the arts, and physical activity, based on children's previous experiences and knowledge.
- F. Uses appropriate National and State standards, including appropriate early learning standards in lesson plans.

### IV. Course Learning Outcomes (Minimum of 3):

- A. Plan integrated lessons (Math, Science and Social Studies) that reflect children's development and learning characteristics including difficulties in the content, disabilities or developmental delays and exceptional abilities.
- B. Apply knowledge of approaches for integration of Math, Social Studies and Science with other content areas based on children's previous experiences and knowledge.
- C. Uses appropriate National and State standards, including appropriate early learning standards in lesson plans.

**V. Names of Faculty Qualified to Teach the Proposed Course:**

*List qualified faculty. It is preferable new courses are not dependent on an individual faculty member.*

- A. Dr. Sharon J. Dees
- B. Dr. Julie A. Ray
- C. Ms. Brooke Uchtmann
- D. Ms. Laura Johnson
- E. Dr. Susan Davis

**VI. Course Content or Outline (Indicate number of class hours per unit or section):**

<b>VII. Covered in week:</b>  <b>VIII. (in one hour increments)</b>	<b>Topic</b>	<b>Course Hours</b>
1, 5, 7, 9	Basic concepts, processes and skills in Math, Social Studies and Science	4
3, 6, 8, 10, 11	Evidenced based math, science, and social studies instructional strategies including Developmentally Appropriate Practices	5
11, 12, 13	Learning characteristics including English Language Learners, difficulties in the content, disabilities or developmental delays and exceptional abilities	3
5, 7, 9	Critical thinking and problem solving in math, science and social studies instruction	3
6, 8, 10	Academic Language in Math, Science and Social Studies	3
4, 12, 14, 15,	Resources, tools, technology in math, science and social studies instruction	4
1, 2, 3, 4	Integration of content areas (math, science, social studies with language and literacy, the arts, physical activity)	4
2, 13, 14, 15	National and State Standards including Early Learning Standards in math, science and social studies	4
	<b>Total</b>	30

**Attach copy of example class syllabus and schedule:**

Fall 2018

CE364 Syllabus

Southeast Missouri State University

Department: Elementary, Early & Special Education

Course No. CE 364

Title of Course: Methods of Teaching Math, Science and Social Studies in Early Childhood and Elementary Education

Date: Approved 2014

Revised: Fall 2018

Catalog Description: Research based strategies for implementation of integrated Math, Science, Social Studies curriculum in Early Childhood Education / Elementary Education (2 credit hours)

Class Meeting Time and Location: Monday, 1:00-2:50, SC303

Instructor Name and Contact Information: Dr. Sharon J. Dees, Honors Faculty,  
SC401E, 651-2122  
sdees@semo.edu

Office Hours: Tuesday and Thursday at LaFerla, 9:15-9:45  
Tuesday and Thursday at SC401E, 10:00-11:00

Prerequisite: Admission to the Teacher Education Program  
CE 370 Language Acquisition of the Young Child  
US 105 American History I  
PS 103 US Political Systems  
BS 118 Introduction to Process Science for Elementary Teachers  
BS 218 Biological Science: A Process Approach  
MA 228 Geometry and Measurement for Educators  
EC 101 Economic Problems and Policies  
PH 218 Physical Science: A Process Approach  
UI 308 Cultural and Physical Landscapes of the World: A Geographical Analysis

Co-requisite: CE 330 Classroom Management and Environmental Organization  
CE 365 Observation, Assessment and Data Analysis  
CE 366 Curriculum, Theory and Program Management  
CE 368 Early Childhood Field Experience

**Class Concerns**

Questions, comments or requests regarding this course or program should be taken to your instructor. Unanswered questions or unresolved issues involving this class may be taken to Dr. Julie Ray, Chair of the Department of Elementary, Early and Special Education.

