**IMPORTANT UPDATE REGARDING COMPUTER SCIENCE COURSES**

**BEGINNING SCHOOL YEAR 2012 GOING FORWARD**

Beginning in 2011-2012, computer applications courses (i.e. Mircrosoft Word, Excel, etc.) will no longer be allowed to fulfill the Computer Science option for the Hathaway Success Curriculum. All Computer Science courses must align with one or more of the following SCED codes:

|  |  |
| --- | --- |
| **SCED Code** | **Description** |
| 10051 Information Management | Information Management courses provide students with the knowledge and skills to develop and  implement a plan for an information system that meets the needs of business. Students develop an  understanding of information system theory, skills in administering and managing information systems,  and the ability to analyze and design information systems. |
| 10053 Database Applications | Database Application courses provide students with an understanding of database development,  modeling, design, and normalization. These courses typically cover such topics as SELECT statements,  data definition, manipulation, control languages, records, and tables. In these courses, students may use  Oracle WebDB, SQL, PL/SQL, SPSS, and SAS and may prepare for certification. |
| 10054 Data Systems/Processing | Data Systems/Processing courses introduce students to the uses and operation of computer  hardware and software and to the programming languages used in business applications. Students  typically use BASIC, COBOL, and/or RPL languages as they write flowcharts or computer programs  and may also learn data-processing skills. |
| 10055 Particular Topics in Management Information Systems | These courses examine particular topics in management information systems other than those  already described. |
| 10097 Management Information Systems – Independent Study | Management Information Systems—Independent Study courses, often conducted with  instructors as mentors, enable students to explore topics related to management information systems.  Independent Study courses may serve as an opportunity for students to expand their expertise in a  particular specialization, to explore a topic in greater detail, or to develop more advanced skills. |
| 10099 Management Information Systems - Other |  |
| 10151 Business Programming | Business Programming courses provide students with experience in using previously written  software packages as well as designing and writing programs of their own. The word-processing,  spreadsheet, graphics, and database exercises in these courses contain a business industry focus, and the  original programs are written in languages typical of this industry (Visual Basic (VB), C++, Java, BASIC,  COBOL, and/or RPL). |
| 10152 Computer Programming | Computer Programming courses provide students with the knowledge and skills necessary to  construct computer programs in one or more languages. Computer coding and program structure are  often introduced with the BASIC language, but other computer languages, such as Visual Basic (VB),  Java, Pascal, C++, and COBOL, may be used instead. Initially, students learn to structure, create,  document, and debug computer programs, and as they progress, more emphasis is placed on design,  style, clarity, and efficiency. Students may apply the skills they learn to relevant applications such as  modeling, data management, graphics, and text-processing. |
| 10153 Visual Basic Programming | Visual Basic (VB) Programming courses provide an opportunity for students to gain expertise in  computer programs using the Visual Basic (VB) language. As with more general computer  programming courses, the emphasis is on how to structure and document computer programs and how to  use problem-solving techniques. These courses cover such topics as the use of text boxes, scroll bars,  menus, buttons, and Windows applications. More advanced topics may include mathematical and  business functions and graphics. |
| 10154 C++ Programming | C++ Programming courses provide an opportunity for students to gain expertise in computer  programs using the C++ language. As with more general computer programming courses, the emphasis  is on how to write logically structured programs, include appropriate documentation, and use problemsolving  techniques. More advanced topics may include multi-dimensional arrays, functions, and records. |
| 10155 Java Programming | Java Programming courses provide students with the opportunity to gain expertise in computer  programs using the Java language. As with more general computer programming courses, the emphasis  is on how to structure and document computer programs, using problem-solving techniques. Topics  covered in the course include syntax, I/O classes, string manipulation, and recursion. |
| 10156 Computer Programming – Other Language | Computer Programming—Other Language courses provide students with the opportunity to gain  expertise in computer programs using languages other than those specified (such as Pascal, FORTRAN,  or emerging languages). As with other computer programming courses, the emphasis is on how to  structure and document computer programs, using problem-solving techniques. As students advance,  they learn to capitalize on the features and strengths of the language being used. |
| 10157 AP Computer Science A | Following the College Board’s suggested curriculum designed to mirror college-level computer  science courses, AP Computer Science A courses provide students with the logical, mathematical, and  problem-solving skills needed to design structured, well-documented computer programs that provide  solutions to real-world problems. These courses cover such topics as programming methodology,  features, and procedures; algorithms; data structures; computer systems; and programmer  responsibilities. |
| 10158 AP Computer Science AB | Following the College Board’s suggested curriculum designed to mirror college-level computer  science courses, AP Computer Science AB courses (in addition to covering topics included in AP  Computer Science A) provide a more formal and extensive study of program design, algorithms, data  structures, and execution costs. |
| 10159 IB Computing Studies | IB Computer Studies courses prepare students to take the International Baccalaureate Computing  Studies exam at either the Subsidiary or Higher level. The courses emphasize problem analysis, efficient  use of data structures and manipulation procedures, and logical decision-making. IB Computing Studies  courses also cover the applications and effects of the computer on modern society as well as the  limitations of computer technology. |
| 10160 Particular Topics in Computer Programming | These courses examine particular topics in computer programming other than those already  described. |
| 10197 Computer Programming – Independent Study | Computer Programming—Independent Study courses, often conducted with instructors as  mentors, enable students to explore topics related to computer programming. Independent Study courses  may serve as an opportunity for students to expand their expertise in a particular specialization, to  explore a topic in greater detail, or to develop more advanced skills. |

Please note: Computer Science courses are NOT required in order to qualify for a Hathaway Scholarship.