TRAINING PROGRAMS THAT DELIVER JOB-READY, TANGIBLE OUTCOMES

We understand that your professional development goals are important to you. That’s why we offer a variety of courses, certificate programs and exam preps in various formats, subject areas, and convenient times to best meet your unique needs. Our programs complement your educational degree and our credentials validate your professional capabilities. Choose the best option to fit your needs and enhance your career advancement.

COURSE FORMATS:

CLASSROOM
On the UAH campus, attend public training classes in the areas of Cybersecurity, Information Technology, Engineering, and Management. Stay current with updates and best practices by interacting with peers and actively participating in high quality training curriculum led by industry professionals and expert instructors.

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Experience the convenience and flexibility of completing an instructor-led online course, exam prep or certificate program that fits within your schedule. Register at any time, and take up to 30 days to complete the course. Take 60 days to complete courses over 30 hours and IT courses.

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Meet the demand for professionals in your workforce to stay current in their fields by partnering with us to provide you and your team with training programs designed to meet your specific needs. Select an out-of-the-box training offered at UAH or onsite at the location of your choice. We can also work with you to design specialized training tailored to meet your specific organizational goals. You select the topics, location, and times that are convenient for you or your team, and we will bring the high quality learning experience to your organization.

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Complete the registration form and submit via one of the following. Hours: M – F, 8:15 am – 5 pm (CST)

- **ONLINE**: CPCS.uah.edu
- **PHONE**: 256.824.6010 or 800.448.4031
- **MAIL OR IN PERSON**: UAH CPCS, Wilson Hall, Room 103, Huntsville, AL 35899-0650
- **FAX**: 256.824.6760
- **WE ACCEPT**: MasterCard, Visa, American Express, Discover, Company POs, and SF-182s

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- Fathia Hardy, Associate Director: 256.824.2808

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**UAH WILL BE CLOSED**: Mar 18 – 22, 2019 | May 27, 2019 | Jul 4, 2019

**Classroom courses are held on the UAH campus unless otherwise noted.**

Refer to your confirmation letter email for the location. View the campus map on the inside back cover. A parking permit will be provided the first day of the course.
# Professional Development 2019 Course Calendar

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All courses can be customized to meet your organization's needs. Call 256.824.6015 for details.
### Systems Engineering Certificate

- **Systems Engineering Overview**
- **Requirements Development**
- **Applied System Design and Decision-Making**
- **Systems Analysis, Modeling, and Simulation**
- **System Validation and Verification**

### Test and Evaluation Certificate

- **Test and Evaluation Principles**
- **Test Planning and Conduct**
- **Requirements Development**
- **Test Evaluation and Assessment**
- **System Validation and Verification**
- **Project Scope, Cost, and Schedule Management**

### Test and Evaluation Certificate

- **Model-Based Systems Engineering with SysML**
- **CSEP Exam Bootcamp**
- **Systems Thinking: Problem Solving Tools and Techniques**
- **Missile Systems Fundamentals**
- **Intro to Rotorcraft**

### Federal Contract Management Essentials

- **Federal Proposal Management**

### Earned Value Management Certificate

- **Earned Value Management Essentials**
- **Earned Value Management Analysis and Reporting**
- **Integrated Baseline Review Prep and Execution**

### Project Management Certificate

- **Project Management Foundation**
- **Project Scope, Cost, and Schedule Management**
- **Project Quality and Risk Management**
- **Project Procurement and Contracting Management**

### Interior Design Certificate

- **Building a Foundation in Interior Design**
- **Design and Architecture**
- **Sketch Up Your Design**
- **Applying Design Principles and Elements**
- **Interior Space Planning**

### Key

- Offered in the Daytime
- Offered in the Evenings
- Online On Demand
A+ Exam Prep  
(Meets DoD Directive 8140)
CompTIA’s A+ certification fulfills a basic requirement for most technical support and IT administrative positions. Learn the fundamental concepts of installation, configuration and maintenance of PCs, devices and related hardware/software. Learn to assemble components based on customer requirements. Apply troubleshooting skills to properly and safely diagnose, resolve, and document common issues while providing appropriate customer service. Validate your knowledge to perform effectively as a technician. Prepare for CompTIA’s A+ Certification Exam 220-901/902 which applies to DoD 8140 Information Assurance Technical (IAT) Level I. Go to comptia.org for complete certification information. Prerequisite: Basic understanding of information technology and/or 6 – 12 months hands-on experience in the IT field recommended.

D. Spooner, 28 hrs, $955/$1195*  
Online: D2119010  
*With two exam vouchers

Linux+ Exam Prep
Expand your career opportunities by earning the CompTIA Linux+ certification. Gain clear, concise information on all aspects of Linux administration with a focus on the latest version of the exam, as well as insight from real-world scenarios. Learn GNU and Unix commands, system operation, system administration, system services, and security. Prepare for the CompTIA Linux+ Certification Exam LX0-103/104 and automatically receive the LPI LPIC-1 certification. Upon completion of the course, schedule to take the Linux+ exam in the UAH Pearson VUE testing center. Prerequisite: A+, Network+, and/or 6 – 12 months of Linux administration experience recommended.

J. Hough, 28 hrs, $1495/$1895*  
Campus: Jun 3 – Jul 8, 2019  |  M, W  |  5:30 – 8:30 pm  |  C2119038**  
*With two exam vouchers  
** Class will not meet July 3, 2019. July 1 and July 8, 2019 class will meet from 5:30 – 7:30 pm

Network+ Exam Prep  
(Meets DoD Directive 8140)
Network+ certification is a requirement or prerequisite for many networking technicians, network administrators, network installers, help desk technicians, and IT cable installers. Challenge yourself by gaining the expertise needed to pass the CompTIA Network+ certification exam. Practice exam questions in a lab environment and benefit from hands-on exercises. Prepare to build, manage, and protect the critical asset that is the data network. The certification applies to DoD 8140 Information Assurance Technical (IAT) Level I. Visit CompTIA.org for complete certification information. Take the CompTIA Network+ certification exam in our convenient UAH Pearson VUE testing center. Prerequisite: 6 – 12 months of technical networking experience recommended.

What You Will Learn:

- Construction of networks with the OSI and TCP/IP models and SOHO networks
- Configuration of network hardware, topologies, cabling, IPv6 routing protocols, and wireless network
- Connecting multiple Ethernet components
- Router and switch installation and configuration
- TCP/IP applications and network protocols
- Virtualization Implementation
- Client and server remote access
- Securing networks with firewalls, NAT, port filtering, packet filtering, and other methods
- Managing and troubleshooting networks

J. Cuneo/D. Spooner, 28 hrs, $1195/$1395*  
Campus: Aug 26 – 29, 2019  |  M – Th  |  8:30 am – 4:30 pm  |  C2119008*  
Online: D2119011  
*With exam voucher

The course made me feel equipped to pursue a Network+ Certification, which opens up important job opportunities in the IT field.

– Network+ Exam Prep Participant
ISSA Member Discount

UAH CPCS is proud to offer North Alabama Chapter ISSA members (NACISSA) a 5% discount on cybersecurity exam preps. Register today at 256.824.6010.

Security+ Exam Prep
(Meets DoD Directive 8140)

Increase your current expertise by preparing for the CompTIA Security+ Certification Exam. Learn the skills and tools needed to achieve core security measures. Gain knowledge on the latest methods in risk management, identifying intrusions, and designing secure systems and networks. Familiarize yourself with concepts and study how to anticipate, guard against, mitigate, and respond to security incidents. Hands-on labs and performance based questions give each participant in-depth knowledge and practical experience with essential security systems. The certification applies to DoD 8140 Information Assurance Technical (IAT) Level II and Information Assurance Management Level I. Visit CompTIA.org for complete information. Prerequisite: 2 Years of technical networking experience and/or Network+ recommended.

What You Will Learn:
• Network infrastructure fundamentals
• Systems security and cryptography concepts
• Organizational security methods
• Access control and auditing techniques

J. Cuneo/T. Williams, 28 hrs, $1195/$1475*
Campus: Jun 4 – Jul 9, 2019 | T, Th | 5:30 – 8:30 pm | C2119039**
Campus: Dec 16 – 19, 2019 | M – Th | 8:30 am – 4:30 pm | C2120004
Online: D2119009

*With exam voucher
** Class will not meet July 4, 2019. Class will meet from 5:30 – 7:30 pm on July 2 and July 9, 2019.

I feel that taking this course was one of the best investments I could have made for my career. The instructor was very knowledgeable and had a complete understanding of the material.

– Security+ Exam Prep Participant

Certified Ethical Hacker (CEH™) Exam Prep
(Meets DoD Directive 8140)

Dive into an interactive environment and learn how to scan, test, and secure systems from hackers. Hands-on labs give you in-depth knowledge and practical experience with the current essential security systems. Learn how perimeter defenses work and then scan and attack your own networks (no real network is harmed). Understand how intruders escalate privileges and what steps can be taken to secure a system. Study intrusion detection, policy creation, social engineering, DDoS attacks, buffer overflows, virus creation, and cloud computing. Build areas of mastery and focus your attention on subjects you need to gain proficiency by taking simulated assessments. Acquire familiarity with the exam questions and layout, and employ effective test-taking strategies as you experience the real exam scenario. After completion of the course, you will be eligible to schedule the CEH™ exam through UAH Testing and Certification Services. Go to eccouncil.org for complete certification information. Prerequisite: Technical networking experience with an emphasis on security recommended.

What You Will Learn:
• Ethics and legality
• Enumeration
• Scanning networks
• Denial-of-Service
• Social Engineering
• Mobile platforms
• SQL Injection and cryptography
• Footprinting and reconnaissance
• Evading IDS, Firewalls, and Honeypots
• System hacking, session hijacking, malware threats, and sniffers
• Hacking web servers, web applications, and wireless networks

J. Cuneo, 35 hrs, $2195/$2595*
Campus: Apr 15 – May 22, 2019 | M, W | 5:30 – 8:30 pm | C2119037**
Campus: Dec 16 – 20, 2019 | M – F | 8:30 am – 4:30 pm | C2120005

*With exam voucher.
** May 22 class will meet from 5:30 – 7:30 pm

DoD DIRECTIVE 8140

Select courses assist in the credentialing/continuing education requirements of DoD employees with privileged access to DoD information systems. Courses include: A+, Network+, Security+, CISSP®, CEH™, CAP®, and CASP+.
Cyberspace is the new battlefield where commercial, federal, state, and local government agencies, including the DoD, have become virtual targets. Threats include critical infrastructures such as the energy, transportation, health, emergency services, telecommunications, financial systems, shipping, food, water, and chemical sectors. Knowledgeable people are the key to a secure organization. Organizations require the CAP® Certification to monitor and protect their network infrastructure and information systems. Learn to ensure that information systems possess security commensurate with the level of exposure to potential risk, as well as damage to assets or individuals. Prerequisite: 1-2 years of IT security, risk management, systems, and/or technical networking experience recommended.