**Course Learning Outcomes (Minimum of 3):**

1. Plan integrated lessons (Math, Science and Social Studies) that reflect children's development and learning characteristics including difficulties in the content, disabilities or developmental delays and exceptional	Measurement:  Lesson plan rubric (Math and Science)
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abilities.	
2. Apply knowledge of approaches for integration of Math, Social Studies and Science with other content areas based on children’s previous experiences and knowledge.	Measurement:  Lesson plan rubric (Science / Reading and Integrated Lesson) and Contextual Factor Information
3. Uses appropriate National and State standards, including appropriate early learning standards in lesson plans.	Measurement:  Lesson plan rubric (standards section)

Purposes or Objectives of the Course:

Teacher Candidates will:

1. Plan integrated lessons (Math, Science and Social Studies) that reflect children’s development and learning characteristics including English Language Learners, difficulties in the content, disabilities or developmental delays and exceptional abilities.
2. Uses effective strategies and tools, including technology, based on research and knowledge of the basic concepts, processes, and skills related to Math, Social Studies and Science.
3. Uses a variety of developmentally appropriate teaching and approaches, including technology, that promote children to think critically, problem solve and be motivated to solve problems in Math and Science.
4. Uses developmentally appropriate learning experiences and resources, including technology, for promoting children’s understanding of basic concepts and academic language in Math, Social Studies and Science.
5. Apply knowledge of approaches for integration of Math, Social Studies and Science with other content areas, i.e. language and literacy, the arts, and physical activity, based on children’s previous experiences and knowledge.
6. Uses appropriate National and State standards, including appropriate early learning standards in lesson plans.

## **ACCESIBILITY STATEMENT**

Southeast Missouri State University is committed to providing services for students with disabilities to ensure equal access as outlined in the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act. Disability Services is the institutionally recognized program designed to provide both federally mandated services as well as proactive services for students with disabilities by ensuring equal access. By providing leadership, advocacy, resources, mediation, and guidance to students with disabilities, Disability Services assists students with identifying barriers to their success and thus identifying ways to address those barriers.

While Disability Services strives to reduce barriers that students encounter at Southeast, academic accommodations are often necessary in the classroom. Academic accommodations are adjustments made to provide students equal access. Students wishing to use academic accommodations that are associated with their disability should contact Disability Services to determine how best accommodations may be provided. When accommodations are needed, they are implemented on a case

by case basis. Disability Services staff consult with each student individually to identify how to best meet their needs.

For more information, see the Disability Services page or contact Disability Services located in Dearmont Hall Wing B1, One University Plaza MS 2030, Cape Girardeau, MO 63701; (573-651-5927)

### Disability Services

If a student has a special need addressed by the Americans with Disabilities Act (ADA) please notify the instructor at the beginning of the course. You must register as a student with a disability in the office of Disability Services located in Dearmont Hall Wing B1, One University Plaza MS 2030, Cape Girardeau, MO 63701; (573-651-5927).

It is the responsibility of the student to notify the instructor after requesting reasonable accommodations with DS. Failure to do this may result in not receiving the requested accommodations. Refer to <http://www.semo.edu/ds/index.htm>

## **ACADEMIC HONESTY**

**Policy.** Academic honesty is one of the most important qualities influencing the character and vitality of an educational institution. Academic misconduct or dishonesty is inconsistent with membership in an academic community and cannot be accepted. Violations of academic honesty represent a serious breach of discipline and may be considered grounds for disciplinary action, including dismissal from the University.

Academic dishonesty is defined to include those acts which would deceive, cheat, or defraud so as to promote or enhance one's scholastic record. Knowingly or actively assisting any person in the commission of an above-mentioned act is also academic dishonesty.

Students are responsible for upholding the principles of academic honesty in accordance with the "University Statement of Student Rights" found in the Undergraduate or Graduate Bulletin. The University requires that all assignments submitted to faculty members by students be the work of the individual student submitting the work. An exception would be group projects assigned by the instructor. In this situation, the work must be that of the group. Academic dishonesty includes:

**Plagiarism.** In speaking or writing, plagiarism is the act of passing someone else's work off as one's own. In addition, plagiarism is defined as using the essential style and manner of expression of a source as if it were one's own. If there is any doubt, the student should consult his/her instructor or any manual of term paper or report writing. Violations of academic honesty include:

1. Presenting the exact words of a source without quotation marks;
2. Using another student's computer source code or algorithm or copying a laboratory report; or
3. Presenting information, judgments, ideas, or facts summarized from a source without giving credit.

