**Computer Science & Engineering**

**Aerospace & Mechanical Engineering**
- Astronautical Engineering
- Lean Six Sigma
- Systems Engineering
- Engineering Review Courses
- Advanced Plumbing Systems Design

**Civil & Environmental Engineering**
- Construction Management
- Recycling and Solid Waste Management

**Electrical Engineering**
- Communication Systems
- Digital Signal Processing
- Integrated Circuit Design

**Bioengineering**
- Biotechnology Engineering
- Medical Device Engineering

**Information Systems**
- Systems Analysis
- Linux/UNIX Operating System
- Information Systems Security

**Software Development**
- Applications Programming
- Coding Boot Camp
- Data Science
- Embedded Software Development
- Java Programming
- Mobile Application Development

**Technical Management**
- Advanced Project Management
- Contract Management
- Government Cost Estimating & Pricing
- Information Technology Management
- Project Management
- Supply Chain Management

**Web Development**
- Web Technology

**What Our Students Say**

“*The courses enabled me to further hone my skills in order to successfully manage multimillion dollar research projects.*”

— Vanessa Allwardt
Astronautical Engineering

MECH&AE X 402.23 Space Mission Systems Engineering
4.0 units
Systems engineering plays a pivotal role in the design and execution of a space mission. Systems engineering responsibilities encompass all phases of a program, including mission requirements definition; systems specification; requirements flowdown; systems integration; mission operations; and the definition, control, and verification of internal and external interfaces. This course addresses these systems engineering activities with particular emphasis on the process of designing and executing a space mission. Topics include the roles and responsibilities of systems engineering; the specification of a space mission; the systems design process; constraints, tradeoffs, analysis, and decision making; systems integration and verification; ground support systems; mission operations; launch vehicles; and impacting technologies. Professional engineers and engineering students who wish to gain a better understanding of the systems engineering process as applied to space mission design benefit from this course. Required course in the Astronautical Engineering Certificate.

Reg# 352469
Fee: $1,150
Classroom
12 mtgs
Monday, 6-9pm, April 3–June 19
DoubleTree Hotel LAX/El Segundo: 1980 E Grand Ave.
Visitors not permitted.
Enrollment deadline: April 10.
No refund after April 17.
Dr. David E. Lee Ph.D. Integrated concept development facility lead, Northrop Grumman Aerospace Systems
Stephen A. Way MS, manager, Payload Products Strategic Development, Northrop Grumman Aerospace Systems

MECH&AE X 402.18 Introduction to Satellite Communication 4.0 units
This course provides an introduction to satellite communications and systems and methods. Basic radio communications engineering principles are combined with practical applications to both commercial and government-owned systems. Analog and digital radio signaling and processing methods are explored, as well as their indications in satellite-based communications. The course also covers how communications satellite systems are typically organized into space segments, ground-based control segments, and user terminal segments, and the functions of each segment. Students learn how to construct system link budgets; determine what they tell us; and discover how they drive the system definition, design, and cost. Mathematics are employed for some topics, such as link budgets, but the course emphasis is on functional concepts and practical experience.

Reg# 352472
Fee: $1,150
Classroom
11 mtgs
Monday, 6-9pm, April 3–June 19
DoubleTree Hotel LAX/El Segundo: 1980 E Grand Ave.
Internet access required to retrieve course materials.
Enrollment deadline: April 9.
No refund after April 16.
Ameesh Pandya Ph.D., Communication Systems Engineer, Northrop Grumman Aerospace Systems

ENGR X 402.27 Liquid Rocket Engines for Spacecraft Pressure-Fed Propulsion Systems 4.0 units
This course provides an in-depth treatment of the fundamental concepts and technologies of modern spacecraft liquid propellant rocket engines. Instruction focuses on scientific and engineering foundations of pressure-fed, monopropellant, bipropellant, dual mode, and secondary combustion augmented thrusters for satellite orbit-raising and station-keeping operations. The course covers thruster analyses; design; ground testing; flight operations; anomaly investigations; and lessons learned. Additionally, the course covers interactions of thrusters with the propulsion and interfaces of the propulsion system with other spacecraft subsystems as they relate to design and operations. The extensive course notes provide a concise reference for understanding virtually all aspects of modern satellite liquid thruster technologies.

Prerequisite(s): BS or equivalent in engineering, applied science, or upper-level or advanced standing in an engineering program.

