

## HOWARD UNIVERSITY SCHOOL OF BUSINESS

Accredited by AACSB-International

Undergraduate Curriculum

## COMPUTER INFORMATION SYSTEMS CYBER SECURITY CONCENTRATION

| FIRST YEAR               |   |              |   |  |           |
|--------------------------|---|--------------|---|--|-----------|
| FIRST SEMESTER           |   | HRS          | SECOND SEMESTER                         |  | HRS       |
| ENGW-XXX                 | English Writing Requirement                             | 3            | ENGW-XXX                                | English Writing Requirement                | 3         |
| MATH-010                 | College Algebra II *+                                   | 4            | MATH-026                                | Applied Calculus *                         | 4         |
| Foreign Language ①       |   | 3            | Foreign Language (Level 2+)             |  | 3         |
| <b>INFO-010</b>          | <b>Business Problem Solving</b>                         | 2            | PSYC-050                                | Intro to Psychology                        | 3         |
| Afro-American Elective ① |   | 3            | HHPL-XXX                                | Physical Education- Activity               | 1         |
| <b>MGMT-010</b>          | <b>Business Orientation</b>                             | 1            | <b>MGMT-011</b>                         | <b>Business Orientation II</b>             | 1         |
| <b>TOTAL</b>             |   | <b>16</b>    | <b>TOTAL</b>                            |  | <b>15</b> |
| SECOND YEAR              |   |              |   |  |           |
| FIRST SEMESTER           |   |              | SECOND SEMESTER                         |  |           |
| <b>ECON-180</b>          | <b>Statistics- Bus &amp; Economics</b>                  | 3            | History or Political Science Elective ① |  | 3         |
| ECON-001                 | Principles of Economics I                               | 3            | ECON-002                                | Principles of Economics II                 | 3         |
| <b>ACCT-201</b>          | <b>Accounting Principles I</b> ◇                        | 3            | <b>ACCT-202</b>                         | <b>Accounting Principles II</b> ◇          | 3         |
| <b>INFO-204</b>          | <b>Management Info Systems</b><br>(for Honors & Majors) | 3            | <i>INFO-210</i>                         | <i>Intro to Software Design</i>            | 3         |
| <b>MGMT-001</b>          | <b>Career Counseling</b>                                | 1            | <b>BCOM-320</b>                         | <b>Business Communication</b>              | 3         |
| HHPL-XXX                 | Physical Education- Health ①                            | 1            | <b>TOTAL</b>                            |  | <b>15</b> |
| <b>TOTAL</b>             |   | <b>14</b>    |   |  |           |
| THIRD YEAR               |   |              |   |  |           |
| FIRST SEMESTER           |   |              | SECOND SEMESTER                         |  |           |
| <b>INFO-311</b>          | <b>Quantitative Bus Analysis</b>                        | 3            | <b>INFO-335</b>                         | <b>Production &amp; Operations Mgmt</b>    | 3         |
| <i>INFO-330</i>          | <i>Database Management</i>                              | 3            | <i>INFO-XXX</i>                         | <i>Programming Language</i>                | 3         |
| Science Elective ①       |   | 3-4          | <b>FINA-311</b>                         | <b>Finance Principles</b>                  | 3         |
| <b>MGMT-301</b>          | <b>Management &amp; Org Behavior</b>                    | 3            | <b>BLAW-305</b>                         | <b>Business Law I</b>                      | 3         |
| <b>MKTG-301</b>          | <b>Principles of Marketing</b>                          | 3            | <i>INFO-370</i>                         | <i>Systems Analysis &amp; Design</i>       | 3         |
| <b>TOTAL</b>             |   | <b>15-16</b> | <b>TOTAL</b>                            |  | <b>15</b> |
| FOURTH YEAR              |   |              |   |  |           |
| FIRST SEMESTER           |   |              | SECOND SEMESTER                         |  |           |
| <i>INFO-391</i>          | <i>Intro to Information Security</i>                    | 3            | <i>INFO-398</i>                         | <i>Information Systems Consulting</i>      | 3         |
| <i>INFO-393</i>          | <i>Network/Internet Security Mgmt</i>                   | 3            | <b>MGMT-351</b>                         | <b>Entrepreneurship</b>                    | 3         |
| <b>BECN-330</b>          | <b>Managerial Economics</b>                             | 3            | <i>INFO-3XX</i>                         | <i>Business Analytics or Immersive Lab</i> | 3         |
| <i>INFO-395</i>          | <i>Information Assurance</i>                            | 3            | PHIL-XXX                                | Philosophy Elective ①                      | 3         |
| General Elective         |   | 3            | <b>MGMT-390</b>                         | <b>Business Policy</b>                     | 3         |
| General Elective         |   | 3            | <b>TOTAL</b>                            |  | <b>15</b> |
| <b>TOTAL</b>             |   | <b>18</b>    |   |  |           |

**Minimum semester credits required for GRADUATION: 120**

\* A grade of "C" or higher is required in all Math courses to advance to the next level. Only 4 credit hours will be awarded for each required Math course.

+ Students exempt from Math 010/ College Algebra II must complete a substitute course(s) equivalent to 4 credit hours.

◇ The average grade of ACCT 201 and ACCT 202 must be a "C" or higher.

① See the *General Education Electives Sheet* in order to determine the courses that fulfill these requirements.

② See the *Course Requirements for the Major Sheet* in order to determine the courses that fulfill these requirements.

Note: All required and elective courses for your major must be a grade of "C" or higher. See *Course Requirements for the Major sheet* for more.

Course names in **bold** are those courses that comprise the business core. Course names in *italics* are those courses that are required for the major. Many of the courses listed above require prerequisites. For more information see the *Course Prerequisite Information Sheet*. Any student who has enrolled in a course without the proper prerequisite(s) will be withdrawn from the course.