CAP® Benefits:
• Demonstrates commitment and knowledge
• Offers a career differentiator and credibility
• Provides you with increased earning potential (world-wide average increase of 25%)
• Fulfills requirements for information security certification mandates

R. Spee, 28 hrs, $1295*
Campus: Apr 9 – May 9, 2019 | T, Th | 5:30 – 8:30 pm | C2119044**
Campus: Sep 10 – 13, 2019 | T – F | 8:30 am – 4:30 pm | C2120007

*Exam voucher not included
**Class will meet 5:30 – 7:30 pm on May 7 & 9, 2019.

“...The instructor is obviously an expert, if not a master, of this material. He is very knowledgeable of the topic and articulates it well.”
– CAP® Exam Prep Participant

Understand information security best practices and prepare for the CISSP® Exam. Organizations gain a leading edge by demanding qualified information security staff who demonstrate their dedication by providing the highest standard of security for their customers, employees, stakeholders, and organizational information assets. Define the architecture, design, management, and/or controls that assure the security of business environments. Broaden your expertise in critical topic areas such as application, information, and operations security. Gain in-depth security knowledge in risk management, cloud computing, mobile security, and application development security. The certification applies to DoD 8140 Information Assurance Technical (IAT) Level III, Information Assurance Management Levels II and III, and System Architect and Engineer Levels I and II. Go to isc2.org for complete certification information. Prerequisite: 10 years of IT experience and/or 5 years of hands-on technical security experience recommended.

How You Will Benefit:
• Confront difficult situations with confidence by knowing best practices in Information Security
• Show you have a working knowledge of information security
• Validate dedication to the information security profession
• Obtain a superb resume builder with great credibility
• Receive access to valuable resources, such as peer networking and idea exchange
• Learn related security topics to the ones you have already mastered through your professional experience and education
• Demonstrate your advanced knowledge on 8 security subjects through your professional experience and educational knowledge
• Prove you have the technical expertise to skillfully design and execute a high quality professional cybersecurity program

E. Jackson/D. Hall, 35 hrs, $2195*
Campus: Apr 1 – May 15, 2019 | M, W | 5:30 – 8:00 pm | C2119043
Campus: Sep 16 – 20, 2019 | M – F | 8:30 am – 4:30 pm | C2120006

*Exam voucher not included
CompTIA® Advanced Security Practitioner (CASP+) Exam Bootcamp (Meets DoD Directive 8140)
The CompTIA Advanced Security Practitioner (CASP+) exam CAS-002 is for those who want to take the next step in their career. The CASP+ body of knowledge covers enterprise security, risk management and incident response, research and analysis, integration of computing, and communications and business disciplines, as well as technical integration of enterprise components. Provide the best cybersecurity solutions and protection for organizations worldwide as a CASP+ certified security professional. Through hands-on activities and lecture, develop the skills to confidently perform your duties as an advanced security professional. The CASP+ is designed for security professionals who want to obtain the technical knowledge and skills needed to conceptualize, integrate, and implement secure solutions across complex enterprise environments. Go to comptia.org for additional certification information. Prerequisite: 10 years of IT experience and/or 5 years of hands-on technical security experience recommended.

E. Jackson, 35 hrs, $2195/$2545*
Campus: Jun 10 – 14, 2019 | M – F | 8:30 am – 4:30 pm | 82119002
*With exam voucher.

Certified Network Defender (CND) Exam Prep
Are you a network administrator, network security administrator, network security engineer, involved in network operations, or concerned about the integrity of your network infrastructure? Then this course is for you! Enhance your network defense ability and learn about attackers by taking this intensive, hands-on, lab-based course. This course offers network security and cyber defense strategies to protect, detect, and respond to cyber attacks. Interactive labs provide technical skills required to design a secure network with future threats in mind. The CND certification is the next step towards protecting your network. Prepare for the EC-Council CND 312-38 exam and gain 35 hours of class time and schedule to complete the CND 312-38 exam at our location, at your convenience. Go to eccouncil.org for complete certification information. Prerequisite: Technical networking experience with an emphasis on security recommended.

35 hrs
Customized Training: 256.824.6015

Complete Your Certification Exam at UAH!
TESTING & CERTIFICATION SERVICES
Over 100 IT exams and over 35 certification/licensure exams are available including professional certification exams, college entrance exams, and credentialing exams.

In addition, we are a Pearson Vue provider with licensure and certification exams including CompTIA, CISCO, and EC-Council.

Why Test at UAH?
• State-of-the-art computer labs
• Comfortable, professional setting
• Convenient location and hours
• Knowledgeable, friendly staff
• Secure storage for personal items

View a full listing of exams at CPCS.uah.edu/TaCS or call 256.824.6373.

Proud Partners with CompTIA® and EC-Council
As a proud partner of CompTIA and the EC-Council, UAH can offer discounted exam vouchers for a single fee. Simply register for the “with exam voucher” session. Vouchers are distributed before the last class and are valid in the U.S. for one year.

As a CompTIA academy partner, UAH offers exam prep courses in A+, Security+, Network+, Linux+, and CASP+ with Pearson VUE exam vouchers.

As an EC-Council Accredited Training Center, UAH offers the CEH™ exam prep course and testing through our Testing and Certification Services.
NEW Introduction to Excel
Enhance your skills by learning and mastering Microsoft Office Excel. In this introduction, learn the basics of Excel including spreadsheet terminology, features, and basic functions. Explore the Help System and discover how to navigate and modify worksheets and workbooks. In hands-on labs you will create, enter, and edit data as well as learn to format and manage text, values, and formulas. This course is geared toward participants with little to no familiarity with Excel.
Prerequisite: Fundamental experience with PCs and Windows.
A. Spain, 7 hrs, $265
Campus: Sep 10, 2019  |  T  |  8:30 am – 4:30 pm  |  C2120013

NEW Excel: Introduction to PivotTables and PivotCharts
Become more valuable to your organization by discovering the power of PivotTables and PivotCharts. Learn to use data sets that work with PivotTables. Understand how to organize and summarize data, format reports and data, and create PivotCharts to visualize pivoted data. This course is suitable for those who work in Excel but have little to no knowledge of how to create PivotTables and PivotCharts and who want a greater understanding of how to analyze and report information. Prerequisite: Intermediate level Excel users familiar with general concepts of Excel features.
A. Spain, 7 hrs, $265
Campus: Apr 12, 2019  |  F  |  8:30 am – 4:30 pm  |  C2119049
Campus: Nov 12, 2019  |  T  |  8:30 am – 4:30 pm  |  C2120015

NEW Excel: Formulas and Functions
Excel formulas and functions are useful in all types of spreadsheet applications. They are essential to manipulating data and obtaining useful information. This course will expand your understanding and use of Excel by focusing on the techniques that help you build useful worksheet formulas and enhance spreadsheet functionality with the right functions. Learn to create formulas, import, export and validate data, plus more. Understand how to maintain your original data, audit your formulas for correctness, and adjust values to be able to calculate how to reach outcome goals. Prerequisite: Intermediate level Excel users familiar with general concepts of Excel features.
A. Spain, 7 hrs, $265
Campus: Mar 8, 2019  |  F  |  8:30 am – 4:30 pm  |  C2119048
Campus: Oct 15, 20019  |  T  |  8:30 am – 4:30 pm  |  C2120014

NEW Powerful Presentations Using PowerPoint
Delivering effective and powerful presentations is critical to success whether you are presenting a new initiative, planning budgets, or allocating resources. Learn PowerPoint tips that make an impact on your audience. This course will provide examples of what makes the best PowerPoint presentations utilizing layout, themes, graphics, objects, builds, slide transitions, and more. Practice building easy-to-create powerful, engaging, professional, and custom presentations that ensure an attentive audience. Prerequisite: Previous experience with PowerPoint preferred.
L. Smith, 7 hrs, $265
Campus: Aug 30, 2019  |  F  |  8:30 am – 4:30 pm  |  C2120009

NEW Access Essentials
Learn Access basics to streamline information management by designing and creating databases. Explore ways to plan, create, and manipulate databases using tables. Discover how to create and modify queries as well as perform operations within queries. Master data entry rules and properties by using them to your advantage. Prerequisite: Experience with PCs and Windows.
L. Smith, 7 hrs, $265
Campus: Nov 15, 2019  |  F  |  8:30 – 4:30 pm  |  C2120016
MICROSOFT PROJECT CERTIFICATE
Gain a competitive edge by increasing your productivity and efficiency in Microsoft Project. Learn to use Project's flexible features to keep your projects organized and on time.

Take the 2-course series or just one course.

Using Project
Effectively manage your projects with Microsoft Project. Utilize entered data, creating a valid and dynamic model of the project. Learn how to set up MS Project to facilitate efficiency and ease of use. Enter tasks, estimates, dependencies, constraints, resources, and assignments. Understand project management concepts, create a work breakdown structure, and identify project costs. Use filters, groups, and sorting. Master relationship types such as lead and lag, and resource conflicts. See and use the critical path of your project. Build a foundation in how to control your project environment as never before. Prerequisite: Experience with PCs and Windows.

P. Tatum, 12 hrs, $395
Campus: Jul 16 – 17, 2019 | T, W | 8:30 am – 3:30 pm | C2119034

Project Power User
Maximize your ability to manage tasks and projects. Work with templates, create baseline plans, monitor and update projects, and analyze Project statistics. Learn to handle delays and conflicts with ease, consolidate project files, and share resources. Understand how to use the resource histogram and how to manually optimize resources. Integrate Project data with other Office applications. Review Project management concepts and best practices, handle resource conflicts, and share resources across many plans. Understand task types and customize and manage multiple projects. Prerequisite: Using MS Project or six months’ experience using MS Project.

P. Tatum, 12 hrs, $395
Campus: Oct 29 – 30, 2019 | T | 8:30 am – 4:30 pm | C2120002

QuickBooks Foundation
Set up a comprehensive, well organized business financial management system with ease! Learn to customize QuickBooks with our hands-on labs. Track finances, process invoices, manage sales and expenses, and maximize the software's features. Understand how to use QuickBooks's proven techniques and time-saving shortcuts for business purposes. Topics will include: accounting 101, preferences, configuring QuickBooks, chart of accounts, entering transactions, using online banking, creating business reports, managing accounts payables and receivables, reconciling bank accounts, and data file maintenance. Prerequisite: Basic computer skills and knowledge of accounting terms.

