Angelina College Science and Mathematics Division
COSC 1315: Fundamentals of Programming
Instructional Syllabus - Fall 2016, Sect. 001

I. BASIC COURSE INFORMATION

A. Course Description

Computer Science - COSC 1315 - Fundamentals of Programming. Three hours credit. Introduction to computer programming. Emphasis on the fundamentals of structured design, development, testing, implementation, and documentation. Includes coverage of language syntax, data, and file structures , input/output devices, and disks/files. Must be TSI Complete.

B. Intended Audience

Any student who is interested in the fundamentals of computers and programming.

C. Instructor -

Name: **Bill Fisk** Office: S112
Phone: (936) 633-5461 Division Fax: (936) 633-5457
email: bfisk@ angelina.edu
Office Hours:

Day	Class Hours	Office Hours
Monday	8:00-9:20am; 1:10-2:30pm	9:30-12:45; 3:00-4:00pm
Tuesday	9:30-10:50am; 11:25-12:45pm; 1:10-2:00pm	10:30-11:20;2:00-4:00pm
Wednesday	8:00-9:20am; 1:10-2:30pm	9:30-12:45; 3:00-4:00pm
Thursday	9:30-10:50am; 11:25-12:45pm; 1:10-2:00pm	10:30-11:20;2:00-4:00pm
Friday	No classes	9:00-11:30am by appointment only

II. INTENDED STUDENT OUTCOMES:

A. Core Objectives Required for this Course

1. **Critical Thinking:** to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information..
2. **Communication:** to include effective development, interpretation and expression of ideas through written, oral, and visual communication
3. **Empirical and Quantitative Skills:** to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions. .

B. Course Learning Objectives for all Sections –

1. To identify and describe the function of each of the devices that comprise a computer system.
2. To construct algorithms providing a logical means for solving an empirical problem.
2. To explore and use the QBASIC programming language.
3. Explain the principal components of the computer and their use
4. Describe the use of magnetic disks, USB flash drives, and other storage media
5. Discuss computer software and explain the difference between system software and application software
6. To identify several types of personal computer application software
7. Discuss computer communications equipment and use of Internet and World Wide Web
8. Demonstrate the skills necessary to use Microsoft Applications

III. ASSESSMENT MEASURES

A. Assessments for the Core Objectives:

1. **Critical Thinking** - Students will use logics skills to develop an algorithm to solve a problem on the computer. The student will then convert the algorithm into a computer program using the computer programming language QBASIC. The program s will be written to accommodate different scenarios (ie., different data being entered into the computer). Should logic bugs be found in the program, the student will be required to find the problem and fix it to provide viable output..
2. **Communication** - Students will be required to write a short autobiography or a review of a recent computer article to show their written communication skills. Each student will also be required to give a brief verbal narrative on a particular topic discussed in the book. A rubric will be used to assess these oral, and written communicative skills. Visual communication will be achieved by each student providing a report detailing information derived from the QBASIC program (both screen and paper).
3. **Empirical and Quantitative Skills** - .Students will resolve mathematical problem s potentially encountered when using software (any programming language). Students will systematically show a step-by-step process for solving various math problem utilizing the rules derived from the Order of Precedence.

B. Assessments for Course Learning Outcomes:

1. The student's ability to describe and discuss structured programming, system s software (Windows 7), and various application software packages will be assessed through monitoring classroom discussions and through quiz and test questions that pertain to these topics.
2. The student's ability to develop an understanding of the use and function of the computer in the current and future world will be assessed through monitoring classroom discussions and through quiz and test questions that pertain to these topics.
3. The student's ability to identify and describe the function of each of the devices that comprise a computer system will be assessed through monitoring classroom discussions and through quiz and test questions that pertain to these topics.
4. The student's ability to apply logical methods to solve problem s through the use of algorithm s will be assessed through monitoring student's in-class and out-of-class assignments and through test questions that pertain to this topic.
5. The student's ability to explore and use the QBASIC language will be assessed through monitoring classroom discussions, student worksheets and through quiz and test questions that pertain to this topic.
6. The student's ability to acquire the skills and tools to learn, apply, and evaluate new technologies will be assessed through monitoring classroom discussions and through quiz and test questions that pertain to these topics.

