

Capella University



Bachelor of Science in Information Technology - Software Architecture

STUDENT DATA:

NAME: ROADMAP'S DEGREE

SSN: 000-00-0000

Credit Potential
Required Credit

Communications Electives

12.00

Capella learners develop the communication skills necessary to effectively use the English language to communicate both verbally and in written form. In addition, they learn to read, write, speak, and listen critically.

The courses below are recommended:

ENGL1000 English Composition

ENG2000 Research Writing

SPC2000 Intercultural Communication

SPC2050 Visual Design in Communications (3 qtr hours)

{DANTES Code = 11.07.00}

(College credit by examination may apply. Visit the Capella website for course descriptions.)

Ethical and Social Responsibility Course

6.00

Capella learners develop an understanding of the ethical dimensions of their personal and professional lives. Through reflection on their own values and positions, as well as those of others, they learn what it means to be a socially responsible citizen in today's world and develop the ability to appropriately exercise that citizenship.

(College credit by examination may apply. Visit the UC website for a description of courses available.)

{DANTES Code = 17.05.00}

Fine Arts and Humanities Electives

12.00

(Capella learners develop an understanding of the arts and humanities as an expression of human culture, and through the critical analysis of works of art, literature, and philosophy, they develop the ability to form their own aesthetic judgments.)

ART2000 - Art History Survey

HUM1000 - Introduction to the Humanities

HUM1050 - World Religions

LIT2000 - Sports and Literature

PHI1000 - Introduction to Philosophy

PHI2000 - Ethics (Recommended course)

PHI2050 - Human Nature & Ethics (Recommended courses:)

(College credit by examination may apply. Visit the CU website for a description of courses available.)

{DANTES Code = 08.06.00 or most 08.XX.XX series}

Mathematical and Logical Reasoning Course

6.00

Capella learners develop an understanding of mathematical and logical reasoning and the ability to use mathematics and logic to address problems in their personal and professional lives.

The courses below are recommended:

Applied Algebra (MAT 1050)

Introductory Statistics (MAT 2000)

Pre-Calculus (MAT1051) strongly recommended

College credit by examination may apply. Visit the CU website for a description of these courses.)

{DANTES Code = 14.09.00 or 14.09.06 or 14.01.00}

Natural Science Electives

12.00

Capella learners develop an understanding of the scientific methods used to study phenomena in the natural sciences and an appreciation of the role scientific inquiry plays in addressing the critical issues facing today's world.

BIO1000 - Human Biology

BIO1050 - Biology and Society

CHM1000 - Chemistry for Changing Times

PHY1000 - Introduction to Astronomy

(College credit by examination may apply. Visit the CU website for a description of courses available.)

{DANTES Code = 16.13.00 or 16.99.00 or most 16.XX.XX series}

Social Science Electives

12.00

Capella learners develop an understanding of the scientific methods used to study human behavior and interaction and knowledge of the predominant theories resulting from this study.

(The three courses below are recommended:

ECO1050 - Microeconomics

ECO1051 - Macroeconomics

HIS1000 - Immigrants in the American City

PSYC1000 - Introduction to Psychology

POL1000 - The Politics of American Government

POL2000 - Globalization

SOC1000 - Introduction to Human Society

SOC2000 - Cultural Diversity

College credit by examination may apply. Visit the CU website for a description of these courses.)

{DANTES Code see 20.XX.XX series}

Communication Strategies for the Info Tech Professional (TS 3006) 6.00

(Success in today's high-tech information age requires effective communication strategies and the ability to articulately share ideas in writing. In this course, learners build and enhance the skills necessary for success in the workplace and in their bachelor's degree program. Through interactive activities, learners develop a business perspective of information technology while preparing professional-caliber communications. In this course, learners expand their IT industry knowledge, participate in building a learning community, and tap into the talents and resources of their peers in the courseroom. Topics covered in course activities include written communications, research, teamwork, critical thinking, problem solving, ethics, and project creation. Learners must take TS3006 in their first quarter. Cannot be fulfilled by transfer or petition course study the fundamentals of hardware and operating systems architecture. Topics include computer architecture, operating systems architecture, number systems, peripherals, file management, and programming tools. The course also includes a review of current computer architectures and modern operating systems such as Windows, Linux, and MacOS. Prerequisite(s): TS3200.)