D. Jacobs, 7 hrs, $265
Campus: Mar 26, 2019 | T | 8:30 am – 4:30 pm | C2119036
Campus: Oct 22, 2019 | T | 8:30 am – 4:30 pm | C2120003

QuickBooks for Government Contractors
Utilize QuickBooks to be in compliance with DCAA accounting requirements. Structure the chart of accounts in cost pool format to properly segregate direct costs from indirect costs, as well as exclude the unallowable costs outlined in FAR 31. Set up payroll items, projects, and timecards to use in conjunction with the Customer module for job costing. Accumulate the data you will need for rate computations. Explore various DCAA audits such as the Incurred Cost Submission, Floor Check, and Pre-Award Audit. In addition, complete DCAA’s pre-award audit form SF 1408 to show how the requirements can be met. Prerequisite: QuickBooks Foundation or basic knowledge of QuickBooks and Government contracting.

K. Gardner, 7 hrs, $265
Campus: Nov 5, 2019 | T | 8:30 am – 4:30 pm | C2120012

Earn Your Accountancy CPEs at UAH!
The Alabama State Board of Public Accountancy has granted CPE equivalency to many of our courses and certificate programs. Visit CPCS.uah.edu/Accountancy for the full list of approved courses.

MICROSOFT WORD
Available for Customized Training. Call 256.824.6015 for details.
**ORACLE APPLICATIONS DEVELOPER CERTIFICATE**

Learn the power of Oracle 12c, the first database designed for the cloud. On completion, participants will be equipped to use Structured Query Language (SQL) in the Oracle environment program using PL/SQL, Oracle’s answer to programming logic not available in SQL. Develop front-end web-enabled applications that retrieve information easily from the Oracle database. Update your skills to Oracle 12c or develop new Oracle 12c knowledge in the database industry.

**SAVE $150 by registering for the entire 3-course series at once (call 256.824.6010).**

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**Fundamentals of SQL Using Oracle**

Gain an extensive introduction to data server technology. Cover concepts of both relational and object database theory, design, and terminology. Learn SQL statement categories and their purpose. Study basic SQL programming concepts and techniques to store, retrieve, and manipulate data. Participate in hands-on labs to create and maintain database objects to reinforce learning. **Prerequisite:** Fundamental user experience with PCs. Basic programming experience is a plus.

**T. Bell, 21 hrs, $895**  
**Campus:** Feb 19 – Mar 12, 2019 | T, Th | 5:30 – 8:30 pm  | C2119031

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**Oracle PL/SQL Programming**

Oracle PL/SQL language provides for programming logic features not contained within SQL. Cover the main features of PL/SQL: blocks, sections of blocks, error handling, variables, constants, data abstraction, subprograms, stored programs, triggers, and control statements. Create and manage user-defined packages and Oracle supplied packages. **Prerequisite:** Fundamentals of SQL Using Oracle or equivalent experience.

**T. Bell, 21 hrs, $895**  
**Campus:** Apr 16 – May 7, 2019 | T, Th | 5:30 – 8:30 pm  | C2119032

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**Developing Oracle Application Express (APEX) Web Applications**

Build database-centric, web-enabled applications using Oracle APEX, a true Rapid Application Development (RAD) environment. Create and define attributes of live, front-end applications in APEX using the Oracle database engine as the database host. Generate additional application pages, update the application, edit using themes and templates, and deploy the application. **Prerequisite:** Fundamentals of SQL Using Oracle or equivalent experience.

**T. Bell, 21 hrs, $895**  
**Campus:** Jun 11 – Jul 2, 2019 | T, Th | 5:30 – 8:30 pm  | C2119033

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**Full Program Discount:**

Select certificates offer a discounted fee if you register for all courses in the certificate at once. To register, call 256.824.6010.

The series was a great learning method for SQL. I advanced my knowledge and understanding of SQL.  
– Oracle Developer Certificate Participant

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**CUSTOMIZED TRAINING:**

Choose a current course or develop a new program to deliver in your preferred learning format on your selected day, time, and location. See page 29 for more information.
NEW Introduction to R Programming

R is an open-source programming language and environment with powerful and extensive features for data analysis, data visualization, and statistical computing. The use of R has recently grown substantially with the increased interest in data analytics, for which it is well suited. R also includes a full range of general purpose programming language features, including control structures, mathematical operations, and file input/output. This course will begin with the basic concepts and statements of R, and then proceed through file input/output, data analysis, and data visualization. Complete working R programs will be presented as examples. Hands-on instructor-led classroom exercises will reinforce participants’ abilities and confidence with R. Prerequisite: Familiarity with programming concepts, and preferably, prior experience with at least one programming or scripting language.

What You Will Learn:
• Understand the principles of programming
• Learn to use the R console
• Create vectors and data frames in R
• Generate graphs and plots in R

M. Petty, 14 hrs, $795
Campus: Jul 24 – 25, 2019 | W, Th | 8:30 am – 4:30 pm | C2319010

NEW Object-Oriented Programming: A Multi-Language Examination

Further your programming language skills by learning the universal object-oriented (OO) programming paradigm. Go beyond the basics of programming to understand the methodology across multiple programming languages such as Python, Java, C++, etc. Strengthen your understanding of OO concepts in a general sense without the constraints of a particular language. Discover the difference between a function and an object. Compare and contrast OO features and implementations. Learn about encapsulation, polymorphism, interface/implementation inheritance, multiple inheritance and the diamond of death, UML diagrams, design patterns, and more. Prerequisite: Prior programming experience.

What You Will Learn:
• Objects, methods, messages, and delegation
• Class, abstraction and generalization, and interface

C. Cantrell, 21 hrs, $795
Campus: Aug 6 – 27, 2019 | T, Th | 5:15 – 8:15 pm | C2119058

MASTER PROGRAMMER CERTIFICATE

Enhance your programming skills by receiving a comprehensive Master Certificate in Programming. Improve your personal marketability with training designed to build expertise and experience that leads to career advancement, recognition, and increased earning potential. This program is comprised of our most in-demand developer programs.

Whether you plan to use the knowledge gained for a current position, or simply for self-enrichment, the Master Programmer Certificate will drastically improve your overall programming ability and understanding of programming best practices, which will place you in a position to effectively achieve career success.

SAVE $500 by registering for the entire 5-course series at once (call 256.824.6010).

Choose five of the following courses (Pages 11 – 13):
• C++ Programming
• Advanced C++ Programming
• Introduction to Java Programming
• Java Programming Advanced Features
• Introduction to Python Programming
• Advanced Python Programming
• Object-Oriented Programming: A Multi-Language Examination
**C++ DEVELOPER CERTIFICATE**

Master a powerful tool by learning C++ programming language used for Object-Oriented (OO), generic, and procedural programming. By participating in hands-on lab exercises, you will be equipped to write C++ code to utilize basic types, create abstract object classes, manipulate object data, change the personality of objects, and use file manipulation to implement stand-alone C++ programs.

Take the 2-course series or just one course.

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**C++ Programming**

Familiarity with C++ is an essential skill for engineers, scientists, and many technical managers. This introductory course offers a solid understanding of object-oriented programming, which is critical for programming on the latest compilers and systems. Design and use classes, loops and decisions, and objects effectively in C++ to create powerful applications. **Prerequisite:** Experience with a programming language such as C.

D. Brockhaus/J. Busby, 21 hrs, $895

| Campus: | Jul 15 – Aug 5, 2019 | M, W | 5:30 – 8:30 pm | C2119035
| Online: | D2119007 |

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**Advanced C++ Programming**

Build on your knowledge of basic C++ syntax and explore the full capabilities of the standard C++ library. Learn to apply the streaming operators and the proper canonical interface of an object. Practice using object management with smartpointers and reference counting. Add the STL containers and algorithms to your own programs and explore the Gang of Four Object-Oriented (OO) design patterns. **Prerequisite:** C++ Programming or equivalent program development experience.

J. Busby/D. Brockhaus, 21 hrs, $895

| Campus: | Mar 12 – 14, 2019 | T – Th | 8:30 am – 4:30 pm | C2119056
| Campus: | Aug 19 – Sep 11, 2019 | M, W | 5:30 – 8:30 pm | C2120001**
| Online: | D2119008 |

**Class will not meet September 2, 2019**

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**JAVA DEVELOPER CERTIFICATE**

Prepare yourself to take advantage of the career opportunities available to Java developers who are in demand more than ever. Java is the perfect environment to master Object-Oriented (OO) programming concepts that transfer to all modern programming languages. Java technology is at the core of many large-scale business applications — especially business-to-business commercial systems that fuel the Internet economy.

Take the 2-course series or just one course.

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**Introduction to Java Programming**

Through a series of hands-on, instructor-led lab exercises you will learn Java syntax, Object-Oriented (OO) programming, and study the structure of a well-written Java program. Cover skills common to all modern programming languages such as variables, flow-control, pointers, and arrays. During lab exercises, gain hands-on experience with Java development tools and tour the massive Java I/O library to learn what is available and how to use it. **Prerequisite:** Experience with PCs and programming concepts.

J. Busby/D. Layman, 28 hrs, $995

| Campus: | Apr 22 – May 22, 2019 | M, W | 5:00 – 8:30 pm | C2119026*
| Campus: | Sep 16 – 19, 2019 | M – Th | 8:30 am – 4:30 pm | C2120010
| Online: | D2119003 |

*May 20 and May 22 class will meet from 5:30 – 7:30 pm

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**Java Programming Advanced Features**

Learn to leverage the power of Java for developing client/server applications. Gain proficiency with the Java JDBC API and create applications to demonstrate its use. Become familiar with core concepts for GUI applications, and learn to embed Java inside HTML with JSP. Learn client/server programming, using both raw network sockets and the more powerful RMI (Remote Method Invocation) system so that your Java application will be able to run on any operating system with Java support, including Windows, Linux, and Mac. **Prerequisite:** Introduction to Java Programming or equivalent experience.

C. Cantrell/D. Layman, 28 hrs, $995

| Campus: | Jun 3 – Jul 8, 2019 | M, W | 5:30 – 8:30 pm | C2119027**
| Campus: | Oct 21 – 24, 2019 | M – Th | 8:30 am – 4:30 pm | C2120011
| Online: | D2119004 |

**Class will not meet on July 3, 2019. July 1 and July 8 class will meet from 5:30 – 7:30 pm**

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Software programming tools for programming courses are provided virtually to enhance your course experience.
Using HTML5 and CSS3
Discover the new standards and features of HTML5 and CSS3 to create more visually engaging web pages with transitions, animations, and media elements. Learn new techniques for building websites section by section. Using style sheets, explore mobile device media that can be viewed and supported in mobile browsers to include audio and video in web pages. This step-by-step course allows web developers to create dynamic, aesthetically pleasing web pages.

C. Cantrell, 21 hrs, $495
Online: D119001

JavaScript for Beginners
As a web developer, it is essential that you have a solid understanding and become acquainted with one of the most highly sought job market skills desired by employers today. JavaScript is the foundation of many commonly used libraries and frameworks. Learn to code, create, and build in JavaScript, the native language of the web used by developers the world over. Understand how to create HTML5 sites and other interactive websites using this versatile language. Discover new web development techniques and tricks to utilize on your web pages.