Reg# 352578
Fee: $1,150
Classroom
12 mtgs
Tuesday, 6-9pm, April 4–June 20
DoubleTree Hotel LAX/El Segundo: 1980 E Grand Ave.
Visitors not permitted.
Enrollment deadline: April 10.
No refund after April 17.
G. P. Purish PhD., PE, MBA, engineering specialist, The Aerospace Corporation

Lean Six Sigma

For a complete course description contact uclaextension.edu/engineering. For information call (310) 825-4100 or email et@uclaextension.edu.

MECH&AE X 428.69 Six Sigma Green Belt 4.0 units
The Six Sigma Management System is rocking the business world by helping organizations meet or exceed customer requirements through greater efficiency and profitability. “Sigma” is a statistical measurement term that indicates how far a given process deviates from perfection, and the highly disciplined Six Sigma process allows organizations to develop and deliver near-perfect products and services. The central idea behind Six Sigma is that if you can measure how many defects exist in a process, you can systematically eliminate them and get as close to “zero defects” as possible. This course shows students how to identify and manage process-improvement projects using the systematic, analytical Six Sigma approach. Topics include management roles and responsibilities that support Six Sigma philosophy, specific analysis techniques that can be applied to a process, and inspiring case studies of company successes. Class exercises include simulations that demonstrate the application of tools and techniques. This course also prepares students to take the American Society for Quality Green Belt Certification exam.

Prerequisite(s): Experience in a manufacturing or service organization; knowledge of Lean manufacturing and World Class Operations techniques; knowledge of basic statistics; and working knowledge of computer spreadsheet, presentation, database, and word processing applications such as Excel, PowerPoint, Word, and Access.

Reg# 352554
Fee: $950
Classroom
12 mtgs
Wednesday, 6:30-9:30pm, April 5–June 21
Extension Gayley Center: 1145 Gayley Ave.
Visitors not permitted.
Enrollment deadline: April 11.
No refund after April 18.
Chatriar Assad, PhD, chief scientist, The Boeing Company

MECH&AE X 428.80 Lean Six Sigma Black Belt I 4.0 units
Lean Six Sigma helps organizations develop and deliver near-perfect products and services in a more efficient way to both meet and exceed customer requirements, and to become more profitable. This course prepares students to fulfill the requirements for the Lean Six Sigma Black Belt, providing technical guidance and mentoring to Green Belts, leadership, and other team members. Subjects include strategic planning, measuring performance, team development, and understanding the customer. This is not an exam prep course. Completing both Lean Six Sigma Black Belt I and II provides students with practical knowledge to improve their organizations and excel in their careers.

Prerequisite(s): Successful completion of the UCLA Extension X 428.69 Six Sigma Green Belt, or a comparable Green Belt course from a recognized source, and consent of instructor.

Reg# 352557
Fee: $950
Classroom
12 mtgs
Tuesday, 6:30-9:30pm, April 4–June 20
Extension Lindbrook Center: 10920 Lindbrook Dr.
Visitors not permitted.
Enrollment deadline: April 10.
No refund after April 17.
David Arvonio, DM, MBA, MPA, Lean Six Sigma Master Black Belt, senior business analyst, Air Force Space and Missile Systems Center

Enroll at uclaextension.edu or call (800) 825-9971

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/engineering
Once again, we are offering a range of informative engineering courses at the DoubleTree Hotel in El Segundo.

Take advantage of what we’re teaching this quarter:

X 402.23 Space Mission Systems Engineering
X 402.18 Introduction to Satellite Communication
X 402.27 Liquid Rocket Engines for Spacecraft Pressure-Fed Propulsion Systems

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/engineering

MECH&AE X 428.90
Lean Six Sigma Black Belt II
4.0 units
For decades, the Lean and Six Sigma methodologies have been helping organizations meet and exceed customer requirements, while becoming more efficient and profitable. Lean and Six Sigma help organizations develop and deliver near-perfect products and services. Lean is a term developed by Toyota that focuses on the relentless pursuit of removing waste from business practices. The term “Sigma” is a statistical term that measures how far a given process deviates from perfection. The central idea behind Six Sigma is that if you can measure how many defects you have in a process, you can systematically determine how to eliminate them, getting as close to “zero defects” as possible. This course demonstrates advanced Lean and Six Sigma tools and techniques. Students learn to document enterprise-level processes, identify the steps necessary to implement a Lean Six Sigma system, as well as learn how to teach and mentor in the workplace.