Enterprise Architecture (TS 3200) 6.00

(Learners in this course study how core business processes and information technology infrastructure merge to form enterprise architecture. Learners conduct an organizational requirements analysis as a first step in constructing an enterprise architecture. Learners also examine the stages of enterprise architecture maturity and develop core designs appropriate for each corresponding maturity level.)

Human-Computer Interaction (TS 3300) 6.00

(Learners in this course analyze the cognitive and affective dynamics of humancomputer interaction. Learners also examine the impact of user-centric guidelines on the design cycle of technological products and evaluate the usability of device interfaces and computer applications. Prerequisite(s): TS3200. upon school approval.)

Fundamentals of Project Management (TS 3120) 6.00

(This course emphasizes the critical activities associated with managing and leading Information Technology projects. It includes vendor management, configuration management, project estimation, risk management, and managing cross-functional and multi-national teams. Case studies of Information Technology project successes and failures are explored. Learners build and apply a project plan during this course. Learners are also introduced to Software Management Practices within the Software Engineering Institute's Capability Maturity Model.)

Hardware and Operating Systems (TS 3310) 6.00

(Learners in thiscourse study the fundamentals of hardware and operating systems architecture. Topics include computer architecture, operating systems architecture, number systems, peripherals, file management, and programming tools. The course also includes a review of current computer architectures and modern operating systems such as Windows, Linux, and MacOS. Prerequisite(s): TS3200.)

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| Fundamentals of Software Architecture (TS 3340) | 6.00 |
| (This course provides an introduction to the fundamentals of software and database architecture. Topics include the role of the software and data architect, requirements and tools used to create software architecture, database management systems, and database architecture. Learners define a software and data architecture appropriate for organizational needs and gain an understanding of the role of design in software and data architecture. Prerequisite(s): TS3200.) | |
| Network and Security Architecture (TS 3350) | 6.00 |
| (This course provides an introduction to the fundamentals of network and security architecture. Learners gain an understanding of how networks function to support the requirements needed to build a network and security architecture. Course topics include requirements analysis, network architecture, security architecture, network analysis, and systems methodology. Prerequisites(s): TS3200.) | |
| Ethical and Human Side of Information Technology (TS 3160) | 6.00 |
| (This course uses specific case examples and projects to explore the ethical and human dimensions of Information Technology within organizations and in relationships with customers, partners, and society. Learners develop the ability to recognize, to take seriously and to exercise leadership in significant ethical and human matters related to Information Technology.) | |
| Software Requirements Architecture (TS4710) | 6.00 |
| (This course provides an introduction to software requirements architecture. Learners study the roles of stakeholders and examine the analysis and requirements phases of the architecture development process. Learners also apply appropriate tools and techniques for requirements gathering and modeling and practice defining an organizational software architecture using those tools. Prerequisite(s): TS3340 or equivalent knowledge upon school approval.) | |
| Applications Architecture (TS 4715) | 6.00 |
| (This course provides an introduction to applications architecture. Course topics include client-server architecture and Model-View-Controller (MVC) paradigms, object-oriented design and programming, modeling, data structures, programming constructs, algorithms, and event-driven development processes. Learners study the role of applications architecture in software architecture and use the appropriate tools to define an organizational applications architecture. Prerequisite(s): TS3340 or equivalent knowledge upon school approval.) | |
| Software Construction I: Design and Modeling (TS4720) | 6.00 |
| (In this course, learners study and apply object-oriented analysis and design concepts using Unified Modeling Language (UML) and a high-level, compiled programming language. Course topics include techniques for designing, modeling, constructing, testing, and debugging object-oriented software applications. Prerequisite(s): TS4710 and TS4715 or equivalent knowledge upon school approval.) | |

Software Construction II: Database Development (TS 4725) 6.00

(This course focuses on data requirements and modeling, database development, and Structured Query Language (SQL). Learners study database design and implementation principles and apply SQL to create tables and queries. Learners also examine storage procedures and various uses of databases in contemporary Web, traditional, and mobile applications.

Prerequisite(s): TS4720 or equivalent knowledge upon school approval.)

Support and Maintenance of Software Systems (TS 4770) 6.00

(This course presents strategies for improving the quality of information systems. Learners examine common quality characteristics and apply quality assurance concepts and configuration management methodologies to develop effective testing processes. Learners also review system requirements for testability, participate in simulated design and code inspections, analyze testing strategies, and explore ways to integrate improvement processes in organizations or workplaces. Prerequisite(s): TS4735 or TS4745 or TS4755 or equivalent knowledge upon school approval.)

