2007-2008

Bachelor of Science (BS) **Checksheet for Computer Science Majors**
Degree Code 219A

I. CORE CURRICULUM.....44
Math 1110 will count toward math requirement. PHY 1150-1151 or CHE 1101-1110-1102- 1120 will count toward science requirement.

II. MAJOR REQUIREMENTS.....71
2.0 major GPA is required for graduation. Major GPA calculation will include <u>all</u> courses taken in the major department, plus any other courses under II. Minimum of 18 semester hours of courses taken to fulfill major requirements must be courses offered by Appalachian. Course requirements for the Bachelor of Science degree in computer science are as follows (with program subject to the approval of the advisory committee):

A. Computer Science (30 hours):
C S 1440 _____ (4) Computer Science I (C)
C S 2440 _____ (4) Computer Science II (C)
C S 2450 _____ (3) Assembly Lang. & Machine Operation (C)
C S 2490 _____ (3) Introduction to Theoretical Computer Science
C S 3460 _____ (3) Data Structures (C)
C S 3481 _____ (3) Computer Systems I (W, C)
C S 3482 _____ (3) Computer Systems II (C)
C S 3490 _____ (3) Programming Languages (C)
C S 4100 _____ (1) Senior Seminar in Computer Science (W, S)
C S 4667 _____ (3) Software Engineering (C)

<u>Major Designators</u>
2 Writing (W) ____ ____
1 Speaking (S) ____
Certified Proficiency in Communication (CPC)
CPC is met with a grade of "C" or better in CS 4100
<u>Other Designators</u>
4 Writing (W) ____ ____ ____ ____
(English 1000 and 1100 will count as 2 W)
4 Multi Cultural (MC) ____ ____ ____ ____
(History 1101 and 1102 will count as 2 MC)
2 Numerical Data (ND) ____ ____
2 Computer (C) ____ ____
1 Cross Disciplinary (CD) ____

B. Mathematics (18 hours):
C S 1100 _____ (3) Discrete Mathematics
MAT 1110 _____ (4) Calculus with Analytic Geometry I (ND)* *(1110 or 1120 will also fulfill core requirement)
MAT 1120 _____ (4) Calculus with Analytic Geometry II (ND)*
MAT 2240 _____ (3) Introduction to Linear Algebra (C)
STT 3850 _____ (4) Statistical Data Analysis (ND, C)

C. Eleven hours of Computer Science electives (approved by departmental Computer Science advisor)
These courses must be selected from Computer Science courses numbered above 2000 (excluding 3520) and may include MAT 4310 (ND, C). No more than three hours of CS 3470 may be included in the eleven hours.

_____ _____ _____ _____ _____

D. Science Requirement: Complete a minimum of 12 semester hours:
1. One of the following science sequences:
PHY 1150 _____ (5) Analytical Physics I (ND)
PHY 1151 _____ (5) Analytical Physics II (ND)

Note: Science Sequence will also fulfill Core Curriculum requirement

<u>OR</u>

CHE 1101 _____ (3) Introductory Chemistry I (ND)
CHE 1110 _____ (1) Introductory Chemistry I Lab
CHE 1102 _____ (3) Introductory Chemistry II (ND)
CHE 1120 _____ (1) Introductory Chemistry II Lab

2. Additional courses from the list below to complete minimum of twelve hours required, subject to the restriction that if you take PHY 1150-1151 to satisfy # 1, above, you may not take PHY 1103-1104 and that you must observe prerequisites.

BIO 1110 _____ (4) Concepts of Biology
BIO 2000 _____ (4) Introduction to Botany
BIO 2001 _____ (4) Introduction to Zoology
CHE 1101/1110 _____ (4) Intro. Chem. I (ND) & Lab
CHE 1102/1120 _____ (4) Intro. Chem. II (ND) & Lab
CHE 2201/2203 _____ (4) Organic Chem. I &Lab
CHE 2202/2204 _____ (3) Organic Chem. II & Lab (W)
CHE 2210/2211 _____ (4) Quantitative Analysis & Lab (W)
CHE 3301 _____ (3), 3302 _____ (3) Physical Chem. I, II (C)
GLY 1101_____(4) Intro. to Physical Geol (ND)
GLY 1102_____(4) Intro. to Historical Geol (CD, ND)
GLY 1103_____(4) Intro. to Env. and Applied Geol (ND)
GLY 1510_____(4) Geol. Science Honors–Phys (W, ND)
GLY 1511_____(4) Geol. Science Honors–Hist (W, ND)
AST 1001_____(4), 1002 _____ (4) Intro. Astronomy I, II (ND)
PHY 1150_____(5), 1151 _____ (5) Analytical Physics I & II (ND)
PHY 1103_____(4), 1104 _____ (4) General Physics I & II (ND)
PHY 2010_____(4) PHY 2020 _____ (4) Intermediate Physics I, II

III. MINOR (optional)

IV. ELECTIVES (taken to total minimum required for the degree, normally 122 hours) ..... <u>7-19</u>
2 semester hours of free electives must be outside the major discipline. **122**