Code # ED49 (2014) REV

**New/Special Course Proposal-Bulletin Change Transmittal Form**

☒ **Undergraduate Curriculum Council** - Print 1 copy for signatures and save 1 electronic copy.

☐ **Graduate Council** - Print 1 copy for signatures and send 1 electronic copy to [mmcginnis@astate.edu](mailto:mmcginnis@astate.edu)

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| --- |
| ☒**New Course or** ☐ **Special Course (Check one box)**  *Please complete the following and attach a copy of the catalogue page(s) showing what changes are necessary.* |

|  |  |
| --- | --- |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **Department Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **COPE Chair (if applicable)** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **Department Chair:** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **General Education Committee Chair (If applicable)** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Undergraduate Curriculum Council Chair** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **College Dean** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Graduate Curriculum Committee Chair** |
|  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Vice Chancellor for Academic Affairs** |

1. Proposed Course Prefix and Number (For variable credit courses, indicate variable range.)

MLED 4012.

2. Course Title – if title is more than 30 characters (including spaces), provide short title to be used on transcripts. Title cannot have any symbols (e.g. slash, colon, semi-colon, apostrophe, dash, and parenthesis). Please indicate if this course will have variable titles (e.g. independent study, thesis, special topics).

Methods and Materials for Teaching Mathematics

Methods Materials for Tch Math

3. Will this course be lecture only, lab only, lecture and lab, activity, dissertation, experiential learning, independent study, internship, performance, practicum, recitation, seminar, special problems, special topics, studio problems, student exchange, occupational learning credit, or course for fee purpose only (e.g. an exam)? Please choose one.

Lecture

4. What is the grade type (i.e. standard letter, credit/no credit, pass/fail, no grade, developmental)?

Standard

5. Is this course dual listed (undergraduate/graduate)?

Yes, this course will be dual listed with MLED 5012 for our Masters of Arts in Teaching Degree Program. Course to be developed with the revision of the MAT program to bring it into compliance with Arkansas Department of Education licensure changes.

6. Is this course cross listed? (If it is, all course entries must be identical including course descriptions. It is important to check the course description of an existing course when adding a new cross listed course.)

No

7. Brief course description (40 words or fewer) as it should appear in the bulletin.

Mathematical processes, diagnosis of learner difficulties, and underlying rationale for teaching mathematics. Focus on Mathematics Common Core Standards, appropriate pedagogy, math manipulatives and use of instructional technology.

8. Indicate all prerequisites and if this course is restricted to a specific major, which major. (If a student does not have the prerequisites or does not have the appropriate major, the student will not be allowed to register).

a. Are there any prerequisites?

Prerequisites, Admission to the Teacher Education Program, MLED 3043, MLED 3053, MATH 2113, MATH 2123, Co-requisite: MLED 4109, MLED 4042, One of the following specialty courses: MLED 4002, MLED 4022, MLED 4032.

b. Why?

Background knowledge developed in these courses is needed for understanding the content, pedagogy, and strategies of the course.

9. Course frequency(e.g. Fall, Spring, Summer). Not applicable to Graduate courses.

Fall

10. Contact Person (Name, Email Address, Phone Number)

Dr. Ron Towery, Arkansas State University, Jonesboro. PO Box 2350, State University, AR 72467. Rtowery@astate.edu . 870-972-3059

11. Proposed Starting Term/Year

New program begins Fall 2015, first time this course offered is Fall 2016

12. Is this course in support of a new program? Yes/No

If yes, what program?

No

13. Does this course replace a course being deleted? Yes

If yes, what course?

MLED 4023

Has this course number been used in the past? No

*Submit Course Deletion Proposal-Bulletin Change Transmittal Form.*

14. Does this course affect another program? No

If yes, provide contact information from the Dean, Department Head, and/or Program Director whose area this affects.

Enter text...