The course **underlined and italicized** is the Capstone for the major. This course integrates specific knowledge and skill sets acquired from previous courses within the discipline and features comprehensive assessments of cumulative student learning.

The course **underlined and in bold** is the Capstone course for the undergraduate business curriculum. This course integrates the knowledge and skills sets acquired from courses in different disciplines and features comprehensive assessments of students' competency in solving complex, interdisciplinary business problems.

# COMPUTER INFORMATION SYSTEMS BBA

## CONCENTRATION IN CYBER SECURITY

Effective Fall 2019 (Rev'd SP24)

| General Education Core   |  |     |   |
|--|--|-----|---|
| Course No.   | Title                                  | Hrs | Prerequisites and Minimum Classification  |
| <b>Maximum 15 credits of "Ds" and minimum grade of "C" for MATH courses.</b> |  |     |   |
| ECON 001   | Principles of Economics I              | 3   | <i>View the Howard Course Catalog or contact the Department coordinating the course</i> |
| ECON 002   | Principles of Economics II             | 3   |   |
| ENGW   | English Writing Requirements           | 6   |   |
| HHPL   | Physical Education - Activity Elective | 1   |   |
| HHPL   | Physical Education - Health Elective   | 1   |   |
| HIST or POLS   | History or Political Science Elective  | 3   |   |
| MATH 007 or MATH 010   | Pre-Calculus or College Algebra II     | 4   |   |
| MATH 026 or MATH 156   | Applied Calculus or Calculus I         | 4   |   |
| PSYC 050   | Introduction to Psychology             | 3   |   |
|  | Afro-American Elective                 | 3   |   |
|  | Foreign Language Requirements          | 6   |   |
|  | General Electives                      | 6   |   |
|  | Philosophy Elective                    | 3   |   |
|  | Science Elective                       | 3-4 |   |

**Total Credit Hours 49**

| Business Core  |                                     |   |   |
|--|-------------------------------------|---|---|
| <b>Maximum 6 credits of "Ds." Minimum average grade of "C" in ACCT 201 and ACCT 202. Minimum grade of "C" in INFO 204.</b> |                                     |   |   |
| ACCT 201   | Accounting Principles I             | 3 | MATH 006 (C)  |
| ACCT 202   | Accounting Principles II            | 3 | ACCT 201 (C); MATH 007/010 (C)                                |
| BCOM 320   | Business Communication              | 3 | ENGW 101/102/104; ENGW 103/105; MATH 026/156 (C); Sophomore   |
| BECN 330   | Managerial Economics                | 3 | ECON 001; ECON 002; INFO 311; MATH 026/156 (C)                |
| BLAW 305   | Business Law I                      | 3 | MATH 026/156 (C); Junior                                      |
| ECON 180   | Statistics for Business & Economics | 3 | None  |
| FINA 311   | Finance Principles                  | 3 | ACCT 202; ECON 001; ECON 002; MATH 026/156 (C); Junior        |
| INFO 010   | Business Problem Solving            | 2 | None  |
| INFO 204   | Management Info Systems             | 3 | INFO 010  |
| INFO 311   | Quantitative Business Analysis      | 3 | ECON 180; INFO 204; MATH 026/156 (C); Junior                  |
| INFO 335   | Production & Operations Mgmt        | 3 | INFO 311; Junior  |
| MGMT 001   | Career Counseling                   | 1 | MGMT 011  |
| MGMT 010   | Business Orientation                | 1 | None  |
| MGMT 011   | Business Orientation II             | 1 | MGMT 010  |
| MGMT 301   | Management & Org. Behavior          | 3 | ACCT 201 (C); ECON 001; ECON 002; MATH 026/156 (C); Sophomore |
| MGMT 351   | Entrepreneurship                    | 3 | FINA 311/312; MATH 026/156 (C); MGMT 301; MKTG 301; Junior    |
| MGMT 390   | Business Policy                     | 3 | MGMT 301; Senior  |
| MKTG 301   | Principles of Marketing             | 3 | ACCT 201 (C); ECON 001; ECON 002; MATH 026/156 (C)            |

**Total Credit Hours 47**

| Major Core                               |                                 |   |                                    |
|--|---------------------------------|---|------------------------------------|
| <b>Minimum 2.5 GPA and grade of "C."</b> |                                 |   |                                    |
| INFO 210                                 | Introduction to Software Design | 3 | INFO 204 (C)                       |
| INFO 330                                 | Database Management             | 3 | INFO 210 (C)                       |
| INFO 340 or INFO 341                     | Intro to C++ or Java            | 3 | INFO 210 (C)                       |
| INFO 370                                 | Systems Analysis and Design     | 3 | INFO 330 (C); Junior               |
| INFO 398                                 | Info Systems Consulting         | 3 | INFO 330 (C); INFO 370 (C); Senior |

**Total Credit Hours 15**

| Concentration Requirements               |                                     |   |                                      |
|--|-------------------------------------|---|--------------------------------------|
| <b>Minimum 2.5 GPA and grade of "C."</b> |                                     |   |                                      |
| INFO 391                                 | Intro to Information Security       | 3 | INFO 204 (C);                        |
| INFO 393                                 | Network/Internet Security Mgmt      | 3 | INFO 204 (C);                        |
| INFO 395                                 | Information Assurance               | 3 | INFO 204 (C);                        |
| INFO 384 or INFO 397                     | Business Analytics or Immersive Lab | 3 | <i>Varies based on chosen course</i> |

**Total Credit Hours 12**

**Total Credit Hours Required for Graduation in Program 123**

*Minimum 2.0 Cumulative GPA*