Join individuals from 35 various states and 13 other countries who participate in our world-class training.
Complete your online course from your home, office, or on the road. Textbook, handouts, and supplemental materials are included in the course fee. If you have a browser and internet access, you are ready to enroll!

In our easy access online environment, you will have:
• The complete course lecture videos and class assignments
• Software needed to write code, run programs, and participate in lab exercises

Now available Online On Demand:
• IT, Management, and Engineering courses
• Certificates, exam preps, and short courses

Are you ready to influence, impact, and improve your performance?
Become a stronger, more relevant business leader who makes a positive difference in the workplace. Our programs offer practical experience balanced with academic theory that you can immediately apply in the civilian or military world.

The Certificate Program Advantage
Certificate programs are a well-respected form of specialized education among professionals, employers, and universities. The workforce environment is constantly changing, making certificates a valuable tool for professional development.

Visit PCS.uah.edu/OnlineLearning or call 256.824.6940 for more information.
**Course Locations**
All classroom courses are held on the UAH campus unless otherwise noted. After registering, please refer to your confirmation letter for the location. A map of the UAH campus is located on the inside back cover. A parking decal will be provided to you on the first day of the class.

**Our Executive Training Center Offers You:**
- Comfortable and professional classrooms
- Accommodating break room with complimentary refreshments
- State-of-the-art computer labs with all necessary software

**Full Program Discount**
Save time, money, and guarantee your seat by registering for full programs at once. See page 32 for more details.

**Questions? We’ll Be Glad to Help!**
- Please refer to Policies & Procedures and Credits & Alliances on page 30.
- For any other questions, call 256.824.6015, Mon – Fri, 8:15 am – 5:00 pm or email your questions to PCS@uah.edu.
- To register for courses, please refer to page 32.

**Stay in Touch**
Receive information about upcoming short courses and certificate programs:
- Visit the PCS website at: www.PCS.uah.edu
- Sign up to receive publications and emails at: www.PCS.uah.edu/subscribe

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@UAHPCS
PCS.uah.edu/LinkedIn
PCS.uah.edu/YouTube
Adobe Photoshop Essentials
C. Concannon, 14 hrs, $495
Give your presentation that polished look with photographs and graphics, using Adobe Photoshop, the industry standard. Learn to create and edit your own digital graphics and photographs. Explore the Photoshop interface and tools for selecting and optimizing images and working with text. Hands-on labs examine color and resolution, layers, typography, and photographic restoration and retouching. Photographers, marketers, web and print designers, and those tasked with creating graphics for their company, school or personal use will benefit from challenging practical exercises that build their image manipulation skills.

What You Will Learn:
• Selecting the best tool for the job
• Navigating and configuring the interface
• Resolving color and resolution issues
• Optimizing images for print and web use
• Working with layers and layer masks for added control
• Eliminating dust, scratches, and distracting objects
• Working with text
• Preparing and optimizing graphics for different social media platforms

Prerequisite: Some experience with Microsoft Windows is recommended.

CAMPUS:
Apr 25 – May 4, 2016 | M, W | 5:30 – 9:00 pm | C2116061A

Certified Authorization Professional (CAP®) Exam Prep
R. Spee, 28 hrs, $1295**

Meets DoD Directive 8570!
Knowledgeable people are the key to a secure organization.
Cyberspace is the new battlefield where commercial, federal, state, and local government agencies, including the Department of Defense (DoD) assets, have become virtual targets. Organizations require qualified Certified Authorization Professionals (CAP®) to monitor and protect their network infrastructure and information systems. The Federal Government recognizes the CAP® credential in DoD 8570 at IAM Level I and II. The CAP® credential applies to those responsible for formalizing processes that assess risk and establish security requirements and documentation using the Risk Management Framework (RMF) model. Authorization officials, system owners, information owners, information system security officers, certifiers, and all senior system managers will benefit.

The CAP® CBK® Exam Domains Include:
1. Risk Management Framework (RMF)
2. Categorization of Information Systems
3. Selection of Security Controls
4. Security Control Implementation
5. Security Control Assessment
6. Information System Authorization
7. Monitoring of Security Controls

Enroll now to endorse your capability to monitor and validate information systems’ risks against threats. Prepare for the CAP® exam and take the steps to become a highly sought after Certified Authorization Professional. Prerequisite: 1-2 years IT security, risk management, systems, and network experience.


CAMPUS:
Apr 26 – May 19, 2016 | T, Th | 5:30 – 9:00 pm | C2116086A
Aug 30 – Sep 2, 2016 | T – F | 8:30 am – 4:30 pm | C2117011A

**Exam voucher not included.

VIRTUAL DESKTOPS
Training Time Beyond the Classroom
Utilize the Virtual Desktop tool to enhance your course experience. Feel confident that you can apply your newly attained knowledge!

To learn more, contact Christina.Holmes@uah.edu or call 256.824.6015.

Linux+ Certification Exam Prep
R. Pearson, 28 hrs, $1295/$1595*
The CompTIA Linux+ certification, powered by LPI (Linux Professional Institute), provides access to a range of careers. It offers a framework for acquiring working knowledge of Linux for IT professionals working as junior-level system administrators, as well as those working in Web and software development. This course provides clear, concise information on all aspects of Linux administration with a focus on the latest version of the exam. Gain insight from real-world scenarios, with detailed guidance and authoritative coverage of key topics, including GNU and Unix commands, system operation, system administration, system services, security, and more, from a practical perspective that easily translates into on-the-job know-how.

While preparing for CompTIA’s Linux+ Certification Exam LX0-103/104, you can also automatically receive the LPI LPIC-1 and the SUSE (Software und System Entwicklung) Certified Linux Administrator (CLA) certifications. Earn three industry-recognized certifications for the cost, time, and effort of one!

For more details visit www.comptia.org.

What You Will Learn:
• Review the basic system architecture, installation, and management
• Understand commands, devices, and file systems
• Utilize shells, scripting, and data management techniques
• Navigate user interfaces, desktops, and essential system services

Prerequisite: A+, Network+ and at least 12 months of Linux administration experience

CAMPUS:
Jan 26 – Feb 18, 2016 | T, Th | 5:30 – 9:00 pm | C211606A
Aug 9 – Sept 1, 2016 | T, Th | 5:30 – 9:00 pm | C2116067A

*With exam voucher.
A+ Exam Prep
J. Smith, 28 hrs, $1295/$1495*

Meets DoD Directive 8570!
CompTIA’s A+ Certification fulfills a basic requirement for most technical support and IT administrative positions. On completion of this course, understand 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, and provide 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 8570 Information Assurance Technical (IAT) Level I. Go to www.comptia.org for complete certification information. Prerequisite: Basic understanding of information technology and/or 6 – 12 months hands-on experience in the IT field.

CAMPUS:
Apr 19 – May 12, 2016 | T, Th | 5:30 – 9:00 pm | C2116080A
Oct 25 – 28, 2016 | T – F | 8:30 am – 4:30 pm | C2117015A

Network+ Exam Prep
M. Turner, 28 hrs, $1295/$1495*

Meets DoD Directive 8570!
Prepare for the CompTIA Network+ Exam N10-006, recognized by the U.S. Department of Defense. Many companies and organizations require or recommend CompTIA Network+ certification for their networking technicians. Benefit from hands-on exercises and exam question practice in a lab environment. Covered exam topic areas include network technologies, installation and configuration, media and topologies, management, and security. Possible career opportunities for those with Network+ Certification include network administrator, network technician, network installer, help desk technician, and IT cable installer. The certification applies to DoD 8570 Information Assurance Technical (IAT) Level I. Prerequisite: Technical networking experience recommended.

CAMPUS:
Feb 1 – 4, 2016 | M, W | 5:30 – 9:00 pm | C2116039A
Sep 6 – 9, 2016 | T – F | 8:30 am – 4:30 pm | C2117016A

Security+ Exam Prep
D. Gray, 28 hrs, $1295/$1495*

Meets DoD Directive 8570!
CompTIA’s Security+ Exam SYO-401 is the premier vendor-neutral security certification. It is included in the approved list of certifications to meet DoD Directive 8570.1 requirements, and is designed for professionals who have two years’ experience with an emphasis on security. Build on your current skill set and prepare for the CompTIA Security+ Certification exam. Familiarize yourself with concepts and tools, and anticipate, guard against, mitigate, and respond to security incidents. The certification applies to DoD 8570 Information Assurance Technical (IAT) Level II and Information Assurance Management Level I. Prerequisite: Technical networking experience with an emphasis on security. Network+ or equivalent experience recommended.

CAMPUS:
Apr 5 – 28, 2016 | T, Th | 5:30 – 9:00 pm | C2116042A
Nov 1 – 4, 2016 | T – F | 8:30 am – 4:30 pm | C2117023A

Cloud+ Exam Prep
J. Cuneo, 28 hrs, $1295/$1495*

Acquire the skills to understand basic cloud terminologies and methodologies, relate cloud implementation and virtualization application to industry best practices, and learn to implement, maintain and deliver cloud technologies and infrastructures. Prepare for CompTIA’s Cloud+ Certification Exam CV0-001 and validate the knowledge required for many cloud-related IT positions. The exam is intended for individuals with two to three years of work experience in IT networking, network storage, or data center administration and a familiarity with any major hypervisor technology, pertaining to server virtualization. Go to compitia.org for complete information. Prerequisite: Experience with any major hypervisor and two to three years’ work experience in IT networking, network storage, or data center administration.

CAMPUS:
Apr 19 – May 12, 2016 | T, Th | 5:30 – 9:00 pm | C2116068A

COMPTIA ACADEMY PARTNER
As an academy partner, we are offering our participants the option to pay a single fee and receive course registration and a discounted exam voucher from PearsonVue. The exam voucher will be distributed during the last class session for those who register for the “with exam” course session. The voucher can be used to register for the exam anywhere in the United States and is valid for a period of one year. Courses currently included are A+, Security+, Linux+, Network+, and Cloud+.

HOW YOU WILL BENEFIT:
• Certified instructors who have access to CompTIA practice assessments, exams, and questions
• A discounted test voucher
• A convenient one-time registration fee for both the course and the voucher with easy, electronic delivery of voucher
• A convenient test location on the UAH campus inside Wilson Hall or another U.S. location of your choice

For complete certification information, visit www.comptia.org

Select IT Courses Meet DoD Directive 8570!
Select IT courses assist in the credentialing/continuing education requirements of DoD employees with privileged access to DoD information systems.
Courses Include: A+, Network+, Security+, CISSP®, SSCP®, CSSLP®, CEH™, and CAP®
Exam Preps
Certified Information Systems Security Professional (CISSP\textsuperscript{®}) Exam Bootcamp  K. Patterson, 35 hrs, $2195**

Meets DoD Directive 8570!

Organizations gain a leading edge by demanding qualified information security staff. They demonstrate their dedication to providing the highest standard of security for their customers, employees, stakeholders, and organizational information assets. Understand information security best practices and prepare for the Exam CISSP. 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 8570 Information Assurance Technical (IAT) Level III, Information Assurance Management Levels II and III, and System Architect and Engineer Levels I and II. Go to www.isc2.org for complete certification information. Prerequisite: Security+ certification or equivalent professional experience is highly recommended.

CAMPUS:
Mar 28 – Apr 1, 2016  |  M – F  |  8:30 am – 4:30 pm  |  C2116082A
Oct 18 – Nov 17, 2016  |  T, Th  |  5:00 – 8:30 pm  |  C2117024A

**Exam voucher not included.

Certified Ethical Hacker (CEH™) Exam Prep  R. Ward, 35 hrs, $2195/$2495*

Meets DoD Directive 8570!

Dive into an interactive environment and learn how to scan, test, and secure systems from hackers. Our hands-on lab gives each student 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. This course prepares you for EC-Council Certified Ethical Hacker v9 exam. This course provides 35 hours of class time with an optional 4 hours to complete the CEH v9 exam immediately following class. Go to www.eccouncil.org for complete certification information. Prerequisite: Programming and networking experience with an emphasis on security. Network+ and Security+ certifications are beneficial.

CAMPUS:
Mar 28 – Apr 1, 2016  |  M – F  |  8:30 am – 4:30 pm  |  C2116079A
Oct 17 – Nov 16, 2016  |  M, W  |  5:00 – 8:30 pm  |  C2117018A

*With exam voucher.

GUARD AGAINST CYBERSECURITY THREATS

8th Annual National Cyber Summit
June 8 – 9, 2016
Visit NationalCyberSummit.com for details.

UAH PCS is now an EC-Council Accredited Training Center!

Partnering with The International Council of E-Commerce Consultants (EC-Council) allows us to offer certification training recognized worldwide by various government agencies including the U.S. DoD, National Security Agency (NSA) and the Committee on National Security Systems (CNSS). Certified Ethical Hacker (CEH™) Exam Prep includes all of the benefits of this partnership.

How You Will Benefit:
• Industry-recognized training led by EC-Council Instructors (CEI)
• A discounted test voucher
• EC-Council courseware kit that includes DVDs, official EC-Council curriculum courseware volumes, lab guides, t-shirt, and backpack
ICS410: ICS/SCADA Security Essentials 35 hrs, $4615**

The SANS Institute has joined forces with industry leaders to equip security professionals and control system engineers with the cybersecurity skills they need to defend national critical infrastructure. ICS410: ICS/SCADA Security Essentials provides a set of standardized skills and knowledge for industrial cybersecurity professionals. The course is designed to ensure that the workforce involved in supporting and defending industrial control systems is trained to keep the operational environment safe, secure, and resilient against current and emerging cyber threats.

