



University of Maryland  
University College



**Bachelor of Science in Information Assurance**

**STUDENT DATA:**

**NAME:** ROADMAP'S DEGREE

**SSN:** 000-00-0000

**Credit Potential  
Required Credit**

**Introduction to Writing (WRTG 101 or 101X)**

**3.00**

Practice in effective writing and clear thinking at all levels, including the sentence and paragraph, with emphasis on the essay and research report. Specific steps reviewed within the writing process include formulating purpose, identifying an audience, and selecting and using research resources and methods of development.

(ENGL 101 must be completed within the first 15 semester hours. A placement test may be required. This may not be earned through credit by examination.)

**Another Writing Course**

**3.00**

(CLEP General English with or without essay may apply here. No more than 3 semester hours of writing credit may be earned through credit by examination. All 3-credit COMM courses apply, except COMM 300, 380, 400, 486, A or B & 493. In addition, ENGL 102, 278F, 291, 294, 303, 391, 391X, 480, 482, 483, 485, & 493 apply. Additional courses include JOUR 201 and LGST 401.

{DANTES Code = 11.07.00}

**Speech Communication or Writing Course**

**3.00**

(COMM and SPCH courses may apply, COMM 300, COMM 397A, COMM 380, COMM 400, COMM 493, COMM 495, ENGL 102, 294, 303, 485, JOUR 201, SPCH 100, SPCH 101, SPCH 125, SPCH 222, SPCH 324, SPCH 397, SPCH 420, SPCH 424, SPCH 426, SPCH 470, SPCH 472, SPCH 482. Additional courses include WRTG 289, WRTG 291, WRTG93, WRTG 387, WRTG 388, WRTG 390, WRTG 391, WRTG 391X, WRTG 393, WRTG 393X, WRTG 394, WRTG 394X, WRTG 489. WRTG 489, and WRTG 496.

{DANTES Code = 04.10.00 or 04.10.01}

**Upper Level Intensive Writing**

**3.00**

(Recommended courses WRTG 391, WRTG 391X WRTG 393, WRTG 393X, WRTG 394, WRTG 394X )

{DANTES Code = some 11.08.00}

**Arts or Humanities & History (One course each in two disciplines)**

**6.00**

(College credit by examination may apply. Arts & Humanities (must satisfy two different areas; one must fulfill Historical Requirement the other may be Art, Humanities, Music, Philosophy, Theater, Dance, Literature, or a Foreign Language.)

{DANTES Code = any 08.XX, any 11.XX, or some 04.XX series}

<b>Behavioral &amp; Social Sciences: One course each in two disciplines</b>	<b>6.00</b>
(College credit by examination may apply. One course is required in two disciplines, such as Anthropology, Behavioral Science, Criminology and Criminal Justice*, Economics, Geography, Gerontology {Except GERO 341, 342, 351, and 353}, Government and Politics, Psychology, and Sociology. *Note: Not all Criminology and Criminal Justice courses apply. Eligible courses are CCJS 350, 360, 432, 453, 454, & 461.) {DANTES Code any 20.XX.XX series}	
<b>Biological / Physical Science with Laboratory</b>	<b>4.00</b>
(A science lecture course, 3 sh, with related laboratory course, 1 sh, or a science course combining lecture and laboratory, 4 sh. Courses from the following discipline may apply: Astronomy, Biology, Biological Science, Chemistry, Geology, Natural Sciences, Physics, Botany, Entomology, General Science, and Zoology.)	
<b>Biological / Physical Science Elective</b>	<b>3.00</b>
(College credit by examination may apply. Courses from the following discipline may apply: Astronomy, Biology, Biological Science, Chemistry, Geology, Natural Sciences, Physics, Botany, Entomology, General Science, and Zoology.) {DANTES Code = 16.13.00 or 16.99.00 or most 16.XX.XX series}	
<b>Mathematics Elective [MH048B,MH049B,MH051B,MH065B]</b>	<b>3.00</b>
(Select from the following courses:  College Mathematics (MATH 103) Finite Mathematics (MATH 106) College Algebra (MATH 107) Trigonometry & Analytical Geometry (MATH 108) Pre-Calculus (MATH 115) High Level Math Elective  Visit the UMUC website for a description of these courses.)	
<b>Information and Research Methods (LIBS 150)</b>	<b>1.00</b>
An introduction to the research process and methods for retrieving information in a library or through online sources. Experience in approaching research, selecting a topic, and retrieving information on topics of professional or personal interest is provided. Focus is on developing the following information literacy skills: understanding the research process; selecting relevant print and electronic sources to answer research questions; effectively using Web search engines and UMUC Information and Library Services' electronic resources to find information; and evaluating, organizing, and correctly citing the information found.	
<b>Introduction to Computer-Based Systems (IFSM 201) [CS001B]</b>	<b>3.00</b>
(Course activities require access to a standard office productivity package, i.e., word processing, spreadsheet, database, and presentation software.) An overview of computer information systems in which hardware, software, procedures, systems, and human resources are explored in relation to their integration and application in business and other segments of	

