



HOMEWOOD-FLOSSMOOR HIGH SCHOOL COURSE SCOPE & SEQUENCE



Semester 1 '10 –'11

Department: Mathematics

Course: Introduction to CS

Instructor(s): Brewczynski

This course is aligned to: College Board Standards

*The Homewood-Flossmoor High School Course Scope & Sequence provides parents and students with a semester-long overview of each class that we offer. **An instructor may alter a course's scope & sequence as needed.** Students are responsible for keeping track of due dates and other pertinent course information in their H-F Student Planners. Parents, please contact your child's teacher by telephone or e-mail to clarify any questions you may have about the scope & sequence of a particular course.*

WEEK	STANDARDS	INSTRUCTIONAL CONTENT	ACTIVITIES, READINGS, LABS, AND/OR ASSIGNMENTS	MAJOR ASSESSMENTS
WEEK #1 8/16 – 8/20 No school: 8/16 & 8/17	II.B.4.a	Unit 1 – Kodu Programming <ul style="list-style-type: none">• introduction• character programming	Programming Projects: <ul style="list-style-type: none">• Basic Movement• Joystick Control	
WEEK #2 8/23 – 8/27	II.B.4.a	Unit 1 – Kodu Programming <ul style="list-style-type: none">• producing game goals• enemy programming• enemy artificial intelligence• basic collisions	Programming Projects: <ul style="list-style-type: none">• Treasures and Hazards• Collisions• Moving Enemies	



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WEEK #3 8/30 – 9/3 PLC day: 9/3	II.B.4.a	Unit 1 – Kodu Programming <ul style="list-style-type: none">• terrain tools• triggered responses• “creatable” objects• camera control	Programming Projects: <ul style="list-style-type: none">• Terrain• Triggered Responses• Hatch• Camera	
WEEK #4 9/6 – 9/10 No school: 9/6 Pep assembly: 9/10	II.B.4.a	Unit 1 – Kodu Programming <ul style="list-style-type: none">• beginning game design• game concepts	Programming Projects: <ul style="list-style-type: none">• Make Your Own Game	
WEEK #5 9/13 – 9/17	II.B.4.a	Unit 1 – Kodu Programming	Programming Projects: <ul style="list-style-type: none">• Make Your Own Game	Unit 1 Test Project Unit 1 Exam
WEEK #6 9/20 – 9/24 PLC day: 9/24	I.B.1 II.A.1.a II.B.2	Unit 2 – C# Objects and Variables <ul style="list-style-type: none">• constructors and variables• main & object methods	Programming Projects: <ul style="list-style-type: none">• selected exercises from Head First C#• selected exercises from A+ Computer Science Reading: Chapter 1 & 2	



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WEEK #7 9/27 – 10/1	I.B.1 II.A.1.a II.B.2	Unit 2 – C# Objects and Variables <ul style="list-style-type: none"> • constructors and variables • main & object methods 	Programming Projects: <ul style="list-style-type: none"> • selected exercises from Head First C# • selected exercises from A+ Computer Science Reading: Chapter 1 & 2	Unit 2 Test Project Unit 2 Exam
WEEK #8 10/4 – 10/8 PLC day: 10/8	I.B.1 II.A.1.a II.B.2	Unit 3 – C# Classes & Polymorphism <ul style="list-style-type: none"> • class structure • extending a class • abstract classes 	Programming Projects: <ul style="list-style-type: none"> • selected exercises from Head First C# • selected exercises from A+ Computer Science Reading: Chapter 3 & 4	
WEEK #9 10/11 – 10/15 No school: 10/11 All School Testing: 10/13	I.B.1 II.A.1.a II.B.2	Unit 3 – C# Classes & Polymorphism <ul style="list-style-type: none"> • class structure • extending a class • abstract classes 	Programming Projects: <ul style="list-style-type: none"> • selected exercises from Head First C# • selected exercises from A+ Computer Science Reading: Chapter 3 & 4	



