# Summary of Proposed Curriculum Revisions 

Ouachita Baptist University
December 2013

The faculty approved these curriculum revisions on Tuesday, December 3, 2013, at the Faculty Meeting.

The Biology Department withdrew its proposal to replace BIOL 4001 Experimental Research with a new course, NSCI 4xx1 Experimental Research in Natural Science.

General Academic Programs | Business | Education | Interdisciplinary Studies | Natural Sciences

The short form notation indicates informational level curriculum revisions submitted on the Curriculum and Academic Standards Committee's short form, which addresses course title changes, course time offering changes, and non-substantive changes to course content and/or descriptions.

These short form revisions will NOT be brought to the faculty for discussion or a vote, unless questions are raised before the faculty meeting.

## General Academic Programs

Associate of Arts Degree

The university proposes adding an Associate of Arts degree that would be offered on the campus of New Life Church in Conway, Arkansas, under the accreditation and academic guidance of OBU.

Students enrolled in this program may choose from two concentrations: General Studies or Christian Studies.

A total of 61 hours is required to complete the degree.
See Proposed Associate Arts Degree for degree requirements and course descriptions.

## Hickingbotham School of Business

## Business

Administration

Add a fourth emphasis, Sport Management, to the Business Administration major. Add three new courses SPTM 4013 Big Data/Data Mining, SPTM 4023 Sport Law, and SPTM 4993 Sport Management Internship, which would be options for the Sport Management emphasis.

Sport Management is a multi-disciplinary field blending business with sports. The focus is the management of the business side of a specific industry, sports. Sport Management programs have become increasingly popular in recent years. OBU's current offerings do not meet this unmet demand, which this emphasis intends to satisfy.

Based on feedback provided at the North American Society for Sport Management (NASSM) 2013 annual conference (Austin, Texas), we have decided to structure the program within the business school. Majors will be required to complete the same requirements all other business majors meet, plus successfully completing 4 of the 5 Sport Management Emphasis courses.

Of the existing Business Administration Emphases, Finance requires 4 courses while Management and Marketing require 3 courses. Each of these emphases tends to focus on a "generalist" perspective, which is simply due to the inability to specialize because of our small faculty size. The addition of Sport Management alters this generalist approach because it focuses on a single industry, sports. The courses for the proposed Sport Management Emphasis are the following:

1. SPTM 4013 Big Data/Data Mining - new course to be offered in fall
2. SPTM 4023 Sport Law - new course to be offered in spring
3. LST 3013 Program Design and Management - existing course offered in spring and requiring prerequisite changes
4. KIN 4013 Organization and Administration of Health, Physical Education, and Recreation (K-12) - existing course offered in fall and requiring prerequisite changes
5. SPTM 4993 Sport Management Internship - new course to be offered on demand in summer

The new Big Data / Data Mining course (SPTM 4013) has been taught the last two fall semesters as a Special Topics in Management course (Data Mining - MGMT 4893). The course initially became possible because several HSB faculty were awarded OBU's initial \$10,000 Technology Innovation Grant in 2011 from the Teaching and Learning Resources Committee. Many Big Data / Data Mining cases and examples come from sports, most notably the popular "Moneyball" best-selling book and movie. So, the fit with Sport Management is a natural one. However, the course does involve additional topics (e.g., marketing, finance, weather, politics) so it is hoped the course will appeal to a broader market than solely Sport Management students. If broader interest materializes, then the course may eventually be cross-listed for other programs (e.g., CSCI, PSYC, BUAD).

The new Sport Law course (SPTM 4023) will be an altogether new offering. Part of the appeal of this course is the willingness of a local adjunct instructor to teach it. The adjunct, Chris Turnage, is an attorney and sports agent who lives in Hot Springs. Legal topics unique to sports (e.g., injuries such as concussions in the NFL, performance-enhancing drug use of MLB players Ryan Braun and Alex Rodriquez) would make this course different than the Legal Environment of Business (BUAD 3003) course. The role of agents in professional sports, and sports agencies as an example of small business entrepreneurship will similarly distinguish this course uniquely to Sport Management.

Program Design and Management (LST 3013) is an existing course that focuses on managing recreation programs. Much Sport Management publicity focuses on college- and professional-level sports programs. However, youth- and amateur-level programs represent a significant component of Sport Management (e.g., AAU basketball, USSSA baseball, club volleyball). The inclusion of this course to the Sport Management emphasis is intended to address this industry level. Historically, recreation programs are operated as non-profit organizations. The inclusion of Sport Management students to this class extends the application of these concepts and methods to a for-profit context. The prerequisites in the course description include "(exception made for Fitness Emphasis Majors)." An
exception for Business Administration - Sport Management Emphasis Majors will need to be included.

Organization and Administration of Health, Physical Education, and Recreation (K-12) (KIN 4013) is an existing course that serves as a senior-level capstone course on the "administration of exercise-related professions." Typically the distinction between "administration" and "management" is the former refers to non-profit and the latter for-profit organizations. So, a for-profit perspective added to this course makes it another natural fit for Sport Management. The prerequisites in the course description do not include any exceptions. An exception for Business Administration - Sport Management Emphasis Majors will need to be included.

Sport Management Internship (SPTM 4993) is an initial step toward a critical capstone experience for Sport Management students. Feedback during the NASSM annual conference indicated the internship as essential for a Sport Management program. This will involve 400 hours of "hands-on" experience within the Sport Management industry. Internships are an example of "experiential education" that, frankly, the Hickingbotham School of Business has historically struggled with. It is a great idea in theory, but who actually manages it? Based on NASSM feedback, it is clear we will need to develop a good network of contacts placing Sport Management students. Then, someone will have to coordinate these internships (e.g., making contacts, verifying internships, managing interns). Since we are a new program, we will have to build this network from scratch and develop a position (likely part-time) for an internship coordinator. We had intended to submit a Strategic Initiative Grant to the Strategic Planning Committee in fall 2013 for this position, but decided this was premature. Our plan is to submit a grant proposal next fall. Even though we lack the formal structure we envision for internships, we want to offer it as an option for students who may have or develop connections to internships on their own.

## Catalog Description

After the "Marketing Emphasis" section on page 60, add:
$\qquad$
Select four of the following courses:

SPTM 4013 Big Data/Data Mining
SPTM 4023 Sport Law
LST 3013 Program Design and Management
KIN 4013 Organization and Administration of Health, Physical Education, and Recreation (K-12)
SPTM 4993 Sport Management Internship

After the "Marketing" section on page 65, add:

Sport Management (SPTM)

4013 Big Data/Data Mining. An introduction to the concepts of Big Data and methods of Data Mining. Subject content includes sports, politics, finance, marketing, psychology, and climate. Fall.

4023 Sport Law. The legal environment specific to the business of sport, including liability, contracts, and agencies. Spring.

4993 Sport Management Internship. This class is an applied integrative experience in which students will be placed under a mentor in the field outside the university setting. These will generally be 400 hours in length. Summer, On Demand.

Business
Administration

Replace ECON 2023 Principles of Microeconomics with a new course, ECON 1013 Survey of Economics, in the business core curriculum.

Students should have microeconomics before macroeconomics since the latter subject requires knowledge of the former. Because we are not able to offer enough sections of both courses, about fifty percent of students are forced to take macroeconomics first, which means that we have to teach micro to those students for about the first three weeks of each macro class. In addition, our students have fared poorly on the microeconomics portion of their exit exam for many years, in spite of efforts to "beef up" the microeconomics course. Analysis of our curriculum indicates that microeconomics is far more important than macroeconomics in preparing students for upper-level courses such as finance, marketing, organization behavior, and strategy.

The proposed solution is to offer a new course at the freshman level, ECON 1013 - Survey of Economics. This course would serve to emphasize microeconomics at the conceptual stage with a minimum of formal graphs and equations. Some macroeconomics would still be covered, but most of the semester would consist of microeconomic analysis.

This would require us to offer a junior-level course in Managerial Economics. Many of the topics that are now covered in Principles of Microeconomics would be covered more thoroughly and with more rigor in Managerial Economics. In this way, students would develop more analytical skills which they could apply to other upper-level courses. The hope is that double-exposure to the most important microeconomic concepts would enable them to "stick" in a way that the single exposure through Principles of Microeconomics is not providing. In addition, we would not be teaching two dramatically different populations of students: those who have had the prerequisite and those who have not. Everyone would have had the introductory economics course first.