It also helps participants with preparation for the Global Industrial Cyber Security Professional (GICSP) certification exam. This unique vendor-neutral, practitioner-focused industrial control system certification is a collaborative effort between GIAC and representatives from a global industry consortium involving organizations that design, deploy, operate and/or maintain industrial automation and control system infrastructure.

GICSP will assess a base level of knowledge and understanding across a diverse set of professionals who engineer or support control systems and share responsibility for the security of these environments.

This certification will be leveraged across industries to ensure a minimum set of knowledge and capabilities that IT, engineering, and security professionals should know if they are in a role that could impact the cybersecurity of an ICS environment. Visit www.giac.org for complete certification information.

Prerequisites: A basic understanding of technology, networks, and security; specific understanding of networking and system administration, TCP/IP, networking design/architecture, vulnerability assessment, and risk methodologies.

GICSP Certification Objectives:
- ICS architecture
- ICS security assessments
- Industrial control systems
- ICS modules and elements hardening
- Cybersecurity essentials for ICS
- Configuration/change management
- ICS security governance and risk management

This Course Will Provide You With:
- An understanding of industrial control system components, purposes, deployments, significant drivers, and constraints
- Hands-on lab learning experiences to control system attack surfaces, methods, and tools
- Control system approaches to system and network defense architectures and techniques
- Governance models and resources for industrial cybersecurity professionals

Who Should Attend:
Individuals who influence the attack surface and are responsible for or support efforts to maintain a secure, safe and reliable Industrial Control System environment. The roles performed by personnel specific to this field can be divided into four domains: IT (includes OT support), IT security (includes OT security), engineering, and corporate, industry, and professional standards.

CAMPUS:
Feb 22 – 26, 2016 | M – F | 8:30 am – 4:30 pm | C2116083A
DEADLINE TO REGISTER: February 15th

**Exam voucher not included
### MICROSOFT EXCEL CERTIFICATE
Develop the essential skills to move from novice to confident Excel specialist. This program also prepares you for the Excel 2013 exam (77-420). **Take one course or the complete series.**

**SAVE $45**
By registering for the entire certificate.
Reference session P2116005A.

#### Certificate awarded after completion of:

**Excel Essentials**  
B. McCall/A. Spain, 7 hrs, $265  
Grasp basic features of Excel. Learn spreadsheet terminology, Help system use, and worksheets/books navigation.  
**Prerequisite:** Fundamental experience with PCs and Microsoft Windows.

**CAMPUS:**  
Feb 2 – 4, 2016 | T, Th | 5:00 – 8:30 pm | C2116051A  
Jun 2, 2016 | Th | 8:30 am – 4:30 pm | C2116071A  
Oct 14, 2016 | F | 8:30 am – 4:30 pm | C2117001A

**Excel Intermediate**  
B. McCall/A. Spain, 7 hrs, $265  
Study advanced formatting options, charting techniques, outlining/subtotals, and PivotTables.  
**Prerequisite:** Microsoft Excel Essentials or equivalent experience.

**CAMPUS:**  
Feb 9 – 11, 2016 | T, Th | 5:00 – 8:30 pm | C2116052A  
Jun 9, 2016 | Th | 8:30 am – 4:30 pm | C2116072A  
Oct 21, 2016 | F | 8:30 am – 4:30 pm | C2117003A

**Excel Advanced**  
B. McCall/A. Spain, 7 hrs, $265  
Learn advanced formulas and lookup functions, data validation, import/export, and external database queries.  
**Prerequisites:** Microsoft Excel Essentials and Intermediate or equivalent experience.

**CAMPUS:**  
Feb 16 – 18, 2016 | T, Th | 5:00 – 8:30 pm | C2116053A  
Jun 16, 2016 | Th | 8:30 am – 4:30 pm | C2116073A  
Oct 28, 2016 | F | 8:30 am – 4:30 pm | C2117004A

### MICROSOFT PROJECT CERTIFICATE
Learn to use Project’s flexible features to keep your projects organized and on time. This program also prepares you for the Project 2013 exam (74-343). **Take one course or the complete series.**

**SAVE $50**
By registering for the entire certificate.
Reference session P2116004A.

#### Certificate awarded after completion of:

**Using Project**  
J. Barnes/M. Hawkins, 12 hrs, $425  
Build a solid foundation and learn to effectively manage your Projects. Learn how to set up MS Project to facilitate efficiency and ease of use. Utilize entered data, creating a valid and dynamic model of the project. This course is tailored to project managers and planners.  
**Prerequisite:** Fundamental experience with PCs and Microsoft Windows.

**CAMPUS:**  
Feb 4 – 5, 2016 | Th, F | 8:30 am – 3:30 pm | C2116055A  
Jun 6 – 15, 2016 | M, W | 5:00 – 8:00 pm | C2116062A  
Oct 13 – 14, 2016 | Th, F | 8:30 am – 3:30 pm | C2117008A

**Project Power User**  
P. Tatum, 12 hrs, $425  
Maximize your ability to manage tasks and projects. Learn to handle delays and conflicts, consolidate project files, and share resources. Understand how to execute, monitor, and control tasks, so that your project is completed on time, within budget, and according to scope. This course is designed for experienced Microsoft Project users.  
**Prerequisite:** Using Microsoft Project or six months’ experience using Microsoft Project.

**CAMPUS:**  
Feb 11 – 12, 2016 | Th, F | 8:30 am – 3:30 pm | C2116081A  
Oct 20 – 21, 2016 | Th, F | 8:30 am – 3:30 pm | C2117009A

### MICROSOFT WORD CERTIFICATE
Learn the skills necessary to navigate Word at the feature and functionality level. This program also prepares you for the Word 2013 exam (77-418). **Take one course or the complete series.**

**SAVE $45**
By registering for the entire certificate.
Reference session P2116006A.

#### Certificate awarded after completion of:

**Word Essentials**  
L. Smith/A. Spain, 7 hrs, $265  
Cover the basic functions of Word. Learn to enter and edit text, save and browse documents, format documents, and edit table structure.  
**Prerequisite:** Fundamental experience with PCs and Microsoft Windows.

**CAMPUS:**  
Mar 4, 2016 | F | 8:30 am – 4:30 pm | C2116057A  
Jul 7, 2016 | Th | 8:30 am – 4:30 pm | C2116074A  
Nov 4, 2016 | F | 8:30 am – 4:30 pm | C2117005A

**Word Intermediate**  
L. Smith/A. Spain, 7 hrs, $265  
Go beyond the basics of document creation. Create styles, use columns and diagrams, create outlines, password protect, and track changes.  
**Prerequisite:** Microsoft Word Essentials or equivalent experience.

**CAMPUS:**  
Mar 11, 2016 | F | 8:30 am – 4:30 pm | C2116058A  
Jul 14, 2016 | Th | 8:30 am – 4:30 pm | C2116075A  
Nov 11, 2016 | F | 8:30 am – 4:30 pm | C2117006A

**Word Advanced**  
L. Smith/A. Spain, 7 hrs, $265  
Learn advanced features of Word like creating a table of contents and figures, footnotes, cross references, an index, backgrounds, and document revisions.  
**Prerequisites:** Microsoft Word Essentials and Intermediate or equivalent experience.

**CAMPUS:**  
Mar 18, 2016 | F | 8:30 am – 4:30 pm | C2116059A  
Jul 21, 2016 | Th | 8:30 am – 4:30 pm | C2116076A  
Nov 18, 2016 | F | 8:30 am – 4:30 pm | C2117007A
DEVELOP CUSTOM ANDROID APPLICATIONS

Now Available Online On Demand

ANDROID™ MOBILE DEVELOPER CERTIFICATE

Become an Android developer and release your own high-quality apps to the marketplace. In hands-on labs, learn about and practice implementing the various stages of development on the Android operating system. Study topics related to user interface, application services, permissions and security, graphics, data persistence, monitoring tools, application hosting, and more. Take one course or the complete series.

Certificate awarded after completion of:

Introduction to Android™ Application Development
J. Busby, 21 hrs, $945
Create your own Android app and learn how to submit it to market. Discover the basics of Android application development through in-depth exercises. Learn how Android programming allows background processing, provides a rich user interface library, supports 2-D/3-D graphics using the OpenGL libraries, and provides an embedded SQLite database. Explore simple GUI applications, understand widgets/components, and working with the database to store data locally.

What You Will Learn:
• Development environment and tools
• The Android Software Development Kit (SDK)
• Managing the activity lifecycle
• Developing for different devices
• Dynamic user interface design

Prerequisite: Basic programming experience required. Object-Oriented programming language experience recommended.

Android™: Beyond the Basics
J. Busby, 21 hrs, $945
Learn best practices for implementing solutions to a wide range of common problems that all Android developers are likely to encounter eventually. Examine how to take advantage of both Java language features and its support libraries on Android devices. Discover proven techniques that you can use to create robust, stable, and feature-rich Android applications. Practice Android tips and tricks to give perfect shape to your creative thinking.

What You Will Learn:
• Managing activities, threads, and background services
• Using Android's animation and advanced graphics engines
• Managing files, using databases, and sharing data between applications
• Dealing with challenges using networks and web services on mobile devices
• Accessing device hardware (cameras, microphones, and sensors)

Prerequisite: Introduction to Android Application Development or equivalent experience.

CAMPUS:
Mar 28 – Apr 13, 2016 | M, W | 5:30 – 9:00 pm | C2116036A
Sep 19 – Oct 5, 2016 | M, W | 5:00 – 8:30 pm | C2117017A
ONLINE ON DEMAND: D2116001A

Check out what previous attendees are saying:

“The course was great! I definitely found it useful.”

“Instructor presented material in a way that could be grasped and understood.”

“Presented a good balance of hands-on exercises and examples.”

“Instructor was excellent!”

SAVE $200
By registering for the entire certificate. Reference session P2116008A.

Ways to Register, page 32
Building Secure Android™ Applications  
*R. Pearson*, 21 hrs, $945

Are you dealing with "Smart devices, dumb apps?" Develop your knowledge and ability to create secure native Android applications and at the same time ensure secure network communication and back end Web services. Learn about smart device features that undermine security and how to mitigate associated risks. Identify weaknesses and vulnerabilities in Android applications' interactions with supporting services and typical Android mobile threats. Study how to perform native Android security assessments and respond effectively. Participants need a strong familiarity with Java, Android SDK, and some knowledge of secure application principles.

**What You Will Learn:**
- Native Android™ application security
- Software Development Life Cycle (SDLC)
- Android™ SDK, APIs, and security features
- Implementing encryption for data security
- Application hardening and reverse engineering

**Prerequisite:** *Introduction to Android™ Application Development and Android™: Beyond the Basics* or equivalent experience.

**CAMPUS:**
- Apr 25 – May 11, 2016  |  M, W  |  5:30 – 9:00 pm  |  C2116078A
- Nov 1 – 17, 2016  |  T, Th  |  5:00 – 8:30 pm  |  C2117021A

**ONLINE ON DEMAND:**  D2116005A

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**Apple iOS Application Development**  
*R. Rojas*, 21 hrs, $795

Discover the basics of iOS application development and create your own application through in-depth exercises utilizing the provided Mac laboratory. Apple iOS programming allows developers to develop rich touch-based applications for Apple mobile devices (iPhone, iPod Touch, and iPad). Explore simple GUI applications; understand widgets and components and how to work with the database to store data locally in our hands-on labs. Understand the features and concepts being introduced with the current version of the iOS SDK through its user interfaces, program structure, and implementation details.

**Prerequisite:** Programming experience required. Familiarity with C++, Java, or other Object-Oriented programming language is a plus.

**CAMPUS:**
- Jun 6 – 22, 2016  |  M, W  |  5:30 – 9:00 pm  |  C2116063A

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**ORACLE**

**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; and develop front-end web-enabled applications that retrieve information easily from the Oracle database. Update your skills to Oracle 12c, the latest version of the most widely used database engine, or develop new Oracle 12c knowledge for a career in the database industry where job satisfaction and workforce demand are high. **Take one course or the complete series.**

**SAVE $300**  
By registering for the entire certificate.  
*Reference session P2116001A.*

**Fundamentals of SQL Using Oracle**  
*T. Bell*, 21 hrs, $945

Gain an extensive introduction to data server technology. Participants cover the concepts of both relational and object database theory, design and terminology. Learn SQL (Structured Query Language) statement categories and their purpose. Study basic SQL programming concepts and techniques to store, retrieve and manipulate data. Participate in hands-on lab experiences creating and maintaining database objects to reinforce learning.

**CAMPUS:**
- May 31 – Jun 16, 2016  |  T, Th  |  5:00 – 8:30 pm  |  C2116088A

**Oracle PL/SQL Programming**  
*T. Bell*, 21 hrs, $945

The 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. Participate in creating and managing user defined packages and Oracle supplied packages. Practice using the features in active, hands-on lab exercises that build your Oracle PL/SQL capability.

**CAMPUS:**
- Jun 21 – Jul 7, 2016  |  T, Th  |  5:00 – 8:30 pm  |  C2116089A

**Developing Oracle Application Express (APEX) Web Applications**  
*T. Bell*, 21 hrs, $945

Build database-centric, web-enabled applications using Oracle Application Express (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, fine tune the look and feel using themes and templates, and deploy the application. Use Oracle APEX best practices as an integral part of the practical exercises in hands-on labs.

**CAMPUS:**
- Jul 12 – 28, 2016  |  T, Th  |  5:00 – 8:30 pm  |  C2116090A
C++ DEVELOPER CERTIFICATE

Master a powerful tool by learning C++ programming language used for Object-Oriented (OO), generic, and procedural programming. Participate in hands-on lab exercises. On completion, 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 one course or the complete series.