IV. INSTRUCTIONAL PROCEDURES:

A. Methodologies common to all sections

This course is taught using a combination of lectures, discussions, and application examples. Software demonstrations and lecture presentations will be included through the use of a computer and classroom projector. The overhead projector will be used to demonstrate programming techniques.

B. Methodologies determined by the instructor – N/A

V. COURSE REQUIREMENTS AND POLICIES:

A. Required Textbooks, Materials, and Equipment –

1. Discovering Computers - Introductory by Shelly & Vermaat (Cengage, 2012 edition)
Introduction to QBasic (2nd edition) by Elaine Russell (Thompson Custom Publishing) .

2. Specific equipment required of all students.

Two flash drives (jump drives) that can be dedicated to this class, a flowchart template, and two **BLANK** Scantron sheets (due by September 14th).

3. **Additional text(s) and supplementary materials for individual instructor** – Angelina College has an online tutorial package called Smarthinking which will provide 24/7 tutors for many different disciplines, but not programming. To use this software, click on the icon for Smarthinking from the Blackboard home page.

4. **Specific equipment required by the individual instructor** – N/A

B. **Assignments** *(Appropriate due dates, schedules, deadlines)*

1. **Computer Assignments**: All major assignments, marked with a # in the Student Course Outline attached at the end of this syllabus, will be due by 4:00 on the date the next computer assignment is made. **NO assignments will be accepted late**. All computer assignments must be stored on your flash drives AND backed up to the network Drive K in the COSC 1315 folder. In case of flash drive failure, the backup copy in Drive K will be graded. If your assignment is not backed up to Drive K, you will lose a minimum of 50% of the assignment's value. **Complete** computer assignments may be turned in before the due date for an additional 2 points.

2. **Worksheets** will be assigned as noted on the Student Course Outline. These assignments are due by 4:00 on the class meeting after they are assigned and they will not be accepted late nor made up.

3. **Quizzes** may be given at any time and cannot be made up.

4. No additional specific assignments, other than those previously discussed, are required by this instructor.

C. **Course Policies** – *(This course conforms to the policies of Angelina College as stated in the Angelina College Handbook.)*

Academic Assistance – If you have a disability (as cited in Section 504 of the Rehabilitation Act of 1973 or Title II of the Americans with Disabilities Act of 1990) that may affect your participation in this class, you should see Sellestine Hunt, Associate Dean of Student Services, Room 200 of the Student Center. At a post-secondary institution, you must self-identify as a person with a disability; Ms. Hunt will assist you with the necessary information to do so. To report any complaints of discrimination related to disability, you should contact Mr. Steve Hudman, Dean of Student Affairs, Student Center, Room 101, 936-633-5292, or by email: shudman@angelina.edu

.

Attendance – A student **may** be dropped after four consecutive or five cumulative absences. It is the student's responsibility to attend classes, participate in class discussions, and complete required work on time. Should the student decide to withdraw from the course, it is the student's responsibility to initiate and complete the drop process.

Computer Laboratory Rules: (S110)

- No games, other than those in the program list are allowed.
- Audio CDs may be played, but you must provide your own headphones.
- Students working on Science & Mathematics Division assignments have priority on use of computers.
- Children and other guests are not allowed.
- NO food or tobacco products are allowed.
- **Use of cell phones for conversation or texting is prohibited**.

- Participation in **chat rooms**, or **interactive gaming** is not allowed.
- Use of the computers in any of the laboratories in the Science & Mathematics Division implies acceptance of the Computer Use Policy as posted.