## Catalog Description

ECON 1013 Survey of Economics. The laws of economics, with applications of each, are presented. Both the micro and macro views are covered, with more emphasis placed on microeconomics. The laws of supply and demand, principle of parsimony, and marginal analysis are among the topics covered, with the emphasis on student learning rather than economic reference. This course serves as a prerequisite for ECON 3033 Managerial Economics. Fall, Spring.

Change requirements for:
-"Business Core" - page 57 - from ECON 2013 Principles of Macroeconomics to ECON 1013 Survey of Economics.

- "Accounting, Spring (Year 1)" - page 58 - from ECON 2023 Microeconomics to ECON 1013 Survey of Economics
- "Business Administration, Spring (Year 1)" - page 60 - from ECON 2023 Microeconomics to ECON 1013 Survey of Economics
-"Requirements for Minors" - page 61 - from ECON 2013 Principles of Macroeconomics to ECON 1013 Survey of Economics

Change prerequisites for:

- BUAD 3103 Global Business - from ECON 2013 to ECON 1013
- ECON 3013 Intermediate Microeconomics - from ECON 2013, 2023 to ECON 1013
- ECON 3023 Intermediate Macroeconomics - from ECON 2013, 2023 to ECON 1013
- ECON 4013 History of Economic Thought - from ECON 2013, 2023 to ECON 1013
- FINN 3003 Financial Institutions - from ECON 2013, 2023 to ECON 1013
- FINN 3013 Corporate Financial Management - from ECON 2013, 2023 to ECON 1013
- MKTG 3033 Principles of Marketing - from ECON 2013, 2023 to ECON 1013


## Business

Administration

Change time offering of ECON 2013 Principles of Macroeconomics from "Fall, Spring" to "On Demand."
Pending acceptance of two proposed new courses - ECON 1013 Survey of Economics and ECON 3033

Managerial Economics - ECON 2013 Principles of Macroeconomics and ECON 2023 Principles of Microeconomics would no longer be offered in fulfillment of business core requirements. Instead, ECON 1013 and ECON 3033 would be offered each semester. This change is in response to two observations: 1) poor performance in microeconomics on exit exams given to business seniors, and 2) the difficulty in scheduling students to take microeconomics before macroeconomics because of too few sections of both courses. The latter situation has resulted from insufficient personnel to offer two principles of economics courses in sequence each semester.

## Catalog Description

2013 Principles of Macroeconomics. Economic resources, capitalism, supply and demand, business organization, the economic function of government, national income and gross domestic product, unemployment, inflation, consumption, saving, investment, the monetary and banking system, central banking, monetary and fiscal policy, stagflation, supply-side economics and economic growth. On Demand.

## Business

Administration
short form

## Change time offering of ECON 2023 Principles of Microeconomics from "Fall, Spring" to "On Demand."

Pending acceptance of two proposed new courses - ECON 1013 Survey of Economics and ECON 3033 Managerial Economics - ECON 2013 Principles of Macroeconomics and ECON 2023 Principles of Microeconomics would no longer be offered in fulfillment of business core requirements. Instead, ECON 1013 and ECON 3033 would be offered each semester. This change is in response to two observations: 1) poor performance in microeconomics on exit exams given to business seniors, and 2) the difficulty in scheduling students to take microeconomics before macroeconomics because of too few sections of both courses. The latter situation has resulted from insufficient personnel to offer two principles of economics courses in sequence each semester.

## Catalog Description

2023 Principles of Microeconomics. The economics of the firm, price and output determination, the law of supply and demand, elasticity, utility, indifference analysis, cost of production, monopoly, and other forms of imperfect competition, marginal productivity and income distribution (wages, rent, interest, and profit), antitrust laws, labor practices, international trade and comparative advantage, and the balance of payment and exchange rates. On Demand.

## Business <br> Administration

Replace ECON 2013 Principles of Macroeconomics with a new course, ECON 3033 Managerial Economics, in the business core curriculum.

This course is designed as a follow-up course to the proposed course, ECON 1013 Survey of Economics. Students have fared poorly on the microeconomics portion of their exit exam for many years, in spite of efforts to "beef up" the microeconomics course. Analysis of our curriculum indicates that microeconomics is far more important than macroeconomics in preparing students for upper-level courses such as finance, marketing, organization behavior, and strategy. The proposed solution is to offer a new course at the junior level, ECON 3033 Managerial Economics. This course would serve to emphasize microeconomics at the analytical stage using tools of mathematical optimization, game theory, decision analysis, and regression analysis. The hope is that double-exposure to the most important microeconomic concepts would enable them to "stick" in a way that the single exposure through Principles of Microeconomics is not providing. Also, our offering analytical methods in microeconomics would serve students better and make them more competitive with graduates of other universities who are likely to have had Managerial Economics instead of just Principles of Microeconomics like our students have had in the past.

## Catalog Description

ECON 3033 Managerial Economics. Tools of microeconomic analysis for managers are presented. Techniques such as elementary optimization, game theory, linear regression, and decision analysis are developed. Students are expected to apply analytical tools to problems facing managers.
Prerequisites: ECON 1013 Survey of Economics, BUAD 2033 Statistics for Business and Economics. Fall, Spring

Change requirements for:
-"Business Core" - page 57 - from ECON 2023 Principles of Microeconomics to ECON 3033 Managerial Economics

- "Accounting, Fall (Year 2)" - page 58 - from ECON 2013 Macroeconomics to BUAD 2033 Business Statistics
- "Accounting, Spring (Year 2)" - page 58 - from BUAD 2033 Business Statistics to ECON 3033 Managerial Economics
-"Business Administration, Fall (Year 2)" - page 61 - from ECON 2013 Macroeconomics to BUAD 2033 Business Statistics
- "Business Administration, Spring (Year 2)" - page 58 - from BUAD 2033 Business Statistics to ECON 3033 Managerial Economics
- "Requirements for Minors, Business Administration Minor (non-business majors)" - page 61 delete ECON 2023 Principles of Microeconomics


## Huckabee School of Education

| Education (EDFN) | Replace EDFN 1001 Freshman Seminar with a new course, EDFN $1 \times x 2$ Introduction to Education. <br>  <br> All students considering education need to have a more in-depth understanding of the education <br> profession. The new course will include a five-hour field experience in education settings as well as a <br> Little Rock field trip to the Capitol and the Clinton Presidential Library to build an understanding of the <br> relationship of government, politics, and education. Current trends and issues will also be discussed. <br> Catalog Description$\quad$EDFN $1 \times x 2$ Introduction to Education. This course provides an overview of the education profession <br> and the impact of government, politics, and society issues on education. Trends and issues in <br> education will be highlighted. The course includes five hours of field experience in educational settings. <br> There is also a field trip to Little Rock visiting the Capitol and the Clinton Presidential Library. Fall and <br> Spring. |
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## Education (EDFN) Add a new course, EDFN 2xx2 Teaching Students from Multilingual and Diverse Backgrounds.

While English is the dominant language in most classrooms in which our candidates will be placed, many children who come to school have a different mother tongue. Teacher education candidates need strategies for assisting English Language Learners who are assigned to their classrooms. While other courses address the concerns of ELL students, a more intentional focus is needed to strengthen the teacher education program in this area. Further, several of our teacher education candidates graduate and teach outside of the United States.

## Catalog Description

EDFN 2xx2 Teaching Students from Multilingual and Diverse Backgrounds. This is a methods course designed to assist teacher education candidates to acquire strategies to assist English Language Learners. Fall, Spring

## Education (EDFN) Add a new course, EDFN 2xx3 Professional Writing in Education.

This satisfies the discipline-specific writing course requirement that is in lieu of CORE 1053 Composition II. Also, for accreditation purposes, a second composition course is needed to demonstrate competency in writing skills.

