

Professional Education Program Proposal COVER SHEET

Institution:	Phone:Email:							on: Date Submitted:						
Program Contact Person:														
Position/Title:	Phone:	Email:												
Name of program:		CIP Code:												
Degree or award level (B.S., M	I.A.T., graduate non-d	legree, etc.):												
Indicate the title and grade ra	nge of the license for v	which candidates will be prepared:												
Title:		Grade Range:												
Proposal is for:New First-Time Li	icensure Program (Co	mplete Section A)												
New Educator Lic	ensure Endorsement I	Program (Complete Section B)												
Major Revision(s)	to Approved Licensus	re Program (Complete Section C)												
Minor Revision(s)	to Approved Licensus	re Program (Complete Section C)												
Deletion of Appro	ogram Contact Person:													
-		delivered via Distance Learning												
Proposed program starting da	ite:													
Will this program be offered a	it more than one site?	□Yes □No												
If yes, list the sites where	e the program will be or	ffered:												
Prior approval by AHECB is recunder Ark. Code Ann. §6-61-30.														

2. Rationale for revision to existing licensure program

The changes to the Childhood Education program are being made are in response to the Arkansas Department of Education's revisions in the K-6 content competencies for teacher education programs. In making the changes, program faculty consulted ADE's required content competencies, the content addressed in the Praxis and new state required Reading Exam candidates must pass to obtain licensure, various national and state standards documents, and leading research in the elementary education field.

The revised program, Bachelor of Science in Education in Childhood Education leading to a Master of Arts in Teaching in Elementary Education, would enable students to major in Elementary Education at the undergraduate level and pursue a Master of Arts in Teaching degree with an endorsement either in English as a Second Language (EASL), Gifted and Talented (GATE), Dyslexia therapy (READ), or a graduate certificate in Science, Technology, Engineering, and Mathematics (STEM) education. Successful completion of this 5-year program would make candidates eligible for Arkansas teacher licensure in K-6 Elementary Education.

The University currently supports two initial K-6 licensure programs. One is a BSE in Elementary Education, and one is a Master of Arts in Teaching in Elementary Education, so current library resources, facilities and equipment will be used in the education of undergraduate and graduate students. The revised licensure program will be mostly comprised of existing courses; however, it does require the creation of four new courses at the undergraduate level and the revision of some existing courses.

Program goals focus around the competencies developed by the Arkansas Department of Education required for licensure as a K-6 Elementary Education Teacher, as well as the Arkansas Teaching Standards (InTASC) and the Teacher Excellence Support System (TESS).

3. Institutional Approval

Forms must be submitted through the University of Arkansas Program Management System. Following initial approval, the online form and associated documents will be submitted to the next approval level and proceed through the college approval process until the proposal reaches the office of the dean for college or school approval, or all participating deans, if more than one school or college is involved.

Proposals for all teacher education program changes proceed from the University Teacher Education Board (UTEB), to the college, which will forward the proposals to the University Course and Programs Committee for review. For actions to be reviewed by the University Course and Programs Committee in a given month, the proposal must be at the University Course and Programs Committee level by the second Friday of that month.

Actions involving curricula of undergraduate or professional programs must be reviewed by the University Course and Programs Committee and, for core courses, by the Core Curriculum Committee (CCC) prior to action by the Faculty Senate. Actions involving changes to graduate programs must be reviewed by the University Course and Programs Committee prior to action by the Graduate Council and Faculty Senate.

Certain program changes must be approved by or reported to the Board of Trustees and the Arkansas Higher Education Coordinating Board (see Board Policy 620.1 and the ADHE *Criteria* document identified on page one for further details). Among them are the initiation of new programs and substantive program changes including offering a program at an additional (off-campus) site. Many other changes must be reported (such as name changes and changes in organizational structure) and may be reviewed for action. All program change proposals are reviewed following campus approval to determine which are to be sent forward. All campus actions requiring action by either board or notification to either board will be handled by the provost, on behalf of the chancellor. Such actions will be reported by letter to the president for inclusion as agenda items for one or both boards. *All materials for either board must be submitted to the office of the provost in electronic format.* Items will not be submitted to ADHE for review until they have been approved by the Faculty Senate. Given that agenda items must be submitted no later than 120 days prior to the target AHECB meeting, Faculty Senate approval must be received at least four months in advance of that date.

For programs requiring no off-campus approval, Faculty Senate approval will be considered notification to the campus that the program change will be implemented effective with the academic year in which the change is included in the catalog or the proposed effective date, if different, unless other notification is provided by the provost.

The Curriculum Approval Process is described in the Academic Policy 1622.20 (https://provost.uark.edu/policies/162220.php). The Workflow Steps for Program/Unit Changes are also provided on the registrar's website (https://registrar.uark.edu/program-unit-changes/index.php).

4. Documentation of Revisions

All of these changes are made to align the program with the Arkansas Department of Education's revisions of the K-6 content competencies. Included in this change will be course deletions and course additions. Current and revised five-year degree plans, as well as new and revised syllabi, are included in Appendices at the conclusion of this document. The matrices with the course correlations to the revised ADE content competencies and the Arkansas Teaching Standards are included as separate Excel files.

Appendix A: 4a-i. CURRENT Five-year degree plan for CHEDBS and ELEDMA (with revisions indicated

Appendix B: 4a-i.REVISED Five-year degree plans for CHEDBS and ELEDMA

Appendix C: 4a-iv. and 4a-v. Course descriptions and syllabi

4a-i. CHEDBS and ELEDMA Plan of study with proposed revisions

*Course Deletions from current CHEDBS Program:

- 1. 3 hours of Fine Arts
- 2. CIED 3262, Language Development for the Educator
- 3. CIED 3103, Children's and Adolescent Literature
- 4. CIED 4113, Integrated Communication Skills for the K-6 Classroom
- 5. CIED 4363, Disciplinary Literacy in the K-6 Classroom

Course Deletions from CHEDBS with READ concentration:

1. SPED 5173, Introduction to Dyslexia

Course Deletions from ELEDMA with READ concentration:

- 1. CIED 5173, Literacy Assessment and Intervention
- 2. CIED 5593, Advanced Diagnosis and Intervention
- 3. CIED 5793, Practicum in Literacy
- 4. CIED 5983, Practicum in Curriculum and Instruction
- 5. CIED 6233, Organization of Reading Programs

Course Deletions from CHEDBS with STEM concentration:

1. STEM 5023, Creativity and Innovation

*Course Additions or Specifications for revised CHEDBS Program:

- 1. Change MLIT 1003 AND ARHS 1003 or EITHER MLIT 1003 OR ARHS 1003
- 2. Change STAT 2303, Principles of Statistics to STAT 2303 OR any 3-hour statistics course
- 3. Change 3-hour general elective to a 3-hour linguistics or phonology-focused elective (a list of suggested courses will be given to program advisors)
- 4. ENSC 1001L, Environmental Science Lab
- 5. CIED 2943, Foundations of Language and Literacy (NEW COURSE)
- 6. CIED 3453, Developmental Literacy (NEW COURSE)
- 7. CIED 4183, Instruction and Assessment in Writing (NEW COURSE)
- 8. CIED 4533, Reading Comprehension through Children and Adolescent Literature (NEW COURSE)

Course Additions specific to CHEDBS with EASL concentration:

1. 3 hour general elective

Course Additions specific to CHEDBS with READ concentration:

- 1. SPED 4173, Introduction to Dyslexia: Literacy Development and Structure of Language
- 2. SPED 4483, Teaching Literacy Skills for Students with Disabilities (K-12)

Course Additions specific to CHEDBS with STEM concentration:

- 1. STEM 4043, Creativity and Innovation in STEM Education (NEW COURSE at the undergrad level)
- 2. 3 hour general elective

Course Additions specific to the ELEDMA with READ concentration:

- 1. Additional 3 hours of CIED 508V, Elementary Education Cohort Teaching Internship
- 2. CIED 5073, Action Research in Elementary Education
- 3. SPED 5543, Dyslexia Practicum and Case Study
- 4. SPED 5633, Curriculum Development and Instructional Planning (dyslexia section)
- 5. SPED 5873, Assessment of Exceptional Students

These changes will move all **CHEDBS** degree programs to a total of 124 hours (from the previous 122) required for graduation.

4a-vi. Common Program Assessments

No changes will be made to the common program assessments. Candidates are still required to complete a teaching audition at the program mid-point. Successful completion of this assessment is required before the candidate is allowed to progress into the final stage (internship) of the Childhood and Elementary Education programs. Other common assessments involve the TESS observation rubric and changes have not been made to this document.

4a-vii. Field Experiences and Supervised Clinical Practice

Field Experience:

Each Childhood Education methods course will be required to embed field experiences into the course requirements. These field experiences will take place in elementary and middle schools with varied and diverse students. The types of diversity addressed throughout the field experience component will include elementary and middle schools with (1) a focus on particular special needs, (2) high concentrations of ELL students, (3) students from various cultural backgrounds, (4) students from varying socio-economic levels, and (5) a focus on specific interests, such as STEM.

Field experience will be coordinated through the College of Education and Health Professions Field Placement Office. The Field Placement Director will assign each candidate to a different elementary and/or middle school and grade level for each semester they are in the program. This centralized placement office will ensure that students receive varied and diverse experiences throughout their program of study prior to their internship experience.

A table of courses requiring field experience can be seen below. In addition to the courses listed below, CIED 1013, Introduction to Education and Practicum, has an 18-hour introductory practicum.

]	Field Experience Courses in the CHED Program							
Fall	Spring	Fall	Spring					
Junior Year	Junior Year	Senior Year	Senior Year					
CIED 3013	CIED 3023	CIED 3123	CIED 3143					
CIED 3113 (K-2 only)	CIED 3053 (5 & 6 only)	CIED 3133	CIED 4153					
	CIED 3453 (2-4 only)	CIED 4183 (1-6 only)	CIED 4423					
	ECON 3053		CIED 4533					

Internship:

Internship in the Childhood Education program takes place once candidates have been admitted to the Master of Arts in Teaching in Elementary Education. Candidates participate in a yearlong internship during this year of Graduate School. The schools chosen to host Elementary Education MAT interns are selected specifically for the diversity of students and experiences they can offer our pre-service candidates. The types of diversity addressed throughout the internship will include schools with (1) a focus on particular special needs, (2) high concentrations of ELL students, (3) students from various cultural backgrounds, (4) students from varying socio-economic levels, and (5) a focus on specific interests, such as STEM. Interns are placed at their internship site dependent on the option they have chosen to pursue during their MAT year (ESL, Gifted and Talented, Reading, or STEM).

During the course of the internship year, candidates will be placed in three different grade-levels and at least two different schools. Grade-level placements will include lower, middle, and upper elementary grades as well as a middle school placement. Interns are present at their internship school four days a week from early August until the University's May Commencement. The one day they are not at their internship sites, they are expected to be on the University campus for their MAT coursework.

4b. Transition to DLT format

N/A

4c. Changes to Policies Overseeing Candidate Quality

N/A

5. Transition Plan

Due to the immediate requirement of the Pearson Reading Exam as a gateway to teacher licensure, all program candidates, current and new, will be prepared using the new content competencies and corresponding courses. Program modifications will be completed at the program and college level for current program candidates to ensure they meet the graduation requirements in a timely manner.