Reg# 352675
Fee: $950
Online
April 3–June 25
Enrollment deadline: April 9.
No refund after April 16.

David Arvonio, DM, MBA, MPA, Lean Six Sigma Master Black Belt, senior business analyst, Air Force Space and Missile Systems Center

MECH&AE X 410.100
Principles of Systems Engineering
4.0 units
This course is designed to provide the student with an overview of systems engineering including its key activities of requirements, architecture, behavior, and test & evaluation. The course will define systems and how they are brought into being, the various life cycle models that can be used to describe the evolution of a system from concept through disposal, the management of the engineering and other disciplines involved in bringing a system into being, the system design and analysis process, and, finally, the importance of operational feasibility analysis as a necessary element during the design process. Reading and problem assignments are designed to reinforce key concepts discussed in lecture and discussion threads. Exams are intended to assess the students’ understanding of systems engineering fundamentals.

Reg# 352616
Fee: $950
Online
April 3–June 25
Enrollment deadline: April 9.
No refund after April 16.

Gary Bosworth, MS, MBA, licensed professional engineer

Get the tools to innovate the next big thing. Stay on top of emerging technologies and trends with our courses and certificates.

Offered in Westwood, Downtown, El Segundo, or Online

• Advanced Plumbing Systems Design
• Astronautical Engineering
• Biotechnology Engineering
• Communications Systems
• Construction Management
• Digital Signal Processing
• Integrated Circuit Design
• Sustainability
• Lean Six Sigma
• Manufacturing Engineering
• Medical Device Engineering
• Recycling and Solid Waste Management

Winter Highlighted Courses
X 410.400 Systems Integration, Verification, and Validation
X 402.23 Space Mission Systems Engineering
X 402.18 Introduction to Satellite Communication
X 422.2 Digital Signal Processing (DSP) Applications
X 428.69 Six Sigma Green Belt
X 428.90 Six Sigma Black Belt II
X 431.1 Fundamentals of Biotechnology Engineering

Engineering Certificates & Courses

Systems Engineering
MECH&AE X 410.100
Principles of Systems Engineering
4.0 units
This 3-course (12-unit) program prepares you to take the American Society for Quality Green Belt and Black Belt Certification exams.

Learn how to meet and exceed customer requirements, and make your organization more profitable, by delivering near-perfect products and services in the most efficient way.

Required Courses
+ X 428.69 Six Sigma Green Belt
+ X 428.80 Lean Six Sigma Black Belt I
+ X 428.90 Lean Six Sigma Black Belt II

For Complete Details
uclaextension.edu/engineering

Enhance Your Engineering Skills in the South Bay

Lean Six Sigma Series

This 3-course (12-unit) program prepares you to take the American Society for Quality Green Belt and Black Belt Certification exams.

Lean Six Sigma methodology benefits anyone in Engineering, Manufacturing, Business Operations, Quality Control, and beyond.

+Offered this quarter.
The Systems Engineering program provides solid understanding of key principles of systems engineering including requirements analysis, architecture and design, modeling, integration, risk management, verification, and validation.

- **X 410.100 Principles of Systems Engineering**
- **X 410.200 System Requirement and Design**

These courses qualify as electives toward the Astronautical Engineering and the Medical Device Engineering certificates.

+ Offered this quarter.

### Systems Engineering Series

#### X 410.300 Systems Modeling and Simulation and Design Integration

#### X 410.400 Systems Integration, Verification, and Validation

These courses are designed to provide the student with a deeper understanding and working knowledge of the Integration, Verification, and Validation (IV & V) processes within the Systems Engineering discipline. These processes are typically executed toward the end of the product development cycle, during product and system test. However, it is imperative that IV & V engineers work closely with other systems engineers and design engineers throughout the product development life cycle to ensure a well-architected and smooth test program.

**Reg# 352646**
- Fee: $950
- Online
- April 3–June 25
- Enrollment deadline: April 9.
- No refund after April 16.
- Gary Bosworth, MS, MBA, licensed professional engineer

**Robert Wright**, PhD, engineering director, Raytheon Space and Airborne Systems

### Engineering Review Courses

#### CEE X 434.24 Air Quality Permitting and Enforcement

4.0 units 3.6 ceus

This course examines the roles and responsibilities of air quality management agencies at the federal, state, and local levels, with an emphasis on requirements to obtain air quality permits. Students learn the entire permitting process, from application issuance of Permits to Operate (PO) and Permits to Construct (PC) conditions, enforcement and compliance procedures, strategies to work effectively with air quality agencies, such as the South Coast Air Quality Management District (SCAQMD) and the South Coast Air Quality Management District; and Title V and RECLAIM permitting. Since Title V permits are now undergoing review and issuance by the SCAQMD, this topic is particularly timely. This course provides excellent preparation for the SCAQMD Certified Permitting Professional (CPP) examination and also meets the training requirements of California Health and Safety Code 42520—Air Pollution Permit Streamlining Act of 1992.