## Catalog Description

EDFN 2xx3 Professional Writing in Education. Composition skills particularly needed for education majors is the focus of this class. Types of writing include lesson plans, article summaries, reflections, and research papers with APA formatting. Fall, Spring

| Education (EDFN) | Revise the course content and description for EDFN $\mathbf{2 0 1 2}$ Instructional Technology to include how to <br> develop online courses. |
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| short form | A new state law requires all Arkansas high school students to enroll in one online course as part of their <br> high school requirements. Therefore, it seems pertinent to prepare our teacher education candidates <br> with updated technology tools, appropriate implementation of technology tools, information on how to <br> evaluate online learning opportunities, and to provide strategies for teaching online courses. Further, <br> required professional development hours are often offered online and are sometimes provided by |


|  | professional peers. Therefore, adding a module concerning online education is an important addition <br> to this course. It will allow our candidates the ability to better evaluate existing programs and to be <br> able to assist schools in providing the required online course or possibly online faculty development for <br> their future colleagues. |
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| Catalog Description |  |
| EDFN 2012 Instructional Technology. A study of use of technology and digital learning courses of |  |
| faculty development venues in education and the integration of it into K-12 curriculum. Evaluation of |  |
| and exploration of quality online teaching/presentations will be an outcome of the course, as well. Fall, |  |
| Spring. Winter and/or May term as needed. |  |

## Education (ELED) Replace three courses - KIN 3053 Methods and Materials in Health and Physical Education in the Elementary School, MUED 2063 Music for Classroom Teachers, and ECED 3013 Public School Art - with a new course, ELED 2xx3 Art, Drama, Movement, and Music Integrated in the Elementary Classroom.

Separate courses in art, music and physical education will be omitted from the new K-6 licensure program and replaced with this integrated methods course. The K-6 licensure program requires content emphasis in reading, math, social studies, and science. There is also the need to contain the program to 120 hours. Helping teacher education candidates use the arts and movement to enhance learning in all areas as well as to include these skills for the enjoyment and humanizing elements they bring are goals of this course.

|  | Catalog Description <br> ELED 2xx3 Art, Drama, Movement, and Music Integrated in the Elementary Classroom. The Integration of art, drama, movement, and music in the elementary classroom provides both aesthetic enrichment and enhanced acquisition and retention of learning. An integrated approach is in keeping with current brain research which shows students learn holistically. The course will assist K-6 candidates learn strategies to teach in an interdisciplinary manner which can motivate and enhance meaning in all subjects. Spring and other semesters as needed. |
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| Education (ELED) <br> short form | Change ECED 2033 Literature for Early Childhood Classroom and Middle School Classrooms to ELED 2033 Literature for Elementary Classrooms. <br> The Arkansas Department of Education has changed from Early Childhood P-4 licensure to Elementary Education K-6 licensure, which requires changing this course title. <br> Catalog Description <br> ELED 2033 Literature for Elementary Classrooms. A survey of sources and types of reading materials available for children. Spring and other semesters as needed. |
| Education (ELED) <br> short form | Change ECED 3023 Teaching of Social Studies to ELED 3023 Teaching of Social Studies. <br> The Arkansas Department of Education has changed from Early Childhood P-4 licensure to Elementary Education K-6 licensure, which requires changing this course title. <br> Catalog Description <br> ELED 3023 Teaching of Social Studies. Methods and materials for teaching social studies with an emphasis on economics and the integration of multicultural education and inclusion into the social studies curriculum. Pre-requisite: Admission to Teacher Education. Fall and other semesters as needed. |
| Education (ELED) <br> short form | Change ECED 3093 Language and Literacy to ELED 3093 Language and Literacy. <br> The Arkansas Department of Education has changed from Early Childhood P-4 licensure to Elementary Education K-6 licensure, which requires changing this course title. <br> Catalog Description <br> ELED 3093 Language and Literacy. A study of emergent literacy, models, theories, and strategies of literacy instruction, including phonics and spelling. The field component of this class will provide the opportunity to apply the concepts and strategies studied. Pre-requisite: Admission to Teacher Education. Fall. |
| Education (ELED) | Replace ECED 3103 Techniques in Early Childhood Education with a new course, ELED 3xx3 Elementary Curriculum. <br> The Arkansas Department of Education has changed from Early Childhood P-4 licensure to Elementary Education K-6 licensure. Therefore, our curriculum course needs to focus on K-6 classrooms. <br> Catalog Description <br> ELED 3xx3 Elementary Curriculum. A study of content, teaching strategies, and materials to provide exemplary learning environments for children in grades Kindergarten through Grade Six. Discussion of curricula trends and issues as well as state and national standards will be the focus of this course. Prerequisite: Admission to Teacher Education. Spring and other semesters as needed. |

Education (ELED) \begin{tabular}{l}
Create a new course, ELED 4xx3 Diagnostic Reading and Disciplinary Literacy. It will be taught <br>
concurrently with the corresponding course for MSED majors. <br>

| The state legislature has made several changes and mandates for education. One of the changes is that |
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| all institutioss that prepare teacher candidates must include a Disciplinary Literacy Course. With the |
| change from P-4 licensure to K-6 licensure, there is also a greater need for diagnosing and creating |
| meaningful reading instruction for students. Students generally have particularly more difficulty |
| reading textbooks in the content areas of social studies and science. Raising awareness of literacy |
| needs and ways to meet the needs is a focus of this class. To diagnose why the reading is more difficult |
| can help teachers and students to find strategies to help students acquire the skills needed in particular |
| disciplinary reading areas. While teacher education candidates in Elementary and Middle School do |
| take a course Reading and Writing in the Content Area, the course is more about general strategies for |
| Reading and Writing, without the more in depth diagnostic strategies that the Diagnostic Reading and |
| Disciplinary Literacy course will cover. | <br>


| Catalog Description |
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| ELED 4xx3 Diagnostic Reading and Disciplinary Literacy. Use of informal reading inventories, |
| :--- |
| standardized reading tests, and other sources will be presented and implemented to assist students |
| with disciplinary literacy and reading for pleasure. Candidates will benefit from learning strategies to | <br>

assist students with reading tasks in the various disciplines thus creating disciplinary literacy. Teacher <br>
education candidates will prepare a case study for a student after implementing various diagnostic <br>
tests to assist a student in an area of disciplinary literacy. Pre-requisite: Admission to Teacher <br>
Education. Fall and other semesters as needed.
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| Education (ELED) | Change ECED 4023 Reading and Writing in the Content Areas to ELED 4023 Reading and Writing in the <br> Content Areas. |
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## short form

The Arkansas Department of Education has changed from Early Childhood P-4 licensure to Elementary Education K-6 licensure, which requires changing this course title.

## Catalog Description

ELED 4023 Reading and Writing in the Content Areas. A study of the integration of reading and writing in the content areas, with emphasis on vocabulary strategies and process writing. The field component of his class will provide the opportunity for teacher education candidates to apply a variety of reading and writing strategies. Pre-requisites: ELED 3093 or permission of the Department Chair and admission to Teacher Education.

| Education (ELED) | Change ECED 4043 Practicum in Early Childhood Education and Classroom Management to ELED 4043 <br> Practicum in Elementary Education and Classroom Management and adjust the pre-requisites. |
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| short form | The Arkansas Department of Education has changed from Early Childhood P-4 licensure to Elementary <br>  <br> Education K-6 licensure, which requires changing this course title and adjusting the pre-requisites. |
| Catalog Description |  |$\quad$| ELED 4043 Practicum in Elementary Education and Classroom Management. Directed practical |
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| experiences in working with children individually and in small groups in classroom learning |
| environments. Pre-requisites: EDFN 2003, Admission to Teacher Education, and ELED 3xx3 Elementary |
| Curriculum or permission of the Department Chair. Fall and other semesters as needed. |


| Education (ELED) | Change ECED 4733 Pedagogy in Early Childhood Mathematics to ELED 4733 Pedagogy in Elementary Mathematics. |
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| short form |  |
|  | The Arkansas Department of Education has changed from Early Childhood P-4 licensure to Elementary Education K-6 licensure, which requires changing this course title. |
|  | Catalog Description |
|  | ELED 4733 Pedagogy in Elementary Mathematics. A course for K-6 teacher education candidates that includes theories, activities, curricula, and new developments in teaching mathematics to children at the elementary level. Open only to Elementary Education majors. Pre-requisite: Math 3023. Fall and other semesters as needed. |
| Education (MSED) | Change MSED 2033 Literature for Early Childhood Classroom/Middle School Classrooms to MSED 2033 Literature for Middle School Classrooms. |
| short form |  |
|  | Middle School content courses must be identified separately from Elementary courses as part of demonstrating a distinct track for Middle School content. |
|  | Catalog Description |
|  | MSED 2033 Literature for Middle School Classrooms. A survey of sources and types of reading materials available for students in middle school. Spring. |


| Education (MSED) | Change MSED 3013 Young Adolescent Development, Middle Level Philosophy, and School Organization <br> to MSED 4xx3 A Practicum in Young Adolescent Development, Middle Level Philosophy, and School |
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| short form | Organization. |

This course is a practicum and ideally needs to be taken after the Middle School methods course.