society. Students may receive credit for only one of the following courses: BMGT 301, CAPP 101, CAPP 300, CMST 300, IFSM 201, or TMGT 201.

**Information Systems in Organizations (IFSM 300) [MG009B] 3.00**

(Course activities require access to Microsoft Office Professional.)  
Prerequisites: IFSM 201 and basic knowledge of office productivity software. An overview of information systems and how they provide value in organizations by supporting organizational (or business) objectives. Discussion covers human aspects of computing, types of computer systems, and general theory of systems and their relationship to the overall organization.

**Software and Hardware Concepts (IFSM 310) [CS031B] 3.00**

Prerequisites: CMIS 102 or CMIS 102A. A survey of computer systems. Emphasis is on the interrelationships of hardware architecture, system software, and application software. Topics include the architectures of processors and storage systems and implications for system software design. Discussion also covers the effects of the design of hardware and system software on the development of application programs in a business environment. Students may receive credit for only one of the following courses: CMIS 270, CMIS 310, CMSC 311, or IFSM 310.

**Information Systems and Security (IFSM 430) [CS076B] 3.00**

Prerequisite: IFSM 300. A survey covering aspects of establishing and maintaining a practical information security program. The security aspects and implications of databases, telecommunication systems, and software are examined, along with techniques used to assess risks and discover abuses of systems.

**Telecommunication Systems in Management (IFSM 450) 3.00**

Prerequisites: IFSM 300 and 310. An analysis of technical and managerial perspectives on basic concepts and applications in telecommunication systems. An overview of data communication protocols and standards; local area networks, wide area networks, and internetworks; and trends in telecommunications is provided. The implications of the regulatory environment and communications standards on transmission of voice, data, and image are examined. Students may receive credit for only one of the following courses: CMIS 370, CMSC 370, or IFSM 450.

**Information Security Needs Assessment & Planning (IFSM 433) 3.00**

(Visit the UMUC website for a description of this course.)

**Information System Security Mechanisms (IFSM 454) 3.00**

Prerequisite: IFSM 450. Recommended: IFSM 430. A hands-on technical examination of six areas of security vital to any organization: authentication, authorization and access control, confidentiality, availability, data integrity (encryption), and nonrepudiation. Topics include firewalls, intrusion detection systems (IDSs), vulnerability software, Public-Key Infrastructure (PKI), IP security (IPSec), virtual private networks (VPNs), and Web server lockdown procedures. Review also covers the types of attacks often launched on the Internet and how they are performed. Projects include demonstrations of network software used to gain information about a network, perform attacks, and/or prevent attacks.

**Information Assurance Supplemental Courses** **12.00**

Select from the following:

- IFSM 350 Wireless Telecommunications
- IFSM 431 Policy Planning for Security Architects
- IFSM 432 Disaster Recovery Planning
- IFSM 457 Cyberterrorism
- IFSM 459 Security Issues and Emerging Technologies
- BMGT 305 Knowledge Management
- EMGT 312 Social Dimensions of Disaster

Visit the UMUC website for a description of these courses.

**Systems Engineering (IFSM 485)** **3.00**

Prerequisites: IFSM 430 and 450. A project-oriented capstone study of all elements that constitute information systems assurance. Focus is on applying the practices, policies, operational procedures and technology required to protect the data and infrastructure utilized by information systems in organizations. Topics include present and future implementation requirements for maintaining information integrity and security.

**Free Electives** **49.00**

(College credit by examination may apply. At least 45 sh in the entire degree must be UL.)