SAVE $200 | By registering for the entire certificate. Reference session P2116009A.

Certificate awarded after completion of:

C++ Programming
D. Brockhaus, 21 hrs, $945
C++ is one of the most widely adopted and broadly applicable programming languages. Familiarity with it is an essential skill for engineers, scientists, and many technical managers. This introductory course offers you a solid understanding of Object-Oriented programming, which is critical for programming on the latest compilers and systems. Learn how to design and use classes and objects effectively in C++ to create powerful applications. Practice your skills in hands-on, instructor-aided labs.

What You Will Learn:
• Functions and operators
• Formatted input/output
• Loops and decisions
• Classes and inheritance
• Dynamic data
• Templates
• Top-level and class member functions

Prerequisite: Experience with a programming language such as C.

C++ Programming
D. Brockhaus, 21 hrs, $945
Build on your knowledge of basic C++ syntax, explore the full capabilities of the standard C++ library. Learn how to apply the streaming operators and the proper canonical interface of an object. Practice using object management with smart-pointers and reference counting. Add the STL containers and algorithms to your own programs, dive into the Standard Template Library, and explore the Gang of Four Object-Oriented (OO) design patterns.

What You Will Learn:
• Polymorphic streaming operators
• The standard object methods
• Smart pointers and reference counting
• Strings and regular expressions
• Advanced templates
• Standard template library
• Object-Oriented design patterns

Prerequisite: C++ Programming or equivalent program development experience.

CAMPUS:
Jan 25 – Feb 10, 2016 | M, W | 5:30 – 9:00 pm | C2116037A
Jul 11 – 27, 2016 | M, W | 5:00 – 8:30 pm | C2116091A
ONLINE ON DEMAND: D2116003A

Check out what previous attendees are saying:

“What I learned will benefit my search for employment.”

“The instructor taught in a professional, yet casual manner, allowing the students to absorb the lessons fully.”

“The content was great! I really enjoyed learning about the features of C++.”

“Great instructor! The on-screen coding was a very effective teaching method.”

BLENDED FORMATS
Combine online and classroom courses to complete a certificate!

BECOME A CERTIFIED LINUX+ EXPERT!

NEW SHORT COURSE: Linux+ Certification Exam Prep

Validate your ability and knowledge on all aspects of Linux administration. Gain real-world insight that easily translates into on-the-job know-how, while preparing for the CompTIA Linux+ Exam LX0-103/104.

See page 2 for course details.
JAVA DEVELOPER CERTIFICATE

Prepare yourself to take advantage of the career opportunities available to Java developers who are more in demand than ever. Java is the perfect environment to master Object-Oriented 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. If you know the fundamentals of C/C++ programming and want to expand your professional horizons, this is the series for you. Take one course or the complete series.

SAVE $200
By registering for the entire certificate.
Reference session P2116007A.

Certificate awarded after completion of:

**Introduction to Java Programming**
D. Layman/C. Cantrell, 28 hrs, $1095
Through a series of hands-on, instructor-led lab exercises you will learn Java syntax 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.

**Java Programming Advanced Features**
D. Layman, 28 hrs, $1095
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. Next move on to client/server programming using both raw network sockets and the more powerful RMI (Remote Method Invocation) system. After you have created your Java application, it will be able to run on any operating system with Java support, including Windows, Linux, and Mac.

What You Will Learn:
• Core concepts for GUI applications and classes
• JavaBeans technology
• Low-level networking classes
• Web development with servlets
• Embedding Java inside HTML with JSP

Prerequisites: Introduction to Java Programming or equivalent experience.

**QuickBooks**

QuickBooks Foundation
D. Jacobs, 7 hrs, $265
Set up a comprehensive business financial management system with ease! Customize QuickBooks Desktop with our hands-on labs. Track finances, manage payroll, process invoices, manage sales and expenses, and maximize the software’s features. Learn to use QuickBook’s proven techniques and time-saving shortcuts.

What You Will Learn:
• Chart of accounts, budgeting, and inventory
• Reconciling bank accounts and entering transactions
• Creating business reports and using online banking
• Managing accounts payable and receivable

Prerequisite: Basic computer skills and knowledge of accounting terms.

CAMPUS:
Feb 12, 2016 | F | 8:30 am – 4:30 pm | C2116041A
Oct 5, 2016 | W | 8:30 am – 4:30 pm | C2117020A

QuickBooks for Government Contractors
R. Elliott, 7 hrs, $265
Need a Defense Contract Audit Agency (DCAA) compliant accounting system for Government contracting? Learn how QuickBooks software can be utilized 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 Items and Payroll Items to use in conjunction with the Customer module for job costing. See how easily QuickBooks can accumulate the data you will need for rate computations. In addition, complete DCAA’s pre-award audit form SF 1408 to show how the requirements can be met in a properly structured QuickBooks file.

What You Will Learn:
• Accounting system intro, SF1408 and QuickBooks compatibility
• Chart of accounts structure and cost pool accumulation
• Customers, projects, and contract line item numbers (CLINs) set-up
• Payroll items and timecards
• Labor distribution, accounts payable, invoicing, and month-end
• Rate calculations
• Policies and procedures

Prerequisite: QuickBooks Foundation or basic knowledge of QuickBooks and government contracting.

CAMPUS:
Feb 26, 2016 | F | 8:30 am – 4:30 pm | C2116077A
Aug 3, 2016 | W | 8:30 am – 4:30 pm | C2116094A
VIRTUAL AND CLOUD IMPLEMENTATION CERTIFICATE

Cloud computing and virtualization are two very different technologies, and confusing the two has the potential to cost an organization dearly. In simple terms, virtualization is software that separates physical infrastructures to create various dedicated resources. It is the fundamental technology that powers cloud computing. Cloud computing is a service whose foundation is formed by virtualization. In today’s IT environment, virtualization can exist without the cloud, but cloud computing cannot exist without virtualization. Being clear about the difference is a matter of preventing costly mistakes. In two courses, you can learn the differences in these two highly publicized technologies, their benefits and potential pitfalls, and how to implement or utilize them. Prerequisite: Basic computer knowledge; understanding of operating systems and networking. Take one course or the complete series.

Who should attend:
IT professionals, system architects, IT operations managers, application developers, computer programmers, network/systems managers

SAVE $200
By registering for the entire certificate. Reference session P2116002A.

Certificate awarded after completion of:

Implementing a Virtual Environment  D. Spooner, 21 hrs, $695
Companies of all sizes are embracing virtualization as part of their IT infrastructure in an effort to cut hardware costs and overhead and increase server capability. Learn the main concepts and capabilities of virtual technology. Compare the benefits and drawbacks of utilizing a virtual environment in the workplace. In our hands-on lab, implement a virtual environment from a vendor neutral perspective. Build a virtual machine including installation of the operating system, implementation of security measures, and practicing administrator access.

Upon completion, you will be able to:
• Perform an IT environment assessment and develop customized virtualization scenarios
• Plan and design a virtual server infrastructure by selecting the appropriate platform and hardware
• Build, configure and populate your virtual environment
• Secure your virtual environment using authorized groups and roles
• Monitor and maintain VM (Virtual Machine) performance
• Back up your virtual machines using virtualization-specific backup applications
• Troubleshoot servers, SAN (Storage Area Network), network, storage and virtualization software
• Manage support staff and document virtual infrastructure tasks

Cloud Deployment and Computing  J. Busby, 21 hrs, $695
Identify key criteria that determine an organization’s cloud suitability, and apply that knowledge to transition to the best-suited deployment architecture. In hands-on practical lab exercises, the course examines how to provision cloud resources, supervise their configuration, deploy applications to those resources, and monitor their health. Learn how notification services and cloud-based distributed queue systems quickly and dynamically publish and move information to multiple access points. Consider issues like load balancing, caching, distributed transactions, identity and authorization management, and data encryption.

Upon completion, you will be able to:
• Identify cloud-based opportunities and assess suitability against business needs
• Understand cloud computing concepts such as infrastructure, platform, and SaaS
• Select the appropriate deployment strategy: private, public, community or hybrid
• Build, deploy, and maintain machine images and applications in the cloud
• Develop a secure design that considers the implementation as well as the ongoing operations
• Understand components required to fully calculate and justify the investment required when transitioning to the cloud

CAMPUS:
Mar 1 – 17, 2016 | T, Th | 5:30 – 9:00 pm | C2116048A
Aug 29 – 31, 2016 | M – W | 8:30 am – 4:30 pm | C2117010A
*Also an elective for the Management of Engineering and Technology Certificate.

Validate Your Cloud-Related Expertise!

CLOUD+ CERTIFICATION EXAM PREP

Prepare for CompTIA’s Cloud+ exam CV0-001 and acquire the knowledge needed for many cloud-related IT positions. See page 3 for course details.
AEGIS COMBAT SYSTEM CERTIFICATE

Gain a comprehensive foundation in the history, deployment, and future of the Aegis Combat System (ACS). Aegis is the Navy’s most modern surface combat system. ACS was developed over the last fifty years as a multi-warfare system-of-systems, integrating sensors, command & control, weapons, electronic warfare, navigation, and more. The integration of ACS systems enhances the capability of a ship to engage and defeat numerous multi-warfare threats simultaneously by land, air, and sea.

With the Navy and MDA’s interest for a land-based alternative to Aegis afloat, a new air and missile defense radar system and further standard missile developments on the rise, accelerate your ability to understand and use naval vocabulary. Become familiar with the Aegis Combat & Weapon System elements and build your ACS knowledge foundation. Developed with instructors who are Aegis subject matter experts, the program offers the opportunity to learn from respected industry leaders.

Take one course or the complete series. Participants must provide verification of a valid Common Access Card or Security Clearance and U.S. Citizenship. Acceptable proof of citizenship includes one of the following: U.S. passport, birth certificate with picture ID, Certificate of Citizenship, or Naturalization from USCIS.

SAVE $200 | By registering for the entire certificate. Reference session P2316003A.

Certificate awarded after completion of:

Aegis Combat and Weapon Systems Overview
J. Carter, 24 hrs, $1150
Launched from the Advanced Surface Missile System program, Aegis was developed as one of the most successful warfare systems in the U.S. Navy. Discover how Aegis systems have adapted to change, and enable our sailors to command the sea, control the littorals, project power ashore, and safeguard our troops from the growing threat of ballistic missiles. Navy terms, concepts, and key events in the Aegis Program are introduced. Gain a historical perspective that led to the initiation of Aegis.

Key Takeaways:
• Aegis Overview and History
• Aegis Weapon System (AWS) Essentials
• Aegis Combat System (ACS) Fundamentals
• Aegis Ballistic Missile Defense (BMD) Essentials

ONLINE ON DEMAND: D2316018A

Aegis Combat Systems Engineering
J. Parnell/B. Gaffney, 24 hrs, $1150
Aegis is a prime example of rigorous systems engineering, a necessity for successful Aegis development and the basis for the entire program. Study the three systems engineering process phases: concept definition, design, and implementation. Examine how the SE process ensures that systems are developed to meet affordable, operationally effective, and timely mission objectives. Focus on engineering the weapon system including standard missile and Aegis Combat System integration.

Key Takeaways:
• Aegis Systems Engineering and Development
• Combat and Weapon System Design Evolution
• Aegis Combat System Integration
• Program Engineering Management

ONLINE ON DEMAND: D2316019A

Aegis Ballistic Missile Defense
J. Parnell/R. Morris, 32 hrs, $1350
Naval sea engagements can be divided into three major functions: detect, control, engage. ACS tightly integrates, interlaces, and overlaps all three functions into one. The central integrating element of the ACS is the Aegis Weapon System (AWS), the foundation for developing Aegis Ballistic Missile Defense (BMD). Aegis BMD is the primary component of the sea-based U.S. BMD System. Understand how Aegis Combat System was upgraded to include the additional BMD mission while maintaining existing Aegis operational warfare capabilities.

Key Takeaways:
• Aegis BMD Mission Definition
• System Functional Architecture
• AWS Element Modifications
• AWS Test and Evaluation
• Aegis BMD Technical Approach
• Operational Effectiveness
• Aegis Weapon System Design Overview

ONLINE ON DEMAND: D2316020A
### Rotorcraft Systems Fundamentals

**8. Marshall, 20 hrs, $1195**

Understand the history, fundamental aerodynamics, and design considerations of rotorcraft systems. Explore how the increasing complexity of rotorcraft and their subsystems requires a rigorous systems engineering approach to developing, designing, delivering, and sustaining an affordable rotorcraft system. Learn how a rotorcraft’s ability to hover provides a unique capability to perform manned and unmanned missions requiring vertical takeoffs, landings, and maneuvering within a confined area.

**What You Will Learn:**
- Past, present, and future manned and unmanned rotorcraft
- Aerodynamics, performance, and flight maneuvers
- Functional, performance and design requirements and considerations
- Subsystems, flight phenomenon and technology development

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

*ONLINE ON DEMAND: D2316015A*

### Private Pilot Ground School

**R. Lindstrom, 42 hrs, $599**

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 for approximately $150 at the UAH or Off Campus Bookstore.