## Catalog Description

MSED 4xx3 A Practicum in Young Adolescent Development, Middle Level Philosophy, and School Organization. Designed to enable candidates to understand the principles of young adolescent development and to better inform teacher decision making for middle level students. Candidates will begin to develop a philosophy based on National Middle School Association (NMSA) Standards, including an intense field experience component. The course will also provide an overview of the basis for middle school organization and appropriate teaching strategies characteristic of a middle level program, including scheduling, curriculum design, and strategies for working with diverse populations, Prerequisite: Admission to Teacher Education. Pre-requisite: Admission to Teacher Education. Fall, Spring.

## Education (MSED) Create a new course, MSED 4xx3 Diagnostic Reading and Disciplinary Literacy. It will be taught

 concurrently with the corresponding course for ELED majors.The state legislature has made several changes and mandates for education. One of the changes is that all institutions that prepare teacher candidates must include a Disciplinary Literacy Course. With the change from P-4 to K-6 there is also a greater need for diagnosing and creating meaningful reading instruction for students. Students generally have particularly more difficulty reading textbooks in the content areas of social studies and science. Raising awareness of literacy needs and ways to meet the needs is a focus of this class. To diagnose why the reading is more difficult can help teachers and students to find strategies to help students acquire the skills needed in particular disciplinary reading areas. While teacher education candidates in Elementary and Middle School do take a course Reading
and Writing in the Content Area, the course is more about general strategies for Reading and Writing, without the more in depth diagnostic strategies that the Diagnostic Reading and Disciplinary Literacy course will cover.

## Catalog Description

MSED 4xx3 Diagnostic Reading and Disciplinary Literacy. Use of informal reading inventories, standardized reading tests, and other sources will be presented and implemented to assist students with disciplinary literacy and reading for pleasure. Candidates will benefit from learning strategies to assist students with reading tasks in the various disciplines thus creating disciplinary literacy. Teacher education candidates will prepare a case study for a student after implementing various diagnostic tests to assist a middle school student in an area of disciplinary literacy. Pre-requisite: Admission to Teacher Education. Fall and other semesters as needed.

## Education (MSED) Reorganize Middle School concentrations into four areas. Teacher education candidates must select any two of the following: English/Language Arts, Math, Science, and Social Studies.

## short form

Due to licensure changes, Middle School teacher education candidates must choose two concentration areas and earn a minimum of 18 credit hours in each chosen area: English/Language Arts, Math, Science, and Social Studies.

## Catalog Description

Middle School Education majors must choose any two of the following concentration areas to meet requirements for Middle School licensure:

English/Language Arts - 18 hours
ENGL 2013 English Studies
ENGL 2023 Advanced Grammar
ENGL 3003 Advanced Composition
ENGL 3xx3 Mythology
ENGL 4223 Shakespeare

Choose one:
ENGL 3xx3 English Literature I
ENGL 3xx3 English Literature II
ENGL 3xx3 English Literature III
ENGL 3103 American Literature I
ENGL 3113 American Literature II
ENGL 4023 History of the English Language/Linguistics
ENGL 3303 Children's and Young Adult Literature

Mathematics - 18 hours
MATH 1073 Discrete Math
MATH 2053 Math form Middle School Teachers I
MATH 2063 Elementary Statistics
MATH 3083 History of Mathematics
MATH 3313 Math for Middle School Teachers II
MATH 4113 Methods of Middle School Math

Science - 22 hours*
BIOL 1014 General Biology (Zoology)
BIOL 1024 General Biology (Botany)
CHEM 1024 Introduction to Chemistry
PHYS 1004 Introduction to Physics
NSCI 2003 Earth Science
NSCI 3003 Natural Science for Elementary/Middle School Teachers

|  | [ ${ }^{*}$ Candidates will have an additional three hours in the Scientific Connections portion of the Flexible Core. The four-hour courses listed above are expected to meet the Scientific Inquiry requirement in the Common Core per conversations with Dr. Tim Knight.] <br> Social Studies - 18 hours <br> HIST 1003 World Civilization to 1600 <br> HIST 1013 World Civilization Since 1600 <br> HIST 2003 US History to 1877 <br> HIST 2013 US History Since 1877 <br> HIST 4163 Arkansas History <br> Choose one: <br> GEOG 1003 or Introduction to Human Geography <br> GEOG 2003 Natural Resources: Environments/Survival |
| :---: | :---: |
| Kinesiology and Leisure Studies short form | Change CORE 1022 Concepts of Wellness to KIN 1xx2 Concepts of Wellness. <br> Departmental prefixes are used to identify courses on the "Physical Well-Being" menu of the Flexible CORE. <br> Catalog Description <br> KIN 1xx2 Concepts of Wellness. Students will examine their fitness needs, producing an exercise program and lifetime personal fitness goals. Fall, Spring. |
| Kinesiology and Leisure Studies short form | Change the course description for KIN 2073 Health and Safety. <br> This change better reflects what is actually being taught in the course and better describes the learning outcomes for the new Flexible CORE curriculum. <br> Catalog Description <br> KIN 2073 Health and Safety. A course that deals with the principles of personal health, personality, and interpersonal relationships. Issues in nutrition, exercise, mental health and mental illness, stress, domestic violence, prevention of chronic diseases, as it relates to elementary and secondary schools. Fall and Spring. |
| Kinesiology and Leisure Studies | Change KIN 2901 Methods of Strength Training to a two-hour course, KIN 2092 Methods of Strength Training and Conditioning. <br> Because this course is a requirement for an emphasis in fitness, Methods of Strength Training and Conditioning is a more appropriate title. <br> To better prepare our majors seeking an emphasis in fitness, pre-professional, and recreation and sports ministry, the added course materials merit the awarding of an additional hour of academic credit. Currently, two-thirds of our majors are seeking an emphasis in fitness. Many aspire to become strength and conditioning coaches and/or personal trainers. The additional course content will assist them as they seek national certifications. <br> Catalog Description <br> KIN 2902 Methods of Strength Training and Conditioning. A study of the methodology of teaching various strength and conditioning programs to prepare strength coaches, personal trainers, and health club professionals. Fall, Spring. |

## Kinesiology and Leisure Studies

## Kinesiology and Leisure Studies

Delete KIN 3053 Methods and Materials in Health Physical Education in the Elementary School, merge its content with KIN 4073, and change the course title of KIN 4073 from Methods, Evaluation, and Materials in Physical Education to Methods and Materials in Physical Education, Wellness, \& Leisure (K12).

The Education Department is proposing a change of degree requirement for Early Childhood in which KIN 3053 Methods and Materials in Health and Physical Education in the Elementary School will no longer be required for a degree in Early Childhood.

By including course requirements for KIN 3053 into the course requirements for KIN 4073, students seeking an emphasis in teaching Physical Education, Wellness, and Leisure would receive K-12 licensure by taking KIN 4073 and two additional courses at Henderson State University.

With the new course requirements, a name change to Methods and Materials in Physical Education, Wellness, \& Leisure ( $\mathrm{K}-12$ ) is more reflective of the course and the licensure area.

We can accommodate students needing the course by offering it every two years.

## Catalog Description

KIN 4073 Methods and Materials in Physical Education, Wellness, \& Leisure (K-12). A course in program planning and techniques of teaching physical education, wellness, and leisure in kindergarten, elementary, middle, and secondary school settings. Prerequisites: KIN 1003, 1113, 2093. Fall of oddnumbered years.

Create a new course, LST 2xx3 Outdoor Leisure Pursuits, and include it in the "Physical Well-Being" Flexible CORE menu.

The new course, LST 2xx3 Outdoor Leisure Pursuits, is designed to introduce outdoor leisure activities along with basic skills and techniques needed to continue life-long participation leading to the development of a healthier active lifestyle. It will also expose students to a variety of activities.

This course is more appropriate for the "Physical Well-Being" Flexible CORE menu than LST 3083, which is designed for KIN/LST majors.