Computer Lab Hours in S110:

Monday:	8:00 - 4:00;
Tuesday:	8:00 - 4:00;
Wednesday:	8:00 - 4:00
Thursday:	8:00 - 4:00
Friday:	8:30 - 3:30

Additional Classroom Policies Established by the Individual Instructor –

- Conferences outside of class are available during office hours or by appointment.
- **No** eating, drinking, or use of tobacco products is allowed.
- Children and other guests are not allowed.
- **NO makeup tests** are authorized except in case of emergency. A student is required to contact the instructor about a possible makeup exam as soon as possible, preferably on or before the date of the original exam. The final exam will replace any one missed test or the lowest of the scheduled tests during the semester.
- **Turn off and put away** all cellular phones and similar electronic devices when you come to class.
- Any email to your instructor should come from your Angelina College email address.
- Students are expected to participate in the instruction through courteous, relevant comments and questions during class and behavior that interferes with the learning environment is not tolerated.
- **Any student or students caught cheating (plagiarism, collusion, copying, etc.) on an exam or an assignment will receive a zero for that exam or assignment.**

VI. COURSE CONTENT:

A. **Required Content/ Topics -** *(as required by the individual Instructor)*

Main topics covered include:

Introduction to Microsoft Word
Introduction to Structured Programming using QBASIC64.
Introduction to Computer Concepts including vocabulary, hardware, and software.

A Student Course Outline is attached which includes assignments and test dates. There may be variations depending on circumstances, but it serves as a general guide for preparing for class and reading for missed classes.

B. Additional Content -- Based on classroom discussions, other topics and material from additional chapters may be introduced.

VII. EVALUATION AND GRADING:

A. Grading Criteria – Grades are determined by numeric scores on the following written components:
Worksheets and Quizzes (Total of 50 points) The format on each worksheet will vary, but each will contain instructions indicating the format of the required student response. Grading will reflect the ability of the student to follow correct procedures as well as determining the correct answers, so all relevant work must be shown. Each worksheet or quiz will have a maximum value of 10 points.
MS Word Assignments (Total of 70 points or 10%) The format for each assignment will vary, but each will contain specific instructions regarding required format and word processing functions to be

used. The grade will reflect the ability of the student to follow instructions as well as use the software.

Windows Assignments (Total of 50 points) The format for each assignment will vary, but each will contain specific questions to answer and operating system functions to follow. The ability of the student to follow these instructions and use the software will be reflected in the final grade.

QBASIC Assignments (Total of 120 points) The format of each assignment will vary, but each will contain specific instructions of the problem to be solved. The ability of the student to use the software and follow the syntax rules along with solving the original problem will be reflected in the grade for each assignment.

Exams (Total of 400 points [100 points each]) The material covered is given on the class schedule attached to the end of this syllabus. There are no make-up exams, but the lowest grade (which may be a missed exam) is replaced by your final exam grade. Do not miss two exams. Final Exam is a comprehensive exam.

Thus, the overall total of points a student can potentially and collectively accumulate will be approx. 700 points. In order to assign an equivalent letter grade, the instructor will take the total number of points the student actually earned (ex. 590) and divide this figure by 700, giving an average for the class. (Example: 590 pts. (Actual earned points) / 700 pts. (Expected points to be earned) [590/700 = 84%] Then using the table below (Determination of Grade), the instructor would find the range the percentage fell into then find the letter grade to go with that average.

A copy of your grades and current average will be distributed near mid-semester (after Exam 2), and near the end of the semester (after Exam 3), to inform you of your progress and status, and to allow verification that your grades have been accurately recorded.

B. Determination of Grade (*assignment of letter grades*) –

A 90 - 100
B 80 - 89
C 70 - 79
D 60 - 69
F Below 60

A grade of I for incomplete work may be assigned, but only due to dire circumstances near the end of the semester and this grade requires the approval of Dr. McKenzie, Vice-President & Dean of Instruction.