**Cheating.** Cheating includes using or relying on the work of someone else in an inappropriate manner. It includes, but is not limited to, those activities where a student:

1. Obtains or attempts to obtain unauthorized knowledge of an examination's contents prior to the time of that examination;

2. Copies another student's work or intentionally allows others to copy assignments, examinations, source codes or designs;
3. Works in a group when she/he has been told to work individually;
4. Uses unauthorized reference material during an examination; or
5. Have someone else take an examination or takes the examination for another.

**General Responsibilities for Academic Honesty.** It is the University's responsibility to inform both students and faculty of their rights and responsibilities regarding such important matters as cheating and plagiarism. Most of what is considered unethical or dishonest behavior can be avoided if faculty and students clearly understand what constitutes such practices and their consequences. The University community should also be aware of the procedures to be followed should a breach of academic honesty occur.

The faculty member is responsible for clarification to his/her class of those standards of honesty for class assignments or functions where such standards may be unclear or when such standards vary from the accepted norm. Further, some faculty may choose to utilize preventive measures (multiple exams, alternate seating, etc.) to help insure the maintenance of academic honesty. However, the use of such measures is the prerogative of the individual faculty member and is not a responsibility or requirement of faculty in general.

The fundamental responsibility for the maintenance of honesty standards rests upon the student. It is the student's responsibility to be familiar with the University policy on academic honesty and to uphold standards of academic honesty at all times in all situations.

**Protocol for Adjudicating Alleged Violations of Academic Honesty.** Faculty members who discover evidence of academic dishonesty should contact the student within five business days of discovering the alleged dishonesty to arrange to meet and discuss the allegation. Prior to this meeting the faculty member may consult with the Department Chairperson, the appropriate Dean, and the Office of Judicial Affairs. The following sections describe the procedures to be adhered to in each of the listed instances: the student acknowledges the violation, the student denies the violation, and the appeals process. If the faculty member is the Department Chairperson, a departmental designee will assume the Department Chairperson's role in this protocol and references to the Department Chairperson should be read as departmental designee. The procedures below should be followed with online, ITV or face-to-face classes.

**From Faculty Senate Bill 11-A-16** <http://www.semo.edu/facultysenate/handbook/5d.html>

## **CIVILITY AND HARASSMENT**

A major determinant of a successful educational experience is a shared sense of respect among and between the students and their instructor. Some of the texts and issues we will discuss may cause disagreements among members of the class. Multiple viewpoints are an essential component of any college course, and disagreeing with someone is fine. However, rude, disrespectful, aggressive, offensive, harassing, or demeaning behavior—either face-to-face or in an online discussion—toward anyone in the class will not be tolerated; students are expected to abide by the Code of Student Conduct (Statement of Student Rights and Code of Student Conduct). Should a student feel someone has acted inappropriately toward them in class, please speak with the instructor at once so the situation can be

addressed. The instructor for the course reserves the right to ask a student to leave the classroom or the online discussion for any inappropriate behavior, and if the situation warrants, may call campus security to remove the offending student from class.

### **Attendance and make-up work**

Students are expected to attend all classes and to complete all assignments for courses in which they are enrolled. An absence does not relieve the student of the responsibility to complete all assignments. If an absence is associated with a university-sanctioned activity, the instructor will provide an opportunity for assignment make-up. However, it is the instructor's decision to provide, or not to provide, make-up work related to absences for any other reason.

A student not present for class during the entire initial week of a scheduled course may be removed from the course roster unless the student notifies the instructor by the end of the first week of an intention to attend the class. Questions regarding the removal process should be directed to the Registrar.

In order to complete missed or late work an agreement must be made with the instructor. All late work will have a reduction of points. No missed or late work will be accepted after the last regular day of the class (the week before finals).

All assigned papers should be completed in a timely manner and submitted for grading by the indicated date. Points will be deducted for late assignments:

10% 1 – 3 days late

20% 4 - 7 days late

50% 7 – 14 days late

Work more than 14 days late will be given 0 points, but is still due.

This class will include group discussions, small group work, case studies, individual reflections, and other class activities. Teacher candidates are encouraged to ask questions and make comments pertinent to the subject. Points are given for participating in class activities and assignments, and these points may **not** be made up, if absent.

