

COLLEGE: Montgomery College

HIGH SCHOOLS: Damascus, Gaithersburg, Seneca Valley, Springbrook,

CLUSTER: Information Technology

Wheaton, Wootton

MCPS PROGRAM: AOIT\* Computer Programming Option

MC PROGRAM: Computer Science and Technologies A.A.

The AOIT, a member of the National Academy Foundation (NAF), has provided public high school students with the knowledge and skills required to succeed in one of the country's fast growing industries. The AOIT introduces students to broad career opportunities in today's digital workforce and, in the process, equips them with personal, analytical, technical, and communication skills they need to thrive.

STUDENT ENTRY POINTS

GRADE	ENGLISH	MATH	SCIENCE	SOCIAL STUDIES	REQUIRED COURSES				
					RECOMMENDED ELECTIVE COURSES		OTHER ELECTIVE COURSES		
CAREER AND TECHNICAL EDUCATION COURSES									
SECONDARY	9	English	Mathematics	Science	Social Studies	Foreign Language	Physical Education	Select one from the following AOIT courses: ♦ Discovering Programming Concepts A/B** ♦ Computer Programming 1A/B**	
	<b>Entrepreneurship and Business Management A/B and Financial Management are highly recommended courses.</b>								
	10	English	Mathematics	Science	Social Studies	Foreign Language	Health (.5) Personal Finance (.5)	Select one from the following AOIT courses: ♦ Computer Programming 1A/B** ♦ Computer Programming AP 2A/B***	
	11	English	Mathematics	Science	Social Studies	Technology Education Credit	Fine Arts	Select one from the following AOIT courses: ♦ Computer Programming AP 2A/B*** ♦ Computer Programming 3A/B (Advanced Level)***	
	<b>National Academy Foundation requires a six to eight week paid internship and College Information Technology A/B.</b>								
12	English	Mathematics	Science Elective	Entrepreneurship & Business Management A/B	Internship-National Academy Foundation (NAF)	College-NAF A/B (Advanced Level)	Choose from these electives: ♦ Computer Programming AP 2A/B*** ♦ Computer Programming 3 (Advanced Topics) A/B***, Guided Research-NAF A/B		
<b>Articulate up to 24 credits with a grade of B or better for a tuition savings of \$3,192 at Montgomery College.</b>									
POSTSECONDARY	Year 1 1st Semester	English Foundation	MA 181 Calculus I		Behavioral and Social Sciences distribution		Arts Distribution	♦ CS 103 Computer Science I	♦ CS 120 Introduction to Computer Applications
	Year 1 2nd Semester	Speech Foundation	MA 182 Calculus II			CS 204 Computer Science II	**CS 136 Systems Analysis & Design	♦ CS 140 Introduction to Programming	♦ CS 215 Visual Basic Programming
	Year 2 1st Semester	Arts or Humanities Distribution	MA 284 Linear Algebra	Health Foundation		CS 256 Introduction to Discrete Structures	♦ CS 140 Introduction to Programming	♦ CS 213 Java Programming Language	♦ CS 214 Adv. Java Programming Language
	Year 2 2nd Semester			Natural Sciences Lab distribution	Humanities Distribution	**226 Intro to Object-Oriented Programming with C++	** CS 216 UNIX/LINUX Operating System	CS 210 Computer Security	

\* National Academy of Information Technology Note: Four information technology credits are required to complete this career pathway program.

Students who complete the MCPS program (courses in red) in high school do not have to repeat the courses in red at MC.

\*\* Technology Education Credit for class of 2010 and 2011 only

\*\*\* Advanced Technology Education Credit for class of 2010 and 2011



This MCPS CTE program is approved by the Maryland State Department of Education for graduates in 2012.

Required Courses
Recommended Elective Courses
Credit-Based Transition Programs (e.g. Dual/Concurrent Enrollment, Articulated Courses, 2+2+2)
(♦ = High School to Com. College) (● = Com. College to 4-Yr Institution) (■ = Opportunity to test out)



# Information Technology

2009–2010

National Academy of Information Technology (OASIS Code = AP) Computer Programming Option CIP 11.0151.0			
Requirements for Program Completion (3 credits A) + (1 credit B)			
Code	Course #	Course Title	Credit
A	2812/2813	Designing Technology Solutions A/B	1.0
	2964/2967	Discovering Programming Concepts A/B (Tech Ed Credit)	1.0
	2989/2990	Computer Programming 1A/B (Advanced Level)	1.0
	2901/2902	Computer Programming 2A/B (Advanced Placement)	1.0
	2965/2966	Computer Programming 3A/B (Advanced Level)	1.0
	2405/2406	IB-Information Technology in a Global Society (Advanced Level)	1.0
B	5720	Internship-National Academy Foundation (Unlimited Repeats)	.5
	2938/2939	Guided Research- National Academy Foundation A/B (Advanced Level)	.5
	TBD	College- National Academy Foundation (Advanced Level)	1.0

**\*National Academy Foundation requirements:**

5720	Internship-National Academy Foundation (Unlimited Repeats)	.5
TBD	College- National Academy Foundation (Advanced Level)	1.0

**Articulation Agreements with Montgomery College (MC)**

Students can articulate up to **24** credits at Montgomery College for a savings of **\$3,274** (including fees).

For more information, go to:

<http://www.montgomeryschoolsmd.org/departments/cte/toolkit/ClusterInfo/IT/index.shtm>