## Catalog Description

LST 2xx3 Outdoor Leisure Pursuits. This course is designed to introduce outdoor leisure activities, along with basic skills and techniques needed to continue life-long participation leading to the development of a healthier active lifestyle. The student will gain information about outdoor recreation resources in the community, and learn to make full use of them. Activities which may be incorporated course include: hiking, geo caching, orienteering, disc sports, indoor climbing, canoeing, cycling, mountain biking, Leave No Trace environmental, archery, and teambuilding games and initiatives. Ability to participate and a demonstrated ability to swim. Fall, Spring.

## Kinesiology and

 Leisure Studiesshort form

## Remove LST 3083 Outdoor Leisure Pursuits from the "Physical Well-Being" Flexible CORE menu and

 change its title to Outdoor Adventure.LST 3083 is a course requirement for students majoring in KIN/LST seeking an emphasis in recreation or recreation and sports ministry. It is designed to show our majors how to teach outdoor activities. Changing its title to Outdoor Adventure distinguishes it from the proposed new course, LST 2xx3 Outdoor Leisure Pursuits. The course description, objectives, and student learning outcomes will remain the same.

## Catalog Description

LST 3083 Outdoor Adventure. This course is designed to explore the foundations of adventure theory and wilderness leadership. Students learn how to teach outdoor leisure activities. Concepts of judgment, decision making, leadership, and environmentally sensitive practices are introduced. Required field trips include indoor climbing, hiking and canoeing. Prerequisites: KIN 1003 or consent of instructor; and a demonstrated ability to swim. Spring.

## School of Interdisciplinary Studies

## OBU Connections

Replace CORE 1012 Introduction to the Liberal Arts with a new course, CORE 1012 OBU Connections. Academic content from the current Introduction to the Liberal Arts course and OBU Experience will be included in OBU Connections, and OBU Experience will cease. Other components from OBU Experience will be incorporated into WOW.

During the discussions about CORE revision, the subgroup charged with reviewing Introduction to the Liberal Arts agreed that the course should be restructured, based on discussion and feedback from the CORE review group proposals (Spring 2012). The proposed course is structured in two parts: a common content section of approximately five weeks comprised of material from Introduction the Liberal Arts and the OBU Experience, followed by a ten-week intensive focus on a topic chosen by the instructor and related to his or her interests. One goal here is a better balance between common content and flexibility to allow instructors to draw on their expertise and interest to introduce the idea of liberal arts in a way more creative and engaging to students.

## Catalog Description

CORE 1012. OBU Connections. This course will introduce first-year students to higher education in the context of a liberal arts education. Students will develop skills necessary for academic success, explore Ouachita's mission as a Christian college in the liberal arts tradition, and work creatively and collaboratively with peers on an intensive and interdisciplinary study of a topic chosen by the instructor. Fall, Spring.

Add a new course CORE 2xx4 Scientific Inquiry. Delete CORE 2314 Physical Science and CORE 2324 Life Science.

In order to effectively participate in discussions and decisions about many of today's most pressing issues, OBU graduates will need more than a passing familiarity with scientific reasoning. In addition to developing a foundational understanding of scientific principles, students need to be able to apply those principles to other areas of their lives. They must be able to read and understand scientific analysis as presented in the media and in popular scientific literature. They must be able to critically evaluate scientific reporting to identify biases, to evaluate the quality of sources, and to assess the validity of scientific claims. They must be able to intelligently discuss the ethical and political implications of new scientific discoveries.

## Catalog Description

CORE 2xx4 Scientific Inquiry. Students enrolled in this sophomore-level course will be introduced to big ideas in natural science, will learn how scientific information is gathered and analyzed, and will use this knowledge to interact with issues of contemporary scientific importance. This course will meet three hours per week in the classroom and two hours per week in the laboratory. Prerequisite: Completion of the Analytic and Quantitative Reasoning requirement. Fall, Spring.

## Patterson School of Natural Sciences

| Biology | Add a new course, BIOL 2604 Applied Microbiology. <br>  <br> The primary reason for this change is to better serve our pre-Nursing and Allied Health students. Many of <br> our pre-Nursing and Allied Health students take two years of prerequisite courses at OBU (including a <br> microbiology course) before transferring to the appropriate professional school. The current Microbiology <br> course (BIOL 3014) has prerequisite requirements of eight hours of chemistry and junior standing, and the <br> students that transfer to professional school after two years at OBU may have difficulty meeting these <br> requirements. The proposed Applied Microbiology course lacks both of these prerequisite requirements <br> and will better fit into the two-year schedule of a pre-Nursing or Allied Health student, yet still fulfills the <br> microbiology prerequisite requirement of many Nursing and Allied Health programs. |
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## Catalog Description

BIOL 2604 Applied Microbiology. An introduction to a study of bacteria and other life forms from the standpoint of classification, morphology, physiology and environmental factors, and to the relation of bacteria to water, foods, industrial processes and diseases. Emphasis is given to clinical and applied techniques of microbiological processes for pre-nursing and allied health students. This course may be counted toward a major or minor in Biology, but Biology credit may not be received for both BIOL 2604 and BIOL 3014. Prerequisite: Four Hours of Biology. Fall.

## Biology Add a new course, BIOL 3863 Tropical Ecology Hawaii. This course will satisfy the Scientific Connections

 requirement and may count toward a degree in biology.This proposed course will offer students the opportunity to explore the unique biology and culture of Hawaii, making it an ideal interdisciplinary, science-focused course for the Scientific Connections menu.

## Catalog Description

BIOL 3863 Tropical Ecology Hawaii. This elective advanced topics course will expose students to the Polynesian culture and various ecosystems found in Hawaii. A ten-day field trip to the islands of Hawaii and Oahu during spring break is a required component of the course; this trip will incur an additional travel cost. This course will satisfy the Scientific Connections requirement. On Demand.

| Biology | Delete BIOL 4001 Experimental Research and replace it with a new-course, NSC1-4x*1 Experimental-Research in NaturalScience. |
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| WITHDRAWN12-02-2013 |  |
|  | Performing independent experimental research and presenting the findings of this research allows students to mature in their critical thinking and communication abilities, often beyond the abilities developed through traditional coursework. Thus, individual experimental research is required for completion of the bachelor of science degree in biology. However, the critical thinking and communication skills fundamental to independent research are not specific to biological research. The creation of NSC1 $4 \times \times 1$ offers biology students the ability to count experimental research in any program in the Patterson School of Natural Sciences toward the BS degree in biology. |
|  | Gatalog Description |
|  | NSCI-4xx1 Experimental Research in Natural Science. A course in lab or field research in any area of the School of Natural Sciences. A student wishing to receive credit for research experiences through other programs or institutions must receive pre-approval from the Department Chair. Prerequisites: BIOL 1014 and 1024; and consent of instructor. Fall, Spring. $18$ |

Requirements for a major in Biology - B.S. degree: BIOL 1014 and 1024 two courses from 3034, 4054, 4064, and additional BIOL hours to total twenty-nine hours in the department. Additionally, NSCl $4 \times x 1$ and eight hours of chemistry are required. A minor of at least eighteen hours must be completed in Chemistry, Computer Science, Mathematics, Physics or Psychology. Experimental Research (NSCI 4xx1) is waived upon completion of a lab-based Senior Thesis for those participating in the Honors program.

| Biology | Change the time offering of BIOL 4013 Histology and Microtechniques to spring. |
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| short form | The Biology Department offers three other Junior/Senior courses in the fall semester-Microbiology (BIOL <br> 3014), Ecology (BIOL 3034), and Cell and Molecular Biology (BIOL 4064). Consequently, a student may want <br> to take Histology and Microtechniques, but may not be able to fit it into his/her fall schedule. Moving <br> Histology and Microtechniques to the spring semester will make it available to the largest possible number <br> of biology students. |
| Catalog Description |  | | BIOL 4013 Histology and Microtechniques. Lecture and laboratory dealing with primary tissues of |
| :--- |
| vertebrate animals. A practical course for laboratory technicians, pre-medical students, and other Biology |
| students. Prerequisite: BIOL 2014 and 2024 or consent of instructor. Spring. |

## Biology Add a new course, BIOL 4243 Infectious Disease.

This course will offer students the opportunity to learn about subjects related to infectious diseases at a greater level of detail than is available within current biology courses. Further, adding this course will increase the number of elective Junior/Senior course offerings in the Biology Department.