**Reg# 353144**
- Fee: $950
- Online
- April 3–June 25
- Enrollment deadline: April 9.
- No refund after April 16.
- Gary Bosworth, MS, MBA, licensed professional engineer

**Douglas Nadeau**, president, RAN Fire Protection

### Advanced Plumbing Systems Design

#### MECH&AE X 400.10 Plumbing Systems III: Systems Applications

4.0 units

This course covers the concepts of special plumbing systems and plumbing components and equipment with discussion on fire protection systems and green plumbing. Students are also exposed to information needed to relate “special systems” to the overall concept of plumbing design. This course emphasizes the science behind the concepts of plumbing and special systems and stresses the importance of critical thinking skills. The course is not intended to teach you how to “do” plumbing, but rather how plumbing, and related systems, are “done.”

**Prerequisite(s):** A good grasp of fundamental mathematics and completion of X 400.8 Plumbing Systems I and X 400.9 Plumbing Systems II with a grade of “C” or better.

**Reg# 352591**
- Fee: $950
- Online
- April 3–June 25
- No refund after April 16.
- Daniel Murphy, PE, CPD, CFPS, principal, Murphy Exports

### Online Courses

Now you can earn continuing education or academic credit from UCLA Extension—anytime, anywhere. Simply take a UCLA Extension online course.

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Like our classroom courses, UCLA Extension online courses let you advance your professional development, work toward a certificate, acquire skills needed for a career change, or simply explore your creative side.

For more information about online study see page 4.
Civil & Environmental Engineering

Construction Management

For a complete certificate description, visit uclaextension.edu/engr. For information, call (310) 825-4100 or email e vile@uclaextension.edu.

C&EE X 407.1
Construction Management
4.0 units
This course covers the basic principles and responsibilities in construction management, including interface requirements between real estate, leasing, legal, feasibility, finance, lending, marketing, accounting, and public agencies; defining and controlling the scope of a project; and functions of the construction manager: planning, organizing, staffing, directing, and managing the other team members. Other topics include management principles, estimating, scheduling, budgeting, purchasing, design, safety, insurance, construction techniques, labor, and public relations. The course includes one “construction forum” with senior management representatives from several different disciplines related to building construction.

Reg# 352612
Fee: $950
❖ Online
April 3–June 25
Enrollment deadline: April 9.
No refund after April 16. ☑
Dan McAuliffe, MS, LEED AP BD+C, senior field engineer, Morley Builders
Reg# 352695
Fee: $950
❖ Classroom
12 mtgs
Tuesday, 6:30-9:30pm, April 4–June 20
UCLA Extension DTLA: 261 S. Figueroa St.
Visitors not permitted.
Enrollment deadline: April 11.
No refund after April 18. ☑
Salih Eroglu, Master of Construction Management, architect, IIA (International Union of Architects); project manager, Swinerton Builders

C&EE X 407.2
Construction Technology
4.0 units
This course studies construction materials, equipment, methods, and regulatory influences. Topics include construction for site and civil work; seismic resistance; technology of basic building materials; interior and exterior finishes; plumbing and electrical and mechanical systems. Instruction discusses current developments in materials, systems, and construction techniques in light of changing factors of production, regulatory constraints, and current trends.

Reg# 352726
Fee: $950
❖ Classroom
12 mtgs
Monday, 6:30-9:30pm, April 3–June 26
Extension Lindbrook Center: 10920 Lindbrook Dr.
Visitors not permitted.
Enrollment deadline: April 9.
No refund after April 16. ☑
Michael Johnson

Reg# 352701
Fee: $950
❖ Online
April 3–June 25
Enrollment deadline: April 9.
No refund after April 16. ☑
Dan McAuliffe, MS, LEED AP BD+C, senior field engineer, Morley Builders
Reg# 352710
Fee: $950
❖ Classroom
12 mtgs
Thursday, 6:30-9:30pm, April 6–June 22
UCLA Extension DTLA: 261 S Figueroa St.
Visitors not permitted.
Enrollment deadline: April 12.
No refund after April 19. ☑
Perla Lastra, MS, SPD project manager, Turner Construction

C&EE X 407.3
Construction Planning and Management Systems Using Primavera
4.0 units
This course presents an in-depth study of the current systems and techniques applied in construction planning, scheduling, control, and delay impact analysis. Instruction emphasizes the Critical Path Method approach to developing baseline schedules, progress measurement, earned value, integrated management systems, and as-planned versus as-built analysis. The course also includes hands-on computerized scheduling using Primavera Systems software.