15. Justification should include:

a. Academic rationale and goals for the course (skills or level of knowledge students can be expected to attain)

This methods course will acquaint candidates with mathematical processes, diagnosis of learner difficulties, and underlying rationale for teaching mathematics to the middle school child. Math content including the Common Core State Standards for Mathematics, best practices pedagogy, math manipulatives, and instructional technology will be taught. This course is taught in conjunction with the MLED 4109 Teaching Internship Course where candidates will have the opportunity to teach the lesson plans they develop, use math manipulatives and instructional technology with 4th-8the grade students; and then reflect on the lesson plan and its implementation. Goals include that the candidates will learn appropriate and best practices pedagogy for middle grade mathematics instruction, Common Core State Standards Mathematics content, appropriate use of math manipulatives, and appropriated integrated instructional technology.

b. How does the course fit with the mission established by the department for the curriculum? If course is mandated by an accrediting or certifying agency, include the directive.

The mission of the Department of Teacher Education encompasses three areas: teaching, service, and research. This course contributes significantly toward the accomplishment of the department’s goal of preparing Professionally Emerging Teachers and Emerging Professionals in the fields of middle level education.

**This course supports the Arkansas Department of Education’s competencies for middle level education.**

**Specifically, the course will address the following Learning to Teach, Teaching to Learn Conceptual Framework Standards**

Professionalism

Curriculum

Subject Matter

Teaching Models

Assessment

Reflective Teaching

**Specifically, the course will address the following Association of Middle Level Education Standards**

Standard 1: Young Adolescent Development

Element a: Knowledge of Young Adolescent Development

Element b: Knowledge of the Implications of Diversity on Young Adolescent Development

Element c: Implications of Young Adolescent Development for Middle Level Curriculum and Instruction

Element d: Implications of Young Adolescent Development for Middle Level Programs and Practices

Standard 2: Middle Level Curriculum

Element a: Subject Matter Content Knowledge

Element b: Middle Level Student Standards

Element c: Interdisciplinary Nature of Knowledge

Standard 3: Middle Level Philosophy and School Organization

Element a: Middle Level Philosophical Foundations

Element b: Middle Level Organization and Best Practices

Standard 4: Middle Level Instruction and Assessment

Element a: Content Pedagogy

Element b: Middle Level Instructional Strategies

Element c: Middle Level Assessment and Data-informed Instruction

Element d: Young Adolescent Motivation

Standard 5: Middle Level Professional Roles

Element a: Professional Roles of Middle Level Teachers

Element b: Advocacy for Young Adolescents and Developmentally Responsive Schooling Practices

Element c: Working with Family Members and Community Involvement

Element d: Dispositions and Professional Behaviors

**Specifically, the course will address the following InTASC Standards**

The Learner and Learning

Standard 1: Learner Development

Standard 2: Learning Differences

Standard 3: Learning Environments

Content

Standard 4: Content Knowledge

Standard 5: Application of Content

Instructional Practice

Standard 6: Assessment

Standard 7: Planning for Instruction

Standard 8: Instructional Strategies

Professional Responsibilities

Standard 9: Professional Learning and Ethical Practice

Standard 10: Leadership and Collaboration.

c. Student population served.

Middle level education candidates.

d. Rationale for the level of the course (lower, upper, or graduate).

This course is taken during the same semester as the MLED 4109 Teaching Internship in order to facilitate integration of the methods and materials of teaching math with actual classroom teaching.

16. Outline (The course outline should be topical by weeks and should be sufficient in detail to allow for judgment of the content of the course.)

Week One: Discuss Frameworks/Common Core Lesson Plan Discussion

Week Two: Assign Math Manipulative Lesson, complete lesson plan template, Discuss Principles of High Quality Instruction

Week Three-Five: Math Interactive (virtual manipulatives), calculators, and other instructional technology; Students’ presentation of lessons

Weeks Six: Middle school math curricula – trends and historical background

Week Seven: Article critique, how students learn math

Week Eight-Thirteen: Field Experience

Weeks Fourteen: Activities and techniques for problem based learning with Math Common Core content standards

Week Fifteen: Final exam

17. Course requirements (e.g. research papers, projects, interviews, tests, etc.)

Course requirements include:

Article critiques and discussions

3 day Integrated Inquiry Investigation Lesson Plan

Math Manipulative Lesson Plan with classroom teaching

2 Self-Reflections on the two lesson plans

Program Report/Overall Reflection

Final Exam

18. Special features (e.g. labs, exhibits, site visitations, etc.)

Students will be in a school-based internship throughout the semester rehearsing some of the strategies learned in the course; they will come back to campus occasionally for instruction and the instructor may also visit them at their field sites.

