

Computer Science Courses @ DGS

COMPUTER SCIENCE 1

Introduction to Programming

½ Credit Grade Level: 9, 10, 11, and 12

In this one semester course the student will learn the detailed step-by-step instructions needed to design a computer program. The student will also learn common design techniques and methods used to produce efficient and readable programs for various applications. The language currently used to teach/demonstrate these techniques is Visual Basic 2010.

COMPUTER SCIENCE 2

Game Programming Using Visual Basic 2010

½ Credit Grade Level: 9, 10, 11, and 12

This one semester course is a continuation of the Computer Science 1 course. This course will cover advanced topics of programming through the medium of Game Programming. Students will create a variety of computer games with an emphasis on graphics and animation.

AP ADVANCED COMPUTER SCIENCE

Java Programming Language

1 Credit Grade Level: 10, 11, and 12
(Weighted Grade)

Prerequisite: CS1 and CS2 OR instructor's recommendation (based on math skills).

This full year course will cover the methods of programming design. Techniques will be covered as well as a formal in-depth study of algorithms, data structures, data abstractions and object oriented programming.

Successful completion of this course will provide students with the opportunity to take the Computer Science Advanced Placement Test.

Students may also earn 8 hours of dual credit at the College of DuPage, meeting the requirements for CIS1400 (Programming Logic & Technique) and CIS2571 (Introduction to Java Programming).



AP Computer Science Presentation

Douglas Plunkett

Career & Technology Education
Department



Mr. Plunkett has been teaching computer science for more than 20 years and has taught the AP class at DGS for the last 9 years.

Downers Grove
South
High School

Advanced Placement
Open House

AP Computer Science



Thursday
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Career & Technology
Education
Department

Computer Science is ...

- Logical problem solving
- Understanding people
- Communicating ideas
- Working in teams
- Creating solutions with computers



Computer Science @ DGS ...

- 60% of students taking APCS are taking their first ever computer science course
- The 1-year HS course is equivalent to a 1-semester college course
- A HS computer science class is an easier introduction than taking it for the first time in college
- We start with the basics, so no one starts off behind
- Creating solutions with computers

Computer Science is used in ...

- Mathematics
- Biology / Bioinformatics
- Information Security
- Law
- Law Enforcement
- Training Simulations
- Video Games
- Graphic Design
- Music Technology
- Environmental Research
- Psychology
- Robotics
- Medicine
- Neurology

AP Computer Science is ...

- Full year course
- Learn the Java programming language
- Explore advanced programming concepts.
- Take the AP Exam and earn college credit.
- 8 HRS of DUAL CREDIT through COD



Expected Workload ...

- All of the computer work is done in class.
- The class is very hands-on...working on computers every day.
- Outside work is mostly reading assignments and some online problem solving



- Bioengineering
- Telecommunications
- Assistive Technology
- Education
- Computational Modeling
- Agriculture