## Catalog Description

BIOL 4243 Infectious Disease. This course is meant to cover general and specific principles of immunology, epidemiology, pathogenic microbiology, and parasitology. The course relies heavily on student interpretation of scientific literature. Prerequisites: BIOL 3014 or 2604, eight hours of Chemistry, Junior standing. Spring of odd years.

## Chemistry Change CHEM 1024 Introductory Chemistry to CHEM 1024 Fundamentals of Chemistry, and modify the course description to better communicate what is taught in the course.

## short form

The introductory chemistry sequence (CHEM 1024 and CHEM 1034) has long been a prerequisite for nursing schools. Recently, some nursing schools have begun changing their requirements to only one chemistry course. The University of Arkansas School of Medical Sciences (UAMS), in particular, made such a change this year. Because of our vague course description and the fact that "introductory" is often used to describe remedial courses, the UAMS review board indicated CHEM 1024 would no longer be an acceptable prerequisite. After many emails and conversations, the board acknowledged that the material taught in CHEM 1024 was acceptable but that the course title and description needed to be revised. We developed the revision after reviewing descriptions and titles of similar courses at other institutions.

## Catalog Description

CHEM 1024 Fundamentals of Chemistry. Introductory course primarily for students in dietetics, speech pathology, nursing, and dental hygiene. Designed to provide students with an understanding of basic chemical principles and their application to relevant problems in the allied health professions. The course may not be counted toward a major or minor in chemistry. Lecture three hours, laboratory two hours per week. Fall.

| Chemistry <br> short form | Change CHEM 1034 Introductory Organic and Biological Chemistry to CHEM 1034 Fundamentals of Organic and Biological Chemistry, and modify the course description to better communicate what is taught in the course. <br> Because of the proposed change to CHEM 1024, we thought we should do likewise with CHEM 1034 to show these courses are part of the same sequence and to clarify the course content. <br> Catalog Description <br> CHEM 1034 Fundamentals of Organic and Biological Chemistry. Designed to follow CHEM 1024. This course continues to build connections between chemical principles and the allied health professions, focusing on chemistry within the body, food, and medicine. Topics include basic structure of organic molecules, chemical reactions, and enzyme structure and function. The course may not be counted toward a major or minor in chemistry. Lecture three hours, laboratory two hours per week. Prerequisite: CHEM 1024 or CHEM 1004. Spring. |
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| Communication <br> Sciences and <br> Disorders | Add a new course, CMDS 1xx1 First-Year Seminar in CMDS. <br> This new course would help initiate contact with first-year students interested in the major of CMDS. The intent is to assist with retention and increase interest in the major. <br> Catalog Description <br> CMDS 1xx1 First-Year Seminar in CMDS. An introduction to the field of speech-language pathology designed to provide an overview of career opportunities, career paths, as well as the skills and/or various certification standards necessary to work in various work settings. Fall, Spring. |
| Communication <br> Sciences and Disorders <br> short form | Change CMDS 4040.5 Clinical Observation to CMDS 3xx1 Clinical Methods: Observation. <br> This change better reflects the true nature of the course content and current disciplinary practice. <br> Catalog Description <br> CMDS 3xx1 Clinical Methods: Observation. An overview of professional practices in the field of communication sciences and disorders. Topics may include methods of service delivery, code of ethics, and treatment of a variety of communication disorders. Completion of 25 hours of supervised observation is required. Fall. |
| Communication <br> Sciences and Disorders <br> short form | Change CMDS 3003 Clinical Management to CMDS 3xx2 Clinical Methods: Practicum I. <br> This change better reflects the true nature of the course content and current disciplinary practice. <br> Catalog Description <br> CMDS 3xx2 Clinical Methods: Practicum I. Overview of the clinical process for the remediation of communication disorders. Supervised clinical practicum experience is required. Prerequisites: CMDS 3xx1 Clinical Methods: Observation and completion of 25 hours of supervised observation. Spring. |


| Communication <br> Sciences and Disorders <br> short form | Change CMDS 3023 Vocal Anatomy to CMDS 3023 Anatomy and Physiology of Speech, Language, and Hearing. <br> This change better reflects the true nature of the course content and current disciplinary practice. <br> Catalog Description <br> CMDS 3023 Anatomy and Physiology of Speech, Language, and Hearing. Normal anatomy, physiology, and neurology of speech, language, and hearing. Specific breakdowns in anatomical, physiological, \& neurological functioning resulting in communication disorders. Fall of even-numbered years. |
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| Communication <br> Sciences and Disorders <br> short form | Change CMDS 3063 Language Development to CMDS 3063 Normal Speech and Language Development. <br> This change better reflects the true nature of the course content and current disciplinary practice. <br> Catalog Description <br> CMDS 3063 Normal Speech and Language Development. Normal speech and language acquisition and growth from first vocalization to adult grammatical forms. Includes the areas of language prerequisite skills, phonology, morphology, semantics, syntax, and pragmatics. Fall of odd-numbered years. |
| Communication <br> Sciences and Disorders | Add a new online course elective, CDMS 4023 Introduction to Aural Rehabilitation. <br> For those students who plan to attend graduate school, most graduate programs require this course to be completed at the undergraduate level; our students enter graduate school with this deficiency. By delivering the course online, we can meet the needs of our students as well as students enrolled in a graduate program. In the 2013 May Term, we taught the course online with an enrollment of 10 ( 5 OBU May 2013 OBU graduates and 5 graduate students.) This course is an elective, not a requirement for the major or minor. <br> Catalog Description <br> CMDS 4023 Introduction to Aural Rehabilitation. An introduction to the principles of habilitation/rehabilitation of communication disorders related to hearing impairment. Effects of hearing loss on perceptual, cognitive, communicative, educational, occupational, social, and emotional aspects of life, for all age ranges, are studied. Junior standing or consent of instructor. Online. |
| Communication <br> Sciences and Disorders <br> short form | Change CMDS 4140.5-4143 Clinical Practicum to one course, CMDS 4141 Clinical Methods: Practicum II. <br> This change better reflects the true nature of the course content and current disciplinary practice. <br> Catalog Description <br> CMDS 4141 Clinical Methods: Practicum II. Supervised clinical practicum experience that may include assessment, remediation, and treatment of a variety of communication disorders. (May be repeated for credit). Prerequisites: CMDS 1013, CMDS 2023, CMDS 3003 (with documented completion of 25 hours of supervised observation), overall grade point average of 2.50 and departmental approval. Fall, Spring. |

Communication
Sciences and Disorders

Change the additional requirements course electives for the CMDS major.

## Delete the following options:

- DIET 3203 (Nutrition Counseling \& Education)
- DIET 3083 (Community \& Life Cycle Nutrition)
- SPCM 1003 (Fundamentals of Public Speaking)
- SOCI 2023 (Introduction to Social Services)
- CMDS 3073/ENGL 3073 (Linguistics)

Add the following options:

- PSYC 1013 (General Psychology)
- SOCI 3013/PSYC 3013 (Social Psychology)
- SOCI 4073 (Medical Sociology)

These modifications reflect current disciplinary practice for course electives. Introduction to Social Services is listed in the catalog as "on demand." Course content for Linguistics is covered in other CMDS courses.

## Catalog Description

Choose two of the following: PSYC 1013, PSYC 3013/SOCI 3013, BIOL/PSYC 3064, NSCI 4002, SOCI 4073.

Communication Sciences and Disorders

Update the "Requirements for a major in Communication Sciences and Disorders" to reflect course name changes, additions, and deletions. These changes reduce the total number of required hours by 5.

Due to changes in course content and current disciplinary practice, requirements for the major in CMDS need to be updated.

## Catalog Description

Requirements for a major in Communication Sciences and Disorders: CMDS 1xx1, 1013, 2023, 3xx1, 3xx2, 3013 or $3113,3023,3063,4003,4013,4033,4053,4063$; choose two of the following: PSYC 1013, PSYC 3013/SOCl 3013, BIOL/PSYC 3064, NSCl 4002, SOCI 4073; eighteen hours in one related field. The requirement for a minor is waived.