Prerequisite: Using HTML5 and CSS3 or equivalent experience.

C. Cantrell, 21 hrs, $495
Online: D2119002

WEB DEVELOPER CERTIFICATE
Web Development is a continuously needed and growing field in this digital age. Grow your portfolio by earning an overall Web Developer Certificate. Pre-made webpages restrict the way your website looks and feels, and limits where you can store your webpage. Learn to design your own dynamic website without the parameters and restricted formats set by free website builder sites. Practice making graphics, interactive forms, and web applications. Discover new web development techniques and tricks to utilize on your web pages.

Take the 2-course series or just one course.

WEB DEVELOPER CERTIFICATE
Python is a great beginners' programming language. It is a widely used, high-level programming language and is simple in its design, yet incredibly flexible and powerful. Python code is easy to read and enforces good programming style without being overly strict about syntax. It is a general-purpose language that can be applied to a large variety of projects such as data science, web development, system automation and administration, computer graphics, basic game development, and more. Python allows you to write programs having greater functionality with fewer lines of code.

Take the 2-course series or just one course.

Introduction to Python Programming
Developed as a dynamic, object-oriented programming language, Python has gained popularity for its simple, yet robust design that allows you to create dynamic applications that can easily be integrated into other programs or systems. Learn Python’s basic syntax and present ways to emphasize readability by writing fewer lines of code. Whether you are a beginner or an experienced programmer trying to expand your skills, Python can provide you with the tools to further your professional horizons. Prerequisite: Experience with PCs and familiarity with programming concepts.

C. Cantrell/D. Layman, 21 hrs, $895
Campus: Jun 17 – 19, 2019 | M - W | 8:30 am – 4:30 pm | C2119045
Online: D2119005

Advanced Python Programming
Put your Python skills into action with several real-world applications. Create an event-driven graphical desktop application with the built-in Python Graphical User Interfaces (GUI) library. Learn to write code to connect to SQL and NoSQL databases and dive deeper into object-oriented programming. Develop a client/server application using sockets and network programming and create a web application using Python technology on the server. While creating these applications, master complex language features like generators and lambdas. Prerequisite: Introduction to Python Programming or equivalent experience.

J. Busby/C. Cantrell, 21 hrs, $895
Campus: Mar 11 – Apr 8, 2019 | M, W | 5:30 – 8:30 pm | C2119029*
Campus: Jul 29 – 31, 2019 | M – W | 8:30 am – 4:30 pm | C2119057
Online: D2119006

*Class will not meet March 18 or 20, 2019

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Prerequisite: Using HTML5 and CSS3 or equivalent experience.

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Online: D2119002

PYTHON DEVELOPER CERTIFICATE
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C. Cantrell, 21 hrs, $495
Online: D2119002

 introduction
MODELING AND SIMULATION CERTIFICATE

Build a foundation in modeling and simulation, and learn the benefits of using models and their simulation to improve engineering processes.

**Prerequisite:** Undergraduate degree in a technical field or equivalent experience.

Take the 4-course series or just one course. Choose four of the following five courses:

**Fundamentals of Modeling and Simulation**
Gain an introduction to fundamental Modeling and Simulation (M&S) terminology and concepts being used worldwide by the military, industry, and academia as a technological enabler to enhance analysis, acquisition, and training. Review model types and modeling methods to understand how simulations work. Survey typical and emerging M&S applications. Explore important M&S paradigms, interact with simulations and develop simple simulations. Cover common simulation tools, purposes, fidelity, and simulation credibility. Acquire knowledge about M&S technology trends. **Prerequisite:** Undergraduate degree in a technical field or equivalent experience.

M. Petty, 14 hrs, $795
Online: D2319001

**Developing Simulations**
Explore the challenges of real-world simulation development and how to plan for large-scale projects with this hands-on simulation building course. Explore modeling approaches including stochastic and physics-based modeling, and artificial intelligence. Delve into simulation techniques, engines, languages, and design features. Build on the fundamentals of M&S by covering more advanced M&S projects, processes and standards, conceptual modeling, and modeling techniques. **Prerequisite:** Fundamentals of Modeling and Simulation or a background in modeling and simulation.

B. Stiltner, 14 hrs, $795
Online: D2319003

**Simulation Verification, Validation, and Accreditation**
Understand the fundamental concepts of establishing simulation model accuracy, credibility, and usability. Learn a range of verification and validation (V&V) methods including informal, static, dynamic, and formal methods. Review guidelines for selecting the best method for a given model. Explore procedures for performing important V&V methods and interpreting their results. Identify and discuss official DoD, NASA, and IEEE VV&A policies, standards, and processes for Verification, Validation and Accreditation (VV&A). Use extended case studies, drawn from actual VV&A practice, to reinforce general discussion of concepts and methods. Learn statistical and mathematical techniques used in V&V, the relationship of V&V to accreditation, and VV&A in the context of a M&S project. **Prerequisite:** Undergraduate degree in a technical field or equivalent experience.

M. Petty, 14 hrs, $795
Online: D2319002

**Systems Analysis, Modeling, and Simulation**
Develop an understanding of the objectives of systems analysis and its foundational role in systems engineering. Cover the analytical methods that, with tests, provide the basis for systems validation and verification processes and procedures. Build your skill base for development of systems models, integration of component models into a systems model, and model-based and hardware-in-the-loop simulation. Learn systems analysis methods, tools for developing systems models, temporal utility of models, and model fidelity. **Prerequisite:** Undergraduate degree in a technical field, project management, or equivalent experience.

I. Maddox, 14 hrs, $795
Online: D2319004

Also a core course for the Systems Engineering Certificate.

**NEW Monte Carlo Simulation**
Monte Carlo simulation is a powerful method that uses probability distributions to simulate many types of systems. Monte Carlo simulation uses randomness, applied in a controlled manner, to explore the range and likelihoods of possible outcomes inherent in a scenario or system and produces results that vary from run to run. Learn two types of Monte Carlo simulation: stochastically (randomly) varying initial conditions are input to a deterministic model; and fixed initial conditions are input to a stochastic model. In both, randomness is generated using probability distributions selected and parameterized to model the actual variability present in the scenario or system being modeled. **Prerequisite:** Background in probability or statistics and MS Excel are recommended. **Examples will be given in both Excel and R.**

M. Petty, 14 hrs, $795
Online: D2319005

**ALSO AVAILABLE:**

Introduction to R Programming – See pg 11
ROCKET PROPULSION CERTIFICATE

Sharpen your technical understanding of rocket propulsion from first principles to practical case studies. Learn from subject matter experts the foundation of rocket propulsion and missile basics, including the principles of conventional and advanced propulsion systems. Identify items critical in the development, operation, and sustainment of propulsion systems. These courses provide a wealth of technical materials and case studies relevant to both propulsion engineers and project managers. Prerequisite: Undergraduate degree in a technical field or equivalent experience.

Take the 3-course series or just one course. Choose three of the following four courses:

Rocket Propulsion Fundamentals
Gain a foundation in the complex factors that shape propulsion systems. Learn theory and practical design considerations. Grasp the essentials of common aerospace propulsion systems including rockets, air-breathing, thermal, and electric. Discover use considerations for solid, liquid, and hybrid propulsion systems. Professionals who are new to the field or need a refresher can benefit from lectures combined with practical exercises reinforcing the learning experience. Prerequisite: Undergraduate degree in a technical field or equivalent experience.

M. Benfield, 12 hrs, $795
Online: D2319013

Advanced Solid Rocket Propulsion
A joint industry initiative between NASA and UAH national subject matter experts resulted in this course for the next generation of solid rocket motor engineers, recorded in 2007. Review solid rocket propulsion, and learn from recognized specialists about rocket component design, propellant properties, ballistic modeling and burn rate, and combustion. Apply these fundamentals of solid rocket propulsion to your current career. Prerequisite: Undergraduate degree in a technical field or equivalent experience.

R. Frederick, 40 hrs, $895
Online: D2319021

Liquid Rocket Engineering
Learn from recognized propulsion experts and practitioners, Scott Claflin and Dr. Robert Frederick. Benefit from an overview of common liquid rocket engine power cycles, propellants, and components. Gain an understanding of the function, operation, and design considerations of the individual components which comprise a liquid rocket engine such as turbopumps, thrust chambers, preburners, gas generators, igniters, and valves. Learn the fundamentals of combustion stability and stabilization devices as well as combustion chamber heat transfer and cooling. You will be challenged to develop a preliminary design of a liquid rocket engine after learning enabling methodologies and analysis techniques. Prerequisite: Undergraduate degree in a technical field or equivalent experience.

S. Claflin/R. Frederick, 35 hrs, $1095
Online: D2319014

Combustion Instability in Solid Rockets
Build an appreciation and understanding of solid rocket combustion instability. Internationally recognized solid propulsion experts and practitioners, Dr. Frederick Blomshield and Dr. Robert Frederick, will guide you through solid rocket combustion fundamentals. Learn background, empirical observations, and commonly performed computations. The class relies on real world motor data whenever possible to illustrate stability prediction methods, amplitude and frequency analysis, response function measurement techniques, and motor pulsing. Prerequisite: Undergraduate degree in a technical field or equivalent experience.

F. Blomshield/R. Frederick, 35 hrs, $1095
Online: D2319015

ALSO AVAILABLE CUSTOMIZED
Courses delivered on your selected day, time, and location. See page 29 for details.

FEATURED INSTRUCTOR:
DR. ROBERT FREDERICK is the Director of the UAH Propulsion Research Center. He has directed over 10 million dollars of research, published extensively, and pioneered an international, team-based aerospace systems design lab. He is an Associate Fellow of the AIAA and former chairman of the AIAA Hybrid Rocket Technical Committee. He has also been a technical advisor to NATO in solid propulsion.
Requirements Development
One of the most successful impacts a development team can have on a system is to ensure the successful identification, analysis, allocation, and verification of requirements. Learn to allocate the requirements for the system’s architecture and processes to conduct a requirements analysis. Go beyond the typical textbook process by applying experience-based instruction. Our subject matter expert will guide you through interactive exercises to develop requirements and experience an entire requirements development process.

G. McPherson, 14 hrs, $795
Online: D2319017
Also a core course for the Systems Test and Evaluation Certificate.

Applied System Design and Decision-Making
Systems engineers are responsible for gathering information and for making decisions based on complex, and often ambiguous, information. Study how to master trade studies, and how to balance performance, schedule, cost, and risk variables. Learn how to support the trade study process through examples of simulations and graphical presentation techniques.

