

Degree Code 219A

I. GENERAL EDUCATION CURRICULUM..... 44

The science taken in AREA II-D fulfills part or all of the Science Inquiry Perspective. MAT 1110 fulfills the Quantitative Literacy requirement.

II. MAJOR REQUIREMENTS (not including 9-12 s.h. counted in Area I, above) 67-70

2.0 major GPA is required for graduation. Major GPA calculation will include all 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.

A. Computer Science (39 hours):

- C S 1440 _____ (4) Computer Science I (Pre: MAT 1020/1025 w/minimum grade "C-")
- C S 2440 _____ (4) Computer Science II (Pre: CS 1440 or 1445 w/minimum grade "C"; Co: 1100)
- C S 2450 _____ (3) Introduction to Computer Systems (Pre: CS 2440 w/min grade of "C")
- C S 2490 _____ (3) Introduction to Theoretical Computer Science (Pre: CS 2440 w/min grade of "C")
- C S 3100 _____ (2) Junior Seminar [WID] (Pre: ENG 2001)
- C S 3430 _____ (3) Database (Pre: CS 2440 w/ min grade of "C")
- C S 3460 _____ (3) Data Structures (Pre: CS 2440 w/min grade of "C")
- C S 3481 _____ (3) Computer Systems I (Pre: CS 2450, 2490; Co: 3460)
- C S 3482 _____ (3) Computer Systems II (Pre: CS 3481, 3460; Co: 3490)
- C S 3490 _____ (3) Programming Languages (Pre: CS 2490, 3460)
- C S 3667 _____ (3) Software Engineering (Pre: CS 2440 w/min grade of "C")
- C S 4100 _____ (2) Senior Seminar (Pre: Sr. standing; CS 3100)
- C S 4800 _____ (3) Capstone Project [CAP] (Pre: Sr. standing; CS 3667)

Major Requirements that count in Gen Education:	
Quantitative Lit	
MAT 1110	4 s.h.
Science Inquiry	
(depends on choices)	
AST 1001 & 1002	8 s.h.
CHE 1101/1110	4 s.h.
CHE 1102/1120	4 s.h.
PHY 1150	5 s.h.
GLY 1101 & 1102/1103	8 s.h.
Total Major hrs:	79
Gen Ed- up to 12 hrs:	- 9-12
Net Major hrs:	67-70

B. Mathematics (18 hours):

- C S 1100 _____ (3) Discrete Mathematics (Pre: MAT 1020 or 1025 w/minimum grade "C-")
- MAT 1110 _____ (4) Calculus with Analytic Geometry I (Pre: MAT 1025 w/min grade C-)
- MAT 1120 _____ (4) Calculus with Analytic Geometry II (Pre: MAT 1110 w/min grade C-)
- MAT 2240 _____ (3) Introduction to Linear Algebra (Pre: MAT 1120)
- STT 3850 _____ (4) Statistical Data Analysis I (Pre: MAT 1110)

C. Computer Science electives (Select 9 hours) No more than three hours of CS 3470 may be included in the nine hours. Some graduate level classes may be chosen as electives with permission of the graduate school and the CS department.

- C S 3440 _____ (3) Client-Side Web Programming (Pre: CS 2440 w/min C-)
- C S 3463 _____ (3) Simulation (Pre: CS 3460; STT 2810 or 4250)
- C S 3470 _____ (1-6) Current Computer Use
- C S 3500 _____ (1-3) Independent Study in Computer Science
- C S 3530-3549 _____ (1-4) Selected Topics courses
- C S 3750 _____ (3) Appld Neural Ntwks (Pre: CS 1440 w/min C; MAT 2240)
- C S 3760 _____ (3) Sys Admin & Security (Pre: CS 3460 w/min grade C)
- C S 3770 _____ (3) Computational Crypt (Pre: CS 3460)
- C S 4435 _____ (3) Server-side Web Programming (Pre: CS 3430, 3440)
- C S 4440 _____ (3) Artificial Intelligence (Pre: CS 3460)
- C S 4450 _____ (3) Data Comm & Netwking (Pre: CS 3481)
- C S 4465 _____ (3) Comp Graphics (Pre: CS 3460; MAT 2240)
- C S 4520 _____ (4) Operating Systems (Pre: CS 3482)
- C S 4550 _____ (3) Theoretical Comp Sci (Pre: CS 2490)
- C S 4570 _____ (3) Human Comp Interfaces
- C S 4620 _____ (4) Real-time Systems (Pre: CS 3482)
- C S 4740 _____ (3) Digital Image Proc (Pre: CS 1440 w/min C; MAT 2240)
- MAT 4310 _____ (3) Numerical Methods (Pre: MAT 2310)
- MAT 4990 _____ (3) Numerical Linear Algebra (Pre: MAT 4310)

D. Science Requirement: Complete a minimum of 13 semester hours from one of the following options:

Option A

- PHY 1150 _____ (5) Analytical Physics I (Co: MAT 1110)
- PHY 1151 _____ (5) Analytical Physics II (Co: MAT 1120)

Option B

- PHY 1150 _____ (5) Analytical Physics I (Co: Mat 1110)

AND choose one of the following courses:

- AST 1001 _____ (4) Intro Astronomy I-Solar Systems
- BIO 1801 _____ (4) Biological Concepts I (Co: CHE 1101)
- CHE 1101/CHE 1110 _____ (4) Intro Chem I & Lab
- GLY 1101 _____ (4) Intro to Physical Geology

AND one of the following 8 s.h. sequences:

- AST 1001 _____ (4) Introductory Astronomy I-Solar Systems
- AST 1002 _____ (4) Introductory Astronomy II-Stars & Galaxies (Pre: AST 1001)
- CHE 1101/1110 _____ (4) Introductory Chemistry I & Lab
- CHE 1102/1120 _____ (4) Introductory Chemistry II & Lab (Pre: CHE 1101/1110)
- BIO 1801 _____ (4) Biological Concepts I (Co: CHE 1101)
- BIO 1802 _____ (4) Biological Concepts II (Pre: BIO 1801)
- GLY 1101 _____ (4) Introduction to Physical Geology
- GLY 1102 _____ (4) Intro. to Hist Gly **OR** GLY 1103 _____ (4) Int Env & App Gly

III. MINOR (optional)

IV. ELECTIVES (taken to total minimum required for the degree, normally 122 hours)..... 8-11

2 semester hours of free electives must be outside the major discipline.

122