*CAMPUSS:
Jan 12 – Apr 26, 2016 | T | 5:30 – 8:30 pm | C232001116A
May 31 – Aug 9, 2016 | T | 5:30 – 8:30 pm | C232001616A*

### Simulating Aircraft Motion in Six Degrees of Freedom

**T. Burress, 14 hrs, $895**

Explore the principle techniques in simulating motion of various aircraft at various fidelity levels including Six Degrees of Freedom (6 DoF). The ability to validly model motion is the cornerstone of a wide range of system design and operation projects. The course reviews basic aerodynamics, their relationship to equations of motion, and provides an orientation to their derivation. The course uses hands-on labs developing and experimenting with simulations of specific aircraft. The course uses a commercial software package to enable focus on the concepts without the distraction of developing software.

**Topics Include:**
- Aerodynamics
- Coordinate frames
- Euler angles and rates
- Propagation of coordinate frames
- Quaternions and their propagation
- Equations of motion
- Actuators/control surfaces
- Thrust

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

*ONLINE ON DEMAND: C2317005A*

### Opening the DOORS® to Requirements Management

**C. Zolynsky, 21 hrs, $945**

DOORS® (Dynamic Object Oriented Requirements System) can assist program managers to achieve a robust requirements management process and determine optimum strategies for ensuring technical objectives are satisfied across entire program life cycles. DOORS® offers a robust environment for importing, exporting, and relating a variety of requirement-related information. Gain the knowledge and hands-on experience to effectively use this computer-based tool.

**On completion, you will be able to:**
- Navigate the project environment
- Understand the basic uses for Formal Modules
- Manually enter requirements and related information
- Import, export, and trace specification requirements
- Create specific module views
- Perform requirements traceability
- Effectively manage a DOORS® project
- Navigate the Change Proposal System

**Prerequisite:** Fundamental experience with PCs and programming concepts.

*CAMPUSS:
Oct 17 – 18, 2016 | M – T | 8:30 am – 4:30 pm | C2317001A
Oct 17 – 19, 2016 | M – W | 8:30 am – 4:30 pm | C2317001A*

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**Maximize the Impact on Your Organization – Register Three or More People.**

Register three or more people from the same organization, for the same course, at the same time and pay a reduced rate. Phone 256.824.6015 for information.
**ENGINEERING TOOLS**

**MATLAB**  B. Stiltn, 20 hrs, $995  
MATLAB is a technical computing environment used by engineers, scientists, mathematicians, and financial analysts. It can be applied to virtually any problem requiring technical computation and is advertised as the world’s leading software for technical computing. The MATLAB class will provide the skills needed to work with MATLAB interactively and as a programming language.

On completion, you will be able to:
- Navigate and evaluate MATLAB
- Perform technical computing with MATLAB
- Use a design methodology to solve technical problems
- Work with data within MATLAB
  - Scalars, vectors, matrices, strings and structures
  - File input/output including interfacing with Excel
- Present visual results via graphics and plotting
- Understand MATLAB’s Graphical User Interfaces (GUI’s)

Prerequisite: Familiarity with basic computer operations and exposure to programming in any language.

**CAMPUS:**
- Feb 23 – Mar 10, 2016  |  T, Th  |  5:30 – 8:50 pm  |  C2316011A
- Jun 6 – 22, 2016  |  M, W  |  5:30 – 8:50 pm  |  C2316012A

**MODELING AND SIMULATION**

**MODELING AND SIMULATION CERTIFICATE**

In hands-on labs, learn the benefits of using models and their simulation to improve engineering processes. Build a foundation in M&S to improve decision-making, product design, safety, and program efficiencies.  
Prerequisite: Undergraduate degree in a technical field or equivalent experience. Take one course or the complete series.

**SAVE $400** | By registering for the entire certificate.  
Reference session P2316002A.

Certificate awarded after completion of:

**Fundamentals of Modeling and Simulation**  M. Petty, 14 hrs, $895  
Gain an introduction to M&S concepts to understand how simulations work. Explore how M&S is used and review forecasts of where M&S technology is heading. Look at common simulation tools and how to determine simulation credibility. Includes developing simple simulations.

**ONLINE ON DEMAND:** D2316005A

**Developing Simulations**  R. Alexander, 14 hrs, $895  
Explore the challenges of real-world simulation development and how to plan for large-scale projects. Explore modeling approaches including stochastic and physics-based modeling, and artificial intelligence. Delve into simulation techniques, engines, languages, and design features.

**ONLINE ON DEMAND:** D2316006A

**Simulation Verification, Validation, and Accreditation**  M. Petty, 14 hrs, $895  
A range of verification and validation (V&V) methods including informal, static, dynamic, and formal methods are described, and guidelines for selecting the best method for a given model are discussed. Specific procedures for performing important V&V methods and interpreting their results are explained.

**ONLINE ON DEMAND:** D2316007A

**Systems Analysis, Modeling, and Simulation**  R. Alexander/J. Little, 14 hrs, $895  
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.

**CAMPUS:**
- Mar 10 – 11, 2016  |  Th, F  |  8:30 am – 4:30 pm  |  C2316009A
- ONLINE ON DEMAND: D2316012A

*Also a core course for the Systems Engineering Certificate.

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**On Demand Online 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.
Combustion Instability in Solid Rockets

F. Blomshield/ R. Frederick, 35 hrs, $1295

In five days, gain an appreciation and understanding of solid rocket combustion instability from internationally recognized solid propulsion experts and practitioners, Dr. Frederick Blomshield and Dr. Robert Frederick. With over 150 papers published on the subject, 35 years of experience in the field, and numerous awards and honors including becoming a NAVAIR Fellow, Dr. Blomshield is an international leader in the solid rocket combustion community. Dr. Frederick is Director of the UAH Propulsion Research Center, an Associate Fellow of the AIAA, served as a solid propulsion technical advisor to NATO, and has collaborative agreements with international universities.

Most DoD and NASA solid rockets have had some form of combustion instability during their development and life cycle. The instructors will guide participants through solid rocket combustion fundamentals. Participants 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. Participants reinforce learning in practical case studies.

Key Takeaways:
- Understanding of basic mechanisms of combustion instability
- Examining case studies and past motors with instability and solutions
- Learning about methods of measuring and analyzing combustion instability
- Predicting performance and trends with practical algorithms
- Reducing program risks associated with combustion instability
- Acquiring a listing of key studies in this field

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

CAMPUS:
Jun 6 – 10, 2016  |  M – F  |  8:30 am – 4:30 pm  |  C2316021A
For Graduate Credit MAE 695-01

Liquid Rocket Engineering

S. Claflin/R. Frederick, 35 hrs, $1295

In a one-week short course, learn from recognized propulsion experts and practitioners, Scott Claflin and Dr. Robert Frederick. As a member of the AIAA Hybrid Rocket Technical and the AIAA Pressure Gain Combustion Program Committees, the JANNAF Pressure Gain Combustion Working Group, and holder of two U.S. patents, Mr. Claflin is a recognized leader in liquid propulsion innovations. Dr. Frederick is Director of the UAH Propulsion Research Center, an Associate Fellow of the AIAA, served as a solid propulsion technical advisor to NATO, and has collaborative agreements with international universities.

Participants will benefit from an overview of common liquid rocket engine power cycles, propellants and components. The instructors will lead participants to 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. Participants will be challenged with developing a preliminary design of a liquid rocket engine during the course after learning enabling methodologies and analysis techniques.

Key Takeaways:
- Examining liquid rocket development history
- Understanding of liquid rocket engine systems and power balances
- Sizing techniques for turbopumps, thrust chambers, lines, and valves
- Understanding of injector element selection and design
- Understanding of fundamentals of combustion stability and stabilization devices
- Understanding of combustion chamber heat transfer and cooling
- Understanding of engine fluid control

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

CAMPUS:
Jul 11 – 15, 2016  |  M – F  |  8:30 am – 4:30 pm  |  C2316022A
For Graduate Credit MAE 695-02

Prerequisite: Undergraduate degree in a technical field or equivalent experience.
Fundamentals of Model-Based Systems Engineering with SysML  L. Delligatti, 21 hrs, $1095

Spend three days engaged in a learning event with Lenny Delligatti, nationally recognized model-based systems engineering author and practitioner. Mr. Delligatti states, “Model-Based Systems Engineering (MBSE) is a practice; it’s something you do. SysML is a graphical modeling language that enables you to practice MBSE and has become the de facto standard among MBSE practitioners.” Mr. Delligatti will guide participants 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 the answer to a common myth that has arisen about MBSE so that you can better manage your customers’ expectations while you deliver the return on investment that MBSE promises. Prerequisite: Undergraduate degree in a technical field, project management, or equivalent experience.

Upon completion, you will be able to:
• Evangelize the roots of the return on investment (ROI) from practicing model-based systems engineering (MBSE) to organizational decision makers
• Apply a modeling method, OOSEM™ (INCOSE’s Object-Oriented Systems Engineering Method), to create a behavioral and structural model of a system in a standardized modeling language, SysML™ (OMG’s Systems Modeling Language), using a dedicated SysML modeling tool, No Magic’s Cameo Systems Modeler™

Topics Include:
• The roots of the ROI from practicing MBSE
• The difference between a SysML modeling tool (e.g., Cameo Systems Modeler) and a diagramming tool (e.g., Visio)
• The design activities in the Object-Oriented Systems Engineering Method (OOSEM) modeling methodology
• 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 SysML use case diagrams
• Producing SysML activity diagrams to graphically represent system use case specifications
• Simulating a system behavior with the Cameo Simulation Toolkit
• Making a structural model of a system’s domain and representing it on SysML block definition diagrams (BDDs) and internal block diagrams (IBDs)
• Modeling system requirements and traceability relationships with SysML requirements diagrams and tables
• Creating a structural model of a system’s architecture and representing it on SysML BDDs and IBDDs
• Allocating system behaviors to system structures
• Forming SysML state machine diagrams to represent the state-based behavior of system structures
• Performing 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

CAMPUS:
May 9 – 11, 2016 | M – W | 8:30 am – 4:30 pm | C2316015A
Nov 7 – 9, 2016 | M – W | 8:30 am – 4:30 pm | C2317003A

Lenny Delligatti

Principles of Radar Technology  R. Morris, 14 hrs, $895

Study radar technology with an overview of basic radar concepts and terms. Understand the radar equation required for radar function with examples of its use in radar system design. Learn basic concepts of radar propagation issues, signal processing, measurements and signatures, and target detection. Discuss characteristics of “clutter” with Moving Target Indicator (MTI) and Pulse Doppler techniques for mitigating “clutter’s” negative effects. Missile and air defense radar missions illustrate concepts.

CAMPUS:
Jul 12 – 21, 2016 | T, Th | 5:30 – 9:00 pm | C2316018A
ONLINE ON DEMAND: D2316016A

Sensors and Tracking for Air and Space Vehicles  R. Morris, 21 hrs, $1095

Gain an introduction to tracking sensor engineering for air and space vehicles. Cover active and passive sensor hardware design, focusing on the accuracy of measurements needed to track and the signal processing needed for detection, range measurement, and angle estimation. Cover optimal track filter design (Kalman filter theory) from simple cases to combining data from multiple sensors. Address problems applying the theory. Emphasis is on understanding the models underlying the algorithms and mathematical derivations presented.

CAMPUS:
Jun 7 – 23, 2016 | T, Th | 5:00 – 8:30 pm | C2316017A
ONLINE ON DEMAND: D2316022A

Rocket Propulsion Fundamentals  M. Benfield, 12 hrs, $895

Gain a foundation in the complex factors that shape propulsion systems. Rocket propulsion theory and practical design considerations are the focus. Grasp the essentials of common aerospace propulsion systems including rockets, air-breathing, thermal, and electric. Solid, liquid, and hybrid propulsion system content provides the range of propulsion propellant types and their use considerations. Lectures combined with exercises reinforce learning. Prerequisite: Undergraduate degree in a technical field or equivalent experience.

ONLINE ON DEMAND: D2316008A
APPLIED SYSTEMS ENGINEERING CERTIFICATE

Equip yourself for success in today’s professional systems engineering (SE) environment. The Professional Certificate presents SE techniques focusing on how to design and manage complex engineering systems over the system life cycle. Participants can apply the techniques to a wide range of industries. Instructors are real-world practitioners and will arm you with knowledge of core processes, techniques, and tactics required to be an effective systems engineer. Concentrating on the principles of systems engineering management, the program validates participants’ knowledge of the systems engineering interdisciplinary approach. Prerequisite: Undergraduate degree in a technical field or equivalent experience. Take one course or the complete series.

SAVE $500 | By registering for the entire certificate. Reference session P2316004A.

Certificate awarded after completion of:

Systems Engineering Overview
G. Tackett, 14 hrs, $895
Learn the fundamental concepts of systems engineering (SE), basic techniques that govern the SE process, and how SE fits into the life cycle management process.

What you will learn:
- Concepts that govern SE processes
- How SE fits into the overall project management process
- SE problem-solving process
- Traditional techniques used
- Analysis and control tools that provide balance to the SE process
- Current trends in SE and SE mgmt
- Conflict resolution techniques

CAMPUS:
Feb 11 – 12, 2016 | Th, F | 8:30 am – 4:30 pm | C2316019A
Oct 18 – 27, 2016 | T, Th | 5:00 – 8:30 pm | C2317002A
ONLINE ON DEMAND: D2316010A
*Also an elective for the Management of Engineering and Technology Certificate.

Applied System Design and Decision-Making
D. Gunther, 14 hrs, $895
Perform trade studies to support decision-making at all stages of the system development process. Study how to master trade studies – the identification of alternatives and application of decision-making methodology. Look at balancing performance, schedule, cost, and risk variables. Participate in case studies of problems often encountered in the field.