D. Gunther, 14 hrs, $795
Online: D2319007
Also a core course for the Systems Test and Evaluation Certificate.

System Validation and Verification
Ensure that you have a complete approach to the validation and verification (V&V) of your product. Determine the process to ensure that a new system works as designed and that the design fulfills its intended function. Learn to develop and determine verification versus validation requirements using MOEs/MOPs/TPMs. Hands-on cases illustrate developing metrics, team/management structures, and executing V&V activities.

D. Gunther, 14 hrs, $795
Online: D2319008
Also an elective for the Systems Test and Evaluation Certificate.

Systems Analysis, Modeling, and Simulation
Develop an understanding of the objectives of systems analysis and its foundational role in systems engineering. Complementing System Validation and Verification, this course provides broad coverage of the analytical methods that, with tests, provide the basis for systems validation and verification processes and procedures. It will help you develop your skill base for the development of systems models, the integration of component models into a systems model, and model-based and hardware-in-the-loop simulation.

I. Maddox, 14 hrs, $795
Online: D2319004
Also an elective for the Modeling and Simulation Certificate.

Take the 5-course series or just one course.
Fundamentals of Model-Based Systems Engineering with SysML

Take part in this engaging three-day learning event. SysML is a graphical modeling language that enables you to practice MBSE and has become the standard among MBSE practitioners. You will be guided through the practice of MBSE and how it provides the context — and the business case — for learning SysML. Leave the course with an answer to “What is MBSE?” Learn the three pillars of MBSE — a modeling language, a modeling method, and a modeling tool. Discover how MBSE can help you better manage your customers’ expectations while delivering the return on investment that MBSE promises. Prerequisite: Undergraduate degree in a technical field, project management, or equivalent experience.

What You Will Learn:
• The practice of MBSE using ROI roots
• The difference between a SysML modeling tool (e.g., Cameo Systems Modeler) and a diagramming tool (e.g., Visio)
• The process of creating an effective model structure for partitioning design elements and representing that model structure on SysML package diagrams
• Capturing stakeholders and their concerns in a SysML model
• Modeling system use cases and actors with use case diagrams
• How to produce SysML activity diagrams to graphically represent use case specifications
• System behavior simulations using the Cameo Simulation Toolkit
• How to make a structural model of a system’s domain and represent it on SysML block definition diagrams (BDDs) and internal block diagrams (IBDs)
• Modeling system requirements and traceability relationships with SysML requirements diagrams and tables
• Creation of a structural model of a system’s architecture and representing it on SysML BDDs and IBDs
• Allocation of system behaviors to system structures
• How to form SysML state machine diagrams to represent the state-based behavior of system structures
• How to perform automated impact analysis when a requirement or design element changes
• The mechanics of operating the Cameo Systems Modeler SysML modeling tool to create a system model

L. Baker, 21 hrs, $1095
Campus: Apr 8 – 10, 2019  |  M – W  |  8:30 am – 4:30 pm  |  C2319011
Campus: Nov 4 – 6, 2019  |  M – W  |  8:30 am – 4:30 pm  |  C2320002

Certified Systems Engineering Professional (CSEP) Exam Bootcamp

Achieve one of the most sought after certifications for engineering professionals. Validate your education, knowledge, and experience in the highly competitive field of systems engineering with INCOSE CSEP recognition. A number of organizations, including the U.S. DoD, recognizes the value of the INCOSE CSEP. The certification requires passing an extensive exam based on the INCOSE Systems Engineering Handbook v4. Explore CSEP requirements and the INCOSE SE Handbook to cover all topic areas that might be on the CSEP exam. Interactive work, study plans, and sample exam questions provide the effective preparation needed for the exam. This course also prepares individuals to pass the ASEP (Associate Systems Engineering Professional) exam. Prerequisite: Degree in engineering discipline or equivalent experience in systems engineering. Visit incose.org for exam information and eligibility requirements.

The course fee includes: The Systems Engineering Handbook
R. Leonard, 14 hrs, $795/$695*
Online: D0319022**

*INCOSE Member Discount
**Exam voucher not included

The presentations were excellent and course content was very clear. The online modules were easy to follow. The online format was very helpful to my busy, dynamic work schedule.

– CSEP Exam Bootcamp Participant

INCOSE MEMBER DISCOUNT

INCOSE Huntsville Regional Chapter and UAH CPCS have partnered to offer CSEP Bootcamp. INCOSE members receive a 5% discount on this course. Call 256.824.6010 to register.

The instructor was very lively, helpful, and knowledgeable. He was able to relay concepts in an easy to understand way to both expert and novice students.

– Fundamentals of Model-Based Systems Engineering with SysML Participant
CUSTOMIZED TRAINING:
Choose a current course or develop a new program to deliver in your preferred learning format on your selected day, time, and location. See page 29 for more information.

Missile System Fundamentals
Learn foundational vocabulary and working knowledge of missile systems, technologies, issues, and problem-solving resources. Illustrate key concepts of requirements development, operations, and risk assessment. Understand the capabilities and limitations of missile technology as well as the trade-offs between technology, cost, and performance. This course is designed for employees seeking introductory or deeper practical knowledge in Government, program management, and contractor offices. 

Prerequisite: Undergraduate degree in a technical field or equivalent experience. Participants must be U.S. citizens and provide verification of citizenship. See page 32 for details.

D. Gunther, 35 hrs, $1295
Online: D2319016
Customized Training: 256.824.6015

Introduction to Rotorcraft
Dive into the history, capabilities, and design considerations of rotorcraft systems. Learn how a rotorcraft’s ability to hover provides a unique capability to perform manned and unmanned missions requiring vertical take-off, landing, and maneuvering within a confined area. Explore how the unique requirements of rotorcraft and their subsystems impact designing, delivering, and sustaining an affordable rotorcraft system using hands-on design exercises and trade-off studies. Particular emphasis is placed on the key similarities and differences involved in designing, qualifying, and fielding FAA and military rotorcraft.

Prerequisite: Undergraduate degree in a technical field or equivalent experience.

Customized Training: 256.824.6015

NEW Systems Thinking: Problem Solving Tools and Techniques
System Engineers often optimize individual systems with known stakeholders and requirements. This course will teach the student how to properly approach System of Systems (SoS) challenges and assess the entire network interacting together through applied SoS thinking. Students will engage in integrated case studies where a single system is initially introduced and engineered. An additional system is then incorporated for a SoS engineering view. Students must analyze the impact of multiple systems using SoS methodology. Learn about SoS challenges and complexity, SoS thinking approaches, capabilities versus requirements, operational focused thinking, SoS perspectives, SoS thinking tools/implementation, engineering and design considerations, and incorporating individual systems into a SoS program.

What You Will Learn:
• Problem definition and formulation
• SoS, SE, systems/critical thinking approaches
• The Fifth Discipline
• Systems perspectives to include DoD environments, emerging technologies and metrics
• Developing systems thinkers
• Systems thinking relationships with systems engineering
• Fishbone diagrams, pareto analysis, DMAIC lean process, risk assessment

D. Gunther, 14 hrs, $795
Campus: Aug 13 – 14, 2019 | T, W | 8:30 am – 4:30 pm | C2319017

NEW Missile System Fundamentals
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• The Fifth Discipline
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• Developing systems thinkers
• Systems thinking relationships with systems engineering
• Fishbone diagrams, pareto analysis, DMAIC lean process, risk assessment

D. Gunther, 14 hrs, $795
Campus: Aug 13 – 14, 2019 | T, W | 8:30 am – 4:30 pm | C2319017
Private Pilot Ground School
Whether you are aspiring to have an aviation career or just want to learn the requirements to become a pilot, you will gain a better appreciation and understanding of aviation and piloting airplanes. Prepare to complete the Federal Aviation Administration’s (FAA) Private Pilot Airplane Knowledge Test. Passing this test is one of the prerequisites for obtaining a private pilot’s license from the FAA. This course is designed in accordance with Part 141 — Pilot Schools Training Requirements of the Federal Aviation Regulations. Cover the twelve Federally mandated aeronautical knowledge areas required for private pilot certification. FAA-approved and aviation industry endorsed curriculum training techniques and materials are used. The comprehensive Private Pilot Kit is authored by Gleim Aviation and is available locally and online for approximately $150.

R. Lindstrom, 42 hrs, $599
Campus: Aug 27 – Nov 26, 2019 | T | 5:30 – 8:30 pm | C2320004

NEW Drone Pilot License Test Prep
Prepare for your Drone Pilot License Exam by learning aeronautical knowledge, especially for unmanned aerial vehicles (UAVs). This course covers the 12 subject areas tested on the FAA Part 107 Remote Pilot Knowledge Test. Students will reinforce learning with practice quizzes at the end of each subject area. The course will culminate in a full length practice test to help prepare for the Remote Knowledge Test. Prerequisite: Knowledge of unmanned aircraft, radio controlled aircraft, or manned aircraft is a plus. A private pilot’s license is not a requirement to become a drone pilot.

What You Will Learn:
• Small Unmanned Aircraft Systems (sUAS) regulations
• Airspace classification
• Emergency procedures
• Radio communication procedures
• sUAS performance

B. Stiltner, 14 hrs, $395
Campus: May 6 – 22, 2019 | M, W | 5:30 – 7:50 pm | C2319016

Attend Class Anytime and Anywhere with 24/7 Online Streaming
Our web-based courses deliver the same high-quality content of face-to-face classroom courses with the added benefit of being able to participate at your convenience, 24/7. Course coordinators are available to provide personalized support along the way.

Online Learning Options:
On Demand
Register for a course at ANY time. Participants have one month to complete the course or two months for IT courses and courses over 30 hours.

Blended
Classroom and online learning courses are similar and are considered equivalent. Combine formats to complete your certificate.

Online Certificate Program Benefits:
Choices
• Earn a certificate by combining online and classroom courses to complete a certificate program
• Flexible study — learn anytime and anywhere
• Additional software required for courses are provided through virtual desktops

High Quality
• Receive access to full lectures, PowerPoint slides, assignments, and supplemental materials
• Respected courses and certificates delivered online

Experience
• See and hear instructor presentations in the classroom
• Interact with instructors through email and the web

Rewards
• Increase your salary potential, ensure career mobility, and stand out from the crowd
• Gain professional expertise and valuable skills you can use right away

For information, visit CPCS.uah.edu/OnlineLearning
**MATLAB for Engineers and Analysts**

MATLAB is one of the leading technical computing environments for engineers, scientists, mathematicians, and financial analysts. Unlike compiled programming languages, MATLAB allows you to quickly develop code and solve problems without the overhead required by other languages. It can be applied to virtually any problem requiring technical computation. The language, apps, and built-in functions enable you to quickly explore multiple approaches to arrive at a solution. MATLAB also lets you take your ideas from research to production by deploying your code to stand alone applications or onto embedded devices. The MATLAB class will provide the skills needed to work with MATLAB interactively and as a programming language. You will be able to formulate intermediate and some advanced engineering projects into MATLAB and solve them using programming skills. **Prerequisite:** Familiarity with basic computer operations and some familiarity with programming concepts.