Appendix A

4ai. CURRENT Five-year degree plan CHEDBS and ELEDMA *Proposed revisions notated as highlights and strikethroughs

Current Program of Study with highlighted and strike-through revisions noted: CHEDBS and ELEDMA

FALL SEMESTER 1

SPRING SEMESTER 2

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
ENGL 1013	Composition 1	3	ENGL 1023	Composition 11	3	
MATH 1203	College Algebra (or higher)	3	STAT 2303	Principles of Statistics (*added OR any 3 hr.	3	
				Statistics course)		
BIOL 1543	Principles of Biology	3	CIED 1013	Introduction to Education	3	
BIOL 1541L	Principles of Biology Lab	1	COMM	COMM 1313 or COMM 2323	1	
HIST 2003	U.S. History – to 1877	3	HIST 2013	US History – 1877 to Present	3	
Fine Arts Core	ARHS 1003 – Art History	3				
	*changed to either/or with MLIT 1003					

FALL SEMESTER 3

SPRING SEMESTER 4

	FALL SEVIESTER 3		SI KING SEWIESTER 4					
COURSE #	TITLE	HRS	COURSE #	TITLE	HRS			
Humanities Core	COMM 1233 OR WLIT 1113 OR PHIL 2003 OR PHIL 2103 OR PHIL 2203 OR PHIL 3103	3	HIST 3383	Arkansas & the Southwest OR any 3 hour Arkansas History	3			
Physical Science	PHYS 1034 for Elem. Teachers OR ASTR 2003/2001 Astronomy OR STEM 4104	4	GEOL 1113	Geology	3			
MATH 2213	Math Structures I	3	GEOL 1111	Geology Lab	1			
PLSC 2003	American National Gov't	3	MATH 2223	Math Structures II	3			
FINE ARTS	MLIT 1003 Music Lecture *added Lang and Lit Foundations	3	GEOG 1123 or ANTH 1023	Human Geography OR Cultural Anthropology	3			
			WORLD HISTORY	HIST 1113 or HIST 1123	3			

FALL SEMESTER 5

SPRING SEMESTER 6

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
CIED 3013 (f)	Development and Learning Theories	3	CIED 3113 (f)	* Emergent & Develop. Literacy	3	
	for the K-6 Classroom					
ENGL 2003	Advanced Comp	3	CIED 3053 (f)	Emerging Adolescent	3	
CIED 3103*	Children and Adolescent Literature	3	ENSC 1003 /	1001L Environmental Science	3- <mark>4</mark>	
	*added Reading Comp class			* <mark>added Lab</mark>		
CIED 3262	Language Development for the	2	ECON 3053 o	r ECON Economics for Elem. Teachers OR	3	
ELECTIVE	Educator	<mark>3</mark>	2143	Basic Economics: Theory and Practice		
	*elective (STEM and EASL only)					
ELECTIVE	ELECTIVE	3	ELECTIVE	MATH ELECTIVE	3	
CIED 3123 (f)	Math Methods in the K-6 Classroom	2			+	
CIED 3123 (1)	Math Methods in the K-6 Classroom	3				

FALL SEMESTER 7

SPRING SEMESTER 8

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
Concentration Courses	EASL, GATE, READ, or STEM	3	Concentration Courses	EASL, GATE, READ, or STEM	3	
CIED 4113 (f)*	Integrated Communication Skills for the K-6 Classroom * added Writing Instruction course	3	CIED 4363 (f)*	Disciplinary Literacy in the K-6 Classroom *added Developmental Literacy course	3	
STEM 4033	Introduction to STEM Education (non-STEM concentrations)	3	CIED 3143 (f)	Teaching Science in the Elementary Grades	3	
CIED 3133 (f)	Integrated Social Studies for the K-6 Classroom	3	CIED 3023 (f)	Survey of Exceptionalities	3	
CIED 4423	Teaching a 2 nd Language (non-EASL concentrations)	3	CIED 4153 (f)	Classroom Management in the Elementary Grades	3	

SUMMER Fall MAT Spring MAT

COURSE #	HRS	COURSE #	TITLE	HRS	COURSE #	TITLE	HRS
CIED 5173 – Literacy Assessment (*added 'or READ concentration course')	3	5162 CIED	Applied Practicum		CIED 5032	Curriculum Design Concepts for Teachers	2
CIED 5013 – Measurement, Research, and Stats in the Schools	3	CIED 5053	Multicultural Issues in ELED	3	CIED 5073	Action Research in Elementary Education (*added for READ concentration – was always present in other 3)	3
		CIED 5022	Classroom Management Concepts	2	CIED 5003	Elementary Education Seminar	3
		+CIED 508V	Elementary Education Cohort Teaching Internship	3	+CIED 508V	Elementary Education Cohort Teaching Internship (*added for READ concentration – was always present in other 3)	3
		Concentration Courses	EASL, GATE, READ, or STEM	3	Concentration Courses	EASL, GATE, READ, or STEM	3

^{+ &}quot;B" or better required for graduation

Total Hours for MAT Degree Completion 33

Appendix B

4ai. REVISED Five-year degree plans CHEDBS and ELEDMA Separate plans for each concentration (EASL, GATE, READ, STEM)
*Revisions notated as blue highlights

Degree Plan for CHEDBS leading to ELEDMA with EASL concentration

FALL SEMESTER 1	SPRING SEMESTER 2

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
ENGL 1013	Composition 1	3	ENGL 1023	Composition 2	3	
MATH 1203	College Algebra (or higher)	3	HIST 2003	US History to 1877	3	
BIOL 1543	Principles of Biology	3	HIST 1113 OR 1123	World Civilizations 1 or 2	3	
BIOL 1541L	Principles of Biology Lab	1	GEOL 1113	Geology	3	
CIED 1013	Introduction to Education	3	GEOL 1111	Geology Lab	1	
Humanities Core (COMM 1233, WLIT 1113, PHIL 2003, PHIL	Media, Comm., & Citizen; World Lit 1; Intro to Phil.; Intro to Ethics; Logic; OR	3	MATH 2213	Math Structures 1	3	
2103, PHIL 2203, OR PHIL 3103)	Ethics and Professions					
Total Hours		16	Total Hours		16	

FALL SEMESTER 3 SPRING SEMESTER 4

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
Fine Arts Core (ARHS 1003 OR	Art Lecture OR Music Lecture	3	HIST 3383	Arkansas & the Southwest OR any 3 hour Arkansas	3	
MLIT 1003)				History		
MATH 2223	Math Structures 2	3	ENSC 1003/1001L	Environmental Science and Lab	4	
HIST 2013	US History 1877 to Present	3	PLSC 2003	American National Government	3	
GEOS 1123 OR ANTH 1023	Human Geography OR Cultural	3	CIED 2943	Foundations of Language and Literacy	3	
	Anthropology					
COMM 1313	Public Speaking	3	STAT 2303	Principles of Statistics (or any 3 hour statistics course)	3	
Total Hours		15	Total Hours		16	

FALL SEMESTER 5 (1ST SEMESTER AS CHEDBS CANDIDATE) SPRING SEMESTER 6

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
CIED 3013	Development and Learning Theories for	3	CIED 3453	Developmental Literacy	3	
	the K-6 Classroom					
ENGL 2003	Advanced Comp	3	CIED 3053	Emerging Adolescent	3	
ELECTIVE	Elective (Linguistics or Phonology focus	3	CIED 3023	Survey of Exceptionalities	3	
	recommended)					
CIED 3113	Emergent Literacy	3	ELECTIVE	MATH ELECTIVE	3	
Physical Science (PHYS 1034,	Physics for Elem. Teachers, Astronomy,	4	ECON 3053 or ECON	Economics for Elem. Teachers OR Basic Economics:	3	
ASTR 2003/2001, OR STEM	OR Astronomy for Educators		2143	Theory and Practice		
4104)						
Total Hours		16	Total Hours		15	

FALL SEMESTER 7 SPRING SEMESTER 8

FALL SEWESTER /				SI KING SEMESTER 8		
COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
CIED 3123	Math Methods in the K-6 Classroom	3	CIED 4153	Classroom Management in the Elementary Grades	3	
CIED 4183	Instruction and Assessment in Writing	3	CIED 4533	Reading Comprehension through Children and Adolescent Literature	3	
STEM 4033	Introduction to STEM Education	3	CIED 3143 (f)	Teaching Science in the Elementary Grades	3	
CIED 3133	Integrated Social Studies for the K-6 Classroom	3	CIED 4413	Acquiring a Second Language	3	
CIED 4403	Understanding Cultures in the Classroom	3	ELECTIVE	Elective	3	
Total Hours		15	Total Hours		15	
			Total Hours for CHE	DBS Degree Completion	124	

Degree Plan for ELEDMA with EASL concentration

SUMMER ELEDMA

Fall ELEDMA

Spring ELEDMA

COURSE #	HRS	COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
CIED 5173 -	3	CIED 5162	Applied Practicum	2	CIED 5032	Curriculum Design Concepts for	2	
Literacy						Teachers		
Assessment								
CIED 5013 -	3	CIED 5053	Multicultural Issues in ELED	3	CIED 5073	Action Research in Elementary	3	
Measurement,						Education		
Research, and Stats								
in the Schools								
		CIED 5022	Classroom Management Concepts	2	CIED 5003	Elementary Education Seminar	3	
		+CIED 508V	Elementary Education Cohort Teaching	3	+CIED 508V	Elementary Education Cohort	3	
			Internship			Teaching Internship		
		CIED 5933	Second Language Methodologies	3	CIED 5953	Second Language Assessment	3	
TOTAL Hours	6	Total Hours		13	Total Hours		14	
+"B" or better require	d for gradu	ation			Total Hours for I	Degree Completion	33	

Degree Plan for CHEDBS leading to ELEDMA with GATE concentration

	FALL SEMESTER 1			SPRING SEMESTER 2			
COURSE #	TITLE	HRS	COURSE #	TITLE	H	IRS	
ENGL 1013	Composition 1	3	ENGL 1023	Composition 2	3		
MATH 1203	College Algebra (or higher)	3	HIST 2003	US History to 1877	3		
DIOL 1542	Dain ain 1 C Di - 1	2	THET 1112 OF 1122	W14 Ciili4i 1 2	1		

Total Hours		16	Total Hours		16	
3103)						
2103, PHIL 2203, OR PHIL	Ethics and Professions					
WLIT 1113, PHIL 2003, PHIL	Intro to Phil.; Intro to Ethics; Logic; OR					
Humanities Core (COMM 1233,	Media, Comm., & Citizen; World Lit 1;	3	MATH 2213	Math Structures 1	3	
CIED 1013	Introduction to Education	3	GEOL 1111	Geology Lab	1	
BIOL 1541L	Principles of Biology Lab	1	GEOL 1113	Geology	3	
BIOL 1543	Principles of Biology	3	HIST 1113 OR 1123	World Civilizations 1 or 2	3	
MATH 1203	College Algebra (or higher)	3	HIST 2003	US History to 1877	3	
ENGL 1013	Composition I	3	ENGL 1023	Composition 2	3	

FALL SEMESTER 3 SPRING SEMESTER 4

	FALL SEMESTERS			SI KING SEMESTER 4		
COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
Fine Arts Core (ARHS 1003 OR	Art Lecture OR Music Lecture	3	HIST 3383	Arkansas & the Southwest OR any 3 hour Arkansas	3	
MLIT 1003)				History		
MATH 2223	Math Structures 2	3	ENSC 1003/1001L	Environmental Science and Lab	4	
HIST 2013	US History 1877 to Present	3	PLSC 2003	American National Government	3	
GEOS 1123 OR ANTH 1023	Human Geography OR Cultural	3	CIED 2943	Foundations of Language and Literacy	3	
	Anthropology					
COMM 1313	Public Speaking	3	STAT 2303	Principles of Statistics (or any 3 hour statistics course)	3	
Total Hours		15	Total Hours	-	16	

FALL SEMESTER 5 (1ST SEMESTER AS CHEDBS CANDIDATE) SPRING SEMESTER 6

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
CIED 3013	Development and Learning Theories for the	3	CIED 3453	Developmental Literacy	3	
	K-6 Classroom					
ENGL 2003	Advanced Comp	3	CIED 3053	Emerging Adolescent	3	
ELECTIVE	Elective (Linguistics or Phonology focus	3	CIED 3023	Survey of Exceptionalities	3	
	recommended)					
CIED 3113	Emergent Literacy	3	ELECTIVE	MATH ELECTIVE	3	
Physical Science (PHYS 1034,	Physics for Elem. Teachers, Astronomy, OR	4	ECON 3053 or ECON	Economics for Elem. Teachers OR	3	
ASTR 2003/2001, OR STEM	Astronomy for Educators		2143	Basic Economics: Theory and Practice		
4104)						
Total Hours		16	Total Hours		15	

FALL SEMESTER 7 SPRING SEMESTER 8

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
CIED 3123	Math Methods in the K-6 Classroom	3	CIED 4153	Classroom Management in the Elementary Grades	3	
CIED 4183	Instruction and Assessment in Writing	3	CIED 4533	Reading Comprehension through Children and	3	
				Adolescent Literature		
STEM 4033	Introduction to STEM Education	3	CIED 3143 (f)	Teaching Science in the Elementary Grades	3	
CIED 3133	Integrated Social Studies for the K-6 Classroom	3	CIED 4423	Teaching a 2 nd Language	3	
GT Rotation	Approved GT course	3	GT Rotation	Approved GT course	3	
Total Hours		15	Total Hours		15	
			Total Hours for I	Degree Completion	124	