19. Department staffing and classroom/lab resources (Will this require additional faculty, supplies, etc.?)

No

20. What is the primary intended learning goal for students enrolled in this course?

The primary goal is to prepare middle level education candidates to teach mathematics in grades 4-8.

21. Reading and writing requirements:

a. Name of book, author, edition, company and year

Elementary and Middle School Mathematics: Teaching Developmentally by Van De Walle, et al.

b. Number of pages of reading required per week: 10

c. Number of pages of writing required over the course of the semester: 16

22. High-Impact Activities (Check all that apply)

☐Collaborative assignments

☐Research with a faculty member

☐Diversity/Global learning experience

☐Service learning or community learning

☐Study abroad

☐Internship

☐Capstone or senior culminating experience

x☐Other Explain: MLED candidates will be strongly encouraged to attend and present with ASU COE faculty at the Nov. AR Curriculum Conferences.

23. Considering the indicated primary goal (in Box #20), provide up to three outcomes that you expect of students after completion of this course.

**Outcome #1:** (For example, what will students who meet this goal know or be able to do as a result of this course?)

Develop appropriate math lesson plans for mid-level students.

Learning Activity:(For example, what instructional processes do you plan to use to help students reach this outcome?)

Students will practice developing appropriate lesson plans.

Assessment Tool: (For example, what will students demonstrate, represent, or produce to provide evidence of their learning?)

Students will develop mathematics lesson plans for early adolescent students, which will be graded by the instructor using a rubric.

24. Please indicate the extent to which this course addresses university-level student learning outcomes:

* 1. Global Awareness

x☐Minimally  
☐Indirectly  
☐Directly

* 1. Thinking Critically

☐Minimally  
☐Indirectly  
x☐Directly

* 1. Using Technology

☐Minimally  
☐Indirectly  
x☐Directly

**From the most current electronic version of the bulletin, copy all bulletin pages that this proposal affects and paste it to the end of this proposal.**

**To copy from the bulletin:**

1. Minimize this form.
2. Go to <http://registrar.astate.edu/bulletin.htm> and choose either undergraduate or graduate.
3. This will take you to a list of the bulletins by year, please open the most current bulletin.
4. Find the page(s) you wish to copy, click on the “select” button and highlight the pages you want to copy.
5. Right-click on the highlighted area.
6. Click on “copy”.
7. Minimize the bulletin and maximize this page.
8. Right-click immediately below this area and choose “paste”.
9. For additions to the bulletin, please change font color and make the font size larger than the surrounding text. Make it noticeable.
10. For deletions, strike through the text, change the font color, and enlarge the font size. Make it noticeable.

**~~MLED 4023. Methods and Materials for Teaching Mathematics and Science in the Middle Grades~~** ~~The course includes scientific and mathematical process skills, the interrelated nature of mathematics and science. Three clock hours of fieldwork is required. Prerequisites, Admission to the Teacher Education Program, MLED 3002, MLED 3003, MLED 3004, Pre- or corequisite, MLED 3073.. Fall.~~

MLED 4012 Methods and Materials for Teaching Mathematics

Mathematical processes, diagnosis of learner difficulties, and underlying rationale for teaching mathematics. Focus on Mathematics Common Core Standards, appropriate pedagogy, math manipulatives and use of instructional technology. Prerequisites, Admission to the Teacher Education Program, MLED 3043, MLED 3053, MATH 2113, MATH 2123, Co-requisite: MLED 4109, MLED 4042, One of the following specialty courses: MLED 4002, MLED 4022, MLED 4032. Fall

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