Reg# 352731
Fee: $950
❖ Classroom
12 mtgs
Wednesday, 6:30-9:30pm, April 3–June 19
UCLA Extension Bldg.: 10905 Le Conte Ave.
Students will access Primavera software during class on UCLA Extension computers.
Visitors not permitted.
Enrollment limited; early enrollment advised.
Enrollment deadline: April 9.
No refund after April 16. ☑
Dan McAuliffe, MS, LEED AP BD+C, senior field engineer, Morley Builders
Reg# 352732
Fee: $950
❖ Classroom
12 mtgs
Wednesday, 6:30-9:30pm, April 5–June 14
UCLA Extension Bldg.: 10905 Le Conte Ave.
Students will access Primavera software during class on UCLA Extension computers.
Visitors not permitted.
Enrollment limited; early enrollment advised.
Enrollment deadline: April 9.
No refund after April 16. ☑
Newsha Taheri

C&EE X 412.1
Fundamentals of Construction Costs and Estimating
4.0 units
This course provides an overview of the basic procedures for estimating general construction costs. Topics include the preparation of quantity surveys (take-offs) and the preparation of construction cost estimates, including pricing of contractor and subcontractor work from actual working drawings and specifications.

Reg# 352847
Fee: $950
❖ Classroom
12 mtgs
Wednesday, 6:30-9:30pm, April 5–June 21
Extension Lindbrook Center: 10920 Lindbrook Dr.
Visitors not permitted.
Enrollment deadline: April 10.
No refund after April 17. ☑
Salih Eroglu, Master of Construction Management, architect, IIA (International Union of Architects); project manager, Swinerton Builders

Advanced Plumbing Systems Design Certificate
Certificate Offered in Cooperation with the American Society of Plumbing Engineers (ASPE)

UCLA Extension and American Society of Plumbing Engineering (ASPE) have combined forces to offer one of the most comprehensive online programs in plumbing systems in the U.S. Learn plumbing systems design for commercial and industrial structures in this 7-course (28-units) certificate.

Required Courses
X 400.8 Plumbing Systems Design I: Code and Engineering Fundamentals
X 400.9 Plumbing Systems Design II: Advanced Engineering Systems
+ X 400.10 Plumbing Systems Designs III: Systems Application
X 400.14 High Rise Building Plumbing Design
+ X 400.16 Fire Protection for Plumbing Engineers
X 400.17 Hospital and Lab Plumbing Design

Electives (choose one course from the following list)
+ X 438.8 Leadership in Energy and Environmental Design
X 400.13 Solar Thermal Energy Solutions
+ X 489.14 Electrical Design and Construction
+ Offered this quarter.

For Complete Details
uclaextension.edu/et

C&EE X 409.1
Construction Documentation
4.0 units
This course introduces the fundamentals of construction document controls to students who are seeking an entry-level position with a general contractor, construction/project management firm, public agency, or architecture/engineering firm. The course will cover, but is not limited to, the legal aspects of document control, spreadsheet logs, web-based logs, popular document control software, requests for information (RFI), submittals, substitutions, proposed change orders, change orders, field clarifications, schedules, payment requests, inspections, and project closeout. Students completing the course will be able to understand basic document control systems and processes.

Prerequisite(s): X 407.1 Construction Management or consent of instructor.

Reg# 352977
Fee: $950
❖ Classroom
12 mtgs
Tuesday, 5:30-8:30pm, April 4–June 20
UCLA Extension DTLA: 261 S Figueroa St.
Visitors not permitted.
Enrollment deadline: April 10.
No refund after April 17. ☑
Samir Mehrotra, senior PM, AECOM
## Construction Management Certificate

This 8 course (32-unit) certificate provides an overview of modern construction through a survey of the field’s management and technology facets.