What you will learn:
- Output from the requirements and allocation process foundation
- Project objectives prioritizing
- Identification of the feasible trade space
- Simple/complex trade study methods
- Value and utility curve methods use

CAMPUS:
Jan 28 – 29, 2016 | Th, F | 8:30 am – 4:30 pm | C2316008A
ONLINE ON DEMAND: D2316013A

System Validation and Verification
D. Gunther, 14 hrs, $895
Ensure that you have a complete approach to the validation and verification (V&V) of your product. Learn the process to ensure that a new system works as designed and that the design fulfills its intended function. Hands-on cases illustrate developing metrics and executing V&V activities.

What you will learn:
- Bottom up integration vs. requirements development’s top down iterative process
- Verifiable requirements
- Early design validation
- Procedures for documenting V&V
- V&V plans and guidance documents
- Team/management structures and processes for a successful conclusion

CAMPUS:
Apr 21 – 22, 2016 | Th, F | 8:30 am – 4:30 pm | C2316010A
ONLINE ON DEMAND: D2316014A
*Also an elective for the Test and Evaluation Certificate.

Systems Analysis, Modeling, and Simulation
R. Alexander/J. Little, 14 hrs, $895
Cover analytical methods that, with tests, provide the basis for systems V&V. Build your skill base in systems model development, the component model integration into a systems model, and model-based and hardware-in-the-loop simulation.

What you will learn:
- Objectives of systems analysis, methods, and tools for developing systems models
- Temporal utility of models versus the model fidelity understanding

CAMPUS:
Mar 10 – 11, 2016 | Th, F | 8:30 am – 4:30 pm | C2316009A
ONLINE ON DEMAND: D2316012A
*Also an elective for the Modeling and Simulation Certificate.

Requirements Development
G. McPherson, 14 hrs, $895
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. Go beyond the typical textbook process by applying experience-based instruction. Participate in interactive exercises to develop requirements and experience an entire requirements development process.

What you will learn:
- Examples of well-developed and poorly-drafted requirements
- Guidelines to evaluate individual and sets of requirements
- A process for conducting a requirements analysis
- Techniques to allocate the requirements to the system’s architectures
- Source documents for guidance on drafting requirements documents
- Common software tools used to support requirements analysis and allocation

CAMPUS:
May 25 – 26, 2016 | W, Th | 8:30 am – 4:30 pm | C2316020A
Nov 8 – 17, 2016 | T, Th | 5:00 – 8:30 pm | C2317004A
ONLINE ON DEMAND: D2316011A
*Also a core course for the Test and Evaluation Certificate.
Introduction to Design of Experiments
D. Barnes, 28 hrs, $1095

Do you have limited time or money to evaluate responses of a complex system? Design of experiments is a statistical method to help you develop a time/cost constrained simulation or test program. It determines the relationship between factors affecting a system and the responses of that system while identifying key performance parameters, and extracting the maximum value from limited data sets. After reviewing basic statistical concepts, participants will learn how to design and analyze an experiment while identifying significant factors of a test. By the end of the course, participants will be able to plan and design experiments, conduct simple analyses, and analyze robust designs using a variety of block, factorial, and fractional factorial designs.

What You Will Learn:
• Statistics and hypothesis testing
• Fundamentals of Analysis of Variance
• Principles of experimental design
• Guidelines for designing experiments
• Single- and multi-factor designs
• Replicated, fractional factorial, and Taguchi methods
• Statistical software tools

Prerequisite: Previous experience or education in basic statistics.

CAMPUS:
May 12 – 13, 2016 | Th, F | 8:30 am – 4:30 pm | C2316013A
*INCOSE Member Discount
**Exam voucher not included

Unemployed? Federal Training Funds Are Available.

Update your skills and improve the odds of finding a job through the Federal Workforce Investment Act (WIA). WIA aids job seekers by providing free career services. For more information on WIA funding, contact any Alabama Career Center. Madison County residents may call 256.851.0537.

For information on approved programs, visit The Alabama Consumer Information System at www.etpl.alabama.gov or contact Christina Holmes at 256.824.6015.

On Demand Online 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.

MANAGEMENT
• Earned Value Management
• Federal Contract Management
• Federal Proposal Management
• Interior Design
• PM® Certification Bootcamp
• Project Management
• Supply Chain

ENGINEERING
• Modeling and Simulation
• Systems Engineering
• Test and Evaluation

INFORMATION TECHNOLOGY
• Mobile App Development
• C++ and Java
• Microsoft Office Professional
• Microsoft Excel and Microsoft Word
• QuickBooks
• MATLAB

NEW
Certified Systems Engineering Professional (CSEP) Exam Bootcamp
J. Whitehead, 14 hrs, $895/$695*

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. Department of Defense, recognizes the value of the INCOSE CSEP. The certification requires passing an extensive examination based on the INCOSE Systems Engineering Handbook v4. In two days, 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. The course also prepares individuals to pass the ASE (Associate Systems Engineering Professional) exam. Prerequisites: Degree in engineering discipline or equivalent experience in Systems Engineering. The course fee includes: The systems engineering Handbook. Visit incose.org for exam information and eligibility requirements.

CAMPUS:
May 12 – 13, 2016 | Th, F | 8:30 am – 4:30 pm | C2316013A
*INCOSE Member Discount
**Exam voucher not included

NEW
Model-Based Systems Engineering Primer
Self Study, 10 hrs, $345

To reduce risk and support rapid exploration of innovation, systems engineering leaders are increasingly adopting an MBSE approach. Learn how MBSE enables efficient prototyping at low cost and risk using a graphical, standards-based approach. Discover valuable results such as early, rapid exploration of concurrent options; improved cross-discipline collaboration; and potential accelerated delivery of successful components, systems, and systems of systems. This is a self-study program. Prerequisite: Undergraduate degree in a technical field, project management, or equivalent experience.

ONLINE ON DEMAND: D2316017A

NEW
On Demand Online 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.
TEST AND EVALUATION CERTIFICATE

Subject experts offer their experience to lead you through the test and evaluation (T&E) process from a first requirements dialogue between systems and T&E personnel to a requirements-responsive data report. Utilize proactive and practical approaches to provide optimum T&E results. Prerequisite: Undergraduate degree in a technical field, project management, or equivalent experience. **Take one course or the complete series.**

**SAVE $500** By registering for the entire certificate. **Reference session P2316001A.**

**Certificate awarded after completion of:**

**Test and Evaluation Foundation**  
J. Isbell, 14 hrs, $895  
Understand how T&E, acquisition, and requirements personnel integrate efforts. Become familiar with elements of test programs and how to gather the best data to support your test requirement.  
**ONLINE ON DEMAND:** D2316001A

**Requirements Development**  
G. McPherson, 14 hrs, $895  
Go beyond the typical textbook process by applying experience-based instruction. Participate in interactive exercises providing the opportunity to develop requirements. Practice an entire requirements development process.  
**CAMPUS:**  
May 25 – 26, 2016 | W, Th | 8:30 am – 4:30 pm | C2316020A  
Nov 8 – 17, 2016 | T, Th | 5:00 – 8:30 pm | C2317004A  
**ONLINE ON DEMAND:** D2316011A  
*Also a core course for the Systems Engineering Certificate.

**Data Collection, Analysis, and Reporting**  
S. Gholston/J. Porter, 14 hrs, $895  
Focus on instrumentation and measurements of real-time physical stimuli and responses during test procedures, and on validating, analyzing, interpreting, reporting, and archiving the results. Understand tools and methods used to acquire/analyze data.  
**ONLINE ON DEMAND:** D2316002A

**Test Design, Planning, and Conduct**  
S. Mullins, 21 hrs, $1195  
Understand test design and experiments that provide optimum results for available resources. Facilitate progress reporting and plan flexibility for adaptation as the test effort proceeds. Join in exercises demonstrating efficient/effective testing tools/methods.  
**ONLINE ON DEMAND:** D2316003A

**System Validation and Verification**  
D. Gunther, 14 hrs, $895  
Ensure that you have a complete approach to the Validation and Verification (V&V) of your product. The system V&V process ensures that a new system works as designed, and fulfills its intended function. Hands-on cases help to plan, develop metrics, and execute V&V activities throughout the life cycle.  
**CAMPUS:**  
Apr 21 – 22, 2016 | Th, F | 8:30 am – 4:30 pm | C2316010A  
**ONLINE ON DEMAND:** D2316014A  
*Also a core course for the Systems Engineering Certificate.

**Developing Simulations**  
R. Alexander, 14 hrs, $895  
Explore modeling approaches including stochastic and physics-based modeling, and artificial intelligence. Delve into simulation techniques, engines, languages, and design features.  
**ONLINE ON DEMAND:** D2316006A

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14th Annual Conference on Systems Engineering Research

**March 22 – 24, 2016 | Von Braun Center | Huntsville, AL**

**FROM PRACTICE TO THEORY – and Back Again**

Researchers from around the world will be presenting papers that push the boundaries of systems engineering research and respond to new challenges for systems architecting and engineering. CSER has become the primary conference for disseminating systems engineering research and germinating new research ideas.

Register by January 29, 2016 to receive special discounted rates!  
A limited number of sponsorship and exhibit opportunities are also available.

**Please visit CSER2016.uah.edu for more information. Questions? Contact Tabby.Jagger@uah.edu or phone 256.824.6013.**
COMMUNICATIONS

Communicating With Influence
K. Scroggin, 14 hrs, $445

Presentations are a daily part of doing business, whether formally or informally, to persuade your colleagues, a client, or influence a team. Learn how to create effective presentations with aids to achieve impact with your audience, to present yourself with “presence,” and establish a connection with the audience. You will have the opportunity to practice public speaking, be videotaped, and receive feedback to help perfect your presentation delivery style. Learn tips to control emotion and anxiety. With personal coaching, improve your style in a comfortable, non-threatening environment. Gain strategies to build and strengthen your communication skills with tact and poise. Practice delivery methods that engage the audience and learn how to respond professionally to your audience. Your initial and refined presentations will be videotaped and provided to you at the conclusion of the course for your archive.

What You Will Learn:
• Plan your presentations
• Turn thoughts and ideas into compelling presentations
• Learn and practice proven presentation techniques
• Engage, motivate, persuade, teach, and entertain your audience
• Understand communicative practices – listening, eye contact, body language, and more
• Practice public speaking to gain confidence and perfect delivery
• Reduce prep time and emotional stress
• Choose dynamic presentation aids and connect with your audience

CAMPUS:
Feb 23 – Mar 3, 2016 | T, Th | 5:30 – 9:00 pm | C2516026A

CONTRACT MANAGEMENT

Federal Contract Management Essentials CERTIFICATE
H. Cleaver, 40 hrs, $1295/$1245*

Learn the U.S. Government acquisition life cycle process to acquire goods and services. Discover Uniform Contract Format (UCF) model contracts and how the UCF facilitates preparation of solicitations and contracts as well as their use. Understand roles of the buyer and seller in contract administration, and the functions of the Defense Contract Management Agency (DCMA) and Defense Contract Audit Agency (DCAA). Study Federal contract management key elements that you can apply immediately in the workplace enhancing your career potential and the bottom line for your organization.

How You Will Benefit:
• Complete a Federal acquisition overview and FAR orientation
• Study contract structuring techniques such as Contract Type and the use of Contract Line Item Numbers (CLINs)
• Navigate cost and price analysis
• Examine mandatory and optional contract clauses
• Gain understanding in elements of contract administration
• Review the legal aspects in Federal contracting

CAMPUS:
Apr 18 – 22, 2016 | M – F | 8:00 am – 5:00 pm | C2516010A
Oct 24 – 28, 2016 | M – F | 8:00 am – 5:00 pm | C2517008A
ONLINE ON DEMAND: D2516002A
*NCMA Member Discount

Federal Contract Management Specialization CERTIFICATE
H. Cleaver, 40 hrs, $1295/$1245*

Gain the latest Federal Government contracting process updates through lecture, interactive discussion, and active practice in key components. Explore current topics ranging from the latest revisions in procurement methodologies to performance-based acquisition issues. Each topic is explained in terms of its context within the Federal procurement process.

How You Will Benefit:
• Develop knowledge of Government cost or pricing data policies and how they relate to the key concept of Cost Allowability
• Study cost accounting standards policies as defined in the FAR Appendix and the Contract Pricing Reference Guides
• Examine the complexities inherent when prime contractors seek value-added work or deliverables from subcontractor sources
• Understand principles of subcontract management, subcontractor selection and proposals, teaming agreements, and purchase order formation and awards

Prerequisite: Completion of Federal Contract Management Essentials Certificate or equivalent Federal contract management experience.
ONLINE ON DEMAND: D2516003A
*NCMA Member Discount

* NCMA Member Discount
Federal Contract Management Essentials and Specialization programs satisfy requirements for the National Contract Management Association Continuing Professional Education.
Federal Costing Essentials
H. Cleaver, 14 hrs, $495

Do you know the consequences of failure to understand and comply with Federal Government costing rules and cost accounting standards?

If you are a professional working on a Government contract, take the time to gain basic knowledge of these procedures and rules and how the process works, and minimize the potential for problems. 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), and 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 course content.