Degree Plan for ELEDMA with GATE concentration

SUMMER ELEDMA

Fall ELEDMA

Spring ELEDMA

COURSE #	HRS	COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
CIED 5173 -	3	CIED 5162	Applied Practicum	2	CIED 5032	Curriculum Design Concepts for	2	
Literacy						Teachers		
Assessment								
CIED 5013 -	3	CIED 5053	Multicultural Issues in ELED	3	CIED 5073	Action Research in Elementary	3	
Measurement,						Education		
Research, and Stats								
in the Schools								
Approved GT	3	CIED 5022	Classroom Management Concepts	2	CIED 5003	Elementary Education Seminar	3	
course								
		+CIED 508V	Elementary Education Cohort Teaching	3	+CIED 508V	Elementary Education Cohort	3	
			Internship			Teaching Internship		
					GT Rotation	Approved GT course	3	
TOTAL Hours	9	Total Hours		10	Total Hours		14	
+"B" or better require	- 0				Total Hours for	Degree Completion	33	
*An additional 6 hours	of graduat	e work in GT will be required to	finish the ALP in GT.			o 1		

FALL SEMESTER 1

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
ENGL 1013	Composition 1	3	ENGL 1023	Composition 2	3	
MATH 1203	College Algebra (or higher)	3	HIST 2003	US History to 1877	3	
BIOL 1543	Principles of Biology	3	HIST 1113 OR 1123	World Civilizations 1 or 2	3	
BIOL 1541L	Principles of Biology Lab	1	GEOL 1113	Geology	3	

SPRING SEMESTER 2

Total Hours		16	Total Hours		16	
3103)						
2103, PHIL 2203, OR PHIL	Ethics and Professions					
WLIT 1113, PHIL 2003, PHIL	Intro to Phil.; Intro to Ethics; Logic; OR					
Humanities Core (COMM 1233,	Media, Comm., & Citizen; World Lit 1;	3	MATH 2213	Math Structures 1	3	
CIED 1013	Introduction to Education	3	GEOL 1111	Geology Lab	1	
BIOL 1541L	Principles of Biology Lab	1	GEOL 1113	Geology	3	
	1	-			-	

FALL SEMESTER 3 SPRING SEMESTER 4

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
Fine Arts Core (ARHS 1003 OR	Art Lecture OR Music Lecture	3	HIST 3383	Arkansas & the Southwest OR any 3 hour Arkansas	3	
MLIT 1003)				History		
MATH 2223	Math Structures 2	3	ENSC 1003/1001L	Environmental Science and Lab	4	
HIST 2013	US History 1877 to Present	3	PLSC 2003	American National Government	3	
GEOS 1123 OR ANTH 1023	Human Geography OR Cultural	3	CIED 2943	Foundations of Language and Literacy	3	
	Anthropology					
COMM 1313	Public Speaking	3	STAT 2303	Principles of Statistics (or any 3 hour statistics course)	3	
Total Hours		15	Total Hours		16	

FALL SEMESTER 5 (1ST SEMESTER AS CHEDBS CANDIDATE) SPRING SEMESTER 6

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
CIED 3013	Development and Learning Theories for	3	CIED 3453	Developmental Literacy	3	
	the K-6 Classroom					
ENGL 2003	Advanced Comp	3	CIED 3053	Emerging Adolescent	3	
ELECTIVE	Elective (Linguistics or Phonology focus	3	CIED 3023	Survey of Exceptionalities	3	
	recommended)					
CIED 3113	Emergent Literacy	3	ELECTIVE	MATH ELECTIVE	3	
Physical Science (PHYS 1034,	Physics for Elem. Teachers, Astronomy,	4	ECON 3053 OR ECON	Economics for Elem. Teachers OR	3	
ASTR 2003/2001, OR STEM	OR Astronomy for Educators		2143	Basic Economics: Theory and Practice		
4104)						
Total Hours	·	16	Total Hours		15	

FALL SEMESTER 7 SPRING SEMESTER 8

COURSE #	TITLE	HRS	COU	JRSE #	TITLE	HRS	
CIED 3123	Math Methods in the K-6 Classroom	3	CIEI	D 4153	Classroom Management in the Elementary Grades	3	
CIED 4183	Instruction and Assessment in Writing	3	CIEI	O 4533	Reading Comprehension through Children and Adolescent Literature	3	
STEM 4033	Introduction to STEM Education	3	CIEI	O 3143 (f)	Teaching Science in the Elementary Grades	3	
CIED 3133	Integrated Social Studies for the K-6 Classroom	3	CIEI	O 4423	Teaching a 2 nd Language	3	
SPED 4173	Introduction to Dyslexia	3	SPEI	D 4483	Teaching Literacy Skills for Students with Disabilities (K-12)	3	
Total Hours	·	15	Tota	l Hours		15	
			Tota	al Hours for De	gree Completion	124	

Degree Plan for ELEDMA with READ concentration

Summer ELEDMA Fall ELEDMA

COURSE #	HRS	COURSE #	TITLE	HRS	COURSE #	TITLE	HRS
CIED 5013 – Measurement,	3	CIED 5162	Applied Practicum	2	CIED 5032	Curriculum Design Concepts for Teachers	2
Research, and Stats in the Schools		CIED 5053	Multicultural Issues in ELED	3	CIED 5073	Action Research in Elementary Education	3
		CIED 5022	Classroom Management Concepts	2	CIED 5003	Elementary Education Seminar	3
		+CIED 508V	Elementary Education Cohort Teaching Internship	3	+CIED 508V	Elementary Education Cohort Teaching Internship	3
		SPED 5873	Assessment of Exceptional Students	3	SPED 5543	Dyslexia Practicum and Case Study	3
					SPED 5633	Curriculum Development and Instructional Planning	3
TOTAL Hours	TOTAL Hours 3 Total Hours				Total Hours		17
+"B" or better required	for graduati	on			Total Hours for	Degree Completion	33

Spring ELEDMA

Degree Plan for CHEDBS leading to ELEDMA with STEM concentration

FALL SEMESTER 1	SPRING SEMESTER 2
TALL SEMESTER I	

	TILE SENIES I EIL I			STILL O SENIESTER 2		
COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
ENGL 1013	Composition 1	3	ENGL 1023	Composition 2	3	
MATH 1203	College Algebra (or higher)	3	HIST 2003	US History to 1877	3	
BIOL 1543	Principles of Biology	3	HIST 1113 OR 1123	World Civilizations 1 or 2	3	
BIOL 1541L	Principles of Biology Lab	1	GEOL 1113	Geology	3	
CIED 1013	Introduction to Education	3	GEOL 1111	Geology Lab	1	
Humanities Core (COMM 1233,	Media, Comm., & Citizen; World Lit 1;	3	MATH 2213	Math Structures 1	3	
WLIT 1113, PHIL 2003, PHIL	Intro to Phil.; Intro to Ethics; Logic; OR					
2103, PHIL 2203, OR PHIL 3103)	Ethics and Professions					
Total Hours		16	Total Hours		16	

FALL SEMESTER 3 SPRING SEMESTER 4

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
Fine Arts Core (ARHS 1003 OR	Art Lecture OR Music Lecture	3	HIST 3383	Arkansas & the Southwest OR any 3 hour Arkansas	3	
MLIT 1003)				History		
MATH 2223	Math Structures 2	3	ENSC 1003/1001L	Environmental Science and Lab	4	
HIST 2013	US History 1877 to Present	3	PLSC 2003	American National Government	3	
GEOS 1123 OR ANTH 1023	Human Geography OR Cultural	3	CIED 2943	Foundations of Language and Literacy	3	
	Anthropology					
COMM 1313	Public Speaking	3	STAT 2303	Principles of Statistics (or any 3 hour statistics course)	3	
Total Hours		15	Total Hours		16	

FALL SEMESTER 5 (1ST SEMESTER AS CHEDBS CANDIDATE)

SPRING SEMESTER 6

COMPCE #	CENTENT TO	TTDC	COMPCE #	TOTAL D	TTDC	
COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
CIED 3013	Development and Learning Theories for	3	CIED 3453	Developmental Literacy	3	
	the K-6 Classroom					
ENGL 2003	Advanced Comp	3	CIED 3053	Emerging Adolescent	3	
ELECTIVE	Elective (Linguistics or Phonology focus	3	CIED 3023	Survey of Exceptionalities	3	
	recommended)					
CIED 3113	Emergent Literacy	3	ELECTIVE	MATH ELECTIVE	3	
Physical Science (PHYS 1034,	Physics for Elem. Teachers, Astronomy,	4	ECON 3053 OR ECON	Economics for Elem. Teachers OR	3	
ASTR 2003/2001, OR STEM	OR Astronomy for Educators		2143	Basic Economics: Theory and Practice		
4104)						
Total Hours		16	Total Hours		15	

FALL SEMESTER 7 SPRING SEMESTER 8

COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
CIED 3123	Math Methods in the K-6 Classroom	3	CIED 4153	Classroom Management in the Elementary Grades	3	
CIED 4183	Instruction and Assessment of Writing	3	CIED 4533	Reading Comprehension through Children and	3	
				Adolescent Literature		
STEM 4033	Introduction to STEM Education	3	CIED 3143 (f)	Teaching Science in the Elementary Grades	3	
CIED 3133	Integrated Social Studies for the K-6 Classroom	3	STEM 4043	Creativity and Innovation in STEM Education	3	
ELECTIVE	Elective	3	CIED 4423	Teaching a 2 nd Language	3	
Total Hours		15	Total Hours		15	
			Total Hours for Degree Completion		124	

Degree Plan for ELEDMA with STEM concentration

Summer ELEDMA Fall ELEDMA Spring ELEDMA

COURSE #	HRS	COURSE #	TITLE	HRS	COURSE #	TITLE	HRS	
CIED 5173 -	3	CIED 5162	Applied Practicum	2	CIED 5032	Curriculum Design	2	
Literacy								
Assessment								
CIED 5013 -	3	CIED 5053	Multicultural Issues in ELED	3	CIED 5073	Action Research in Elementary	3	
Measurement,						Education		
Research, and Stats								
in the Schools								
		CIED 5022	Classroom Management Concepts	2	CIED 5003	Elementary Education Seminar	3	
		+CIED 508V	Elementary Education Cohort Teaching	3	+CIED 508V	Elementary Education Cohort	3	
			Internship			Teaching Internship		
		STEM 5203	Problem Based Mathematics in STEM	3	STEM 5213	Problem Based Science in STEM	3	
TOTAL Hours	6	Total Hours	l	13	Total Hours		14	
+"B" or better require	d for gradu	ation			Total Hours for	Degree Completion	33	

Appendix C

4a-iv. and 4a-v. Course descriptions and syllabi

University of Arkansas CHEDBS and ELEDMA Course Descriptions and/or Course Syllabi

Content and/or Pre-Professional Courses in PELED program (taken prior to admission in CHEDBS program)

Course		Catalog Description		
BIOL 1543: Principles of Biology		Principles that unify biology with emphasis on scientific study that demonstrates how all organisms are the product of evolution and are parts of interacting systems from the molecular to the ecosystem level.		
BIOL 1541L: F Lab	Principles of Biology	Experimental and observational techniques used in biology with emphasis on the acquisition and interpretation of results that illustrate major biological		
		principles.		
CIED 1013: Introduction to Education		Integrates psychological, sociological, and philosophical foundations of education with concurrent involvement in field experiences. Encourages prospective teachers to become reflective practitioners by emphasizing organization of school systems, planning and implementation of effective classroom environments, development of teaching styles, and new directions in education. An 18-hour early field experience designed to give prospective teachers opportunities to observe and participate in a variety of school settings is incorporated in this introductory course to education.		
*CIED 2943: F	oundations of	A foundational study of language and literacy with an		
	Literacy (new course; ed following table)	emphasis on content knowledge for teachers that is essential to the components and principles of science-based literacy		
COMM (choose one)	COMM 1313: Public Speaking	Application of the communication techniques needed to organize and deliver oral messages in a public setting. Emphasis given to theory and practice of message strategies and preparation, audience analysis, presentational skills including multimedia support, speech criticism, and the listening process.		
	COMM 2323: Interpersonal Communication	Personal and interpersonal factors affecting communication in everyday life. Emphasis upon ways in which interpersonal perception, physical environment, semantic choices, and nonverbal cues affect communication primarily in the context of work, family, and other personal experiences.		
ENGL 1013: C	omposition I	Required of all freshmen unless exempted by the Department of English.		

