# OFFICIAL MASTER SYLLABUS DOCUMENT

**COURSE:** IST-155-B01 Networking II, 4 Credits

**INSTRUCTOR:**                                        **SEMESTER/YEAR:**  18/SP

**COURSE DESCRIPTION:** This course describes the architecture, components, and operation of routers, switches, and explains the principles of switching, routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols RIPv1, RIPv2, EIGRP, and OSPF. By the end of this course, students will be able to recognize and correct common routing issues and problems. Offered in conjunction with the Cisco Networking Academy. Students must have a personal computer and Internet access to complete online assignments and exams.  Class also meets at least one Saturday per session per the instructor's discretion. Laboratory fee required. Prerequisite: IST 155.

**TEXTBOOK:**
*Routing and Switching Essentials V6 Lab & Study Guide*; Cisco Press; ISBN-13: 9781587134265

**STUDENT LEARNING OUTCOMES:**
- Using IOS commands and the correct cabling configure a router to forward packets with the proper interfaces, routing protocols, and transport protocols enabled.
- Troubleshoot router connectivity issues at all layers of the TCP/IP model and maintain a router and switch through IOS and configuration management.
- Provide LAN connectivity through proper switch configuration and LAN services including DHCP and NAT.
- Provide security for a network segment by drafting access control lists and configuring ACL's on the proper in/out bound interfaces.

**TOTAL HOURS OF COURSEWORK:**

To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute "academic" hours) of coursework per semester. Those hours of coursework may be completed through a combination of hours within the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit.

For most classes, students should expect to do at least 2 hours of coursework outside of class for each hour of in-class coursework.

| | DIRECT Faculty Instruction In-class **36 h required** | Student Work Out of Classroom **114 h required** |
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| In-class "lecture" | 36 h | |
| Reading chapters | | 48 h |
| Practice quizzes | | 11 h |
| Test/activity for each chapter | | 26 h prep and completion |
| Mid-term Exam | | 5 h |
| Chapter assignments and webinars | | 14 h |
| Final exam prep (cumulative and skills) | | 10 h |
| **Total Hours** | **36 h** | **114 h** |

**SERVICES FOR STUDENTS WITH DISABILITIES:** Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as possible. Students may contact a DSS staff member for an appointment at dss@hagerstowncc.edu or at 240-500-2530.