**Excess or Duplicate Credit**

<b>TOTAL</b> .....	<b>120.00</b>	<b>0.00</b>
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Thank you for requesting support from the U.S. Coast Guard Institute (CGI). Whereas we serve as an activity in support of your unit Educational Services Officer (ESO), you are encouraged to seek assistance from your local ESO in your academic endeavors. The following information is provided to help you understand what is presented in this degree plan:

This document is an UNOFFICIAL Degree Plan to provide you with a preliminary assessment of how your prior learning experiences might fit into the specified degree program for this academic institution. If you choose to pursue this degree option, you must present it to a college representative, who will review it for the following:

- o Accurate representation of the college's degree program requirements, including course numbers and titles, credit hours for each course, lower- and upper-level course requirements, and the total number of credits needed for the degree.
- o Appropriate assignment of ACE Guide-recommended credit at the lower or upper level for military service schools and occupations, CLEP, DSST, and other tests, transfer credit for courses from other colleges and universities, certification programs, etc.
- o Appropriate assignment of SOC Course Category Codes from the SOC Handbook Transferability Tables. The SOC Degree Program Handbooks can be obtained from the SOC web site at: [www.soc.aascu.org](http://www.soc.aascu.org) should you wish to learn more about the course

transfer guarantees among SOC network institutions.

**IMPORTANT NOTE:** When you are ready to seek admission into this degree program, please send the completed enrollment form (found on the college's web page) to the USCG Institute. The registrar will send the college or university an official USCG transcript, a copy of the degree plan (if one was developed through the USCG Institute and was identified on your transcript request), and a ready-for-signature SOC Student Agreement (when signed by a college official, becomes a contract for degree completion).

Credit for all courses you have taken must be reflected on official transcripts sent directly to this college from the administrative offices of the colleges you previously attended. This degree plan is often used for information purposes by college counselors pending receipt of the official transcripts from the source colleges.

This degree plan is not intended to compete with your local college or university. Keep in mind, you are allowed to transfer in a significant amount of the degree requirements to this institution. As such, credit from local colleges, college level examination programs, or advanced military training may be applied to this degree. You may also complete the courses necessary from this college either in residence (on campus or possibly on a military base at a campus extension in the Education Center) or through distance delivery of the courses. If you have questions, please contact the college counselor or your advisor listed at the bottom of this Degree Plan.

#### DEGREE PLAN LEGEND:

SH = Semester hours  
VOC = Vocational, not relative to an academic degree  
LL = Lower Level, i.e. courses at the Freshman/Sophomore level  
UL = Upper Level, i.e. courses at the Junior/Senior level  
GL = Graduate Level (sometimes recommended by ACE for very complex courses)  
[#] such as [EN024A] or [EN024B] = SOC Course Category Codes\*  
{#} such as {DANTES Code = 01.02.03} = DANTES Academic Codes \*\*

\* SOC Course Category Codes: Service members Opportunity Colleges (SOC) is a consortium of over 1,600 accredited colleges and universities seeking to provide degree opportunities to the military. Over 170 of these institutions participate in network degree programs developed for the Army, Navy, Marine Corps, and Coast Guard. A SOC course category number beside a course from one of these institutions, such as [EN024A] or [EN024B] for English Composition, indicates that courses from other degree program institutions with the same code may be taken to satisfy the degree requirement. See the SOC Degree Programs Handbooks at <http://www.soc.aascu.org/>

\*\* DANTES Academic Codes: The Defense Activity for Non-Traditional Education Support (DANTES) publishes the DANTES Independent Study Catalog (DISC) annually, which lists more than 6,000 courses from dozens of regionally accredited colleges and universities. Because this is a degree from a SOC affiliated college, the academic residency requirements are limited, thereby allowing students to transfer in a significant portion of the degree, as mentioned above. If the course you desire to take is not offered by this institution when you want to take it, consider

the opportunities the courses in the DISC present. For more information, visit [http://www.dantes.doded.mil/dantes\\_web/distancelearning/disc/front/cont.htm](http://www.dantes.doded.mil/dantes_web/distancelearning/disc/front/cont.htm) Keep in mind, you should always check with the counselor or academic advisor at this institution before enrolling in a course listed in the DISC to ensure it will be accepted in transfer toward this degree.