Communication
Sciences and Disorders

Change the "Requirements for a minor in Communication Sciences and Disorders" as follows:
Delete:

- CMDS 3003 Clinical Management
- CMDS 3023 Vocal Anatomy
- CMDS 3063 Language Development
- CMDS 4053 Language Disorders

Add:

- CMDS 1xx1 First-Year Seminar
- CMDS 3xx1 Clinical Methods: Observation
- NSCI 4002 Medical Terminology
- Additional CMDS hours with departmental approval to equal a minimum of 18 hours

Due to changes in course content and current disciplinary practice, requirements for the minor in CMDS need to be updated.

## Catalog Description

Requirements for a minor in Communication Sciences and Disorders: CMDS 1xx1, CMDS 1013, CMDS 2023, CMDS 3xx1, NSCI 4002 and additional CMDS hours with departmental approval to equal a minimum of 18 hours.

Mathematics $\quad$| Modify the catalog description of the MATH 1003 College Algebra to provide a little more detail and to spell |
| :--- |
| out the specific ACT/SAT scores that serve as prerequisites for the course. |

We have revised the approach of the College Algebra course to emphasize problem-solving and mathematical modeling, while still meeting all of the course content standards required for the course to be accepted by Arkansas colleges and universities under the state transfer system. The revised description reflects these changes. The new course description also explicitly includes the ACT/SAT cutoff scores that serve as a prerequisite to the course.

## Catalog Description

MATH 1003 College Algebra. A study of functions and their use in elementary data analysis and mathematical modeling. The course will include a survey of the properties and uses of linear, exponential, logarithmic, quadratic, and polynomial functions, as well as an introduction to absolute value, piecewise, and rational functions. Additional topics will include transformation and composition of functions, as well as matrices and their use in the solution of linear systems. Prerequisite: An ACT Math score of 19 or higher, an SAT Math score of 460 or higher, or a grade of C or better in either ASKL 1013 or ASKL 1023. Fall, Spring.

## Mathematics

short form

Change the course prefix of Mathematics for the Liberal Arts from CORE 1033 to MATH 1033 (or other course number to be determined by the registrar). Modify the catalog description of the course to provide a little more detail and to spell out the specific ACT/SAT scores that serve as prerequisites for the course.

Under the revised CORE structure, only courses in the Common CORE will retain the CORE prefix. This moves the course into the MATH prefix in anticipation of its placement in the Analytic and Quantitative Reasoning menu. We think the revised course description will provide the Ouachita community with more information about the course, and we anticipate that the new course description will make the course content more clear to other colleges and universities.

## Catalog Description

MATH 1033. Mathematics for the Liberal Arts
Students will engage in a study of mathematical ideas and thinking, learning to solve problems and make decisions using sound quantitative reasoning. All students will study techniques of problem-solving, mathematical reasoning, the set of real numbers, sizes of infinity, and the use of analogy to explore fourdimensional geometry. Additional topics will be chosen by the instructor and may include the use of mathematics in art, additional geometric concepts, probability, and statistics. Prerequisite: An ACT Math score of 19 or higher, an SAT Math score of 460 or higher, or a grade of C or better in ASKL 1013 or ASKL 1023. Fall, Spring.

## Mathematics

Drop the four 1-hour Junior and Senior Mathematics Seminar courses and replace them with two new 3-hour courses. The first will be a course titled Mathematics for Secondary Teachers and will be taken by students majoring in secondary mathematics education. It will be offered every other fall semester in conjunction with the Methods course for the same audience. The second will be a course titled Mathematical Scholarship and will be taken in the spring of the senior year by all other mathematics majors.

In discussions with current and former students, we discovered that the students do not take the Mathematics Seminar as seriously as they should. Uniformly, those interviewed indicated that a 1-hour course does not feel as important and, therefore, takes lowest priority in their preparations. Because of this, the students' professional skills do not advance as much as they should over the four semesters. To remedy this, we propose reverting to the previous structure of a one-semester course focused on scholarship in mathematics (problem-solving, independent learning, and both oral and written communication) to be capped off by a presentation of a senior project. For education majors, we are following the recommendations of the Conference Board of the Mathematical Sciences. In The Mathematical Education of Teachers II, the CBMS calls for prospective secondary mathematics teachers to
take three courses that focus on high school mathematics from an advanced viewpoint. Aside from our Geometry course, we only offer such content as bits and pieces in other courses. Mathematics for Secondary Teachers would give students the opportunity to explore high school content in depth in the same semester that they are learning the methods of teaching this content, allowing for a very dynamic interplay between the two courses.

## Catalog Descriptions

Delete courses MATH 3301, 3311, 4401, and 4411 from the catalog and remove them from the requirements for all four mathematics degrees.

Add the following two courses to the catalog:

MATH 4xx3 Mathematics for Secondary Teachers. Further studies of the mathematical concepts underlying the traditional curriculum for secondary school mathematics. Prerequisite: Junior standing or consent of instructor. Fall of even-numbered years.

MATH 4yy3 Mathematical Scholarship. Students will engage in independent learning activities. These may include reading technical literature, working in a subject area for which the student has not had formal instruction, or continuing the study of a topic beyond the scope of previous coursework. Students will regularly present the results of their explorations in both written and oral form. Prerequisite: Senior standing or consent of instructor. Spring.

Add MATH 4xx3 to the list of degree requirements for the B.A. in Mathematics (Teaching Emphasis).

Add MATH 4yy3 to the list of degree requirements for the B.S. in Mathematics and the B.A. in Mathematics.
For the B.S. in Applied Mathematics, remove the phrase "either 3301 and 3311 or an interdisciplinary mathematics project" and add MATH 4 yy 3 to the list of required courses.

## Mathematics short form <br> Reduce the frequency of offering for Calculus I and Special Topics in Mathematics, increase the frequency of Elementary Statistics, and move the Differential Equations course to the opposite fall semester from its current schedule.

Calculus I enrollments have declined due to AP credit and changes in medical school requirements. Our largest class for the past five semesters has been only 13 students, and we expect no significant growth in the future. At the same time, Statistics enrollments have increased from 15 students a year to 45 students a year, and we expect more growth due to medical and other professional school requirements.

Placing Calculus I in the spring makes the most sense for the purpose of sequencing with Precalculus and Calculus II. Moving Differential Equations and reducing the number of offerings of Special Topics is done solely to balance the schedule and reduce the department's load to 16 courses per semester. This should eliminate the need for adjuncts unless the university sees a big growth in enrollment.

## Catalog Descriptions

Change the time of offering for the following courses:

- MATH 2014 Calculus I - from "Fall, Spring" to "Spring."
- MATH 2063 Elementary Statistics - from "Fall of odd-numbered years, Spring" to "Fall, Spring."
- MATH 3043 Differential Equations - from "Fall of even-numbered years" to "Fall of odd-numbered years"
- MATH 4423 Special Topics in Mathematics - from "Spring" to "Spring of even-numbered years."


## Mathematics

short form

Change the titles of MATH 2033 and MATH 3013 from Mathematics for Early Childhood Teachers I and II to Mathematics for Elementary Teachers I and II.

Due to changes in the state licensure program, the School of Education is changing its Early Childhood degree to an Elementary Education degree. The Dean of the School of Education has requested that we rename the two mathematics courses for these degrees to reflect the change.

## Catalog Descriptions

MATH 2033. Mathematics for Elementary Teachers I. An introduction to the mathematical concepts underlying the traditional computational techniques for elementary school mathematics. The course may not be counted toward a major or minor in Mathematics or for certification in secondary mathematics. Open only to Early Childhood Education majors. Prerequisite: Official placement or a grade of C or better in ASKL 1013. Fall.

MATH 3013. Mathematics for Elementary Teachers II. A continuation of the study of the rational and real number systems. Basic ideas of geometry, including plane regions and space figures, measurement, relations, functions and graphs, linear equations, probability, and logic. The course may not be counted toward a major or minor in Mathematics or for certification in secondary mathematics. Open only to Early Childhood Education majors. Prerequisite: MATH 2033 or consent of instructor. Spring.

Physics

Update the Physics curriculum as follows:

- Add ENGL 3013 Technical Writing to the requirements for the Physics major (Physics Option).
- Add a new course PHYS 3131 Electronic Circuits Laboratory and include it in the requirements for the Physics major (Engineering Physics Option).
- Add a new course PHYS 4xx3 Quantum Mechanics.
- Revise many of the Physics course descriptions, prerequisites, and time offerings.