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WEEK #10 10/18 –10/22 End of 1 st Quarter: 10/22	I.B.1 II.A.1.a II.B.2	Unit 3 – C# Classes & Polymorphism <ul style="list-style-type: none">class structureextending a classabstract classes	Programming Projects: <ul style="list-style-type: none">selected exercises from Head First C#selected exercises from A+ Computer Science Reading: Chapter 3 & 4	Unit 3 Test Project Unit 3 Exam
WEEK #11 10/25 –10/29 PLC day: 10/29	I.B.1 II.B.4.c	Unit 4 – C# Control Structures <ul style="list-style-type: none">if/else/else if statementnested if statementsconditional operators	Programming Projects: <ul style="list-style-type: none">selected exercises from Head First C#selected exercises from A+ Computer Science Reading: Chapter 5	
WEEK #12 11/1 – 11/5 Parent/teacher Conferences: 11/4 No school: 11/5	I.B.1 II.B.4.c	Unit 4 – C# Control Structures <ul style="list-style-type: none">if/else/else if statementnested if statementsconditional operators	Programming Projects: <ul style="list-style-type: none">selected exercises from Head First C#selected exercises from A+ Computer Science Reading: Chapter 5	



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WEEK #13 11/8 –11/12 No school: 11/11	I.B.1 II.B.4.c	Unit 4 – C# Control Structures <ul style="list-style-type: none">• if/else/else if statement• nested if statements• conditional operators	Programming Projects: <ul style="list-style-type: none">• selected exercises from Head First C#• selected exercises from A+ Computer Science Reading: Chapter 5	Unit 4 Test Project Unit 4 Exam
WEEK #14 11/15 –11/19 PLC day: 11/19	I.B.1 II.B.4.d	Unit 5 – C# Repetition <ul style="list-style-type: none">• loop structures• counters & accumulators• nested loop structures	Programming Projects: <ul style="list-style-type: none">• selected exercises from Head First C#• selected exercises from A+ Computer Science Reading: Chapter 6	
WEEK #15 11/22 – 11/26 No school: 11/25 &11/26	I.B.1 II.B.4.d	Unit 5 – C# Repetition <ul style="list-style-type: none">• loop structures• counters & accumulators• nested loop structures	Programming Projects: <ul style="list-style-type: none">• selected exercises from Head First C#• selected exercises from A+ Computer Science Reading: Chapter 6	



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WEEK #16 11/29 – 12/3	I.B.1 II.B.4.d	Unit 5 – C# Repetition <ul style="list-style-type: none">• loop structures• counters & accumulators• nested loop structures	Programming Projects: <ul style="list-style-type: none">• selected exercises from Head First C#• selected exercises from A+ Computer Science Reading: Chapter 6	Unit 5 Test Project Unit 5 Exam
WEEK #17 12/6 – 12/10 PLC day: 12/10	IV.D V.A	Unit 6 – C# Arrays <ul style="list-style-type: none">• one dimensional arrays• adding to arrays• deleting from arrays• looping through arrays	Programming Projects: <ul style="list-style-type: none">• selected exercises from Head First C#• selected exercises from A+ Computer Science	
WEEK #18 12/13 –12/17	IV.D V.A	Unit 6 – C# Arrays <ul style="list-style-type: none">• one dimensional arrays• adding to arrays• deleting from arrays• looping through arrays	Programming Projects: <ul style="list-style-type: none">• selected exercises from Head First C#• selected exercises from A+ Computer Science	



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WEEK #19 1/3 – 1/7	IV.D V.A	Unit 6 – C# Arrays <ul style="list-style-type: none">• one dimensional arrays• adding to arrays• deleting from arrays• looping through arrays	Programming Projects: <ul style="list-style-type: none">• selected exercises from Head First C#• selected exercises from A+ Computer Science	Unit 6 Test Project Unit 6 Exam
WEEK #20 1/10 – 1/14 Finals: 1/11 – 1/13 Marking Day 1/14		Final Exam Review		



HOMEWOOD-FLOSSMOOR HIGH SCHOOL COURSE SCOPE & SEQUENCE

Semester 2 '10 –'11

Department: Mathematics

Course: Introduction to CS

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WEEK #11 10/25 – 10/29 PLC day: 10/29		Unit 7 – Introduction to XNA <ul style="list-style-type: none"> • XNA framework • creating a game application 	Programming Projects: <ul style="list-style-type: none"> • Empty Project 	
WEEK #12 11/1 – 11/5 Parent/teacher Conferences: 11/4 No school: 11/5		Unit 7 – Introduction to XNA <ul style="list-style-type: none"> • storing data • making decisions 	Programming Projects: <ul style="list-style-type: none"> • Xna Moodlight 	Unit 7 Test Project Unit 7 Exam
WEEK #13 11/8 –11/12 No school: 11/11		Unit 8 – Controlling Games <ul style="list-style-type: none"> • getting player input • using the keyboard • adding vibration effects 	Programming Projects: <ul style="list-style-type: none"> • Remote Vibration 	