### Required Courses
- +X 407.1 Construction Management
- +X 407.2 Construction Technology
- +X 407.3 Construction Planning and Management Systems Using Primavera
- +X 412.1 Fundamentals of Construction Costs and Estimating

### Electives (choose 4 courses from the following list)
- X 490.05 Construction Safety and Health Management
- X 412.8 Construction Project Management Using MS Project
- +X 489.14 Electrical Design and Construction
- +X 458.8 Leadership in Energy and Environmental Design (LEED)
- X 438.9 Sustainable Energy Management
- X 407.6 Construction Changes and Claims Documentation

In addition, all courses in the Advanced Plumbing Systems Design Certificate also qualify as electives.

Visit [uclaxextension.edu](https://uclaxextension.edu) for a full list of electives.

+Offered this quarter.

## Recycling & Solid Waste Management Certificate

Learn the environmental, technological, political, legal, and economic aspects of recycling and waste management policies with this 6 course (24-unit) certificate.

We are a Continuing Education Provider for Registered Environmental Health Specialists (REHS).

Developed in cooperation with the Department of Resources Recycling and Recovery (formerly the CA Integrated Waste Management Board).

### Required Courses
- X 438.6 Principles of Waste Reduction, Recycling, and Solid Waste Management
- X 438.1 Municipal Solid Waste Management Technology
- X 438.3 Environmental Law and Regulatory Framework for Recycling and Municipal Solid Waste Management
- +X 438.4 Case Studies and Best Management Practices

### Electives (Choose 2 courses from the following list)
- +X 438.5 Recycling and Municipal Solid Waste Management: Research Project

Any course in Construction Management can apply as an elective.

+Offered this quarter.

For Complete Details [uclaxextension.edu/et](https://uclaxextension.edu/et)

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C&EE X 408.75 Legal Aspects of Construction Projects and Contracts

### Required Courses
- +X 408.75 Legal Aspects of Construction Projects and Contracts
  - 4.0 units

This course covers common construction law errors, basic contract and real estate principles in the construction context, contractor licensing, and bidding. “Standard” construction industry documents also are examined, including AIA 201 general conditions, breach by owner, breach by contractor, construction claims and damages, warranties and insurance, construction lending and deeds of trust, mechanics’ liens, bonds, stop notices, and litigation and arbitration.

Reg# 352981
- Fee: $950
- Classroom
- 12 mtgs
- Tuesday, 6:30-9:30pm, April 4–June 20
- Extension Lindbrook Center: 10920 Lindbrook Dr.
- Not permitted.
- Enrollment deadline: April 10.
- No refund after April 17.

Mark Baker, JD, attorney at law, Baker & Associates

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C&EE X 412.9 Reading Construction Blueprints

### Required Courses
- +X 412.9 Reading Construction Blueprints
  - 4.0 units

This course is an introduction to reading and analyzing construction blueprints. Topics include a review of the necessary mathematics, symbols, and drawn line interpretations; dimensioning; a survey of specifications; plot plans; foundations; framing; plumbing; HVAC; electrical; and masonry plans. The class works in small groups to resolve typical problems encountered by professionals, such as errors, omissions, and code non-compliance. As it is common in today’s construction industry, participants regularly change groups.

Prerequisite(s): X 407.2 Construction Technology, background in the industry, or consent of instructor.

Reg# 352983
- Fee: $950
- Classroom
- 12 mtgs
- Tuesday, 6:30-9:30pm, April 4–June 22
- UCLA Extension DTLA: 261 S Figueroa St.
- Not permitted.
- Enrollment deadline: April 12.
- No refund after April 19.

Zartab Quraishi, PE, ME, CEE, PMP, project control manager, URS Corp

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C&EE X 489.16 Introduction to Building Information Modeling (BIM)

### Required Courses
- +X 489.16 Introduction to Building Information Modeling (BIM)
  - 4.0 units

This introductory course in Building Information Modeling (BIM) focuses on Autodesk’s Revit Architecture as a platform for learning key principles in the application of digital media in the design and documentation of building elements within a parametric environment. Fundamental training is provided so students can progress to more advanced design computation and its application in the construction industry. Through a series of lectures and exercises, this course explores basic BIM concepts that apply to all parametrically driven CAD systems.

Reg# 353075
- Fee: $950
- Online
- April 3–June 25
- No refund after April 16.
- Ataa Aly, senior project engineer, San Diego International Airport

Reg# 353102
- Fee: $950
- Classroom
- 12 mtgs
- Monday, 6-9pm, April 3–June 26
- Extension Lindbrook Center: 10920 Lindbrook Dr.
- Enrollment deadline: April 9.
- No refund after April 16.

