SUMMARY OF PROPOSED CURRICULUM REVISIONS
Ouachita Baptist University
January 2011

[Humanities](#) | [Natural Sciences](#)

The notation <mark>short form</mark> indicates informational level curriculum revisions submitted on the University Curriculum and Academic Standards Committee's short form, which include course title changes, course time offering changes, and non-substantive changes to course content and/or descriptions. These revisions will NOT be brought to the faculty for discussion or a vote, unless questions are raised before the fall faculty meeting.

School of Humanities

Department	Change	Rationale
Humanities	Delete the course HUM 3193 Southern Cities. Remove the course from the general catalog.	The course has not been taught in several years. It was cross listed with social sciences some years ago. When social sciences deleted it, it remained in humanities. Since we haven't taught it, we'd prefer to remove it.
Humanities	Add the course HUM 4011 Servant Leadership. HUM 4011 Servant Leadership. A study of the art and practice of servant leadership, both in comparison with other traditional forms of leadership and with special consideration of how servant leadership exemplifies the life of Christ. On Demand.	Dr. Steve Phillips, former chair of speech communications, first taught "Servant Leadership" as a non-credit course offered through the Elrod Center. The success of that course and Dr. Phillips' interest in the field of leadership studies led to discussions with Dr. Jeff Root and Ian Cosh about the idea of introducing the course in the regular curriculum. Dr. Phillips rewrote his syllabus and designed the course as a one-hour offering. He taught it as a special studies course and received very positive feedback from students. Dr. Rex Horne was invited to teach the course, which he did in 2009 and 2010. Leadership is a field of study of particular interest to Dr. Horne. The interdisciplinary nature of the subject matter and the fact that the president teaches the course lends itself to listings in multiple schools. While this request comes from Humanities, which developed the course, it is suggested that other schools may want to list the course as well.

Patterson School of Natural Sciences

Department	Change	Rationale
Mathematics	Proposed Changes • Add a new course MATH 2xx3 Fundamentals of Mathematical Proof. • Revise the requirements for a B.S. in Mathematics. • Revise the requirements for a B.A. in Mathematics. • Revise the requirements for a minor in Mathematics. • Create a new major in Applied Mathematics (B.S.).	In the spring of 2004, representatives of the mathematics faculty begin participation in a two-year workshop on program assessment sponsored by the Mathematical Association of America (MAA). As a result of the information learned at the first of these workshops, the department proposed several significant changes to the degree requirements for the various mathematics majors, and these changes went into effect beginning Fall 2005. In the years since, we have come to learn that we made the fundamental mistake of designing our curriculum for the majors we wish we had instead of the majors we actually have. The Bachelor of Science in particular was retooled as a program designed to prepare students for graduate studies in mathematics, a subset that constitutes a very small percentage of our majors. Historically, both at OBU and around the country, the large majority of math majors at a small liberal arts college are either preparing to teach mathematics at the secondary level or taking mathematics as a second major to complement another. The intricacies of our current curriculum require a significant number of hours and a particularly challenging sequencing of courses, and the result has been the near elimination of students pursuing mathematics as a second major. Our primary goal for this proposal is to correct the problems introduced with the adoption of our current curriculum.
Mathematics	Add a new course MATH 2xx3 Fundamentals of Mathematical Proof. MATH 2xx3. Fundamentals of Mathematical Proof. An introduction to the techniques used in the construction of mathematical proofs. Prerequisite: Sophomore standing or consent of instructor. Spring.	Currently, all mathematics and computer science majors take Discrete Mathematics I and II. While the first course in the sequence serves both groups of students well, the second course does not. For the mathematics majors, this course needs to be their introduction to mathematical proof. For the computer science majors, this course needs to be a survey of the many different discrete mathematics topics applicable to computer science. Because the number of majors in both programs has been small, we have essentially compressed the two approaches into one,

		but neither audience is getting the content they really need from the course. We propose creating a new course, MATH 2xx3: Fundamentals of Mathematical Proof, which would replace the Discrete Mathematics II requirement for all mathematics majors. When enrollments in either this new course or Discrete Mathematics II would be too low to warrant offering the courses separately, we can offer them concurrently. In such a case, the courses will be differentiated by having students work on several projects that target the particular content required for their major. We anticipate that enrollments will require concurrent offering for the immediate future.
Mathematics	Revise the requirements for a B.S. in Mathematics. Requirements for a B.S. in Mathematics: MATH 1073, 2014, 2024, 2xx3, 3034, 3053, 3093, 3301, 3311, 4023, 4401, 4411, either 4033 or 4053, and three additional Junior-Senior hours in Mathematics. CSCI 1033, 1044; CHEM 1004 or PHYS 2004. A minor must be completed in Biology, Chemistry, Computer Science, or Physics.	First, replace the requirement of MATH 2073 (Discrete Mathematics II) with the new course MATH 2xx3 mentioned above. Second, replace the current depth requirement, MATH 4053 (Abstract Algebra II), with a depth menu option: 4033 (Further Studies in Real Analysis) or 4053. Neither of the two courses would have significant enough enrollment to be offered on a regular basis, so both courses will be listed as On Demand. Students will choose between the two, and the faculty will make certain that students can satisfy the requirement, even if it requires a directed study. Third, replace the current requirement of MATH 4423 (Special Topics) with a junior-senior elective course.
Mathematics	Revise the requirements for a B.A. in Mathematics. Requirements for a B.A. in Mathematics: MATH 1073, 2014, 2024, 2xx3, 3301, 3311, 4401, 4411; two courses chosen from 3003, 3053, 3093, 4023; at least nine additional hours in Mathematics, six of which must be at the Junior-Senior level. CSCI 1033, 1044.	First, replace the requirement of MATH 2073 with the new course MATH 2xx3 mentioned above. Second, remove MATH 3043 (Calculus III) from the list of requirements. Third, replace the current requirements of MATH 3053 (Abstract Algebra I), MATH 3093 (Linear Algebra), and MATH 4023 (Real Analysis), and replace them with a menu of four options (3003, 3053, 3093, 4023) from which students will select two. Fourth, add three hours of electives. Fifth, remove the additional area