*B. Stiltner, 20 hrs, $995*

**Campus:** Apr 16 – 18, 2019 | T – Th | 8:30 am – 4:10 pm | C2319014

**Campus:** Oct 1 – 24, 2019 | T, Th | 5:30 – 8:00 pm | C2320003

**Online:** D2319023 (Coming Soon)

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“Great instructor who used a lot of explanations and examples. His methods were easy to follow, helpful, and practical.”

– MATLAB for Engineers and Analysts Participant

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**FEATURED INSTRUCTOR:**

**BRANDON STILTNER** is an aerospace engineer with over 10 years of experience in the areas of flight dynamics and control, modeling and simulation, testing, and analysis. He is a certified Modeling and Simulation Professional as well as an associate member of the AIAA Modeling and Simulation Technical Committee. Currently, Mr. Stiltner supports the development of the Space Launch System (SLS) as Guidance, Navigation, and Control Engineer at NASA’s Marshall Space Flight Center.

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**Opening the DOORS® to Requirements Management**

DOORS® is a requirements management application for optimizing requirements communication, collaboration, and verification throughout your organization and supply chain. This scalable solution can help you meet business goals by managing project scope and cost while allowing you to capture, trace, analyze, and manage information changes in addition to maintaining compliance to regulations and standards. DOORS® offers a robust environment for importing, exporting, and relating a variety of requirement-related information. Rational DOORS® can assist program managers to achieve an optimal requirements management process with strategies to ensure technical objectives are satisfied across entire program life cycles. Gain the knowledge and hands-on experience to effectively use this computer-based tool. **Prerequisite:** Experience with PCs, requirements development, management, and verification knowledge.

*C. Zolynsky, 21 hrs, $945*

**Campus:** Apr 23 – 25, 2019 | T – Th | 8:30 am – 4:30 pm | C2319012

**Campus:** Sep 24 – 26, 2019 | T – Th | 8:30 am – 4:30 pm | C2320001

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“This is an excellent course. Content was clear and step-by-step. The instructor was a great presenter. His knowledge of the information was excellent.”

– Opening the DOORS to Requirements Management Participant

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**FEATURED INSTRUCTOR:**

**CHARLES D. (CHAD) ZOLYNSKY** is the Common Infrared Counter measure (CIRCM) Systems Engineering Lead for the Aircraft Survivability Equipment (ASE) Project Office under the AMRDEC Systems Engineering Management Division. He is an experienced systems engineer with particular emphasis in requirements development, management, and verification using DOORS. Mr. Zolynsky is proficient in numerous software tools including Minitab, Arena, DOORS, and LSS Power Steering. He holds Army Lean Six Sigma Black Belt, Army LSS Green Belt, Lean Enterprise certifications, and a Master of Science in Project Management.
TEST AND EVALUATION CERTIFICATE

Designed to address the principles of test and evaluation (T&E), this program introduces all aspects of T&E throughout the life cycle of a system. Learn the roles, purposes, functions, and techniques of T&E within the systems engineering process. The program includes modeling and simulation activities for enhancing the T&E process, developmental test and evaluation, live fire test and evaluation, and operational test and evaluation. Prerequisite: Undergraduate degree in a technical field, project management, or equivalent experience.

Take the 5-course series or just one course.

Test and Evaluation Principles
Learn how test and evaluation (T&E), acquisition, and requirements personnel integrate efforts to provide systems that perform as designed and required by the user. Grasp foundational concepts such as developing a team of key personnel, producing documents, and more. At the end of the course, you will be familiar with elements of a test program, test sites that will provide you the best data to support your test requirement and mission, and confidence to proceed with assurance in your role.

G. Tackett, 14 hrs, $795
Online: D2319017

Test Planning and Conduct
Explore technology demonstrations, experimentation, and tests, all of which provide the opportunity to collect data to support programmatic decisions and acquisition milestone determinations. Learn proper test planning and the conduct of those tests which are paramount to successful execution and evaluations. Learning will focus on initial planning techniques and issues, test plan development, rehearsals, test plan validation, test conduct, data collection, and after-action reviews.

S. Mullins, 14 hrs, $795
Online: D2319011

Elective Courses (Choose One):

System Validation and Verification
D. Gunther, 14 hrs, $795
Online: D2319008
See Page 16. Also a core course for the Applied Systems Engineering Certificate

Project Scope, Cost, and Schedule Management
R. Steele, 21 hrs, $895
Campus: Mar 26 – Apr 16, 2019 | T, Th | 5:30 – 8:30 pm | C2319018
Online: D2519011
See Page 24. Also a core course for the Project Management Certificate

ONLINE ON DEMAND LEARNING:
Register for an On Demand course at ANY time. Participants have one month to complete the course, or two months for IT courses and courses over 30 hours.
Federal Contract Management Essentials Certificate
Learn the basic components of the Federal Government’s life cycle process in acquiring goods and services. Understand the roles and responsibilities of both the buyer and the seller in the acquisition and administration phases of Federal contracting. Study the key elements of Federal contract management such as “Contract Types,” which can then be readily applied to workplace contracting situations.

H. Cleaver, 40 hrs, $1295/$1245*
Campus: Oct 28 – Nov 1, 2019 | M – F | 8:00 am – 5:00 pm | C2520001
Online: D2519001

*NCMA Member Discount

Also available online:
Federal Contract Management Specialization
Visit CPCS.uah.edu/FCMS for details.

Federal Costing Essentials
Do you know the consequences of failure to understand and comply with Federal Government costing rules and cost accounting standards? For Government contracting professionals, take the time to gain basic knowledge of these procedures and rules and how the process works to minimize the potential for problems. Learn about Government requests for “certified” or “uncertified” cost or pricing data in bidding processes. Upon course completion, participants will have a clear understanding of the necessity for consistency in costing and cost accounting practices related to bidding, recording, reporting, and invoicing costs (CAS 401), as well as appropriate cost isolations in company records (CAS 402). The Federal Acquisition Regulation (FAR), the Contract Pricing Reference Guides (CPRG), and selected Defense Contract Audit Agency (DCAA) documents are the foundation for this course content.

H. Cleaver, 14 hrs, $495
Online: D2519014

Federal Proposal Management
Gather techniques for preparing successful Federal prime contractor or subcontractor proposals. Understand the pre-solicitation phase, and learn how to conduct the critical pre-proposal preparation phase. Learn about activities and considerations during the solicitation release and proposal team kickoff. Learn how to develop the various proposal volumes to be responsive in both Lowest Price Technically Acceptable (LPTA) and Best Value bidding venues. Identify proposal requirements that are best responded to with high impact graphics and ways to create them. Combine lecture and exercises to understand the realities of actual proposal preparation activities in a page-limited and time-constrained environment.

H. Cleaver, 35 hrs, $695
Online: D2519005

*NCMA MEMBER DISCOUNT:
Federal Contract Management Essentials and Specialization Certificates satisfy requirements for the National Contract Management Association Continuing Professional Education.

The course was very-well prepared and I really enjoyed the videos with the presentation format. The instructor has vast amounts of experience in the subject.

— Federal Contract Management Essentials Participant
EARNED VALUE MANAGEMENT CERTIFICATE
Understand a highly effective project control system that uses measurement tools such as breakdown structures, network diagrams, schedules, budgets, and Gantt charts to ensure that the parameters of a contract and its projects or tasks are on track. Learn Earned Value Management (EVM) guidelines and requirements to meet Government contract regulations. Understand its value as an essential tool for project managers and technical leads in supporting proactive decision-making.

Take the 3-course certificate series or just one course.

Earned Value Management Essentials
Learn to measure project performance, determine project variances based on the comparison of work performed and work planned, and estimate the project’s completion cost and timeline. Review the tenets of work planned, accomplished, and actual work costs, as well as project forecasting. Discuss EVM terminology, formulae, and analysis. Apply methods learned through practical exercises and case studies demonstrating real world applicability to project cost, schedule, and technical performance.

R. Hycoop, 14 hrs, $795
Campus: Oct 15 – 16, 2019  |  T, W  |  8:30 am – 4:30 pm  |  C2520003
Online: D2519007

Earned Value Management Analysis and Reporting
Learn how to efficiently and effectively comply with analysis and reporting requirements. Explore detailed, practical methods to facilitate compliance regardless of contract size or complexity. This course will assist novice analysts building a solid foundation while serving as a refresher for more experienced analysts. Learn to establish variance thresholds and to use indices for predictive analysis. Create Variance Analysis Reports and become familiar with Contract Performance Reports and Integrated Program Management Reports. Demonstrate formulae, methods, and techniques covering problematic areas using practical exercises.

G. Smith, 14 hrs, $795
Campus: Nov 12 – 13, 2019  |  T, W  |  8:30 am – 4:30 pm  |  C2520004
Online: D2519008

Integrated Baseline Review Preparation and Execution
Many Government contracts contain a requirement for an Integrated Baseline Review (IBR). Discover why this requirement exists and to whom it applies. Explore how the five risk areas may impact overall project outcome and how each is assessed for magnitude of potential impact. Learn how to prepare for IBRs, what participants’ roles are, how and when should an IBR be conducted, and what possible outcomes are. Investigate baseline discussion questioning techniques with Control Account Managers (CAM). This course is helpful for those who are being newly introduced to the IBR requirement, and also serves as a refresher for individuals with experience.

J. Little 14 hrs, $795
Campus: Dec 9 – 10, 2019  |  M, T  |  8:30 am – 4:30 pm  |  C2520005
Online: D2519009

The presentations were very clear and the instructor provided relevant exercises and examples to illustrate the application of EVM formulae and principles. In addition, the material is well organized and the course modules are the appropriate length to allow students to absorb the information without being overwhelmed.

– Earned Value Management Certificate Participant

FEATURED INSTRUCTOR:
RICK HYCOOP has over 18 years of project management experience and is currently employed by the DoD as an Earned Value Analyst at the Missile Defense Agency. Rick served as the Integrated Logistics Support Manager for the Navy Tactical Command Support System and as the Earned Value Manager for the Defense Integrated Military Human Resources System. Rick is PMP and EVP certified as well as DAWIA Level 3 in B-FM and DoD FM Level 3.
Project Management Foundation
Explore the fundamental project management processes such as defining requirements, schedules, agile project management, Work Breakdown Structure (WBS), and change control. Gain an understanding of how the project management processes are used during each phase of a project to build a better and more effective project plan and to effectively communicate the results in performance reports.