How You Will Benefit:

• Review basic accounting system requirements
• Understand the "allowable" cost elements and indirect cost pools
• Explore the key Cost Accounting Standards (CAS) purposes
• Study the wide reach of Government cost audits and extensive scope of "cost allowability"
• Learn about Government requests for "certified" or "uncertified" cost or pricing data in bidding processes
• Examine cost estimating and pricing in baseline proposals
• Assess earned value analysis and other cost performance measurement systems
• Examine mandatory and optional contract clauses
• Gain understanding in elements of contract administration
• Review the legal aspects in Federal contracting

CAMPUS:
May 16 – 25, 2016 | M, W | 5:30 – 9:00 pm | C2516020A
ONLINE ON DEMAND: D2516025A

DCAA Compliance and Audits
T. Brannen, 14 hrs, $595

As a contractor, you can take a number of measures to prepare now for a potential audit. Benefit by learning critical information to become and remain compliant with Defense Contract Audit Agency (DCAA) standards. Learn the details that simplify understanding compliance and the audit process. Begin with successfully responding to an audit to ensure your contract work continues. Gain guidance to successfully navigate the audit process and ensure your company's continued work with the Department of Defense and other civilian agencies.

ONLINE ON DEMAND: D2516019A

World-Class Custom Training – DELIVERED!

DID YOU KNOW?
UAH PCS will come to you locally or globally to custom design and deliver a course or an entire program in order to meet your team or organization's specific needs. We use various learning methodologies including a combination of interactive presentation and experiential learning.

WHAT MAKES US UNIQUE?
We help individuals, teams, and organizations strengthen leadership skills, improve thinking capacities, and develop professional skills that produce sustainable high-performance results. We understand the importance of well-facilitated events, connecting with participants, promoting rich dialog, recognizing learning moments, asking provocative questions, and challenging thinking in order for you to retain knowledge to apply it in the workplace.

To discuss your team or organization’s specific training needs, please contact Lane.Fabby@uah.edu or call 256.824.4430.
EARNED VALUE MANAGEMENT

Certificate awarded after completion of:

Earned Value Management Essentials R. Hycoop, 14 hrs, $895
A growing demand for Earned Value Management (EVM) is evident in the number of project-oriented organizations requiring performance measurement practices. This course will lay the foundation for novice specialists as well as help refresh veteran EVM practitioners in the tenets of work planned, work accomplished, and actual work cost. Earned Value terminology, formulae, and analysis will all be discussed and applied through practical exercises demonstrating real world applicability to project cost, schedule and technical performance.

What You Will Learn:
- Earned Value overview, objectives and benefits
- EVM and project planning
- Measuring and analyzing performance
- Reporting findings and recommendations
- EVM resources

CAMPUS:
Feb 9 – 10, 2016 | T, W | 8:30 am – 4:30 pm | C2516016A
ONLINE ON DEMAND: D2516008A
*Also an elective for the Management of Engineering and Technology Certificate.

Earned Value Management Analysis and Reporting J. Little/G. Smith, 14 hrs, $895
Government agencies and companies doing business with Government agencies face many of the same challenges in this area - how to efficiently and effectively comply with analysis and reporting requirements. In this course, we will explore in detail many practical methods to facilitate compliance regardless of contract size or complexity. This course will assist novice analysts to build a solid foundation while serving as a refresher for more experienced analysts. Practical exercises will be used to demonstrate formulae, methods, and techniques covering problematic areas.

What You Will Learn:
- Establish variance thresholds
- Analyze cost, schedule, and at completion variances
- Use performance indices for predictive analysis
- Validate estimates at completion
- Development of variance and analysis reports
- Contract performance report formulation and analysis (formats 1-5)

CAMPUS:
Mar 8 – 9, 2016 | T, W | 8:30 am – 4:30 pm | C2516017A
ONLINE ON DEMAND: D2516009A

Integrated Baseline Review Preparation and Execution G. Smith, 14 hrs, $895
Many Government contracts contain a requirement for an Integrated Baseline Review (IBR). But why does this requirement exist and to whom does it apply? How do you prepare for an IBR? For those involved in an IBR, what are the participant’s roles? How and when should an IBR be conducted? What are the possible results? How are the results of an IBR dispositioned? In this course, we will answer these questions and many more. This course is helpful for those that are being newly introduced to the IBR requirement, as well as serving as a refresher course for those who may have experience in this area.

What You Will Learn:
- The IBR requirement, objectives, and benefits
- An IBR process overview and IBR need assessment
- IBR preparation including guidance, review content, entrance/exit criteria, and training
- IBR execution including agenda, discussions, and results
- IBR team members and roles
- Risk and opportunities
- IBR closeout
- BONUS: Pre-award IBR guidance and process

CAMPUS:
Apr 5 – 6, 2016 | T, W | 8:30 am – 4:30 pm | C2516018A
ONLINE ON DEMAND: D2516010A

SAVE $300
By registering for the entire certificate.
Reference session P2516004A.
MANAGEMENT OF ENGINEERING AND TECHNOLOGY CERTIFICATE

Engineering and technical managers plan, lead and coordinate the direction of design, research, development, and production in organizations. They are unique because of their ability to balance technical and essential management skills. As competitive pressures reshape the typical role of the engineer from largely technical to one that encompasses management, individuals with skills that bridge that gap have a distinct advantage over competitors. This program is designed for early and mid-career engineers who want to prepare for management roles in technically focused organizations. The program can be customized with the choice of three electives after completing two core courses. Prerequisite: Undergraduate degree in a technical field, business management, or equivalent experience. Take one course or the complete series.

SAVE $1,000
By registering for the entire certificate. Reference session P2516003A.

Certificate awarded after completion of:

CORE COURSES:

**Strategic Decision Management**

J. Fortune, 14 hrs, $895
Technical managers and engineers make decisions that are often consequential to themselves, their employer, and society at large. Those decisions impact their income, job security, advancement opportunities, and even the profitability and performance of their employer. 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. Explore structuring of strategic decision-making processes using rational, descriptive, political, and uncertainty models. Investigate links between strategy, organizational structure, and value chain with technical decision-making. Learn about performance measurement systems to assess the effectiveness of strategic decision processes.

CAMPUS:

Feb 29 – Mar 9, 2016 | M, W | 5:30 – 9:00 pm | C2516023A

ONLINE ON DEMAND: D2516017A

**Employee Management and Leadership**

K. Burton, 14 hrs, $895
Managing employees is the most important job that managers do in an organization. Learn best practices on finding, interviewing, and hiring a superior workforce. Your expectations of people and their expectations of themselves are the key factors in how well people perform at work. Gain knowledge to perform employee practices that keep employees motivated, inspired, and developing as well as attaining goals with your guidance. Become the successful manager who makes a serious difference in the work life of employees and for your organization. Specific course topics include team building, effective delegation, decision-making errors, human behaviors at work and human resources and management tips.

CAMPUS:

Mar 28 – Apr 6, 2016 | M, W | 5:30 – 9:00 pm | C2516024A

ONLINE ON DEMAND: D2516018A

ELECTIVE COURSES (CHOOSE 3)

**Implementing a Virtual Environment**

D. Spooner, 21 hrs, $695
See page 11. Also a core course for the Virtual and Cloud Implementation Certificate.

CAMPUS:

Mar 1 – 17, 2016 | T, Th | 5:30 – 9:00 pm | C2116048A

Aug 29 – 31, 2016 | M – W | 8:30 am – 4:30 pm | C2117010A

**Cloud Deployment and Computing**

D. Miller, 21 hrs, $695
See page 11. Also a core course for the Virtual and Cloud Implementation Certificate.

CAMPUS:

Mar 29 – Apr 14, 2016 | T, Th | 5:30 – 9:00 pm | C2116049A

Sep 12 – 14, 2016 | M – W | 8:30 am – 4:30 pm | C2117022A

**Systems Engineering Overview**

G. Tackett, 14 hrs, $895
See page 17. Also a core course for the Systems Engineering Certificate.

CAMPUS:

Feb 11 – 12, 2016 | Th, F | 8:30 am – 4:30 pm | C2316019A

Oct 18 – 27, 2016 | T, Th | 5:00 – 8:30 pm | C2317002A

ONLINE ON DEMAND: D2316010A

**Supply Chain Relationship Management**

C. Gardner, 14 hrs, $895
See page 28. Also a core course for the Supply Chain Management Certificate.

ONLINE ON DEMAND: D2516012A

**Project Quality and Risk Management**

C. Gardner, 21 hrs, $895
See page 27. Also a core course for the Project Management Certificate.

CAMPUS:

Mar 28 – Apr 13, 2016 | M, W | 5:00 – 8:30 pm | C2516008A

ONLINE ON DEMAND: D2516006A

**Operations Systems Management**

N. Loyd, 14 hrs, $895
See page 28. Also a core course for the Integrated Supply Chain Management Certificate.

ONLINE ON DEMAND: D2516014A

**Earned Value Management Essentials**

R. Hycoop, 14 hrs, $895
See page 22. Also core course for the Earned Value Management Certificate.

CAMPUS:

Feb 9 – 10, 2016 | T, W | 8:30 am – 4:30 pm | C2516016A

ONLINE ON DEMAND: D2516008A
**Basic Life Support for Healthcare Providers** $60

Basic Life Support (BLS) for Healthcare Providers is an American Heart Association certification that is required for all UAH Nursing students and is recognized by most hospitals. It is intended to provide healthcare professionals the ability to recognize life-threatening emergencies, provide CPR, use an AED, and relieve choking, as well as other lifesaving skills.

**CAMPUS:**
- Jan 5, 2016  |  T  |  12:00 – 5:00 pm  |  C3115064A
- Jun 21, 2016  |  T  |  12:30 – 5:30 pm  |  C3116002A
- Jul 18, 2016  |  M  |  12:30 – 5:30 pm  |  C3116003A
- Jul 20, 2016  |  W  |  8:00 am – 1:00 pm  |  C3116004A
- Aug 12, 2016  |  F  |  8:00 am – 1:00 pm  |  C3116005A
- Aug 16, 2016  |  T  |  8:00 am – 1:00 pm  |  C3116006A

**Recertification** $40

Prerequisite: Current American Heart Association BLS for the Healthcare Provider card. If expired, you must take the full course.

**CAMPUS:**
- May 20, 2016  |  F  |  9:00 am – 1:00 pm  |  C3116001A

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**Human Resource Management Essentials**

K. Burton, 14 hrs, $495

Whether you are new to human resources or need to strengthen your employee management skills this course is for you. Knowledge of the essentials in human resources can provide important on-the-job effectiveness, protect your business from litigation, and help advance your career. Covering real workplace issues, this course will arm you with practical skills you can immediately apply to your own situation. You will cover real-life HR issues, including employment law, selecting qualified employees, compensation, the employee performance process, and much more. You will also learn key information to keep you on track with compliance issues.

**What You Will Learn:**
- Resource Management
- Employment Law
- Recruitment and Selection
- Compensation and Benefits
- Employee Development
- Performance Management

**ONLINE ON DEMAND:** D2516001A

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**Certificate awarded after completion of:**

**Building a Foundation in Interior Design** L. Mikell, 25 hrs, $395

Understand interior design’s basic principles, including furniture arrangement, basic color schemes and the color wheel, window treatments, accessory application, lighting, floor coverings and interior materials. In two field trips, learn about paint applications and the newest styles in flooring and cabinets.

**CAMPUS:**
- Jan 12 – Mar 15, 2016  |  T  |  5:30 – 8:00 pm  |  C2516005A
- Jan 10 – Mar 14, 2016  |  T  |  5:30 – 8:00 pm  |  C2517002A

**Applying Design Principles and Elements** L. Mikell, 25 hrs, $395

Develop advanced color schemes and combine patterns. Learn different types of fabrics, their serviceability, interior application and combination of formalities. Define exterior color in line with exterior styles. Participate in field trips to explore lighting and rugs/floor coverings. Prerequisite: **Building a Foundation in Interior Design**.

**CAMPUS:**
- Jan 12 – Mar 15, 2016  |  T  |  5:30 – 8:00 pm  |  C2516005A
- Jan 10 – Mar 14, 2016  |  T  |  5:30 – 8:00 pm  |  C2517002A

**Design and Architecture** D. Bird, 20 hrs, $325

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.

**CAMPUS:**
- Mar 29 – May 17, 2016  |  T  |  5:30 – 8:00 pm  |  C2516013A
- Mar 28 – May 16, 2017  |  T  |  5:30 – 8:00 pm  |  C2517003A

The Interior Design certificate is coordinated by LaMerle Mikell, Registered Interior Designer.

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**Health Science**

**Interior Design**

**Certificate awarded after completion of:**

**Building a Foundation in Interior Design** L. Mikell, 25 hrs, $395

Understand interior design’s basic principles, including furniture arrangement, basic color schemes and the color wheel, window treatments, accessory application, lighting, floor coverings and interior materials. In two field trips, learn about paint applications and the newest styles in flooring and cabinets.

**CAMPUS:**
- Sep 13 – Nov 15, 2016  |  T  |  5:30 – 8:00 pm  |  C2517001A

**SketchUp Your Design**

C. Green, 12 hrs, $325

Learn to build computer-generated models of interior spaces with ease 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.

**CAMPUS:**
- Jun 7 – 16, 2016  |  T, Th  |  5:30 – 8:30 pm  |  C2516014A
- Jun 6 – 15, 2017  |  T, Th  |  5:30 – 8:30 pm  |  C2517004A

**Interior Space Planning**

D. Bird, 20 hrs, $325

Instruction and practical hands-on training introduce you to the fundamentals of space planning and its application in solving design problems. Learn about scale, architectural drawing, and creative problem-solving. Discover how to convey your own design solutions using pencil and paper.

**CAMPUS:**
- Jul 12 – Aug 30, 2016  |  T  |  5:30 – 8:00 pm  |  C2516015A
- Jul 11 – Aug 29, 2017  |  T  |  5:30 – 8:00 pm  |  C2517005A

**What participants are saying:**

“I strongly encourage anyone interested in learning interior design skills to take this program. It provides skills and tools to properly decorate a home.”