Emphasis Courses 12.00

Choose one of the following groups listed below:

For an emphasis in Web development

TS4730 - Software Construction III: Web Application Development 6 credits

TS4735 - Software Construction IV: Advanced Web Application Development 6 credits

For an emphasis on traditional development

TS4740 - Software Construction III: Java 6 credits

TS4745 - Software Construction IV: Advanced Java 6 credits

For an emphasis on mobile development

TS4750 - Software Construction III: Mobile Application Development 6 credits

TS4755 - Software Construction IV: Advanced Mobile Application Development 6 credits

Visit the CU website for course listings and descriptions.

Integrated Action Learning Project (TS 4990) 6.00

This course allows learners to apply knowledge and skills from other courses as they develop a project that benefits an organization, community, or industry. Learners prepare a proposal that includes a project description, deliverables, completion dates, and the associated learning that will be exhibited. Upon approval from the instructor, learners execute the proposal, record their progress weekly using a project tracking Web site, and produce a final project report.

Free Electives 30.00

Choose elective courses that total a minimum of 30 credits. The School of Technology recommends that 18 of these credits be earned through undergraduate technology courses.

Excess Duplicate Credit

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| TOTAL | 186.00 | 0.00 |
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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 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 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.

Capella University General Information:

OVERVIEW

Founded in 1993, Capella University is an accredited online university that offers courses, certificates, bachelor's, master's, and doctoral degrees in business, technology, education, human services and psychology. Capella offers 76 specializations - totaling more than 760 online courses, and extensive learner services to support the professional and academic goals of working adults. By leveraging Internet technology to deliver high-quality programs, Capella has conquered the barriers of time and place faced by working adults.

SUPPORT FOR ARMED FORCES

As a member of the Armed Forces, you are entitled to the Capella Armed Forces tuition discount and may be eligible to receive credit for previous training and experience. In addition, you will have access to personal academic advising; writing, research, and computer skills support; career services, the Johns Hopkins Sheridan Library system, the online bookstore, and more.

EDUCATIONAL PHILOSOPHY

As an institution that is focused exclusively on adult learners, Capella University is a results-oriented institution focused on high-quality academic work designed to have immediate professional relevance. Capella strives to inspire achievement through an intimate, community-based learning experience. With a faculty-to-student ratio of 18:1, Capella's learners experience frequent online interaction between faculty and fellow learners-without regard to time or location.

24/7 ACCESS TO COURSES-FROM ANYWHERE IN THE WORLD

Courses are asynchronous-which means that learners can participate 24 hours a day, 7 days a week, from any Internet connection anywhere in the world. Courses are characterized by a blend of assigned readings, threaded class discussions, faculty feedback, group projects, case studies, research and writing assignments. Learners can expect to spend a minimum of 10 hours each week in a course-with at least two hours devoted to online discussion.

FACULTY

Capella University faculty members are subject-matter experts of the highest caliber, each offering a balance of theoretical knowledge and practical experience. Professors include industry analysts, corporate executives, and adjunct professors from prestigious colleges and universities.

ACCREDITATION

Capella University is accredited by The Higher Learning Commission and a member of the North Central Association of Colleges and Schools*. The NCA has recognized Capella for "its pioneering role in translating an adult learning model into action." Capella is the first and only online academic institution to participate in the Higher Learning Commission's Academic Quality Improvement Program.

ENROLLMENT

20,000 enrolled learners located in all 50 states and more than 63 countries. The majority of Capella's learners are working adults who often are balancing family, work and educational achievement.

TUITION

The tuition for the courses required for this Bachelor of Science in Information Technology - Software Architecture is \$1,860 per 6.0 quarter credit course. Capella offers, a 15% tuition discount on undergraduate programs and 10% tuition discount on graduate programs to active duty personnel and their immediate families, veterans/retirees, guards reservists and civilian employees of the Department of Defense.

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.

For more information regarding Capella University, please contact:

John Hayes
Armed Forces Advisor Specialized Services
Capella University

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Email: john.hayes@capella.edu
info@capella.edu

POLICY NOTES:**General Requirements:**

- Different grade point average depending on incoming credits.
- The maximum limit of nontraditional or transfer credit applied to this degree is 138 quarter credits.
- A grade of "D" is NOT accepted in transfer.

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

Evaluation completed by: Charles Morrison

On: 14 November 2008