ENGL 1023: C	Composition II	Continuation of ENGL 1013.
ENSC 1003: E	nvironmental Science	Series of lectures and discussions introducing the topic of environmental science including factors related to water, soil, and air quality.
ENSC 1001L: Environmental Science Lab		Laboratory, field trip, and discussion sessions covering the concepts and information allowing students to critically evaluate environmental issues. Topics will include: laboratory safety, recycling, composting, geographic information systems, soil testing, water quality, hazardous wastes, waste disposal, wetlands, wastewater treatment, and sustainable food systems.
Fine Arts (choose one) ARHS 1003: Art History		A general introduction to the visual arts. Lectures on theory and criticism, demonstrations, films, and slides. Three hours a week plus attendance at specified programs and exhibits.
	MLIT 1003: Music Lecture	Introduction to music. Lecture 3 hours per week providing experience in guided listening. Acquisition of vocabulary and certain fundamentals of music.
GEOG (choose one)	GEOS 1123: Human Geography	Basic course in human geography stressing the interrelationships between the natural factors of the environment and man's activities, especially the role of geography in the understanding of social problems and economic and political activities.
	ANTH 1023: Cultural Anthropology	Introduction to the nature of culture and its influence on human behavior and personality: comparative study of custom, social organization, and processes of change and integration of culture.
GEOL 1113: G	eology	Survey of geological processes and products, and their relationships to landforms, natural resources, living environments and human beings.
GEOL 1111L:	Geology Lab	Laboratory exercises concerning the identification of rocks and minerals, use of aerial photographs and topographic maps, and several field trips.
HIST 2003: U.	S. History to 1877	A history of American life encompassing constitutional, political, social, intellectual and economic development from prior to European colonization to 1877.
HIST 2013: U.S. History, 1877 to present		A history of American life encompassing constitutional, political, social, intellectual and economic development from Reconstruction to the present.
HIST 3383: Arkansas and the Southwest		Political, economic, social, and cultural development of Arkansas from the coming of the Indian to the 20th century, with special emphasis on Arkansas as a national and regional component.
History of the World (choose one) HIST 1113: Institutions and Ideas of World		Introduces the major civilizations of the world in their historical context to 1500.

	Civilizations I	
	HIST 1123: Institutions and Ideas of World Civilizations II	Introduces the major civilizations of the world in their historical context, since 1500.
Humanities (choose one)	COMM 1233: Media, Community, and Citizenship	Examines theory and research on how messages are processed, meanings constructed, communities formed and maintained through interaction with the media. Focus is on critical citizenship and media literacy in the context of the cognitive, social, cultural, political, and economic consequences of increasingly networked media systems.
	PHIL 2003: Intro to Philosophy	An examination of such basic philosophical topics as the existence of God, the nature of the human mind, the relationship between appearance and reality, the forms and limits of human knowledge, freedom of the will, and standards of right and wrong. Includes both historical and contemporary readings.
	PHIL 2103: Intro to Ethics	Basic concepts of moral philosophy, including historical and contemporary literature concerned with such issues as ethical relativism vs. objectivism, duty, happiness, freedom of the will and responsibility, facts and values, individual liberty and society. Application of theories to substantive questions.
	PHIL 2203: Logic	Traditional and modern methods of deductive and inductive inference.
	PHIL 3103: Ethics and the Professions	After a survey of the standard theories of moral obligation, justice, and rights, the course focuses on specific moral problems that arise within engineering, business, and the professions.
	WLIT 1113: World Literature I	An introduction to literature from the beginning of civilization to about 1650.
MATH 1203: C higher)	College Algebra (or	Topics include the solution and application of linear and quadratic equations and inequalities; functions, graphs, and theory of equations; matrix solutions of systems of equations and basic properties of matrices.
MATH 2213: Math Structures I		Sets and logic, systems of numerations, number systems and operations, and elementary number theory.
MATH 2223: Math Structures II		Geometry and measurement, and statistics and probability.
PLSC 2003: Ar Government	nerican National	Survey of the history, basic ideas, structure, and political processes of the national government of the United States, including the fundamental relationships of the federal system.
STAT 2303: Pr	inciples of Statistics	A problem-oriented course with applications from many fields. Emphasis on understanding the nature of

statistical orderliness implied by probability laws.
Statistical analysis is treated as a means of decision
making in the face of uncertainty.

CIED 2943 Foundations of Language and Literacy (NEW COURSE)

University of Arkansas College of Education and Health Professions Department of Curriculum and Instruction

Program Affiliation: Elementary/Childhood Education

Course description:

A foundational study of language and literacy with an emphasis on content knowledge for teachers that is essential to the components and principles of science-based literacy

Course objectives:

- 1. Know the origins of oral and written language. CC ELA 1.1; InTASC 1, 2, 4, 5; TESS 1a,
- 2. Learn the components and principles of science-based literacy. CC ELA 1.1, 1.2; InTASC 4, 5; TESS 1a
- 3. Understand that language shapes how we think. CC ELA 1.1; InTASC 4, 5; TESS 1a
- 4. Describe variation in language across cultures and individuals. InTASC 2, 4; TESS 1a
- 5. Identify elements of engaging communication such as volume, articulation, and awareness of audience. CC ELA 8.3; InTASC 4; TESS 1a
- 6. Understand the ways speech is adapted in various contexts and for different tasks. CC ELA 8.6; InTASC 4; TESS 1a
- 7. Distinguish between phonological awareness and phonemic awareness. *CC ELA 3.3; InTASC 4; TESS 1a*
- 8. Know concepts of print and the alphabetic principle. CC ELA 2.1; InTASC 4; TESS 1a
- 9. Understand the role of phonics in reading development. CC ELA 4.1; InTASC 4; TESS 1a
- 10. Demonstrate knowledge of word analysis skills and strategies. *CC ELA 4.3; InTASC 4; TESS 1a*

Course content:

- I. Origins of oral language (1.1)
 - Structure
 - Language acquisition
 - Speech variety across cultures, contexts, and tasks (8.3 and 8.6)
- II. Origins of written language (1.1, 1.2, 2.1)
 - Relationship between spoken and written language
 - Alphabetic principle
 - Print carries meaning across language systems
 - Environmental print
- III. Five Aspects of Language
 - Phonological Knowledge

- Syntactic Knowledge
- Morphemic Knowledge
- Semantic Knowledge
- Pragmatic Knowledge

IV. Research connections (1.1)

- Neuroscience, linguistics, and education
- Evidence-based practices vs. research-based practice
- How the brain learns to read

V. Reading is not natural; explicit instruction in reading is required (1.1)

VI. Theoretical models of reading (1.1)

- The Simple View of Reading
- Scarborough's Reading Rope
- The Four Part Mental Processor
- Ehri's Phases of Word Level Reading

VII. Differences in reading development of individual students (1.1)

- Underlying causes of reading difficulty
 - o Extrinsic
 - o Intrinsic
- English Language Learners
- Struggling readers
- Highly proficient readers

VIII. Phonological system (3.1, 3.2, 3,3, 3.4)

- Difference between phonemic awareness and phonics skills
- Levels of phonological skills
 - Word awareness
 - Responsiveness to rhyme and alliteration
 - Syllable awareness
 - Onset and rime manipulation
 - Phoneme awareness (segmenting, blending, deleting, substituting)

IX. Phonics (4.1, 4.2)

- Systematic, sequential phonics skills
- The role of phonics in developing rapid, automatic word recognition
- The relationship between decoding and encoding
- The relationship between oral vocabulary and the process of decoding written words
- Specific terminology associated with phonics
 - Consonant sounds (C rule, G rule, consonant blends, consonant clusters, consonant digraphs)
 - Vowel sounds (vowel digraphs, diphthongs, schwa, r-controlled vowels)
 - Word patterns (CVC pattern, CV pattern, VCe pattern, CVVC vowel digraphs)

X. Word analysis skills and strategies (4.3)

- Structural analysis
- Stages of language acquisition (e.g. WIDA taxonomy)
- Interrelationships between word analysis skills, fluency, and reading comprehension
- Common morphemes
- High-frequency sight words
- Decodable words appropriate for particular grades
- Common prefixes and suffixes and their meanings
- Latin and Greek roots that form English words
- Syllabication as a word identification strategy (e.g. open, closed, CVe)
- Analysis of syllables and morphemes in relation to spelling patterns
- Techniques for identifying compound words
- Identification of homographs
- Use of context clues (semantic, syntactic) to help identify words and to verify the pronunciation and meaning of words

Summative Course Assessment:

Comprehensive Final Exam

Suggested Texts:

- Leu, D. J., & Kinzer, C. K. (2017). *Phonics, phonemic awareness, and word analysis for teachers: An interactive tutorial* (10th ed). Boston, MA: Pearson.
- Moats, L. C. (2010). *Speech to print: Language essentials for teachers* (2nd ed). Baltimore, MD: Brookes Publishing.
- Moats, L. C., & Rosow, B. (2011). *Speech to print workbook: Language exercises for teachers* (2nd ed). Baltimore, MD: Brookes Publishing.

Clinical Field Experience: N/A

Content and Professional Courses in the CHEDBS program

*did not require syllabi revisions in competencies since previous program approval

Course		Catalog Description
CIED 3013: Development and Learning Theories in the K-6 Classroom		This course allows students to cultivate an understanding of how elementary students develop, process information, and learn; studies educational applications pertaining to theories of development, intelligence, and thinking dispositions. Students study various learning theories, their implications for instruction, and their role in the K-6 classroom. Field
GYED ANDA		experience required.
CIED 3023 Exceptional	•	A survey of the characteristics of students with exceptional needs. Reviews the definitions of exceptionalities, learning and behavior characteristics of individuals with exceptionalities and the legal basis for the education of persons with exceptionalities in both elementary and secondary schools.
CIED 3053: Emerging Adolescent		This course is a study of the developmental characteristics (social, emotional, physical, moral, and intellectual) of early adolescents (ages 10-15 years). The implications of these changes for motivation, instruction, learning, and classroom management in the classroom are emphasized. Course has field component.
CIED 4153	: Classroom	This course focuses on a number of different management
Managemen	nt in the Elementary	techniques for elementary classrooms that can be used in
Grades		general education settings.
CIED 4423 Language	: Teaching a 2 nd	This course gives an introduction to different methods used to teach individuals a second language, with an emphasis on teaching English as a second language.
ECON	ECON 3053:	For students who plan to become teachers in elementary
(choose	Econ for Elem.	schools. Acquaints students with basic concepts and
one)	Teachers	functioning of the American economic system.
	ECON 2143:	Surveys basic micro, macro principles and analytical tools
	Basic	needed to study contemporary economic problems such as
	Economics:	inflation, unemployment, poverty, and pollution.
	Theory and	
	Practice	
	3: Advanced	Review course in English composition.
Compositio		
Physical	PHYS 1034:	For elementary education majors. Physical science concepts
Science	Physics for Elem	based on state frameworks are explored in a mixed lecture/lab
(choose	Teachers	environment. The inquiry-based lab activities can be
one)		transferable for school classroom use. Topics covered include: scientific inquiry, motion and forces, conservation of energy, heat, light, electricity and simple circuits, and magnetism.
	ASTR	An introduction to the content and fundamental properties of
	2003/2001:	the cosmos. Topics include planets and other objects of the
	Survey of the Universe and Lab	solar system, the Sun, normal stars and interstellar medium, birth and death of stars, neutron stars, pulsars, black holes, the Galaxy clusters of galaxies, and cosmology
		Galaxy, clusters of galaxies, and cosmology.

		(Lab) Daytime and nighttime observing with telescopes and
		indoor exercises on selected topics.
	STEM 4104:	Astronomy for Educators splits evenly between the basics of
	Astronomy for	astronomy and practical methods for teaching astronomy
	Educators	effectively to all grade levels. The class is appropriate and
		effective for elementary, middle school, and secondary
		educators. Pedagogy focuses on the use of low-cost models
		that help all students grasp astronomy fundamentals such as
		phases of the Moon and how our solar system works. Lab
		activities include building and working with scientific models,
		evening lab activities give students the opportunity to use
		telescopes and binoculars to observe the Moon, planets,
		constellations and more. No prior experience or astronomy
		knowledge is assumed for this course.
STEM 4033: Introduction to		This course provides an introduction to the foundations of
STEM Education		STEM education disciplines and the strategies used to deliver
		integrated STEM education in the elementary and secondary
		school setting. The nature of STEM education disciplines,
		STEM pedagogy, teaching strategies, integrated STEM
		learning, STEM careers, and problem-centered instruction are
		addressed. STEM 4033 may be taken for undergraduate or
		graduate credit.