“I really enjoyed this class. The concepts were presented in an easy to understand method.”
Strengths Based Leadership  L. Fabby, 7 hrs, $495

**Includes a personalized assessment!**

For all levels of professionals, learn about your top 5 strengths and how to leverage them within your team to obtain high-performance results. Take a Strengths Assessment prior to attending the course and receive a personalized strengths results booklet with your top 5 strengths categorized into 4 leadership domains (i.e. Executing, Influencing, Relationship Building, and Strategic Thinking). Gain an understanding of your personal strengths, how to work better in teams, and become a better leader. Learn how to capitalize on your strengths and the strengths of others so that you are concentrating on positive reinforcements and best practices in your organization instead of focusing on the negative. Assessment administration, analyses, and debrief will be conducted in concert with experiential learning and team exercises. After completing this course, you will be able to improve on key weakness areas, play to your strengths, and get the best performance results from yourself and team members.

**Sample Questions Discussed:**
- What strengths are you using to live up to your potential?
- What percentage of the day do you spend using your strengths?
- How can your strengths lead to success?
- What are 1 or 2 strengths you would like to use more often? How would these strengths contribute to your team and organization?

The Strengths Assessment will be used to improve awareness and stimulate growth. This course will emphasize candor in dialogue, require participation, and is designed to improve learning and collaboration. The goal is to create more adaptable, resilient, innovative, collaborative, and trusting teams as well as to strengthen your level of thinking, leadership skills, and ability to communicate more effectively.

**CAMPUS:**
Apr 13, 2016 | W | 8:30 am – 4:30 pm | C2516022A

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Building Effective Leadership Skills  D. McGee, 35 hrs, $995

Managers who lead successfully increase their organization’s productivity. The role of the leader is rapidly changing from a traditional model to a “leading in a work team” model. Both seasoned and new leaders require a new set of skills to be successful in driving results from their teams while creating a positive environment within their teams. Explore topics critical to developing effective management skills such as core interpersonal skills, differences in perception, motivation and motivational blockers, team development, transformational leadership, training and mentoring skills – everything you need to manage people effectively. Leaders who have the skills and tools to lead successfully increase an organization’s profitability and improve the bottom line. After completing this course, you will be able to improve on key weakness areas, play to your strengths and get the best results from every member of the team.

*Each individual will complete an online assessment in advance and receive a personalized management and transformational leadership profile on the first day of the course.*

**What will you learn?**
- Effectively troubleshoot individual and team conflict
- How to bring out the dynamics within your team and build on those strengths
- Facilitate strong communication among team members
- Navigate teams through any complex business situation
- Identify and develop high performing members of the team
- Understanding different types of leadership and connecting more effectively to them

**Who should attend?**
Executive and Mid-Level Managers, Project and Program Managers, Production Managers, Individuals Seeking Leadership Roles in their Organization

**CAMPUS:**
Apr 11 – May 11, 2016 | M, W | 5:00 – 8:30 pm | C2516029A

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Leveraging Polarities in Organizations  L. Fabby, 7 hrs, $395

Leaders tend to approach challenges using traditional gap-analysis/problem-solving methods alone. This “Polarity Thinking” workshop will supplement this approach through an awareness of inherently unsolvable and unavoidable challenges referred to in business literature as tensions, paradox, and polarities. Developing competency to see and leverage polarities supports leaders, teams, and organizations to attain their preferred future faster and more sustainably. The polarity map, principles, and processes are the most thorough methodology available for both identifying polarities and leveraging them to support your preferred future. In this course, participants will learn to recognize the differences between problems to solve and polarities to leverage; gain an understanding of how polarities work; and apply the 5-Step approach to address polarity challenges in real-time. Through experiential learning exercises, learn how to identify action steps to maintain or gain the upside benefits and early warning signs that help keep us from the limitations of the downsides. Gain competitive advantage in your organization by learning about the Polarity Thinking method and how to apply it in your team and organization.

**CAMPUS:**
May 10, 2016 | T | 8:30 am – 4:30 pm | C2516027A
LEADERSHIP DEVELOPMENT

Leading With Agile Teams
C. Espy, 7 hrs, $395

As leaders and managers in the process of transitioning to Agile, you may be asking yourself: what is the role of the manager? How can I as a manager or a leader better facilitate the growth of agile teams? What does it mean to be an agile organization? What approaches might we take to bring that about? Are there ways we might need to think differently about how we lead and manage?

The promise of this workshop is not merely to inform leaders and managers regarding agile management and leadership, but to provide a foundation for being agile leaders and managers.

This workshop will help you:

• Understand and appreciate the broader organizational implications of agility and what it means to lead and manage in an agile organization
• Have a way of thinking about your organization that will give you better leverage points for facilitating the growth of broad organizational agility
• Understand how the way in which you most commonly view and think about your role as a leader, of others and of your organization, either enhances or hinders your capacity as an agile leader
• Design a powerful structure for creating an environment that supports the development and growth of agile capabilities across your organization beyond the one day course

CAMPUS:
Feb 19, 2016 | F | 8:00 am – 4:30 pm | C2516028A
Sep 9, 2016 | F | 8:30 am – 4:30 pm | C2517006A

PROJECT MANAGEMENT

PMP® CERTIFICATION BOOTCAMP
M. Stettner/R. Steele, 40 hrs, $1295**

One of the most valued credentials in project management, earning and maintaining this credential shows a solid experience foundation in managing projects. 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 40 required contact hours of project management education. The course also prepares individuals to pass the CAPM® (Certified Associate in Project Management) exam.

The Course Fee Includes:
• Three month subscription to VELOCITEACH’s online exam simulator, InSite
• Key information from all 12 chapters in the PMBOK® Guide
• PMI specific terms and definitions
• Additional project management knowledge not covered in the PMBOK® Guide, but expected to be covered on the exam
• Summary of important formulas and definitions
• Tips and tricks for memorizing information needed for the exam

Textbooks Included:
• A Guide to The Project Management Body of Knowledge, 5th edition
• The PMP® Exam: How to Pass on Your First Try by Andy Crowe, PMP

PMP® Benefits:
One of the most valued credentials in project management, the PMP® credential assures employers that you are committed to project management. Earning and maintaining this credential demonstrates a solid foundation of experience in managing projects.

CAMPUS:
Jan 25 – 29, 2016 | M – F | 8:00 am – 5:00 pm | C2516025A
Jul 11 – 15, 2016 | M – F | 8:00 am – 5:00 pm | C2516011A
Oct 4 – Nov 17, 2016 | T, Th | 5:00 – 8:20 pm | C2517007A
ONLINE ON DEMAND: D2516020A

• Class will not meet Oct 11 or Oct 13.
**Exam voucher not included.

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 PCS.uah.edu/Accountancy for the full list of courses that are approved by the ASBPA.
PROJECT MANAGEMENT

PROJECT MANAGEMENT CERTIFICATE

Good project management ensures that projects run smoothly and clients’ expectations are met. Build a solid foundation of project management knowledge and ensure your projects are set up for success from the start. Aligned with the Project Management Institute’s (PMI) framework, each course is responsive to the Project Management Book of Knowledge (PMBOK) and is specifically designed to focus on the practical application of project management concepts, particularly in a Government/contractor environment. You will immediately acquire knowledge and tools needed to manage your projects’ successful completion. Take one course or the complete series.

SAVE $400 | By registering for the entire certificate. Reference session P2516002A.

Certificate awarded after completion of:

Project Management Foundation  
*R. Hycoop, 21 hrs, $895*

The fundamental project management processes are covered in the foundation course: defining requirements, schedules, risk management, and change control. In group exercises, participants gain an understanding of how the project management processes are used during each phase of a project to build a better, more effective project plan.

What You Will Learn:
• Statement of work analysis
• Roles and responsibilities
• Team charters and team development
• Project closeout process
• Work breakdown structure (WBS)
• Stakeholder concerns
• Elements of a project charter
• Conflict resolution techniques

PMBOK® Knowledge Areas: Integration, Cost, Time, Scope, Risk, and Human Resources

CAMPUS:  
Feb 1 – 17, 2016 | M, W | 5:00 – 8:30 pm | C2516006A
ONLINE ON DEMAND: D2516004A

Project Scope, Cost, and Schedule Management  
*R. Steele, 21 hrs, $895*

Was the project completed on time, on budget, and did it meet the customer’s requirements? Participants will become skilled with earned value measures, proficient with performance indexes, and build s-curve charts to interpret project trends. Gain the tools to monitor quality, measure performance, and communicate the results in performance reports.

What You Will Learn:
• Components of deliverables
• Duration and resources
• Realistic schedules
• Schedule sorting
• Task tracking
• crashing techniques
• Needs/effects of scope change control
• Scope controls within a WBS

PMBOK® Knowledge Areas: Scope, Cost, Time, Integration, and Communication

CAMPUS:  
Feb 29 – Mar 16, 2016 | M, W | 5:00 – 8:30 pm | C2516007A
ONLINE ON DEMAND: D2516005A

Project Procurement and Contracting Management  
*H. Cleaver, 21 hrs, $895*

Procurement and contracting have a strong presence in project management – few projects are self-contained and require no contracting requirements. Understand the basic elements of contract and 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.

What You Will Learn:
• Preparation of project specifications
• Bidding and negotiating from project perspective
• Understanding management aspects of both subcontractors and vendors
• Project completion

PMBOK® Knowledge Areas: Risk, Procurement, and Integration

CAMPUS:  
Apr 25 – May 11, 2016 | M, W | 5:00 – 8:30 pm | C2516009A
ONLINE ON DEMAND: D2516007A

Project Quality and Risk Management  
*C. Gardner, 21 hrs, $895*

Performing good risk assessment is an essential requirement of a successful project management plan. Gain insight into assessment procedures and learn to apply them to decision-making situations. Focus on using a quality management plan and systematic quality controls to address issues and avoid costly reworking expenses.

What You Will Learn:
• Success rate for monitoring risk
• Quantitative decision analysis
• Uncertainty and network analysis
• Decision trees/Mitigation approaches
• Cause and effect diagrams
• Statistical sampling and inspection
• Control and pareto charts

PMBOK® Knowledge Areas: Risk, Quality, and Scope

CAMPUS:  
Mar 28 – Apr 13, 2016 | M, W | 5:00 – 8:30 pm | C2516008A
ONLINE ON DEMAND: D2516006A
*Also an elective for the Management of Engineering and Technology Certificate.

What participants are saying:

“The information was relevant and relatable. It crossed multiple industries and we were given numerous examples. The activities were interesting, and the instructor engaged the entire class to help us all better connect to one another.”

“The program provided a great understanding of project management and was actually more in-depth than expected.”

Ways to Register, page 32
PROPOSAL MANAGEMENT

Federal Proposal Management
H. Cleaver, 35 hrs, $695

In this highly interactive and document development-focused course, gather techniques for preparing successful Federal prime contractor or subcontractor proposals. Learn how to conduct the critical pre-proposal preparation phase of the overall proposal preparation process. Concentrate on 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 graphic images, and ways to create those images. Combine lecture and practical exercises to understand the realities of actual proposal preparation activities in a page-limited and time-constrained environment.

How You Will Benefit:
• Review the introduction to Federal Proposal Management Concepts
• Understand the pre-solicitation phase
• Learn about activities and considerations during solicitation release and proposal team kickoff
• Study the various aspects of proposal preparation essentials
• Examine the procedures surrounding red team review and contract award

ONLINE ON DEMAND: D2516022A

SUPPLY CHAIN MANAGEMENT

INTEGRATED SUPPLY CHAIN MANAGEMENT CERTIFICATE

Supply chain business processes, metrics, risk assessment and mitigation, and the impact of information systems and tools are interwoven into each course. Practical exercises include how to develop supply chain strategies enabling the network to match demand with supply even in the face of uncertainty. Take one course or the complete series.

SAVE $450 By registering for the entire certificate. Reference session P2516001A.

Certificate awarded after completion of:

Supply Chain Management Foundation  K. Sullivan, 14 hrs, $895
Gain an overview of integrated supply chains with an emphasis on business process integration for optimal supply chain performance. The SCOR model will be introduced for process modeling and diagnostics. This course serves as executive development for senior managers and executives.

ONLINE ON DEMAND: D2516011A

Supply Chain Relationship Management  C. Gardner, 14 hrs, $895
Supply chains encompass end-to-end business processes, which include both suppliers and customers. Learn an essential for success – managing relationships with key business partners.

ONLINE ON DEMAND: D2516012A
*Also an elective for the Management of Engineering and Technology Certificate.

Demand Management  S. Messimer, 14 hrs, $895
Supply chain performance depends on an organization’s ability to synchronize its production rate with customer demand. Learn basic tools for forecasting and understanding demand patterns, and Lean Six Sigma techniques for optimizing production capacity and inventory levels.

ONLINE ON DEMAND: D2516013A

Operations Systems Management  N. Loyd, 14 hrs, $895
Explore how to develop a seamless process from supplier to organization and to customer segments. Consider cellular vs. modular manufacturing, process selection, line balancing, production layout, and making vs. buying.

ONLINE ON DEMAND: D2516014A

Research and Product Development  D. Gunther, 14 hrs, $895
Discover the importance of product development process integration in reducing time and cost to market as product life cycles shorten. Develop the keys to successful product development taking into account form, fit, function, and process.