VIII. SYLLABUS MODIFICATION:

The instructor may modify the provisions of the syllabus to meet individual class needs by informing the class in advance as to the changes being made.

FYI

Angelina College is a Tobacco-free campus. Use of tobacco, in any of its forms, is not allowed except in your car.
Angelina College's campus security is available 24 hours a day by contacting 936-676-2563. Please use this number only as necessary for security issues.
Should classes for Angelina College be cancelled due to weather emergencies or other contingencies, notification will be available through local television and radio. Notification for day classes will be available by 6:00 am and for night classes by 3:00 pm. You may also call the main switchboard (936-639-1301) for information.

Student Course Outline for COSC 1315.001 (TR) - Fall 2016

DC means Discovering Computers

Class	Date	Material Covered	Assignment	Grade
1	Aug 25	Introduction to course and discussion of vocabulary		
2	Aug 30	DC - Chapter 1 *Introduction to Computers*		
3	Sep 1	History of Computers (All notes in-class)	History WKS [10]	
4	Sep 6	Discovering Computers, Chapter 9 *System Software*	#Windows 1 [20]	
5	Sep 8	MS Word: Introduction, formatting, & graphics		
6	Sep 13	MS Word Practice	#MS Word 1 [30]	
7	Sep 15	DC - Chapter 7a - *Input Devices*		
8	Sep 20	MS Word: Multi-page documents	#MS Word 2 [40]	
9	Sep 22	DC - Chapter 6 *Processing*		
10	Sep 27	**Exam #1 over MS Word, History, Windows, DC - Chp 1, 6, 7a, & 9**		
11	Sep 29	QBasic: Language & Program Design (pg. 1 - 4) IPO, Flowcharts, & Programming Concepts (pg. 5-11)		
12	Oct 4	QBasic: Editor, REM, CLS, END and Algorithms - Lab Exercise	#Program 1 [20]	
13	Oct 6	QBasic: INPUT, OUTPUT, TAB() - Lab Exercise	Programming Exer. [10]	
14	Oct 11	QBasic: Files, OPEN, CLOSE, Expressions, Assignments (pg. 24-30; 42)	Expression Wks [10]	
15	Oct 13	QBasic: LOCATE, Input Statements, INPUT (pg. 41-44)	#Program 2 [50]	
16	Oct 18	QBasic: Programming Lab	P2 IPO Due [10]	
17	Oct 20	QBasic: Relational Operators, Logical Operators, IF (pg. 35-40)	P2 Flowchart Due	
18	Oct 25	Internal Representation of Data, pages 199-202 *Conversion of Bases*	Pr Converting Wks	
19	Oct 27	QBasic: DO WHILE (pg. 46-51), Counters and Accumulators (pg. 31)	Converting Wks [10]	
20	Nov 1	QBasic: READ, DATA, PRINT USING (pg. 45, 52-56)	#Program 3 [50]	
21	Nov 3	**Exam #2 over Flowcharts, Expressions, Conversion of Bases, BASIC**		
22	Nov 8	QBasic: PRINT USING (cont.)	Practice PrUse Wks	
23	Nov 10	DC - Chapter 7b *Output* DC - Chapter 8 *Storage*	P3 Flowchart Due Print Using Wks [10]	
24	Nov 15	DC - Chapter 4, pages 142-159 *Application Software*		
25	Nov 17	DC - Chapter 2 *The Internet and the World Wide Web*	*Internet Wks {20}*	
26	Nov 22	DC - Chapter 10 *Networks*	Program 3 Due	
27	Nov 29	DC - Chapter 9, subsection File Mgmt & *Utility Programs*	#Windows 2 [20]	
28	**Dec 1**	**Exam #3 over BASIC, 2, 7b, 8, & 10**	*Internet Wks Due*	
29	Dec 6	Graphics & Multimedia	Windows 2 Due	
30	Dec 8	Review for Final Exam		
31	----------	**Final Exam**		