Professional and Methodology Courses in CHED program New and Revised Course Syllabi

CIED 3113 Emergent Literacy (REVISED COURSE)

University of Arkansas College of Education and Health Professions Department of Curriculum and Instruction

Program Affiliation: Elementary/Childhood Education

Prerequisites: CIED 2943 Foundations of Language and Literacy

Course Description: An understanding of emergent literacy development through a study of science-based literacy pedagogy and practical field experiences

Course Objectives:

- 1. Demonstrate understanding of the development of phonological and phonemic awareness *CC ELA 3.2, 3.3; InTASC 1,4,7; TESS 1a*
- 2. Illustrate knowledge of the use of explicit and implicit strategies to promote phonological and phonemic awareness *CC ELA 3.2, 3.3; InTASC 1, 4,8; TESS 1a*
- 3. Understand the development of concepts of print and the alphabetic principle CC ELA 2.1; InTASC 1, 4; TESS 1a
- 4. Demonstrate understanding of strategies to teach concepts of print and the alphabetic principle CC ELA 2.1; InTASC 2, 4,8; TESS 1a
- 5. Exhibit knowledge of phonics in promoting reading development and fluency *CC ELA* 4.1, 4.2; *InTASC* 4,7; *TESS 1a*
- 6. Describe word analysis skills and strategies CC ELA 4.3; InTASC 4,8; TESS 1a
- 7. Distinguish between the developmental stages of writing (e.g., picture, scribble) by identifying the grade-appropriate continuum of student writing *CC ELA 7.3; InTASC 1, 4; TESS 1a*
- 8. Recognize research-based principles for teaching letter naming and letter formation, both manuscript and cursive *CC ELA 7.7; InTASC 4; TESS 1a*
- 9. Identify appropriate assessment measures for foundational literacy skills *CC ELA 6.1; InTASC 4, 6; TESS 1a*
- 10. Show understanding of the characteristics of effective collaboration to promote comprehension by active listening. CC ELA 8.1, 8.3; InTASC 4,7; TESS 1a

Course Content:

- I. Reading and writing processes
 - Brain-based research (1.1)
 - Neuroscience, linguistics, and education
 - o Evidence-based practices vs. research-based practice
 - o How the brain learns to read
- II. Phonological and phonemic awareness with elementary-aged students (3.1, 3.2, 3.3)

- Distinction between phonological awareness and phonemic awareness
- Role of phonological awareness and phonemic awareness in reading development
- Difference between phonemic awareness and phonics skills
- Levels of phonological and phonemic awareness skills
 - o Rhyming, segmenting, blending, deleting, substituting
- Explicit and implicit strategies to promote phonological and phonemic awareness
- Distinguishing spoken words, syllables, onsets/rimes, and phonemes
- Role of phonological processing in the reading development of individual students
 - o English Language Learners
 - Struggling reader
 - o Highly proficient readers
- Appropriate assessment measures for phonological and phonemic awareness (6.1)

III. Concepts of print and the alphabetic principle (1.2, 2.1)

- Print carries meaning
- Strategies for promoting awareness of the relationship between spoken and written language
- Role of environmental print in developing print awareness
- Development of book handling skills
- Strategies for promoting and understanding of the directionality of print
- Techniques for promoting the ability to track print in connected text
- Strategies for promoting letter knowledge and letter formation
- Strategies for promoting understanding of the alphabetic principle
- Use of reading and writing strategies for teaching letter-sound correspondence
- Development of alphabetic knowledge in individual students
 - o English Language Learners
 - Struggling readers
 - Highly proficient readers
- Appropriate assessment measures for concepts of print and alphabetic principle (6.1)

IV. Phonics (3.4, 4.1, 4.2)

- Role of phonics in developing rapid, automatic word recognition
- Decoding and encoding
- Relationship between oral vocabulary and the process of decoding written words
- Specific terminology associated with phonics instruction
- Appropriate assessment measures for phonics (6.1)

V. Word analysis skills and strategies (4.3)

- Development of word analysis skills and strategies in addition to phonics, including structural analysis
- The various stages of language acquisition (e.g. WIDA taxonomy)
- Interrelationships between word analysis skills, fluency, and reading comprehension
- Identification of common morphemes

- High-frequency sight words and decodable words appropriate for particular grades
- Common prefixes and suffixes and their meanings
- Latin and Greek roots that form English words
- Use of syllabication as a word identification strategy (e.g. open, closed, CVe)
- Analysis of syllables and morphemes in relation to spelling patterns
- Techniques for identifying compound words
- Identification of homographs
- Use of context clues (semantic, syntactic) to help identify words and to verify the pronunciation and meaning of words
- Appropriate assessment measures for word analysis (6.1)

VI. Stages of writing (7.3)

- Purpose for writing
- Identification of the grade-appropriate continuum of student writing
- Strategies for emergent writing
- Appropriate assessment measures for emergent writing (6.1)

VII. Principles for teaching letter naming and letter formation (7.7)

- Manuscript
- Cursive

VIII. Speaking and Listening

- Identifying the characteristics of active listening (8.1)
- Identify elements of engaging oral presentations (e.g. volume, articulation, awareness of audience) (8.3)

Summative Course Assessment:

Administer and use emergent literacy assessments for planning instruction for an early literacy lesson. To be implemented in clinical field experience classroom.

Suggested Texts:

Elish-Piper, L., & L'Allier, S. K. (2012). *Literacy strategies for teacher candidates*. Boston, MA: Pearson.

Tompkins, G. E. (2018). *Literacy for the 21st century: A balanced approach* (7th ed). Boston, MA: Pearson.

Clinical Field Experience: Students will observe and participate in quality literacy instruction in a K/1 classroom in collaboration with faculty and mentor teachers.

CIED 3123 Mathematics Methods in the K-6 Classroom (REVISED COURSE)

University of Arkansas College of Education and Health Professions Department of Curriculum and Instruction

Program Affiliation: Elementary/Childhood Education

Course Description: An examination of the content of elementary mathematics courses. Special emphasis given to methods of teaching the content as well as enrichment materials.

Prerequisites: MATH 1203, MATH 2213, MATH 2223, and STAT 2303

Course Competencies:

Upon completion of this course, candidates will:

- 1. Understand pre-numeration concepts (e.g., informal counting, meaning of number, patterns) *CC MATH 1.1, 2.3; InTASC 4; TESS 1a*
- 2. Understand theoretical approaches to student learning and motivation *CC MATH 1.6, 4.2; InTASC 1, 2, 3, 5, 8; TESS 2b*
- 3. Demonstrate content knowledge and mathematics teaching methods for K-6 in relevant content areas *CC MATH 1.7; InTASC 1,4, 5, 7, 8; TESS 1a*
- 4. Understand Arkansas State Standards for Mathematics and Mathematical Practices for elementary mathematics education in designing appropriate learning experiences *CC MATH 2.3; InTASC 1, 3, 4, 5, 7, 8; TESS 1a*
- 5. Describe how elementary aged children construct and develop mathematical knowledge and competencies at different levels of complexity including number concepts, operations, place value, computation, fractions, measurement, geometry, algebraic reasoning, and other mathematical concepts as time permits *CC MATH 2.3, 3.1, 3.2, 3.3; InTASC 1, 2, 4, 5; TESS 1a, 1b*
- 6. Reflect upon your own readiness to teach elementary school mathematics and establish personal goals to further your professional preparation *CC MATH 1.6, 2.4; InTASC 1, 9, 10; TESS 4a*
- 7. Gain confidence in the ability to do mathematics with understanding *CC MATH 1.6; InTASC 1*, 6, 9
- 8. Be a persistent and successful mathematical problem solver *CC MATH 1.5; InTASC 1, 5, 9; TESS 3a*
- 9. Reason and justify mathematically CC MATH 1.5; InTASC 1, 5, 9; TESS 1a
- 10. Communicate mathematically; helping others understand why a claim is true and listening and appraising other students' explanations CC MATH 2.2; InTASC 1, 3, 4, 5, 6, 7, 8; TESS 3a, 3b
- 11. Read mathematics for understanding CC MATH 4.5; InTASC 1, 3, 4, 5, 6; TESS 1a
- 12. Understand the role of language and precision in mathematics; defining mathematical terms *CC MATH 4.3, 4.4; InTASC 1, 2, 3, 4, 5; TESS 1a*
- 13. Understand the importance of using manipulatives in mathematics teaching and gain skills in selecting and using appropriate manipulatives in mathematics teaching *CC MATH 1.9; InTASC 1, 2, 5, 6, 7, 8; TESS 1a*

- 14. Understand the components of problem-centered learning and develop a problem-centered mathematics lesson that meets the diverse needs of students *CC MATH 2.1; InTASC 1, 2, 7, 8; TESS 1a, 1b*
- 15. Understand and explore the social contexts of math in regard to the diverse students in grades K-6. CC MATH 4.1, 4.2, 4.3, 4.4, 4.5; InTASC 1, 2, 7, 9; TESS 1a, 1b

In lesson plans, candidates will be able to:

- 1. Identify technology applications to enhance teaching and learning *CC MATH 1.9, 2.1; InTASC 1, 2, 3, 7, 8; TESS 1a, 1b, 1d, 1e*
- 2. Address the needs of English Language Learners CC MATH 2.1; InTASC 1, 2, 3, 8; TESS 1b, 3c
- 3. Make accommodations for students with special needs CC MATH 2.1; InTASC 1, 2, 3, 8; TESS 1b, 3c
- 4. Extend instruction for students who have demonstrated proficiency in relevant standards *CC MATH 2.1; InTASC 1, 2, 3, 7, 8; TESS 1b, 3c*
- 5. Utilize research-based instructional practices and/or use recommended strategies from professional organizations (NCTM, IRA, NCTE, NSTA, NCSS, etc.) *CC MATH 1.8, 2.2; InTASC 1, 3, 5, 7, 8; TESS 1a, 4e*

Mathematics Pedagogical Topics:

- Foundations and Perspectives of Mathematics
- Early Number Concepts and Number Sense
- Developing Meaning for Operations
- Place-Value Concepts
- Algebraic Thinking
- Fraction, Decimals, and Percent Concepts and Computation
- Ratios, Proportions, and Proportional Reasoning
- Data Analysis Concepts
- Geometry and Measurement

Required Text:

Van de Walle, J. A., Karp, K. S., & Bay-Williams, J. M. (2013). *Elementary and middle school mathematics: Teaching developmentally, Ninth edition.* Upper Saddle River, NJ: Pearson Education, Inc. [e-text version is recommended]

Arkansas Committee of Educators. (2016). *Grades K-5 Arkansas mathematics standards*. Little Rock, AR: Arkansas Department of Education. http://www.arkansased.gov/divisions/learning-services/curriculum-and-instruction/curriculum-framework-documents/mathematics

National Governors Association Center for Best Practices, Council of Chief State School Officers (NGA/CCSSO). (2010). *Common core state standards for mathematics (CCSS-M)*. Washington, D. C.: National Governors Association Center for Best Practices, Council of Chief State School Officers. http://www.corestandards.org/Math/

Course Resources:

The following reference materials will also be used:

National Council of Teachers of Mathematics Publications including:

- Teaching Children Mathematics
- Mathematics Teaching Mathematics in the Middle School
- Journal for Research in Mathematics Education
- Mathematics Teacher Educator
- Student Explorations in Mathematics

Summative Course Assessments:

- 1. Lesson Plan Creation
- 2. Multimedia Project
- 3. Practicum Observation Log and Reflections

Clinical Field Experience: Field experience is required for this course.

CIED 3133 Integrated Social Studies for the K-6 Classroom (REVISED COURSE)

University of Arkansas College of Education and Health Professions Department of Curriculum and Instruction

Program Affiliation: Elementary/Childhood Education

Course Description: Focuses on the methodology of facilitating elementary students' development in social studies. Integrates the curriculum and teaching strategies in social studies. Field experience required.