PMBOK® Knowledge Areas: Integration, Communication, and HR

R. Hycoop, 21 hrs, $895

Online: D2519010

Project Quality and Risk Management
Learn how to perform good risk assessment—an essential requirement of a successful project management plan. Learn to apply assessment procedures to decision-making situations. Focus on using a quality management plan and systematic quality controls to address issues and avoid costly reworking expenses. PMBOK® Knowledge Areas: Risk and Quality

C. Gardner, 21 hrs, $895

Campus: May 2 – 23, 2019 | T, Th | 5:30 – 8:30 pm | C2519019

Online: D2519012

Project Procurement and Contracting Management
Understand the basic elements of contract, subcontract formation, and management and how they relate to project management activities. Learn about contract types and their influence on projects. Address contracting risks and complexities of contract administration associated with the goal of project completion. Learn how to prepare Statements of Work (SOWs) and how to bid and negotiate from a project perspective. Understand management aspects of both subcontractors and vendors. PMBOK® Knowledge Areas: Procurement and Stakeholder Management

H. Cleaver, 21 hrs, $895

Campus: Jun 11 – Jul 2, 2019 | T, Th | 5:30 – 8:30 pm | C2519020

Online: D2519013

SAVE $400 by registering for the entire 4-course series at once (call 256.824.6010).
**PMP® Certification Bootcamp**
Enhance your skills, knowledge, and qualifications as you prepare for project management certification and related exams. Project Management Professional (PMP®) Certification Bootcamp is an intensive training program that will help you prepare to pass the Project Management Institute’s (PMI®) PMP® exam and provide you with the 35 required contact hours of project management education. The course also prepares individuals to pass the CAPM® (Certified Associate in Project Management) exam.

**Course Includes:**
- Additional project management knowledge not covered in the PMBOK® Guide but expected to be covered on the exam
- Key information from all chapters in the PMBOK® Guide
- Strategies for approaching exam questions
- Summary of important formulas and definitions
- Online PMP® exam simulator

**Who Should Attend:**
- Those wanting to explore a career in project management by getting their CAPM certification
- Government employees preparing to work in the private sector
- Those wanting to learn the terminology of project management in the private sector
- Anyone involved in projects such as Project Managers, Program Managers, Quality Managers, Procurement Managers, Supplier Quality Managers, Finance Managers, Requirements Managers, Test Managers, Contract Managers, Engineering Managers, Manufacturing Managers, Construction Managers, IT Managers, Software Leads, etc.

**Textbooks Included:**
- The PMP® Exam: How to Pass on Your First Try

M. Stettner/R. Steele, 40 hrs, $1295*

**PMP® GUARANTEE**

Your Success is Our TOP PRIORITY!

Introducing the PD Solutions PMP® Guarantee

We are so confident in our PMP® instructors and course content, we guarantee our participants will pass their exam or they may re-take the course online for free to reinforce PMP® learning concepts.

See page 32 for details.

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**NEW Certified Associate in Project Management (CAPM)® Certification Bootcamp**
Gain the knowledge to become an entry level project manager by receiving a Certified Associate in Project Management (CAPM)® certification. If you want to tackle larger projects in your current job, establish your credibility, increase your salary potential, or become more marketable in the work force, the CAPM® is a step in the right direction for future project managers. The CAPM® requires either 1500 hours of project management experience or 23 hours of project management instruction which is provided by this course. The CAPM® Bootcamp is structured around the 10 knowledge areas of project management as laid out in the PMBOK®. The course is instructor-led and includes interactive course lessons, all study materials, CAPM® practice quizzes, and PMBOK® exercises.

M. Stettner, 32 hrs, $945

Online: D2519017 (Coming Soon)

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* PMI® exam voucher and registration fees are not included.
** Participants will have 90 days to complete.
NEW Agile for Project Management
Learn the basic concepts and principles of Agile Project Management. Cover the history of Agile, principles and framework. Understand the difference between Agile and Scrum, as well as the roles and responsibilities of Agile. Define “Done” and learn the purpose of ceremonies that aid in managing projects. Agile methods can help teams manage and perform work more efficiently while delivering the highest quality product within the scope of the budget and business needs.

What You Will Learn:
• Describing how Agile and Scrum works
• Describing the Agile framework
• Agile Roles and Responsibilities
• Developing requirements

S. Camp, 14 hrs, $695
Campus: Sep 24 – 25, 2019  |  T, W  |  8:30 am – 4:30 pm  |  C2519024

NEW Effective Business Writing
Understand the importance of professional communication in the workplace. Learn practical workplace writing strategies for developing documents that are clear, concise, complete, and correct. Topics include the professional writing process, document organization and design, and visuals. Learn to review key grammar, style, and sentence structure concepts that are essential to enhancing the readability of a document. Understand how to adapt messages to meet the needs of various audiences, and recognize the importance of developing documents that are reflective of your workplace style and organization.

S. Gunn, 14 hrs, $595
Campus: Jun 18 – 19, 2019  |  T, W  |  8:30 am – 4:30 pm  |  C2519023

FREE WEBINAR:
NEW How to Become a Certified Project Manager
1 HOUR  |  ONLINE ON DEMAND
This overview will help you learn more about becoming a certified project manager.

Visit CPCS.uah.edu/PMWebinar for details.

NEW Building Productive Teams
Learn your distinct temperament (Blue, Gold, Green or Orange) for your leadership and communication style. Participate in interactive, fun group discussions, and activities that highlight the important characteristics of each temperament. Develop group cohesion and learn leadership, teamwork, and collaborative problem solving skills, continuing to utilize the Real Colors personality temperaments and a Low Ropes Course. Participants share observations, lessons learned, and how to transfer them to their personal and professional lives. Comfortable attire and closed toe/closed heel shoes are required.

S. Kerby, 7 hrs, $395
Campus: Feb 27, 2019  |  W  |  8:30 am – 4:30 pm  |  C2519025
Campus: Oct 28, 2019  |  T  |  8:30 am – 4:30 pm  |  C2520011

Employee Management and Leadership
Learn best practices on finding, interviewing, and hiring a superior workforce. Recruiting and retaining employees is the most important job that managers do in an organization. Your expectations of people and their expectations of themselves are the key factors in how well people perform at work. Gain knowledge to perform practices that keep employees motivated and inspired to develop and attain goals. Learn how to address employee behavior and prevent predictable decision-making errors. Become the successful leader who makes a serious difference in the work life of employees and your organization.

K. Burton, 14 hrs, $595
Online: D2519015

NEW Delivering Successful Briefings to Senior Leaders
Position yourself for promotion, by learning to successfully make presentations to senior management. Understand how to identify and address the informational needs of your audience. Explore different reporting requirement styles presented to senior leaders, and develop techniques for executing professional delivery methods. Learn to organize your briefing for the highest impact. This interactive course will help participants plan and effectively deliver information and decision briefings that meet and exceed the expectations of their challenging senior executive audiences. Class participants will deliver a briefing and receive feedback on content. Invest in yourself and your team by honing effective oral presentation skills.

V. Johnson, 7 hrs, $395
Campus: Apr 5, 2019  |  F  |  8:30 am – 4:30 pm  |  C2519024

FREE WEBINAR:
NEW Agile for Project Management
1 HOUR  |  ONLINE ON DEMAND
This overview will help you learn more about becoming a certified project manager.

Visit CPCS.uah.edu/PMWebinar for details.
NEW Supervisory and Leadership Excellence for New Managers
New supervisors are constantly challenged to find ways to meet the demands of a rapidly changing organization. Join us for a valuable day of insights into how to be an effective supervisor. Identify the qualities and attributes of successful managers, recognize what you do best and find ways to strengthen weaknesses. Develop strategies to create effective and high performing teams. Lunch and the book 3.6 Leadership: Leadership to Build Personal and Career Success is included.

What You Will Learn:
- Clarifying roles, responsibilities, and expectations
- Developing a supervision style to meet changing situations
- Understanding various team concepts
- Understanding your role as a motivator
- Making effective decisions
- Handling conflict
- Evaluating employee performance and providing constructive feedback
- Delegating and time management
- Developing a continuous improvement mindset
- Gaining tools and strategies for a successful transition using 5 Key Leadership Tools

C. Farrior, 7 hrs, $375
Campus: Aug 12, 2019 | M | 8:30 am – 4:30 pm | C2519032

Strategic Decision Management
Learn decision-making methodologies that influence alignment between the manager's technical decision processes and the company's organizational strategy. Discuss normative and descriptive approaches to strategic thinking. Develop an organizational strategy and review how to use strategic decision modeling approaches. Explore how to structure strategic decision-making processes using rational, descriptive, political, and uncertainty models. Investigate links between strategy, organizational structure, and value chain with technical decision-making. Observe using performance measurement systems to assess the effectiveness of strategic decision processes.

J. Fortune, 14 hrs, $595
Online: D2519016

Life Cycle Logistics Management
Gain an overview of all activities associated with the life cycle of a system, from requirements generation and acquisition to sustainment and disposal. This program provides a basic foundation for senior managers and executives who are responsible for overseeing system support processes and assuring ready capability. The curriculum can be customized based on the background, knowledge, and experience level of the participants.

Customized Training: 256.824.6015

American Heart Association
Basic Life Support Certification
BLS (Instructor-Led Training)

Basic Life Support (BLS) is an American Heart Association certification that focuses on what rescuers need to know to perform basic life support skills. After successfully completing this BLS Instructor-Led Training course, you should be able to perform high-quality CPR and describe the technique for choking relief for an adult, child, or infant, as well as demonstrate the appropriate use of automated external defibrillator (AED) and barrier device skills. You will also be able to describe the importance of teams in multi-rescuer resuscitation. To complete this course, students must pass BLS skills testing and a written exam.

BLS is designed for healthcare in both pre-hospital and in-facility environments. In-facility refers to healthcare providers who work in a hospital, clinic, or other healthcare facility including a dentist office, skilled nursing, and assisted-living facilities. This course is hosted in close partnership with the UAH College of Nursing to ensure compliance and best practices are met for new and returning nursing students who are required to maintain annual BLS certification.

REGISTRATION FEE

$60
The instructor is great—very engaging. The practical projects along with the lecture were a great way to implement what we were learning.

– Applying Design Principles and Elements Participant

**INTERIOR DESIGN CERTIFICATE**

Visualize beautiful and functional surroundings that you create. Whether you are searching for new career skills or knowledge for personal use, this program is certain to provide useful content and creative ideas.

Take the 5-course series or just one course.

**Course Materials:** Additional fees for textbooks and supplies may be required.

**Interior Design Career Opportunities Include:**
- Assistant to professionals including interior designers, contractors, or architects in the implementation of interior designs
- Sales reps for paint, carpet, lighting, furniture, or fabric stores
- Office furnishings and space planning suppliers, etc.

