## Course Syllabus

### Course Number: MATH 1111
### Course Name: College ALGEBRA

**Course Description:**
This course is a functional approach to algebra that incorporates the use of appropriate technology. Emphasis will be placed on the study of linear, quadratic, piece-wise defined, rational, polynomial, exponential and logarithmic functions, their graphs and applications. Fall, Spring, Summer. 3 credit hours.

**Pre-requisites/Co-requisites:** Exemption from or successful completion of MATH 0099 and READ 0099.

**USG General Education Outcomes pertinent to this course:**

**Quantitative Reasoning and Mathematics:** quantitative reasoning and mathematics will be characterized by logic, critical evaluation, analysis, synthesis, generalization, modeling, and verbal, numeric, graphical, and symbolic problem solving.

Competence within the context of collegiate general education objectives is defined by the following outcomes:

- Ability to model situations from a variety of settings in generalized mathematical forms;
- Ability to express and manipulate mathematical information, concepts, and thoughts in verbal, numeric, graphical and symbolic form while solving a variety of problems;
- Ability to solve multiple-step problems through different (inductive, deductive and symbolic) modes of reasoning;
- Ability to properly use appropriate technology in the evaluation, analysis, and synthesis of information in problem-solving situations;
- Ability to shift among the verbal, numeric, graphical and symbolic modes of considering relationships;
- Ability to extract quantitative data from a given situation, translate the data into information in various modes, evaluate the information, abstract essential information, make logical deductions, and arrive at reasonable conclusions;
- Ability to employ quantitative reasoning appropriately while applying scientific methodology to explore nature and the universe;
- Ability to discern the impact of quantitative reasoning and mathematics on the sciences, society, and one's personal life.

**College Algebra Course Outcomes:**

- Demonstrate the ability to graph, compute with, and solve application problems with the set of real numbers, and simplify expressions with complex numbers
- Graph and operate with basic functions, demonstrate the ability to use the filed properties of I identities, inverses, and commutativity for these operations
- Demonstrate the ability to use the remainder theorem, factor theorem, and the fundamental theorem of algebra to solve polynomial and rational equations and inequalities
- Determine coordinates and interpret uses for the following functional notions: zeros, relative maximums and minimums, points of inflections, and intervals of increasing or decreasing values
- Use a graphing calculator to model real life problems with functions by organizing,
analyzing, interpreting, and making inferences from ordered pairs of data. This will include modeling with both polynomial and exponential regression and the use of correlation coefficients. Demonstrate the ability to transform information from one representational system to another (verbal, numeric, graphs, symbolic).

INSTITUTIONAL ABSENCE

ACADEMIC DISHONESTY

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**MATH 1111-0 College Algebra**

**Spring 2013, CRN 30491 (MW 2 - 3:15 pm)**

**Instructor:** Avijit Kar

**Text:** Precalculus, Paul Sisson, Hawkes Learning Systems, 2006, with Hawkes Access Code packaged with text.

**Office:** King Hall, Room 8

**Phone:** 229-391-5107  email: akar@abac.edu  web-site: www.abac.edu/akar

**Office Hours:** MW 9-10 am and 11-1 am, TTh 12:30-1 pm and 2-3pm, F 9-10 am

**Prerequisite:** Students who have a learning support math requirement must successfully complete the learning support math sequence before taking college algebra. Completed learning support math and passed COMPASS exit exam or exemption (37 or higher on COMPASS or 480 or higher on Math SAT or 20 or higher on Math ACT). The successful completion of Math 1111 will result in 3 semester credit hours.

**MATERIALS:** A notebook of completed assignments should be kept for daily study and test review. **You will also need to purchase a TI-83 graphing calculator and Hawkes Software.**

**Tests:** There will be 5 in class tests at the end of each chapter and a mandatory final at the end of the semester. Homework and class problems will be strongly emphasized in the tests. **You must certify all Hawkes assignments for that unit in order to be able to take the test.** The final is multiple choices and must be taken on the final exam schedule. Your lowest test score may be replaced by 70% points of your final exam score if it is higher than the lowest test score.

**Grading:**

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<th>Component</th>
<th>Points</th>
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<tr>
<td>Five in class tests (100 × 5)</td>
<td>500 Points</td>
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<tr>
<td>Final Exam</td>
<td>150 Points</td>
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<tr>
<td>Hawkes Certification</td>
<td>100 Points</td>
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**Total = 750 Points**

A = 750-675, B =674-600, C =599-525, D =524-450, F = below 450 Points
**Make-up Exams:** There is no make up exams without documented excuses. I reserve the right to determine if you have valid excuses or not. We may use the final grade for the test missed in addition to its use as the exam grade. If you know that you will not be in school on test day, please see me prior to being absent so that we can negotiate an alternate test time. Any unexcused missed test or any subsequent missing test grades will receive a Zero.

**Disabilities:** Reasonable accommodations will be made to students who have proper documentation and inform the instructor at the beginning of the course. Learning disabilities should be brought to the instructor's attention and arrangements made for special needs the first week of classes.

**Attendance:** Instructors will keep accurate attendance records and must report the individual number of absences with midterm and final grades. Whenever a student is absent, whether for official or personal reasons, the student must assume responsibility and provide notice to the instructor, preferably in advance, for making arrangements for any assignments and class work missed because of the absence. However, final approval for make up work remains with the individual instructor.

**Math Departmental Classroom Expectations:**
- arrive for class with proper tools (textbook, notebook, pencil, calculator)
- keep personal phone out of sight and on silent during class time (speak with your instructor before class should you experience an emergency)
- refrain from cursing during class
- be in class on time (two tardies count as one absence)
- treat faculty in a kind and courteous manner
- complete assignments by the assigned due date
- be attentive and actively participate in class
- wear no hats or other head gear on exam day

**Faculty are expected to:**
- begin class on time
- be prepared for class (text book, markers, calculator, handouts)
- treat students in a kind and courteous manner
- provide students with a schedule of events

**Repercussions – students will be asked to leave class and will be marked absent for the day if:**
- they arrive in class without tools
- they are found sleeping, cursing, or engaging in disruptive behavior
- they are texting or receiving phone calls during class (except for emergencies)

All members of the ABAC community have an obligation to promote an atmosphere in which teaching and learning can take place in an orderly and efficient manner. To maintain this learning environment, individuals must refrain from behavior that disrupts the teaching and learning process. In order to assure the rights of all students to benefit from time spent in class, faculty members have the right and responsibility to excuse from a class session any individual whose behavior disrupts the teaching and learning process. Serious or continued infractions may result in referral of the student for disciplinary action by the student judiciary or appropriate administrative officer.

**Grades and Student Evaluations:** Students enrolled in classes in the School of Science and Mathematics will be expected to demonstrate an understanding of subject matter requiring higher order processing skills. Examination questions may include essay, synthesis, analysis, and application; as well as completion, multiple choices, true/false, and matching. Computational skills and drawing or diagramming may also be required. Learning disabilities should be brought to the instructor's attention and arrangements made for special needs the first week of classes
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<th>Date</th>
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<td>Introduction, Sec 1.4</td>
<td>9</td>
<td>Sec 1.7</td>
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<td>Sec 2.1</td>
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