Prerequisites: PLSC 2003, HIST 2003, HIST 2013, (GEOG 1123 or ANTH 1023), (HIST 1113 or HIST 1123), (ECON 3053 OR ECON 2143), (ARHS 1003 or MLIT 1003)

Course Objectives:

- 1. Plan, design, and implement learning experiences and inquiries, integrating technology, and demonstrating disciplinary knowledge and civic engagement in a variety of ways. *CC SS 3.1, 3.2, 3.3, 3.4, 4.2, and 4.3; InTASC 3, 4, 5, 7, 8; TESS 1a*
- 2. Design and implement a range of authentic and formative assessments, and exhibit data literacy; engage learners in self-assessment practices *CC SS 4.1, 4.4, and 4.5; InTASC 4, 5, 6, 8; TESS If*
- 3. Plan and implement relevant, engaging, and responsive pedagogy that ensures equitable learning opportunities in social studies and is consistent with current theory and research about student learning CC SS 5.1 and 5.4; InTASC 2, 4, 5, 7, 8, 9; TESS 1b, 1c
- 4. Facilitate collaborative, interdisciplinary learning environments *CC SS 5.5; InTASC 3; TESS 2a, 4d*
- 5. Use theory and research to continually improve and present social studies knowledge, inquiry skills, and civic dispositions, and adapt practice to meet the needs of each learner CC SS 6.1 and 7.8; InTASC 4, 5; TESS 1d, 4e
- 6. Explore, interrogate, and reflect upon own cultural frames to attend to issues of equity, diversity, access, power, human rights, and social justice within schools and/or communities *CC SS 6.2; InTASC 2, 3, 7, 9, 10; TESS 1b, 4a*
- 7. Read historical/social studies texts closely to determine what the text says explicitly and to make logical inferences from it, while determining central ideas or themes and analyzing development *CC SS 7.1; InTASC 4, 5; TESS 1a*
- 8. Interpret words and phrases as they are used in a historical/social studies texts, while analyzing the structure of such texts, and integrate knowledge and ideas *CC SS 7.2 and 7.3; InTASC 4, 5; TESS 1a*
- 9. Understand and apply the three text complexity measures: quantitative, qualitative, and reader and task *CC SS 7.4; InTASC 4, 5; TESS 1a*
- 10. Write routinely over extended and shorter time frames for a range of discipline-specific tasks, purposes, and audiences, including argument and informative/explanatory texts; produce and distribute writing *CC SS 7.5, 7.6, 7.7, and 7.9; InTASC 4, 5; TESS 4e*

Course Content:

I. Learning experiences and inquiries (3.1, 3.2, 3.3, 3.4, 4.2, and 4.3)

- Alignment with the C3 Framework, state-required content standards, and theory and research
- Use of disciplinary concepts, tools, literacy, research skills, and technology
- Disciplinary knowledge and civic engagement

II. Authentic and Formative Assessment, data literacy, learner self-assessment (4.1, 4.4, and 4.5)

- Use of formative assessment data to guide instructional decision-making
- Reflection on student learning outcomes related to disciplinary knowledge, inquiry, and civic competence
- Individualized learning outcomes
- Disciplinary knowledge
- Inquiry
- Civic competence

III. Knowledge of learners for relevant and responsive pedagogy (5.1 and 5.4)

- Socio-cultural assets
- Learning demands
- Individual identities
- Variety of social studies instructional strategies, disciplinary sources and contemporary technologies

IV. Collaborative, interdisciplinary learning environments for learners (5.5)

- Disciplinary facts, concepts, and tools
- Engagement in disciplinary inquiry
- Creating disciplinary forms of representation

V. Research and Theory (6.1 and 7.8)

- Short research projects to answer a question (including a self-generated question)
- Multiple sources
- Generation of additional related, focused questions that allow for multiple avenues of
- exploration
- Relevant information from multiple print and digital sources
- Effective use of search terms
- Assessment of credibility and accuracy of sources
- Quoting or paraphrasing the data and conclusions of other while avoiding plagiarism and following a standard format for citation
- Drawing upon evidence from information to support analysis, reflection, and research

VI. Planning, design, and implementation of a service-learning project with a social justice focus, attending to issues of equity, diversity, access, power, and human rights (6.2)

VII. Close reading of historical/social studies texts (7.1)

- Citing specific textual evidence to support analysis of primary and secondary sources
- Determining the central ideas or information of a primary or secondary source
- Providing an accurate summary of the source distinct from prior knowledge or opinions
- Identifying key steps in a text's description of a process related to history/social studies

VIII. Interpreting and analyzing historical/social studies words and phrases; integration of knowledge and ideas (7.2 and 7.3)

- Determining the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies
- Describing how a text presents information
- Identifying aspects of a text that reveal an author's point of view or purpose
- Integration of visual information with other information in print and digital texts
- Distinguishing among fact, opinion, and reasoned judgment in a text
- Analyzing the relationship between a primary and secondary source on the same topic

IX. Text complexity analysis using all three text complexity measures: quantitative, qualitative, and reader and task. (7.4)

X. Discipline-specific writing (7.5, 7.6, 7.7, and 7.9)

- Steps in the argumentative writing process
- Steps in the informative/explanatory writing process
- Production of clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience
- Developing and strengthening writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed
- Using technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently

Summative Course Assessment: Collaborative service learning project with a social justice focus, attending to issues of equity, diversity, access, power, and human rights

Clinical Field Experience: Field experience is required for this course.

CIED 3143 Teaching Science in the Elementary Grades (REVISED COURSE) University of Arkansas

College of Education and Health Professions Department of Curriculum and Instruction

Program Affiliation: Elementary/Childhood Education

Course Description: Study of the methods and materials in teaching science. Classroom applications of teaching strategies with analysis of teacher effectiveness in seminar settings are emphasized.

Prerequisites: BIOL 1543, BIOL 1541L, GEOL 1113, GEOL 1111, ENSC 1003 and 1001L, and (PHYS 1034 or ASTR 2003/2001 or STEM 4104)

Course Competencies:

Upon completion of this course, candidates will:

- 1. Understand and model key concepts of science, technology, engineering and mathematics *CC SCI 1.1; InTASC 4, 5; TESS 1a, 3a, 3b*
- 2. Collect, evaluate, synthesize, and share real world data CC SCI 1.4; InTASC 4, 5; TESS 1a
- 3. Understand and appreciate the nature of science and scientific inquiry through solving real-world problems *CC SCI 1.9; InTASC 4; TESS 1a*
- 4. Share, model, and practice strategies to support the integration of STEM areas with the emphasis in the K-6 classroom *CC SCI 1.10; InTASC 3, 4, 7, 8; TESS 1a, 1e, 3b, 3c*
- 5. Demonstrate a command of the three dimensional vision for K-12 science education-"... students, over multiple years of school, actively engage in scientific and engineering practices and apply crosscutting concepts to deepen their understanding of the core ideas in these fields." *CC SCI 3.1; InTASC 4, 7, 8; TESS 1a*
- 6. Demonstrate a command of the eight scientific and engineering practices in NRC Framework CC SCI 3.2; InTASC 4, 7, 8; TESS 1a
- 7. Demonstrate understanding through the application of the 7 crosscutting concepts (Dimension 2) that should be reinforced by repeated use in instruction across the disciplinary core ideas (Dimension 3) *CC SCI 3.3; InTASC 4, 7, 8; TESS 1a, 1e*
- 8. Demonstrate understanding of the disciplinary core ideas in physical sciences, life sciences, and earth and space sciences in the NRC Framework *CC SCI 3.4; InTASC 4, 7; TESS 1a*
- 9. Identify and implement lessons/units that integrate the scientific and engineering practices and crosscutting concepts with each of the core ideas as specified in the performance expectations of the NRC Framework *CC SCI 3.5; InTASC 4, 7, 8; TESS 1a, 1e*
- 10. Demonstrate content and science investigation teaching methods for K-6 in the particular the core content areas of CC SCI 3.6; InTASC 4; TESS 1a, 1e
 - i. Physical Sciences
 - ii. Life Sciences Earth and
 - iii. Space Sciences

- 11. Demonstrate a command of the implementation of the Common Core State Standards for math and English/language arts and ISTE Technology Standards for Teachers as it supports Next generation Science Standards *CC SCI 3.7; InTASC 4, 7; TESS 1a, 1e*
- 12. Design and conduct science investigations in at least one if not all of the disciplinary core ideas with attention to gathering and interpreting scientific data *CC SCI 3.8; InTASC 4, 5, 7, 8; TESS 1a, 1e, 3b, 3c*
- 13. Demonstrate a command of diverse teaching strategies for reading and writing informational texts like those read and written by scientists CC SCI 3.9; InTASC 7, 8; TESS 1a, 1e, 3b, 3c
- 14. Acquire a broad knowledge of developmentally appropriate scientific and technical texts across genres, cultures, and centuries *CC SCI 9.1, 9.2, 9.3, 9.4; InTASC 3, 4, 5, 8; TESS 1d*
- 15. Be able to select developmentally appropriate scientific and technical texts, using all measures of text complexity: qualitative, quantitative, and reader and task *CC SCI 9.4; InTASC 3, 5, 8; TESS 1a. 1d*
- 16. Read scientific and technical texts closely and critically to analyze the key ideas and details as well as craft and structure with the purpose of integrating knowledge and ideas both within and across texts *CC SCI 9.1; InTASC 3, 5, 8; TESS 1d, 1e*
- 17. Be able to cite specific textual evidence to support analysis of science and technical texts *CC SCI* 9.1; InTASC 3, 5, 8; TESS 1a
- 18. Determine the central ideas or conclusions of a text CC SCI 9.1; InTASC 4, 5, 8; TESS 1a
- 19. Providing an a accurate summary of the text distinct from prior knowledge or opinions
 - a. Following precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks
 - b. Determining the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context
 - c. Analyzing the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic
 - d. Analyzing the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text
 - e. Integrating quantitative or technical information expressed in words in a text with a version of that information expressed visually
 - f. Distinguishing among facts, reasoned judgment based on research findings, and speculation in a text CC SCI 9.2, 9.3, 9.5, 9.6, 9.7, 9.8, 9.9; InTASC 5, 8; TESS 1a
- 20. Be able to write opinion pieces on topics or texts, supporting a point of view with reasons and information CC SCI 9.5; InTASC 5, 8; TESS 1a
- 21. Be able to write arguments focused on discipline-specific content *CC SCI 9.5; InTASC 5, 8; TESS 1a*
- 22. Be able to write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments or technical processes *CC SCI 9.6; InTASC 5, 8; TESS 1a*
- 23. Understand how to design learning activities in a safe, humane, and ethical environment *CC SCI* 8.1, 8.2, 8.3, 8.4, 8.5; *InTASC* 3, 8; *TESS* 2e

Summative Course Assessments: Candidates interview elementary students to identify a science misconception. Once identified, interventions are planned and the misconception is corrected.

Field Experience: Field experience is required for this course.

CIED 3453 Developmental Literacy (NEW COURSE)

University of Arkansas College of Education and Health Professions Department of Curriculum and Instruction

Program Affiliation: Elementary/Childhood Education

Prerequisites: CIED 2943 Foundations of Language and Literacy, CIED 3113

Emergent Literacy

Course Description: A deep and comprehensive application of the development of literacy skills from decoding to fluent, comprehending readers. Field experience required.