#### University of Maryland University College General Information

Disclaimer from University of Maryland University College (UMUC): This Degree Plan is prepared by counseling staff not affiliated with UMUC for informational purposes only regarding educational options. Although this document contains information about UMUC courses, programs and policies and procedures, UMUC did not develop this document and therefore makes no representations or warranty regarding the accuracy or completeness of the information contained herein. The information contained in this Degree Plan is not intended to substitute UMUC admission and transfer requirements and should not be relied upon as acceptance by UMUC that the information contained satisfies UMUC requirements. Reference herein to any University trade name or mark does not constitute or imply the University's endorsement or recommendation. Students are urged to contact UMUC to discuss specific admissions requirements as they relate to each individual and UMUC welcomes all such contact.

University of Maryland University College (UMUC), one of 11 accredited, degree-granting institutions in the University System of Maryland, is the second largest university in the state, offering programs and services tailored for working adults. The university currently has more than 80,000 students worldwide, nearly 15,000 of whom are Maryland residents. In 1949, UMUC began providing educational services to U.S. military overseas. Today, UMUC is the leading education provider for the U.S. military, serving more than 47,000 service members worldwide at more than 100 locations. UMUC holds the highest honor given in Web education: the Sloan Consortium Award for Excellence in Institution-Wide Asynchronous Learning Network Programming. The university has won many other awards for online programming as well, most recently for having the Best Distance Education course as determined by the Maryland Distance Learning Association.

A total of 45 semester hours of Upper Level credit is required for this degree. Lower Level credit in courses that may apply to courses in which a 300 or 400 course number at UMUC is specified as long as the content is compatible and the total number of Upper Level credit is still attained.

Half of the major program of study must be taken through UMUC. Except for the required foundation course (ENGL 303), students may apply three 1-credit courses within a single category toward the required 9 sh, not to exceed a total of six 1-credit courses for the entire major.

Tuition per course: (subject to change)  
\$221 per semester hour active duty military  
\$221 per semester hour in-state  
\$407 per semester hour out-of-state  
\$10.00 per credit hour technology fee

Employees of government agencies, corporations, and private business may be eligible for military tuition rates if they are members of any of the seven Military Reserve or National Guard components. Check with the admissions office to determine eligibility if applicable.

To discuss your next step toward earning this degree with UMUC, contact:

UMUC Enrollment Team

3501 University Blvd. East

Adelphi, MD 20783-8060

Phone: 1-800-888-UMUC

E-mail: [enroll@umuc.edu](mailto:enroll@umuc.edu)

Website: <http://www.umuc.edu>

#### POLICY NOTES:

Transfer credit accepted by UMUC may include up to 30 semester hours of non-traditional credit for an Associates Degree or 60 semester hours for a Bachelor's Degree (military credit or college level testing). The remaining 30 semester hours for an Associates Degree or 60 semester hours for a Bachelor's Degree must be taken through colleges (15 semester hours for an Associates Degree or 30 semester hours for a Bachelor's Degree must be taken through UMUC).

Notes: 1) Academic Residency - 30 semester hours total; 15 semester hours must be Upper-Level UMUC coursework; 15 semester hours of major coursework must be resident.

2) Although military service school and MOS credit are only indicated in the electives area above, UMUC will award maximum military credits where appropriate. This evaluation will be conducted on a case-by-case basis. A maximum of 30sh MOS credit may be applicable.

3) Additional academic requirements: 45sh total upper-level credits; grade of C or better in all major and minor coursework; overall GPA of at least 2.0; at least half the credit for the major and optional minor must be earned through graded coursework; at least half the credits for the major and optional minor must be upper-level coursework.

4) A maximum of 60 semester hours from all credit-by-exam sources (24sh for CLEP general exams) may be applicable to a Bachelor's degree program.

Students who expect to complete the requirements for a degree are responsible for making sure they have met all requirements by referring to their official UMUC evaluation. It is highly recommended that students refer to the degree planning worksheets on the UMUC website for suggested course selections, and work closely with their UMUC academic advisor throughout their progress towards the degree, especially within 15sh of expected graduation.

This college is rated as one of the nation's best in U.S. News & World Report's "America's Best Colleges" issue.

**NAME:** ROADMAP'S DEGREE

**SSN:** 000-00-0000

Evaluation completed by: Charles Morrison

On: 17 November 2008