Many engineering schools are now requiring a technical writing class to graduate. Since we offer one here and students can get credit in the new CORE for taking it, it seems a wise and efficient move to require this course for our majors.

In working out our dual program transfer agreements with the University of Arkansas, Louisiana Tech University, and Missouri University of Science and Technology, we have learned that these schools have changed their electric circuits classes to include a lab requirement. As such, they will not accept ours unless we add a lab component also. We propose adding a one-hour circuits lab that will run during the same semester as the regular circuits course. Only majors with an engineering option will be required to take the class, but it will be open to all physics students. The course will count as a credit toward any physics major, but it will only be a requirement for the engineering option. Since an additional hour will be required for the engineering option, we have reduced the number of physics elective hours from nine to eight. This course will be offered once every four semesters in the fall.

To better reflect what other schools are doing in the area of quantum mechanics, we propose breaking our quantum mechanics course into two parts. The second course can be added to the schedule without any load difficulties. Two years ago, our time offerings were adjusted to give us the flexibility of adding a threehour upper level course based on the interests of the students.

Feedback from cooperating schools indicates that our catalog descriptions and prerequisites need to be more detailed to make our dual program agreements operate more efficiently.

## Catalog Descriptions

B.S. degree (Physics Option): PHYS 1121, 2004, 2014, 3004, 3034, 4003, 4043, 4061, twelve additional
approved hours in physics (PHYS 4023 and 4053 are strongly recommended); 8 hours from CHEM 1004, 1014; BIOL 1014, 1024 subject to all existing prerequisites; MATH 2014, 2024, 3034, 3043, plus three additional Junior-Senior hours in Mathematics; CSCI 1044; ENGL 3013; a completion of a minor in chemistry, biology, computer science or mathematics.
B.S. degree (Engineering Physics Option): PHYS 1121, 2004, 2014, 2123, 2133, 3004, 3034, 3123, 3131, 4003, plus eight additional approved hours in physics. (1112 is strongly recommended); CHEM 1004, 1014; MATH 2014, 2024, 3034, 3043, plus three additional Junior-Senior hours in Mathematics; CSCI 1044; ENGL 3013; a completion of a minor in biology, chemistry, computer science, or mathematics.

PHYS 1112 Engineering Graphics. An introduction to engineering design and the related graphical tools used to communicate design concepts. Drawings will be created by hand and on computer using projections such as orthographic, isometric, and auxiliary. On Demand.

PHYS 1203 Astronomy. An introduction to basic stellar astronomy including a study of the planets, earth-moon-sun relationships, stars, and galaxies; the history of astronomy, and contemporary theories and observations. On Demand.

PHYS 2123 Statics. Equilibrium states are studied by analyzing the forces and torques on both two and three dimensional rigid bodies. Topics include: structural analysis, internal forces, and friction. Prerequisite: PHYS 1004 and Math 2014 or PHYS 2004. [CAC-O] Fall.

PHYS 2133 Dynamics. A study of the kinematics and kinetics of a particle and of rigid bodies in two and three dimensions. Analysis will include force, energy, and momentum methods. Prerequisite: PHYS 2123. Spring of even-numbered years.

PHYS 3004 Introduction to Modern Physics. An introduction to the basic principles of 20th century physics. Topics typically include special relativity; particle properties of electromagnetic radiation; wave properties of particles; uncertainty principle; atomic spectra. Lecture three hours, laboratory three hours per week. Prerequisite: PHYS 1014 and Math 2014 or PHYS 2014. [CAC-O] Fall of even-numbered years.

PHYS 3034 Electricity and Magnetism I. A study of the principles of electricity and magnetism in a vacuum. Topics typically include electrostatics; magnetostatics; Laplace's Equation; Maxwell's Equations; conservation laws. Vector Calculus is introduced and used throughout. Lecture three hours, laboratory three hours per week. Prerequisites: PHYS 1014 or 2014; MATH 3034. Spring of even-numbered years.

PHYS 3044 Digital Electronics. Introduction to the analysis and design of digital circuits including: number systems, Boolean algebra, combinational and sequential logic. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment. Prerequisite: PHYS 1014 or 2014. Spring

PHYS 3123 Electrical Circuits. An introduction to the fundamental concepts of electrical circuits, including circuit variables, elements, and simple resistive circuits; circuit laws and network theorems; op-amps; inductance; capacitance; natural and step responses of RL, RC, and RLC circuits. Prerequisites: PHYS 1014 and Math 2014 or PHYS 2014. Fall of even-numbered years.

PHYS 3131 Electronic Circuits Laboratory. Selected laboratory experiments in electric circuits. Pre/Corequisite: PHYS 3123. Fall of even-numbered years.

PHYS 4003 Classical Mechanics I. A study of the fundamentals of classical mechanics, including Newtonian dynamics and conservation laws; oscillations; central force motion; the calculus of variations; generalized coordinates; Lagrangian and Hamiltonian dynamics. Prerequisites: PHYS 1004 or 2004; MATH 3034. Fall of odd-numbered years.

PHYS 4023 Thermodynamics. A study of the basic principles of classical thermodynamics and statistical mechanics including thermal equilibrium; first, second, and third laws of thermodynamics; entropy; partition functions; statistical ensembles. Applications to engines, refrigerators and others will be considered. Prerequisites: PHYS 1014 or 2014; MATH 3034. [CAC-W] Spring of even-numbered years.

PHYS 4043 Introduction to Quantum Mechanics. An introduction to the concepts and formalism of quantum mechanics. The main focus will be the time-independent Schrödinger equation and its application to systems such as the harmonic oscillator, square-well potentials, and the hydrogen atom. Prerequisite: PHYS 3004; MATH 3043. Spring of odd-numbered years.

PHYS 4053 Mathematical Physics. A selection of topics in applied mathematics of interest to scientists and engineers. Topics include vector calculus; complex numbers variables and functions; Fourier series; special functions defined by solutions to differential equations. Prerequisites: PHYS 1014 or 2014; MATH 3034. Spring of odd-numbered years.

PHYS 4xx3 Quantum Mechanics. A continuation of PHYS 4043 including applications and approximation methods in quantum mechanics as well as the time-dependent Schrödinger equation. Prerequisite: PHYS 4043. On Demand.

PHYS 4103 Modern Physics. A continuation of PHYS 3004; an intermediate course with overviews of quantum theory and its application to atomic, nuclear, particle and solid-state physics. Prerequisites: PHYS 3004; Math 3034. On Demand.

PHYS 4183 Electricity and Magnetism II. A continuation of PHYS 3034 with a focus on electromagnetic fields in matter; electromagnetic waves; radiation; applications in relativity; Prerequisite: PHYS 3034. On Demand.

PHYS 4263 Classical Mechanics II. A continuation of PHYS 4003 with a focus on rigid bodies; scattering; nonlinear oscillations; coupled oscillations; moving coordinate systems; continuous media. Prerequisite: PHYS 4003; MATH 3043. On Demand.

Physics
short form

Change the course number and title for PHYS 1004, 1014 Introductory Physics I, II to PHYS 2xx4, 2xx4 College Physics I, II. Change the course number for PHYS 2004, 2014 University Physics I, II to PHYS 2yy4, 2yy4 University Physics I, II. Drop the corequisite requirement for College Physics.

Nearly every university in the state, including Henderson, classifies beginning college physics courses at the sophomore level. Changing our course title to "College Physics" and the level to sophomore will make transferring credits more efficient. The course numbers needed are currently used by the University Physics courses, meaning we also must alter the University Physics course numbers to complete the change. Because both course sets are prerequisites to other physics courses, their new course numbers must be between 2014 and 2101. Suggested new numberings are PHYS 2024, 2034 College Physics I, II and PHYS 2064, 2074 University Physics I, II. We also propose dropping the corequisite for College Physics, because students who haven't taken the necessary math in advance tend to have difficulty with the math requirements of the course.

## Catalog Descriptions

PHYS 2xx4, 2xx4 College Physics I, II. Introductory non-calculus courses in the fundamental principles of physics. Lecture three hours, laboratory two hours per week. Prerequisite: MATH 1003, 1013, or equivalent. Fall, Spring.

PHYS 2yy4, 2yy4 University Physics I, II. Introductory courses in physics using calculus, designed for the physical science and engineering majors. Lecture three hours, laboratory two hours per week. Prerequisite: MATH 2014, Corequisite MATH 2024. Fall, Spring.