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WEEK #14 11/15 – 11/19 PLC day: 11/19		Unit 8 – Controlling Games <ul style="list-style-type: none">• games and content• making a sprite	Programming Projects: <ul style="list-style-type: none">• Color Nerve with a Picture	Unit 8 Test Project Unit 8 Exam
WEEK #15 11/22 – 11/26 No school: 11/25 & 11/26		Unit 9 – Game Communication <ul style="list-style-type: none">• writing text• creating a clock	Programming Projects: <ul style="list-style-type: none">• Drawing Shadows and Counter Games	
WEEK #16 11/29 – 12/3		Unit 9 – Game Communication <ul style="list-style-type: none">• multiplayer games	Programming Projects: <ul style="list-style-type: none">• Button Bash	Unit 9 Test Project Unit 9 Exam
WEEK #17 12/6 – 12/10 PLC day: 12/10		Unit 10 – Pictures and Sounds <ul style="list-style-type: none">• sound control	Programming Projects: <ul style="list-style-type: none">• Drum Machine	
WEEK #18 12/13 – 12/17		Unit 10 – Pictures and Sounds <ul style="list-style-type: none">• timers• arrays	Programming Projects: <ul style="list-style-type: none">• Reaction Timer Game	



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WEEK #19 1/3 – 1/7		Unit 10 – Pictures and Sounds <ul style="list-style-type: none">• working with images• debugging	Programming Projects: <ul style="list-style-type: none">• Super Zoom Program	Unit 10 Test Project Unit 10 Exam
WEEK #20 1/10 – 1/14 Finals: 1/11 – 1/13 Marking Day 1/14		Unit 11 – A Complete Game <ul style="list-style-type: none">• aspect ratios• sprites and methods• update method for animation• detecting collisions• displaying a score	Programming Projects: <ul style="list-style-type: none">• Pong	
WEEK #11 10/25 – 10/29 PLC day: 10/29		Unit 11 – A Complete Game <ul style="list-style-type: none">• aspect ratios• sprites and methods• update method for animation• detecting collisions• displaying a score	Programming Projects: <ul style="list-style-type: none">• Bread and Cheese Game	



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WEEK #12 11/1 – 11/5 Parent/teacher Conferences: 11/4 No school: 11/5		Unit 11 – A Complete Game <ul style="list-style-type: none">• aspect ratios• sprites and methods• update method for animation• detecting collisions• displaying a score	Programming Projects: <ul style="list-style-type: none">• Cheese Lander	Unit 11 Test Project Unit 11 Exam
WEEK #13 11/8 – 11/12 No school: 11/11		Unit 12 – Classes & Structures <ul style="list-style-type: none">• sprites and structures• arrays• calculating object sizes• managing object collisions• game progression• game state	Programming Projects: <ul style="list-style-type: none">• Blockbuster	
WEEK #14 11/15 – 11/19 PLC day: 11/19		Unit 12 – Creating Gameplay <ul style="list-style-type: none">• sprites and structures• arrays• calculating object sizes• managing object collisions• game progression• game state	Programming Projects: <ul style="list-style-type: none">• StarLight	Unit 12 Test Project Unit 12 Exam



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WEEK #15 11/22 – 11/26 No school: 11/25 & 11/26		Unit 13 – Networking <ul style="list-style-type: none">• network games• game state	Programming Projects: <ul style="list-style-type: none">• Multiplayer Game	
WEEK #16 11/29 – 12/3		Unit 13 – Networking <ul style="list-style-type: none">• network games• game state	Programming Projects: <ul style="list-style-type: none">• Tank Game	
WEEK #17 12/6 – 12/10 PLC day: 12/10		Unit 14 – Game Design <ul style="list-style-type: none">• game implementation	Programming Projects: <ul style="list-style-type: none">• Make Your Own Game	
WEEK #18 12/13 – 12/17		Unit 14 – Game Design <ul style="list-style-type: none">• game documentation	Programming Projects: <ul style="list-style-type: none">• Make Your Own Game	
WEEK #19 1/3 – 1/7		Final Exam Review		