Course objectives:

- 1. Demonstrate knowledge of the role of phonics in promoting reading development. *CC ELA 4.1; InTASC 1, 4,7; TESS 1a; 1e, 3c*
- 2. Show knowledge of automaticity in developing reading fluency *CC ELA 4.2; InTASC 1, 4; TESS 1a; 1e, 3c*
- 3. Apply knowledge of systematic and explicit word analysis skills and strategies. CC ELA 4.3; InTASC 2, 4,8; TESS 1a; 1e, 3c
- 4. Exhibit knowledge of vocabulary development. *CC ELA 5.1; InTASC 1, 4; TESS 1a; 1e, 3c*
- 5. Know the levels of reading comprehension (i.e., literal, inferential, and evaluative). *CC ELA 5.2; InTASC 4; TESS 1a*
- 6. Utilize knowledge of multiple approaches to reading instruction. CC ELA 6.2; InTASC 2, 4,7,8; TESS 1a; 1e, 3c
- 7. Recognize appropriate assessment measures for foundational literacy skills *CC ELA 6.1; InTASC 4, 6; TESS 1a*
- 8. Demonstrate understanding of the characteristics of effective collaboration to promote comprehension *CC ELA 8.1; InTASC 1, 3, 4, 7, 8; TESS 2a; 1a; 1e, 3c*
- 9. Present claims and findings, emphasizing primary points in a focused, coherent manner with pertinent descriptions, facts, details, and examples *CC ELA 8.2; InTASC 4, 5; TESS 1a*
- 10. Identify elements of engaging oral presentations CC ELA 8.3; InTASC 4; TESS 1a

Course content:

- I. Interrelationships between decoding, fluency, and reading comprehension (4.2)
- II. Phonics (4.1)
 - Assessment (6.1)
 - Identifying and applying appropriate instructional strategies

- Use of semantic and syntactic clues to help decode words
- Selecting appropriate connected text
- III. Decoding single-syllable words that follow common patterns and multisyllable words (4.1)
 - Common letter-sound correspondences
 - Spelling conventions
 - Appropriate assessment measures for decoding and encoding (6.1)
- IV. Strategies for automaticity in developing reading fluency (4.2)
 - accuracy
 - rate
 - prosody
 - Appropriate assessment measures for fluency (6.1)
- V. Development of phonics skills (4.1), word analysis (4.3) and fluency (4.2) in individual students
 - English Language Learners
 - Struggling readers
 - Highly proficient readers
- VI. Vocabulary (5.1)
 - Development of academic language and vocabulary
 - Relationship between oral and written vocabulary development and reading comprehension
 - The relationship between oral vocabulary and the process of identifying and understand written words
 - Selecting vocabulary words
 - Systematic, non-contextual vocabulary strategies
 - Contextual vocabulary strategies
 - Knowledge of common sayings, proverbs, and idioms
 - Knowledge of foreign words and abbreviations commonly used in English
 - Appropriate assessment measures for vocabulary (6.1)
- VII. Levels of reading comprehension (5.2)
 - literal
 - inferential
 - evaluative
- VIII. Comprehensive reading instruction (6.2)
 - Theories
 - Approaches
 - Evidence-based practices
 - Programs for developing
 - Appropriate assessment measures for listening and reading comprehension
- IX. Leading and managing the literacy classroom (6.2)
 - Planning

- Organizing
- Differentiating
- Large-group, small group, and individualized reading instruction
- Environment that promotes love of reading
- X. Independent reading in the classroom and at home (6.2)
- XI. Instructional technologies to promote reading development (6.2)
- XII. Supporting individual students (1.1)
 - Underlying causes of reading difficulty
 - o Extrinsic
 - o Intrinsic
 - English Language Learners
 - Struggling readers
 - Highly proficient readers

XIII. Speaking and Listening (8.1)

- For comprehension
- With diverse audiences
- Present claims and findings (8.2)
- Elements of engaging oral presentations (8.3)
 - o Volume
 - Articulation
 - o Awareness of audience

Suggested Texts:

Elish-Piper, L., & L'Allier, S. K. (2012). *Literacy strategies for teacher candidates*. Boston, MA: Pearson.

Tompkins, G. E. (2018). *Literacy for the 21st century: A balanced approach* (7th ed). Boston, MA: Pearson.

Summative Course Assessment

Use running record results for planning instruction for a focused small group literacy lesson

Clinical Field Experience:

Students will observe and plan quality literacy instruction in an intermediate classroom.

CIED 4183 Instruction and Assessment of Writing (NEW COURSE)

University of Arkansas College of Education and Health Professions Department of Curriculum and Instruction

Program Affiliation: Elementary/Childhood Education

Prerequisites: CIED 2943 Foundations of Language and Literacy, CIED 3113 Emergent Literacy, CIED 3453 Developmental Literacy

Course description: Develop knowledge, skills and dispositions about writing processes, genres, and pedagogy. Field experience required.

Course objectives:

- 1. Demonstrate understanding of the characteristics of common types of writing. *CC ELA* 7.1; InTASC 4, 7; TESS 1a
- 2. Demonstrate understanding of the characteristics of effective writing. CC ELA 7.2; InTASC 4, 7; TESS 1a
- 3. Demonstrate understanding of the research process. CC ELA 7.5; InTASC 4, 5, 7; 1a
- 4. Demonstrate understanding of the conventions of grammar, usage, mechanics, and spelling. *CC ELA 7.6; InTASC 4, 7*
- 5. Identify the characteristics and purposes of a variety of digital tools used for producing and publishing writing and for interacting with others. CC ELA 7.4; InTASC 4, 8
- 6. Know research-based principles for teaching letter naming and letter formation, both manuscript and cursive. CC ELA 7.7; InTASC 2, 4, 8; TESS 1a
- 7. Present claims and findings, emphasizing primary points in a focused, coherent manner with pertinent descriptions, facts, details, and examples *CC ELA 8.2; InTASC* 5
- 8. Describe precisely a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not *CC ELA 8.4; InTASC 5*

Course content:

- I. Develop the craft of writing
- II. Common types of writing, including purpose, key components and subgenres (7.1)
 - Opinion/argument
 - Informative/explanatory
 - Narrative
- III. Evaluation of the effectiveness of common types of writing samples
- IV. Characteristics of effective writing (7.2)

- Appropriateness of a particular piece of writing for a specific task, purpose, and audience
- Development, organization, or style of a piece of writing
- Appropriate revisions to strengthen a piece of writing
- Interrelationships among planning, revising, and editing in the process of writing

V. Research process (7.3)

- Steps in the research process
- Primary and secondary sources and their uses
- Reliable and unreliable sources
- Paraphrasing and plagiarizing
- Credible print and digital sources, locate information within the sources, and cite the sources

VI. Conventions of grammar, usage, mechanics, and spelling (7.6)

- Function of different parts of speech
- Usage, mechanics, and spelling
- Examples of different sentence types (e.g., simple, compound, compound-complex)
- Varieties of English (e.g., dialects, registers) used in stories, dramas, or poems to support the overall meaning
- Relevant features of language such as word choice, order, and punctuation

VII. Digital tools for producing and publishing writing, and for collaboration (7.4)

Suggested Texts:

Cunningham, P., & Allington, R. (2015). *Classrooms that work: They can all read and write* (6th ed). Boston, MA: Pearson.

Tompkins, G. E. (2018). *Teaching writing: Balancing process and product* (7th ed). Boston, MA: Pearson.

Summative Course Assessment:

Writing portfolio consisting of content and pedagogical knowledge

Clinical Field Experience:

Students will observe, design, implement, and evaluate quality writing instruction in a K-6 classroom.

CIED 4533 Reading Comprehension through Children's and Adolescent Literature (NEW COURSE)

University of Arkansas

College of Education and Health Professions Department of Curriculum and Instruction

Program Affiliation: Childhood/Elementary Education

Prerequisites: CIED 2943 Foundations of Language and Literacy, CIED 3113 Emergent Literacy, CIED 3453 Developmental Literacy

Course description: An examination of the major genres of children's and adolescent literature to develop and extend K-6 students' skills in reading comprehension. Field experience required.

Course objectives:

- 1. Demonstrate knowledge of vocabulary development CC ELA 5.1; InTASC 1, 4; TESS 1a
- 2. Demonstrate knowledge of the levels of reading comprehension (i.e., literal, inferential, and evaluative) and strategies for promoting comprehension of literature and informational texts at all three levels *CC ELA 5.2*: *InTASC 1, 4, 8*: *TESS 1a*
- 3. Demonstrate understanding various comprehension strategies to support effective reading. CC ELA 5.2 ;InTASC 2, 4, 7; TESS 1a
- 4. Demonstrate knowledge of multiple approaches to reading instruction *CC ELA* 6.2; InTASC 2, 4; TESS 1a
- 5. Demonstrate understanding of the characteristics of effective collaboration to promote comprehension by
 - a. identifying techniques to communicate for a variety of purposes with diverse partners
 - b. identifying the characteristics of active listening

CC ELA 8.1; InTASC 3, 4, 5, 7, 8; TESS 1a,e 2a, 3c

6. Include multimedia components (e.g. graphics, images, music, sound) and visual displays in presentations to clarify information when appropriate *CC ELA 8.5; InTASC 5, 8*

Course content:

- I. Genre Study (Fiction: Folk and Modern Fantasy, Realistic and Historical Fiction; Nonfiction: Informational and Biography; Poetry; Multicultural Literature)
 - Characteristics
 - Evaluation
 - Culturally responsive teaching
- II. Role of text complexity in reading development (6.2)

- Three factors (quantitative, qualitative, and reader and task) that measure text complexity
- Features of text-leveling systems

III. Knowledge of multiple approaches to reading instruction (6.2)

- Significant and current theories, approaches, research-based practices, and programs for developing foundational reading skills and reading comprehension.
- Planning, organizing, managing, and differentiating reading instruction to support the reading development of all students
- Strategies for promoting development of particular reading skills
- Close reading and rereading of well crafted, content-and idea-rich texts in reading development
- Evaluating and sequencing texts for reading instruction according to text complexity
- Balancing students' exposure to and reading of literary and informational texts
- Selecting and using meaningful reading materials at appropriate levels of difficulty
- Creation of an environment that promotes culture of reading
- Uses of instructional technologies to promote reading development (6.2)
- Awareness of strategies and resources for supporting individual students (e.g., English Language Learners, struggling readers through highly proficient readers)

IV. Vocabulary development (5.1)

- Strategies for promoting oral language development and listening comprehension
- Criteria for selecting vocabulary words
- Strategies for promoting comprehension across the curriculum by expanding knowledge of academic language, including conventions of standard English grammar and usage, differences between the conventions of spoken and written standard English, general academic vocabulary, and content-area vocabulary
- Importance of frequent, extensive, varied reading experiences in the development of academic language and vocabulary
- Development of academic language and vocabulary knowledge and skills in individual students (e.g. English Language Learners, struggling readers through highly proficient readers)

V. Levels of reading comprehension (5.2)

- Literal
- Inferential
- Evaluative
- Strategies for promoting comprehension of literature and informational texts at all three levels

VI. Key ideas and details to comprehend literature and informational text (5.2, 6.2)

- Close reading to determine what the text says explicitly and to make logical inferences from it
- Specific textual evidence to support conclusions drawn from the text

- Central ideas or themes of a text and analyze their development
- Key supporting details and ideas
- How and why individuals, events, and ideas develop and interact over the course of a text VII. How features and structures of text across genres affect comprehension (5.2, 6.2)
 - Structural elements of literature across genres
 - Text features to locate information in a print or digital information text
 - Structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g. a section, chapter, scene, stanza) relate to each other and the whole
 - Words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings
 - How specific word choices shape meaning and/or tone

VIII. Point of view using evidence from the text by (5.2)

- Author's point of view in various genres and supporting conclusions with evidence from the text
- Multiple accounts of the same events or topic to identify similarities or differences in point of view
- How point of view, perspective, and purpose shape the content and style of a text IX. Integrate and compare written, visual, and oral information from texts and multimedia sources (5.2)
 - How visual and oral elements enhance the meaning and effect of a literary text
 - Comparison of the written version of a literary text with an oral, stage, or filmed version
 - Analysis of how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches of the author(s)
 - Interpretation of visual and multimedia elements in literary and informational texts

Suggested Texts:

Harvey, S. & Goudvis, A. (2017). *Strategies that work: Teaching comprehension for engagement, understanding, and building knowledge* (3rd ed). Portland, ME: Stenhouse. Beers, K., & Probst, R. (2015) *Reading nonfiction: Notice & note stances, signposts, and strategies*. Portsmouth, NH: Heinemann.

Summative Course Assessment:

Performance Assessment demonstrating comprehension instruction

Clinical Field Experience:

Students will observe, design, implement, and evaluate quality literacy instruction.