Ramo Khem

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C&EE X 489.14 Electrical Design and Construction

### Required Courses
- +X 489.14 Electrical Design and Construction
  - 4.0 units

As a specialty trade in the construction industry, electrical systems can be complex and confusing to the non-expert. Students learn the essentials of electrical systems for commercial construction with an overview of fundamentals, construction procedures, electrical equipment, electrical design, and regulatory requirements. Instruction emphasizes the integration of electrical systems with project site development and related construction trades. This course covers the current requirements of the California Electrical Code and other building and construction regulations, as well as applicability to green building design and sustainability development. Topics also include electrical plan reading, single-line diagram design, panel schedule design, and load calculations.

Reg# 353084
- Fee: $950
- Classroom
- 12 mtgs
- Wednesday, 6:30–9:30pm, April 5–June 21
- Extension Lindbrook Center: 10920 Lindbrook Dr.
- Not permitted.
- Enrollment deadline: April 9.
- No refund after April 16.

Ronald Takiguchi, PE, BS, electrical engineering building official, City of Santa Monica

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C&EE X 438.8 Leadership in Energy and Environmental Design

### Required Courses
- +X 438.8 Leadership in Energy and Environmental Design
  - 4.0 units

Green buildings embody a design intent on balancing environmental responsiveness and responsibility, resource efficiency, and cultural and community sensitivity. The course primarily focuses on the LEED Rating System, currently the centerpiece of the most innovative, effective aspects of green design. The course will cover both versions of the rating system administered by USGBC, LEED 2009, and LEED v4. Topics range from sustainable principles, and current sustainable design...
and building practices, to specific elements of the LEED rating system. This course benefits individuals who are very hands-on in their role in the design and construction of a green building, as well as anyone with an interest in understanding the basic nuances of green building.

Reg# 353085
Fee: $950
❖ Classroom
12 mtgs
Monday, 6:15-9:15pm, April 8-June 20
Extension Lindbrook Center: 10920 Lindbrook Dr.
Visitors not permitted.
Enrollment deadline: April 10. No refund after April 17.
Dimitris Klapais, LEED AP, senior project manager

Recycling and Solid Waste Management

C&EE X 438.4 Case Studies and Best Management Practices
4.0 units
This course provides an overview of the best management practices in the recycling and solid waste management industry, and presents and analyzes the design, implementation, and monitoring/evaluation techniques of benchmark waste reduction and recycling programs utilized by industry, government, and others. Topics also include the siting of waste processing facilities; emerging issues, such as environmental justice, communicators, and public relations for the environmental professional; stakeholder planning processes; radioactive waste management; hazardous waste management; and greenhouse gas emissions. Guest speakers associated with exemplary programs/projects present various case studies that students analyze to learn best management practices.

Reg# 352666
Fee: $950
❖ Classroom
12 mtgs
Monday, 6-9pm, April 3-June 19
Extension Lindbrook Center: 10920 Lindbrook Dr.
Visitors not permitted.
Enrollment deadline: April 9. No refund after April 16.
Yu-Yue Yen, CEO, chairman of the board, EcoTeleosis International, Inc.
Eugene Tseng, JD, principal, Tseng and Associates; recipient, UCLA Extension Distinguished Instructor Award, 2008.

C&EE X 438.5 Recycling and Municipal Solid Waste Management: Research Project
4.0 units
This course provides an opportunity for students of the planned recycling and municipal solid waste management certificate program to complete a long-term individual research project to integrate the knowledge gained from the previous program courses. Each student selects a project from a list of pre-approved research topics that represent issues in recycling and municipal solid waste management faced by government and private industry. Project requirements include thoroughly researching the topic, interviewing recognized experts in the subject, analyzing applicable statutes and regulations, completing an in-depth research paper, and preparing an oral Powerpoint presentation to be given in class. Guest speakers/advisors for each of the topics serve as mentors to the students.
Prerequisite(s): Satisfactory completion of the five previous courses that comprise the planned certificate program in recycling and municipal solid waste management currently in development.

Reg# 352668
Fee: $950
❖ Classroom
12 mtgs
Monday, 6-9pm, April 3-June 19
Location to be announced
Visitors not permitted.
Restricted course. Instructor’s approval required.
Eugene Tseng, JD, principal, Tseng and Associates; recipient, UCLA Extension Distinguished Instructor Award, 2008.