Each teacher candidate is expected to attend classes (arrive on time and stay until the end of class) and take an active role in class. In-class activities points will be deducted for tardiness or leaving class early.

Class work will complement, rather than substitute for the text and assigned readings. Thus it is important that each teacher candidate complete the assigned readings and accompanying homework before we discuss them in class. The readings will be used extensively for both homework and class activities, so it is important to bring the text to class each period. The COE iPads will also be used daily, and it is important that teacher candidates bring their iPad, charged and ready to use, to class.

### **Technology**

Students are expected to check their grades on Moodle. Moodle submission will be used for some assignments. Out of courtesy to your instructor and classmates, please silence cell phones during class time. Any use of cell phone should be done in the hallway. It is also expected that iPad use will be related to class topics / discussions. **In-class activity points will be deducted for cell phone or iPad use that is unrelated to class activities.**

## Writing Effectively

All assignments should demonstrate professional writing abilities, including grammar and spelling. Points will be deducted for writing errors, and papers with repeated unprofessional writing may be returned for revision without being graded. Assistance with writing may be obtained from the Center for Writing Excellence, located at <http://ustudies.semo.edu/writing> or the Writing Excellence's Online Writing Lab (OWL), located at: <http://ustudies.semo.edu/writing/owl.asp>.

All assignments should be typed, double-spaced, 12 point font, standard margins.

Assignments:	Percentage of Total Grade
Science and Math Lesson Plans (integrated with literacy)	40%
Websites / Apps / Video critique	10%
Contextual Information	5%
Misc. classroom activities and participation	30%
Final	15%

### Grading scale and policies:

90% - 100% A

80% - 89% B

70% - 79% C

60% - 69% D

Below 60% F

A grade of C or higher is required.

*Any teacher candidate who is asked to leave a field or clinical experience by a partner school district before the end of the semester, due to performance or dispositional issues, will not be given a new placement for that semester. The teacher candidate will also receive a failing grade for the field experience course. The teacher candidate must repeat the field or clinical course, and if a grade of C or higher is not received in the second attempt, the teacher candidate will be removed from the College of Education program. This policy does not pertain to any teacher candidate whose field placement termination is due to circumstances unrelated to teaching performance or dispositions, such as a cooperating teacher illness.*

### Text:

Bredenkamp, S., & Copple, C. (Eds.). (2009). *Developmentally Appropriate Practice in Early Childhood Programs*. (3<sup>rd</sup> ed.). Washington, DC: National Association for the Education of Young Children.

Course Objective	MoSPE QIs	NAEYC
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1. Plan integrated lessons (Math, Science and Social Studies) that reflect children’s development and learning characteristics including English Language Learners, difficulties in the content, disabilities or developmental delays and exceptional abilities.	2.4, 3.2	1a
2. Uses effective strategies and tools, including technology, based on research and knowledge of the basic concepts, processes, and skills related to Math, Social Studies and Science.	1.2, 1.4	4b, 5a
3. Uses a variety of developmentally appropriate teaching and approaches, including technology, that promote children to think critically, problem solve and be motivated to solve problems in Math and Science.	4.1	4c
4. Uses developmentally appropriate learning experiences and resources, including technology, for promoting children’s understanding of basic concepts and academic language in Math, Social Studies and Science	1.1, 1.2, 4.2	4c, 5b
5. Apply knowledge of approaches for integration of Math, Social Studies and Science with other content areas, i.e. language and literacy, the arts, and physical activity, based on children’s previous experiences and knowledge.	1.4, 2.5	4c
6. Uses appropriate National and State standards, including appropriate early learning standards in lesson plans.	3.1	5c

**Course Content:**

<b>Covered in week: (in one hour increments)</b>	<b>Topic</b>	<b>Course Hours</b>
1, 5, 7, 9	Basic concepts, processes and skills in Math, Social Studies and Science	4
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5, 7, 9	Critical thinking and problem solving in math, science and social studies instruction	3
6, 8, 10	Academic Language in Math, Science and Social Studies	3
4, 12, 14, 15,	Resources, tools, technology in math, science and social studies instruction	4

1, 2, 3, 4	Integration of content areas (math, science, social studies with language and literacy, the arts, physical activity)	4
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	<b>Total</b>	30

Final: December 10, noon, SC303