Professional and Methodology Courses in ELEDMA program (must be admitted to ELEDMA program to enroll)

*All courses included minus the concentration courses

Course	Catalog Description
CIED 5003: Elementary	This course is designed to synthesize the foundational content
Education Seminar	presented in the Master of Arts in Teaching core courses. It focuses
	on refinement of the generalized knowledge to accommodate
	specialized content relevant to elementary students. Professional
	attitudes, knowledge, and skills applicable for today's elementary
	educator are addressed.
CIED 5013:	An introduction to constructing, analyzing, and interpreting tests;
Measurement, Research,	types of research and the research process; qualitative and
and Statistical Concepts	quantitative techniques for assessment; and descriptive and
in the Schools	inferential statistics.
CIED 5022: Classroom	A number of different classroom management techniques are studied.
Management Concepts	It is assumed that a teacher must possess a wide range of knowledge
	and skills to be an effective classroom manager.
CIED 5032: Curriculum	The design and adaptation of curriculum for students in regular and
Design Concepts for	special classrooms. Theoretical bases and curriculum models are
Teachers	reviewed. Concurrent clinical experiences in each area of emphasis
	are included.
CIED 5053:	This course provides an introduction to the major concepts and issues
Multicultural Issues in	related to multicultural education in elementary classrooms. The
Elementary Education	ways in which race, class, gender and exceptionality influence
	students' behavior are discussed.
CIED 5073: Action	Provides the students with experience in conducting case studies and
Research in Elementary	action research related to childhood education. In addition, students
Education	gain knowledge regarding practices used in ethnographic research.
CIED 508V: Elementary	Successful completion of criminal background check required before
Education Cohort	beginning teaching internship. May be repeated for up to 6 hours of
Teaching Internship	degree credit.
CIED 5162: Applied	This course is designed to provide teacher candidates with
Practicum	experiences in conducting action research related to childhood
	education. In addition, they will gain knowledge regarding practices
	used in proposing institutional research.

CIED 5173 Literacy Assessment and Intervention (REVISED COURSE)

University of Arkansas College of Education and Health Professions Department of Curriculum and Instruction

Program Affiliation: Elementary Education MAT

Course Description: This course is a focused application of scientifically-based literacy instruction in a clinical setting. Candidates use formal and informal methods of assessing literacy development and then implement multiple approaches to literacy instruction.

Course Objectives:

- 1. Uses formal and informal methods for assessing literacy development *CC ELA 6.1; InTASC 4, 6, 7; TESS 1a, 9c*
- 2. Uses data and ongoing literacy assessment to adjust instruction to meet students' literacy needs CC ELA 6.1; InTASC 2, 4, 6, 7, 8; TESS 1a, e, 3c, 9c
- 3. Implements multiple approaches to literacy instruction CC ELA 6.2; InTASC 2, 4, 7, 8; TESS 1a, e, 3c, 9c
- 4. Evaluates the effectiveness of writing samples of each genre CC ELA 7.1; InTASC 6
- 5. Uses the characteristics of effective writing to determine student proficiency *CC ELA* 7.2; *InTASC* 2, 6
- 6. Demonstrates understanding of methods for assessing literacy development as well as effective writing characteristics *CC ELA 6.1, 7.2; InTASC 4, 6; TESS 1a*; and uses data to present claims and findings, emphasizing primary points in a focused, coherent manner with pertinent descriptions, facts, details, and examples *CC ELA 8.2; InTASC 2, 6*

Course Content:

- I. Formal and informal methods for assessing literacy development (6.1)
 - Arkansas Curriculum Frameworks
 - NCLB
 - National Reading Panel Report, "Missing Pillars"
 - Science of Reading vs. balanced literacy instruction (1.1)
 - ACT Aspire Assessment
 - EQuIP (Educators Evaluating the Quality of Instructional Products) is an initiative of the American Diploma Project (ADP) Network designed to identify high-quality materials aligned to the Common Core State Standards (CCSS).
 - LETRS An Introduction to Language and Literacy (3.1, 3.4, 4.1, 4.2)
 - R.I.S.E. (Reading Initiative for Student Excellence): The Governor of Arkansas' initiative to encourage a culture of reading by coordinating a statewide reading campaign with community partners, parents, and teachers to establish the importance of reading in homes, schools, and communities.
- II. Pre/post data and ongoing literacy assessment to meet students' specific literacy needs (6.1)
 - appropriate assessments tools for data collection and analysis
 - appropriate technology tools for data collection and analysis
- III. Standardized criterion-referenced and norm-referenced tests (6.1)

- assess literacy development
- literacy strengths and difficulties

IV.Concepts of validity, reliability, and bias in testing (6.1)

V. Characteristics and uses of formation and informal literacy-related assessments (6.1)

VI. Characteristics and uses of group versus individual literacy assessments (6.1)

VII. Techniques for assessing particular literacy skills (6.1)

VIII. Awareness of the challenges and supports in a text (6.1)

IX. Techniques for determining students' independent, instructional, and frustration literacy levels (6.1)

X. Literacy development of individual students (e.g., English Language Learners, struggling readers through highly proficient readers) (6.1)

XI. Multiple approaches to literacy instruction (6.2)

- Strategies for planning, organizing, managing, and differentiating literacy instruction to support the literacy development of all students
- Literacy instruction based on ongoing assessment
- Instructional strategies for promoting development of particular literacy skills
- Large-group, small group, and individualized literacy instruction
- Environment that promotes culture of literacy
- Literacy development through appropriate instructional technologies
- Appropriate strategies and resources for individual students (e.g., English Language Learners, struggling readers through highly proficient readers)

Summative Course Assessment:

Literacy Case Study Report: The purpose of this summative assessment is for the candidate to complete an in-depth look into the literacy strengths and weaknesses of one child, and then utilize the information obtained to plan and implement learning opportunities for that child.

This assessment addresses the following goals:

- 1. familiarize candidates with a variety of assessment techniques
- 2. emphasize the interrelatedness of assessment and instruction to illustrate the role of assessment in instructional decision making
- 3. develop skills in analyzing student responses and work samples to determine the child's strengths and weaknesses and to use such information to guide instruction
- 4. broaden candidates understanding of the learning processes of an individual child
- 5. encourage reflection on the child's response to a variety of assessment tools and techniques
- 6. foster a critical analysis of the effectiveness of a variety of assessment tools and techniques
- 7. deepen candidates skills at documenting student progress over time
- 8. provide experience in communicating assessment results and instructional implications for school and home with the child's parent/guardian.

Suggested Texts:

Reutzel, D. R., & Cooter, R. B. (2015). *Strategies for reading assessment and instruction in an era of Common Core Standards: Helping every child succeed* (5th ed). Boston, MA: Pearson.

Clinical Field Experience:

Working one-on-one or in a small group with targeted students (minimum of 20 interventions)

Professional and Methodology Courses in CHEDBS and ELEDMA program

Additional courses for EASL Concentration ONLY

Courses are part of a pre-approved Endorsement in English as a Second Language. Two are taken at the undergraduate level (CHEDBS) and two are taken at the graduate level (ELEDMA).

Course	Catalog Description
CIED 4403: Understanding Cultures in the	This course provides pre-and in-service
Classroom	teachers knowledge and skills necessary for
	educating ethnically and linguistically diverse
	classrooms. Students have the opportunity to
	understand positive relationships while
	removing stereotypes and prejudices. It
	addresses issues for social justice education
	through understanding ways that children learn
	and communicate in their homes and
	communities. Students will examine how
	topics in multicultural education inform
	instructional goals, curriculum
	planning/implementation, and teaching
	practices across content areas in public K-12
	classrooms. Some sections of this course will
	contain a service-learning component.
CIED 4413: Acquiring a 2 nd Language	The course gives an introduction to the basics
	in research and learning theories involved in
	the acquisition of second languages and
	cultures, particularly of English.
CIED 5933: Second Language Methodologies	This is one of a series of four courses leading
	to Arkansas approved endorsement for
	teaching English as a Second Language (ESL).
	The course introduces the basics in approaches,
	methodologies, techniques, and strategies for
	teaching second languages, especially ESL.
CIED 5953: Second Language Assessment	This is one in a series of four courses leading
	to Arkansas approved endorsement for
	teaching English as a Second Language (ESL).
	The course introduces basic methods for
	testing, assessing and evaluating second
	language, especially ESL, learners for
	placement purposes and academic
	performance.

Professional and Methodology Courses in CHEDBS and ELEDMA program

GATE Concentration ONLY

Courses are part of a pre-approved ALP in Gifted and Talented Education. Two will be taken as out-of-career undergraduate courses in the CHEDBS. The remaining four will be taken at the graduate level either during or following the ELEDMA.

Course	Catalog Description
CIED 5803: Nature and Needs of the Gifted	Educational, psychological, and social
and Talented	characteristics of gifted and talented children.
CIED 5813: Curriculum Development in	Examines the various models for developing
Gifted and Talented	curriculum and providing services for students
	identified for gifted programs.
CIED 5823: Gifted and Talented (Structured)	Supervised field experience in gifted education
Practicum	programs, schools, institutions, and other
	facilities for gifted/talented children.
CIED 6163: Social and Emotional Components	Purpose of this course is to study the
of the Gifted and Talented	theoretical and practical aspects of those
	affective issues, behaviors, and experiences
	often associated with gifted and talented
	students.
CIED 6073: Seminar in Developing Creativity	A study of the facets of creativity, how they
	can be applied to be used in one's everyday
	life, how they can be applied in all classrooms,
	and how to encourage the development of
	these in students.
CIED 6143: Differentiated Instruction for	Major focus of this course will be the
Academically Diverse Learners	examination of differentiated instruction, a
	teaching philosophy appropriate for a wide
	range of learners.

Professional and Methodology Courses in CHEDBS and ELEDMA program

READ Concentration ONLY

Courses are part of a pre-approved Endorsement in Dyslexia Therapy. Two will be taken as out-of-career undergraduate courses in the CHEDBS. The remaining four will be taken at the graduate level during the ELEDMA.

Course	Catalog Description
SPED 4173: Introduction to Dyslexia: Literacy	This course focuses on the assessment of
Development and Structure of Language	students with disabilities, literacy
	development, skills and intervention. Students
	will utilize foundational concepts of oral and
	written language including the structure of
	language to assess students' difficulties and
	plan appropriate instruction. Techniques
	discussed include informal observation, miscue
	analysis, multisensory teaching, and portfolio
	assessment. Prerequisite: Admission to
	graduate school.
SPED 4483: Literacy Skills to Students with	This course will offer a detailed study of how
Disabilities (K-12)	to systematically and explicitly teach essential
	reading skills to students with disabilities or
	those at-risk for learning difficulties.
SPED 5543: Dyslexia Practicum and Case	Provides the opportunity to demonstrate and
Study	refine teaching skills with dyslexic students
	and others with literacy learning disabilities
	through case studies and structured multi-
	sensory teaching of reading and writing skills
	with grades k-12 while simultaneously
	developing a professional portfolio. A
	minimum of 82 hours of field experiences with
	dyslexic students is required.
SPED 5633: Curriculum Development and	Study of the research base for the design and
Instructional Planning	adaptation of curriculum and instructional
	strategies for students with disabilities in
	general and special classrooms.
SPED 5873: Assessment of Students with	Methods and techniques of assessment of
Disabilities	children in all areas of exceptionality with
	emphasis on diagnosis and classification.

Professional and Methodology Courses in CHEDBS and ELEDMA program

STEM Concentration ONLY

Courses are part of a pre-approved Graduate Certificate in STEM Education. Two are taken at the undergraduate level (CHEDBS) and two are taken at the graduate level (ELEDMA).

Course	Catalog Description
STEM 4033: Introduction to STEM	This course provides an introduction to the
Education	foundations of STEM education disciplines and the
	strategies used to deliver integrative STEM education
	in the elementary and secondary school setting. The
	nature of STEM education disciplines, STEM
	pedagogy, teaching strategies, integrative STEM
	learning, STEM careers, and problem-centered
	instruction are addressed.
STEM 4043: Creativity and Innovation	This introductory course in technology and
in STEM (NEW at the undergraduate	engineering education (TEED) focuses on the
level)	development and introduction of TEED activities to
	support science and mathematics instruction in the
	elementary and middle level classroom. Through
	hands-on, problem-based learning challenges, students
	will develop and understanding of the engineering
	design process and the integration of STEM often used
	to solve real-world problems.
STEM 5203: Problem-Based	This graduate level course focuses on sharing,
Mathematics	modeling and practicing strategies to support the
	meaningful integration of science, technology,
	engineering and mathematics (STEM) with the
	emphasis on mathematics in the K-4 classroom. A
	strong foundation for integrating the STEM disciplines
	through a problems-based approach within the
	elementary curriculum will be developed by providing
	students with theoretical frameworks, research,
	resources, and methods related to appropriate and
	effective classroom practice.
STEM 5213: Teaching Problem-Based	This graduate level course focuses on sharing,
Science in the Elementary Grades	modeling and practicing strategies to support the
	meaningful integration of science, technology,
	engineering and mathematics (STEM) with the
	emphasis on science in the K-4 classroom. A strong
	foundation for integrating the STEM disciplines
	through a problems-based approach within the
	elementary curriculum will be developed by providing
	students with theoretical frameworks, research,
	resources, and methods related to appropriate and
	effective classroom practice.