ONLINE ON DEMAND: D2516015A

Supply Chain Strategy Development  K. Sullivan, 14 hrs, $895
Grasp the steps to a supply chain operation strategy that “sees” itself as a customer-facing entity serving the competitive goals of the enterprise. Understand enterprise, business strategy, and developing SC strategy for product demand characteristics as keys to a successful strategy. Learn to employ hybrid SC strategies for tailoring to product characteristics.

ONLINE ON DEMAND: D2516016A

On Demand Online 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.
Rediscover the Joy of Learning!

Join a Vibrant Learning Community For Adults 50+

Meet new people and stay intellectually and socially active, while having lots of fun!

OLLI at UAH is designed for your lifestyle and interests with no grades or tests! Choose from over 50 courses per term:

- America’s First Ladies
- Ancient Chinese Exercises
- Beethoven – His Life and Music
- Eight Epic Archaeological Discoveries
- Finding Equilibrium in Life
- Great Artists of the Italian Renaissance and the Gilded Era
- High Energy Laser Weapons
- History of Native Americans
- Hudson Alpha: The Power of Genetics
- Introduction to Infectious Diseases
- Italian for Beginners and Travelers
- The Life of Abraham Lincoln
- Photography – Progressing from Snapshots to Great Shots
- Practice Making a Fortune
- A Survey of the Southern Civil Rights Struggle
- Ukulele 101

OLLI After Five

Enjoy OLLI programs at a time that works for you on Tuesdays or Thursdays from 5:15 – 6:45 pm.

- A History of Horror in the Movies
- Our Place in the Universe
- The Secret Life of Words
- The History of Computing
- Beginning Spanish
- Selling on eBay
- The World of Wine

Annual OLLI Membership – Only $16.
Term Course Fee – $85 Covers Up to Six Courses


View the course guide at Osher.uah.edu/Catalog or call 256.824.6183 for information.
The Certificate Program Advantage
Certificate programs are a well-respected form of specialized education among professionals, employers, and universities. The workforce environment is constantly changing, making certificates a valuable tool for professional development.

How Will Earning a Certificate Assist Me?
Certificates provide documentation of specific, formal study; career-oriented post graduate training to complement a degree; and increased job skills for your current job, a promotion, or career change. Certificates also demonstrate that you have the discipline to work toward a specific goal.

Distinguish yourself as a leader in your field with professional programs taught by real-world experts. Whether you want to stay current in your field or choose a new career path, we offer certificate programs, short courses, and exam preps to help you succeed!

Non-Credit Registration and Payment Policies
See page 32 for ways to register. Payment by cash, check, credit card, or written employer billing authorization is required at time of registration.

Many employers’ tuition plans cover UAH PCS courses. Mail, fax, or email your company purchase order, tuition voucher, or other billing authorization to the PCS Registration Office.

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 decals 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 full refund, notify the UAH PCS Registration Office directly at least one full business day prior to the course start date. A processing fee may be deducted from refund requests.

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.

Camping Parking Regulations
A parking permit is included in the course fee for on-campus non-credit courses lasting less than 15 weeks and will be issued at the opening session. Please arrive 15 minutes early to allow time to attach your decal.

Continuing Education Units (CEUs)
CEUs are nationally recognized non-academic credit for professional development and granted for professional development courses. Earn one CEU for ten clock hours of class time. Attend 80% of the class clock hours to receive CEUs. See page 32 for additional information.

Transcripts and Grades
CEUs earned through PCS are recorded in the attendee’s name. A transcript is available for $5 by submitting your request to the PCS Registration Office.

The non-credit course grading system is Pass/Fail. Assignments and quizzes may be given for courses preparing for professional exams and in online learning courses.

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 PCS staff will work with active participants to provide the best alternatives for program completion.

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

Acceptable Proof of U.S. Citizenship
Some PCS courses require proof of citizenship. U.S. passport, birth certificate with picture ID, Certificate of Citizenship or Naturalization from USCIS are acceptable forms of proof. (No exceptions)

Course Cancellation
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.

Misprints
UAH PCS shall not be held responsible for misprints in printed or electronic media. We apologize for any inconvenience.

Services for Students with Disabilities
UAH Disability Support Services (DSS) provides special accommodations for students with disabilities. Individuals should contact DSS at 256.824.1997 or www.uah.edu/disability at least one month prior to the start date of class to allow advanced preparation. Official documentation of stated disability is required.

State and Association Requirements
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.

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.

Training Environment
Courses are presented in the PCS Executive Training Center, 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.
BECOME A VALUED PARTNER OF UAH PCS!

How can partnering with UAH PCS benefit your organization?

Through partnerships, we provide a deep learning experience of real-world knowledge and practical skills that can be applied on the job immediately. We collaborate with businesses, government agencies, professional associations, and accredited training centers to design and deliver a wide variety of employee learning and development programs. Programs can be taught at your facility, online, abroad, or on-site at our Executive Training Center.

For details, contact Lane.Fabby@uah.edu or call 256.824.4430.

CREDITS AND ALLIANCES

Government and licensing/certifying organizations accept some UAH PCS courses as equivalent credit within their internal systems.

Alabama State Board of Public Accountancy (ASBC)
Many certificates and courses are approved for ASBPA Certified Professional Education (CPE) units. 1 hour of class time is equal to 1 CPE unit.

Boeing Learning Together Program
As a preferred provider with The Boeing Learning Together Program, UAH PCS offers quality educational opportunities to enhance job performance and improve skill sets. Our courses address the professional needs of the aerospace and defense industry and provide you with the knowledge, skills, and hands-on experience to succeed.

CompTIA
PCS is a CompTIA Academy Partner. Exam preps eligible for benefits are:
- A+, Security+, Network+, Cloud+ and Linux+

Defense Acquisition Workforce Continuous Learning Policy
Acquisition workforce employees must earn 80 Continuous Learning Points (CLPs) every 2 years. All certificates (except Interior Design) are approved for the CLP rate of 1 CEU = 10 CLPs.

Defense Acquisition University (DAU) and The UAH Strategic Alliance
A strategic alliance between UAH PCS and DAU makes it easy for AT&L employees who have completed DAU ACQ101, Fundamentals of Systems Acquisition Management, to complete some of our certificates. Courses eligible for ACQ101 equivalency are:
- Systems Engineering Overview
- Test and Evaluation Foundation

EC-Council
UAH PCS is now an EC-Council Accredited Training Center. Courses eligible for benefits:
- Certified Ethical Hacker (CEH™) Exam Prep

EdAssist™
Partnered together, EdAssist and UAH PCS can help you advance your education and take your career to the next level. Enjoy partnership benefits such as: 5% off the regular registration rate and an easy registration process, with no application fee.

The International Council on Systems Engineering (INCOSE)
INCOSE Huntsville Regional Chapter and UAH PCS partnered to offer Certified Systems Engineering Professional exam preparation. Systems Engineering and Test and Evaluation programs satisfy the requirements for INCOSE Professional Development Units (PDUs). Programs eligible for the INCOSE discount are:
- CSEP Exam Bootcamp

Information Systems Security Association (ISSA) UAH PCS is proud to offer North Alabama Chapter ISSA members (NACISSA) a 10% discount on select cyber-related and information systems security courses:
- A+, Security+, and Network+
- Cloud+, Linux+, CEH™, CISSP®, and CAP®
- Building Secure Android Applications
- And more

National Contract Management Association (NCMA)
Federal Contract and Federal Proposal Management programs meet requirements for NCMA continuing professional education. Certificates eligible for the NCMA discount are:
- Federal Contract Management Essentials and Specialization

Workforce Investment Act (WIA) – Tuition Assistance
Many certificates are approved for tuition assistance through the WIA. For information on WIA funding, visit www.etpl.alabama.gov, or contact your local Alabama Career Center. Madison County residents call 256.851.0537. For information on programs, contact 256.824.6015 or Christina.Holmes@uah.edu. See page 18 for a full course listing.

* Contact Christina.Holmes@uah.edu or 256.824.6015 for additional information.

Ways to Register, page 32  31
5 Easy Ways to Register:

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<tr>
<td>Online</td>
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<td>Phone</td>
<td>256.824.6010 or 800.448.4031</td>
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<td>Fax</td>
<td>registration form to 256.824.6760</td>
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<td>In Person</td>
<td>UAH, Wilson Hall, Room 103</td>
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<td>Mail</td>
<td>registration form to: UAH PCS, Wilson Hall, Room 103, Huntsville, AL 35899-0650</td>
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**We Accept:** MasterCard, Visa, American Express, Discover, Company Purchase Orders, and SF-182s.

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**REGISTRATION FORM**

Duplicate this page for additional forms, or print from PCS.uah.edu.

Circle one: Dr. Mr. Ms.

Name ____________________________ First Middle Last

Home Address _____________________________________________________________

City ____________________________ State ________ Zip Code ______

Company Name ____________________________

Phone: Daytime (_____): ________________ Alternate (_____): ________________

Fax (____): ______________________ E-mail ____________________________

Method of Payment:

☐ Check enclosed. Make checks payable to: UAH PCS

☐ VISA ☐ MasterCard ☐ Discover ☐ American Express (No other cards accepted.)

Card No. ____________ Exp. Date ________ / ______

Cardholder’s Name ____________________________ Signature __________________

☐ Bill my organization

Purchase Order #: __________________ Attn: __________________

Company Billing Address _______________________________________________________

City ____________________________ State ________ Zip Code ______

**SESSION NUMBER** | **COURSE TITLE** | **FEE**

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UAH Disability Support Services (voice/TDD 256.824.1997) provides for students with disabilities.

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**PCS STAFF**

Dr. Karen M. Clanton, Dean
256.824.6013

PCS Registration and Business Services
Kathy Hosch, Sr. Associate Director, 256.824.2814

Professional Development
Lane Fabby, Director, 256.824.4430
Christina Holmes, Associate Director, 256.824.6015

Online Learning
Terrie Pierce, Assistant Director, 256.824.6940

Marketing and Media Services
Amber Capello, Marketing Manager, 256.824.4238

Osher Lifelong Learning
Maxine Doherty, Program Manager, 256.824.6183

All classroom courses are held on the UAH campus unless otherwise noted. After registering, please refer to your confirmation letter for the location.

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**CONTINUING EDUCATION UNITS (CEUS)**

UAH PCS courses meet requirements for providing CEUs. Please note the following conversion rates into Professional Development Hours (PDH), Continuing Learning Points (CLP), Professional Development Units (PDU), and Certified Professional Education Units (CPE).

- One CEU = 10 clock hours of instruction
- One PDH, CLP, PDU, or CPE = one clock hour of instruction
- One CEU = 10 PDH, CLP, PDU, or CPE

Course completion requires participants to attend 80% of scheduled class meetings (and complete associated exams or projects, if applicable). Participants receive a certificate indicating the number of CEUs earned.

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 (SACS), which complies with internationally recognized standards of The International Association for Continuing Education and Training (IACET).

**Full Program Discount:**

Select certificates offer a discounted fee if you register for all courses in the certificate at once. To register, use the “Full Program” session number along with the number for each individual course. When registering online, select the “Full Program” session number only and PCS staff will contact you for individual course information.
Whatever your organizational needs are, we will design customized training for your team or organization that meets your intended outcomes and deliver it globally – where you want it, when you want it.

**What you want:**
We will conduct an in-depth assessment of your specific training needs and design a high-quality and high-impact event.

**Where you want it:**
We will deliver one course or an ongoing program at your site, at an off-site location, or on-site at our state-of-the-art facility.

**When you want it:**
We offer courses or programs any time (i.e. day, evening, weekend, or even a hybrid of off-site/on-site and online).

**Advantages of customized training:**
- Generate high-performance sustainable results
- Improve productivity and bottom line
- Develop and strengthen skills
- Improve thinking capacities
- Flexible delivery options
- Professional growth
- Build teamwork

**Customized sample topics:**
- C++ and Java
- Composites
- Cybersecurity Compliance
- Change Management
- Effective Communication
- Leadership Development
- MATLAB
- Missile Systems
- Project Management
- Rocket Propulsion
- Strategic Decision Management
- Systems Engineering

Contact Lane.Fabby@uah.edu or call 256.824.4430.
PROFESSIONAL TRAINING SOLUTIONS TO HELP YOU LEAD, INNOVATE, AND PRODUCE RESULTS.

CYBERSECURITY/EXAM PREPS
• A+, Network+, and Security+
• Certified Authorization Professional (CAP®)
• Certified Ethical Hacker (CEH™)
• CISSP® Exam Bootcamp
• Cloud+ and Linux+
• SANS ICS410: ICS/SCADA Security

ENGINEERING
• Aegis Combat Systems
• Aerospace and Flight Systems
• Certified Systems Engineering Professional (CSEP) Exam Prep
• Design of Experiments
• DOORS® Requirements Management
• MATLAB
• Missile Systems Fundamentals
• Model-Based Systems Engineering
• Modeling and Simulation
• Propulsion Systems
• Radar and Sensor Applications
• Systems Engineering
• Test and Evaluation

INFORMATION TECHNOLOGY
• Adobe Photoshop
• Android Mobile Developer
• Apple iOS App Development
• C++ and Java Developer
• MATLAB
• Microsoft and QuickBooks
• Oracle Applications Developer
• Virtual and Cloud Implementation

MANAGEMENT
• Building Effective Leadership Skills
• Communicating With Influence
• Contract Management
• Earned Value Management
• Federal Costing
• Human Resource Management
• Interior Design
• Leading With Agile Teams
• Leveraging Polarities in Organizations
• Management of Engineering and Technology
• PMP® Certification Bootcamp
• Project and Proposal Management
• Strengths Based Leadership
• Supply Chain Management