		requirement that requires the students to take General Chemistry I or University Physics I.
Mathematics	Revise the requirements for a minor in Mathematics. Requirements for a minor in Mathematics: A minimum of 18 hours of Mathematics courses, at least six of which must be at the Junior-Senior level. A split minor may not be taken in Mathematics.	Instead of specifying a choice of course sequences (Calculus 1 and 2 or Discrete Mathematics 1 and 2), we are simply going to allow any selection of courses that total at least 18 hours of mathematics, of which at least 6 must be at the junior/senior level.
Mathematics	Create a new major in Applied Mathematics (B.S.). Requirements for a B.S. in Applied Mathematics: MATH 2014, 2024, 2xx3, 3034, 3093; either 3043 or 3063; one course chosen from 3003, 3053, 4023; either 3301 and 3311 or an interdisciplinary mathematics project; and at least six additional hours in Mathematics, three of which must be at the Junior-Senior level. CSCI 1033, 1044. In addition, students must complete a second major.	Students will take the full Calculus sequence (2014, 2024, 3034), the new course MATH 2xx3 mentioned above, MATH 3093 (Linear Algebra), an applied menu option, a proof menu option, two additional electives, and either two semesters of the mathematics seminar or the completion of an interdisciplinary project involving their two majors. The latter of these options can be satisfied by research in their primary major if it contains sufficient mathematical content, as approved by the department chairs of the two majors; otherwise, it will be facilitated through the existing 48x2 special studies courses. Students will also have an additional area requirement of computer programming.
Mathematics ==short form==	Change the prerequisites for MATH 3003 Foundations of Geometry. MATH 3003 Foundations of Geometry - A study of the axiomatic bases of geometries, their relation to real space; basic concepts of point, line, plane and space; projective and non-Euclidean geometries. Prerequisite: MATH 2014 or 2xx3. Spring of odd numbered years.	The course MATH 2073 is being replaced for mathematics majors with a new course MATH 2xx3 Fundamentals of Mathematical Proof.
Mathematics ==short form==	Change the prerequisite for MATH 3053 Abstract Algebra I. MATH 3053 Abstract Algebra I - A study of groups: symmetric	The course MATH 2073 is being replaced for mathematics majors with a new course MATH 2xx3 Fundamentals of Mathematical Proof.

	groups, groups of integers, subgroups, group homomorphisms and isomorphisms, and other group theory topics. Prerequisites: MATH 2xx3. Fall of odd-numbered years.	
Mathematics ==short form==	Change the prerequisites for MATH 3083 History of Mathematics. MATH 3083 History of Mathematics - A survey of the development of mathematical theories and techniques from the early Egyptians through the eighteenth century. Emphasis is placed upon appreciation, but assignments include representative exercises. Prerequisite: MATH 2014 or MATH 2xx3 or consent of instructor. Fall of odd-numbered years.	The course MATH 2073 is being replaced for mathematics majors with a new course MATH 2xx3 Fundamentals of Mathematical Proof.
Mathematics ==short form==	Change the prerequisite for MATH 3093 Linear Algebra. MATH 3093 Linear Algebra - A study of vectors, matrices, and vector spaces. Topics include solutions of linear systems, linear transformations, determinants, bases, coordinate systems, eigenvectors and eigenvalues, orthogonality, and quadratic forms. Prerequisite: MATH 2024 or MATH 2xx3. Fall of even-numbered years.	The course MATH 2073 is being replaced for mathematics majors with a new course MATH 2xx3 Fundamentals of Mathematical Proof.
Mathematics ==short form==	Change the prerequisites for MATH 4023 Introduction to Real Analysis. MATH 4023 Introduction to Real Analysis - A more theoretical treatment than is provided by the basic calculus courses. Topics include limits, continuity, derivatives and the Riemann integral; primarily in one dimension. Prerequisites: MATH 2024 and 2xx3. Spring of odd-numbered years.	This revised version of the old Advanced Calculus limits itself to single variable analysis, which means that the multivariable topics of Linear Algebra and Calculus III are not necessary as prerequisites for the course. The new prerequisite 2xx3 refers to the proposed new course MATH 2xx3 Fundamentals of Mathematical Proof.