**Building a Foundation in Interior Design**

Learn the basics of design elements and principles that work together to create harmonious spaces through lecture, demonstrations, and application examples. A comprehensive overview of color theory, furnishings, fixtures, finishes, the history of design, and current design trends will provide the knowledge to develop aesthetically pleasing and functional interiors.

*G. Huffman, 20 hrs, $375*

**Course:** Oct 15 – Dec 10, 2019 | T | 5:30 – 8:00 pm | C2520002*

*Class will not meet November 26, 2019.

**Design and Architecture**

Learn how architecture and interior design are interwoven and how architectural detailing makes a building unique. Explore residential and commercial architectural styles and types, including historical and contemporary design. Understand design history and theory, basics of construction, materials and finishes, universal design, sustainability, and building systems.

*D. Bird, 20 hrs, $375*

**Campus:** Coming Spring 2020

**SketchUp Your Design**

Learn to build computer-generated models of interior spaces in this hands-on course utilizing Google SketchUp to convey your design ideas and boost your design capabilities. Practice placing existing model assemblies of windows, doors, and more, while viewing and developing interior spaces in detail. **Prerequisite:** Fundamental experience with computers.

*C. Green, 20 hrs, $375*

**Campus:** Apr 2 – 25, 2019 | T, Th | 5:30 – 8:00 pm | C2519021

**Applying Design Principles and Elements**

Develop advanced design skills utilizing color schemes and patterns, furniture layouts, materials selection, and interior elevations. Large scale projects will allow for an in-depth study of interior details such as lighting, fabrics, windows, and flooring. Learn how to present design proposals and then how to successfully communicate with clients and contractors during the project. **Prerequisite:** Building a Foundation in Interior Design.

*G. Huffman, 20 hrs, $375*

**Campus:** May 7 – Jul 9, 2019 | T | 5:30 – 8:00 pm | C2519015*

*Class will not meet May 28 and July 2, 2019.

**Interior Space Planning**

Learn about scale, architectural drawing, and creative problem-solving. Discover how to convey your own design solutions. Employ hands-on training to learn the fundamentals of space planning and its application in solving design problems. **Prerequisite:** Design and Architecture.

*G. Huffman, 20 hrs, $375*

**Campus:** Jul 23 – Sep 17, 2019 | T | 5:30 – 8:00 pm | C2519016*

*Class will not meet September 3, 2019.

**Please Note:**

This program is not preparatory for the NCIDQ exam nor does it provide individuals with the credentials to be identified as a Registered Interior Designer, a title awarded only by the Alabama State Board of Interior Design.
NEED ON-SITE TRAINING FOR YOUR EMPLOYEES?

Is there a knowledge gap within your organization? Does your workforce need new skills to win or support a contract? UAH College of Professional and Continuing Studies delivers high-quality professional education in career-oriented programs that benefit today's workforce and the organizations they serve. Whether your organization is for-profit or non-profit, private, public, or government, we deliver training with results. It is affordable and customizable to your organization's specific training goals. Customized training is hassle-free — we do all the work!

Pre-Event Analysis
Our experts will work with you to develop effective methods to assess work and communication style, cultivate leadership skills, and build team capabilities. Let us help your leaders acquire the skills to nurture team relationships, make better decisions, improve communication, and ultimately achieve measurable results.

Learning Event
We will collaborate with you to design unique and impactful training programs to meet your specific organizational goals. Choose your topic, date, time, and location, and we will develop a high-quality program to exceed your training goals.

Post-Event Evaluation
After your program is completed, we will follow up with one-on-one coaching sessions to review concepts and support implementation in order to help you achieve desired results.

Contact us for an appointment today:
Anita.Daniel@uah.edu 256.824.6015

Consider the advantage of Customized Training:
- Select custom course content
- Choose convenient dates, times, and locations
- Save time with employees spending fewer hours away from work
- Contain costs with volume discounts and reduced travel, food, and lodging expenses
- Build teamwork through group learning experiences
- Realize immediate results when employees put into practice what they simultaneously learned together
CONFERENCE & EVENT PLANNING

UAH Conferences and Special Programs unit is dedicated to facilitating effective learning. Our goal is to support collaborative projects that enrich both our academic and research missions and the communities we serve. Our team has managed conferences, training, special events, meetings, and workshops of all sizes, ranging from 10 to more than 1,500 participants.

We pride ourselves on meeting your unique challenges, making your job easier and your event more enjoyable. Our professionals work hard to ensure every detail exceeds your expectations.

COMPREHENSIVE SERVICES AND SUPPORT WE PROVIDE INCLUDE:

- Registration
- Budget Development
- Planning and Management
- Speakers/Presenters/Exhibitors
- Continuing Education Units (CEUs)
- Promotion and Marketing Support
- Post-Conference Services

Please visit our website, CPCS.uah.edu/Conferences, to learn how we can simplify your role as host, ease the hassles of planning your meeting, and provide the resources necessary to ensure a successful event.

Contact: Fathia Hardy, Associate Director
CPCS.programs@uah.edu, 256.824.2808

FINISH WHAT YOU STARTED.

Online Degree Options Are Available!

Do you need to complete a bachelor’s degree? Are you looking for ways to apply your military training to an academic program? UAH Bachelor of Arts or Science in Professional Studies is an interdisciplinary degree program that makes completing a degree from an accredited university convenient for adult students.

CONCENTRATIONS INCLUDE:

- Leadership Strategies and Dynamics
- Organizational Studies
- Technology, Science, and Society
- Engineering Technology (Coming soon)

Contact us today to find out how to apply up to 75% of your transferred college credits toward your degree. Also, learn how to apply your ACE recommended credit from military training!
EDUCATIONAL UNITS

Continuing Education Units (CEUs)
CEUs are nationally recognized non-academic credit for professional development and granted for professional development courses. UAH PD Solutions (PDS) courses meet requirements for providing CEUs.

CEUs provide a permanent record of an individual’s educational accomplishments in an organized, continuing education experience under responsible sponsorship, capable direction, and qualified instruction. UAH’s use of the CEU follows the accepted criteria and guidelines established by Southern Association of Colleges and Schools Commission on Colleges (SACSCOC), which complies with internationally recognized standards of The International Association for Continuing Education and Training (IACET).

Successful course completion requires participants to attend 80% of scheduled class meetings (and complete associated exams or projects, if applicable). The non-credit course grading system is Pass/Fail. Participants receive a certificate or letter of completion indicating the number of CEUs earned.

Individual CEUs earned through CPCS are recorded in the attendee’s name. A transcript is available for $5 through the CPCS Registration Office.

One CEU equals 10 clock hours of instruction. Please note the following conversion rates into Continuous Learning Points (CLP), Professional Development Hours (PDH), Professional Development Units (PDU), and Certified Professional Education Units (CPE):

One CEU = 10 CLP, PDH, PDU, or CPE.

To determine whether CEUs may be applied toward professional certification, licensing requirements, or other required training or continuing education hours, consult your training department or licensing authority.

Defense Acquisition Workforce
Defense Acquisition Workforce members must acquire 80 Continuous Learning Points (CLPs) every two years from the date of entry into the acquisition workforce for as long as the member remains in an acquisition position per DoD instruction 5000.66. Members are encouraged to set a goal of achieving 40 CLPs within any 12 month period or the mandatory requirement of 80 CLPs within two years. With supervisor approval, attendance in UAH PD Solutions courses may be used towards CLP requirements.
For a complete list of policies, visit CPCS.uah.edu/Policies

NON-CREDIT REGISTRATION AND PAYMENT POLICIES
See page 1 for ways to register. Payment by cash, check, credit card, or written employer billing authorization is required at time of registration. Mail, fax, or email your company purchase order, tuition voucher, or other billing authorization to the CPCS Registration Office. Check with your organization. Many employers’ tuition plans cover UAH PDS courses. You will receive confirmation after your registration has been processed. Please review your confirmation letter carefully for the latest course information. The registration fee for non-credit courses includes any required text, course materials, lab fees, and short-term parking permits unless otherwise noted.

WITHDRAWAL POLICY
Failure to participate in a course or program does not constitute withdrawal. Substitutions are permitted with prior notice. For a refund, the UAH CPCS Registration Office must be notified in writing at least three full business day prior to the course start date. Send notifications to PCSRegistration@uah.edu.

Online On Demand course withdrawal requests must be received prior to logging onto the course and no more than 10 business days from the initial date of registration.

Full Program Discounts will be forfeited with any course withdrawal. Full course fees will be charged for all courses completed and the course in progress, if applicable.

CAMPUS PARKING REGULATIONS AND ZONED PARKING
UAH uses zoned parking. As part of registration, course participants will be issued a Commuter Parking Permit at the opening session. Please arrive 15 minutes early to allow time to hang your permit on your rear view mirror. Campus parking information and Zoning Maps may be found at UAH.edu/Map

TRAINING ENVIRONMENT
Courses are presented in the CPCS Executive Training Center, on the second floor of Wilson Hall, unless otherwise noted. Computer technology courses are conducted in state-of-the-art, one-to-one computer labs. Classroom courses are held in rooms designed for the adult learner.

ACCEPTABLE PROOF OF U.S. CITIZENSHIP
For select courses, participants must be U.S. citizens and provide verification of citizenship. Visit CPCS.uah.edu/Citizenship for more details.

PMP® GUARANTEE
If a participant attends a UAH Professional Development Solutions (PDS) classroom or online PMP® Certification Bootcamp course and does not pass the PMP® Certification exam, participants may re-take for the online PMP® Certification Bootcamp course for no additional cost. To re-register, the participant should contact the CPCS Registration Office within 90 days of completing their first attempt at the PMP® Certification Bootcamp course. A copy of their exam score must be provided. Textbooks and simulator will not be provided a second time.

COURSE CANCELLATION AND INCLEMENT WEATHER
Non-credit courses are self-supporting and classes are subject to cancellation if there is insufficient enrollment. In the event of course cancellation, participants will be notified in a timely manner and will have the option of applying fees paid to another course or receiving a course fee refund.

UAH PDS classes will not meet if UAH closes due to inclement weather. Check local radio/television broadcasts for closing announcements.

CERTIFICATE PROGRAM COMPLETION
Participants must complete all of the certificate program courses in a professional field within a five-year period. Upon completion of the final course, submit a Certificate Completion Form to receive an overall certificate. If a certificate program is updated or retired during this five-year period, the PDS staff will work with active participants to provide the best alternatives for program completion.

TAX DEDUCTION
Treasury regulations may permit an income tax deduction for educational and training expenses (registration fees, travel, meals, and lodging) undertaken to maintain and improve professional skills.

STUDENTS WITH DISABILITIES
UAH Disability Support Services (DSS) provides special accommodations for students with disabilities. Contact DSS at 256.824.1997 or uah.edu/dss at least one month prior to the start date of class to allow advanced preparation. Official documentation of stated disability is required.

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- Test and Evaluation
- Web Developer

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