Electrical Engineering

Communication Systems

EL ENGR X 422.21 Fiber-Optic Communications
4.0 units
This course offers an introduction to fiber-optic communication systems while developing practical tools to understand and design these systems. Instruction presents a broad range of topics in optical communications with emphasis on providing a practical perspective of these systems. Physical understanding of the components, along with the analytical tools learned during the course, prepare students for designing both analog and digital optical links. Students learn design trade-offs in the practical implementation of these systems. The course covers propagation in single and multimode fibers, intermodal dispersion in multimode fibers, chromatic and waveguide dispersion in fibers, polarization-mode dispersion, and dispersion compensation techniques. Additional topics include optical transmitters, such as LEDs, DFB lasers, and VCSLs; analysis of semiconductor lasers with an emphasis on such characteristics as the modulation bandwidth, chirping, RIN noise, and phase noise. Students also gain an understanding of optical detectors (PIN, APD) and optical modulators based on electro-optic, and electro-absorption effects; optical amplifiers, such as EDFA and semiconductor optical amplifiers (SOAs); design of analog and digital optical links; DWDM systems; CATV systems; submarine fiber systems; applications of nonlinearities in optical fibers; and optical switches.

Reg# 352596
Fee: $950
❖ Classroom
12 mtgs
Saturday, 8-11am, April 8-June 24
UCLA: Math Sciences
Visitors not permitted.
Enrollment deadline: April 14. No refund after April 21.
David Taggart, PhD, senior engineering specialist, The Aerospace Corporation

Get a Head-Start on a Master of Science in Engineering

Learn the fundamentals and most common, current systems applications with this 5 course (20-unit) certificate.

Required Courses
X 422.14 Modern Communication Systems
X 422.19 Satellite Communication System Design
X 422.20 Digital and Data Communication Systems
X 422.21 Fiber-Optic Communications

Electives (Choose 1 from the following list)
+ X 422.28 Introduction to Modern Radar Systems
+ X 422.8 Digital Signal Processing (DSP) Applications of Communication Systems
X 422.20 Modern Microwave and Millimeter-Wave Systems with DSP Enhancement
X 422.4 Digital Signal Processing for Real-Time Systems

Offered this quarter.

For Complete Details
gouwp.com/ucla

Integrated Circuit Design Series

Acquire a broad overview of the design and analysis of analog Integrated Circuits (IC), including CMOS RF ICs and the DA/AD converters in this 4-course (16-unit) program.

X 457.25 RF Integrated Circuit Design
X 457.56 Power Integrity and Noise Coupling in Integrated Circuits
X 457.57 CMOS Analog Integrated Circuit Design
+ X 457.58 CMOS Digital-to-Analog and Analog-to-Digital Converter Design

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/engineering
Digital Signal Processing Certificate

Learn the fundamentals of digital signal processing with this 5-course (20-unit) certificate. The Digital Signal Processing Certificate is a 20-unit program that introduces engineers and other technically oriented individuals to the fundamentals of digital signal processing and its applications.

**Required Courses**
- X 422.1 Fundamentals of Digital Signal Processing
- X 422.15 Digital Signal Processing (DSP) Algorithms
- X 422.2 Digital Signal Processing (DS) Applications (Hybrid)
- X 410.100 Principles of Systems Engineering
- X 410.200 System Requirements and Design
- X 410.300 Systems Modeling and Simulation and Design Integration
- X 410.400 Systems Integration, Verification, and Validation

In addition, any of the courses from Communications Systems and Integrated Circuit Design qualify as an elective.

**Electives**
- Remaining 2 courses (8 units) can be selected from a list of approved courses.

**Offered this quarter.**

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**Digital Signal Processing**

**EL ENGR X 422.2**

**Digital Signal Processing (DSP) Applications**

4.0 units

This is a new DSP certificate course that provides the student with an overview of 11 modern DSP applications using hands-on experiences, as well as explanations of the theory and MATLAB proof of concept implementations. This course uses the Simulink and MATLAB Student Suite to focus on cell phone speech processing, CD digital audio playback processing; audio processing in an MP3 player; speech recognition in a dictation machine; pitch-shifting in an audio effects processor; tracking sperm whales in the ocean; hidden information in music; digital image compression; digital TV compression; digital cinema image compression; and brain degeneration quantification.

**Reg# 352604**

Fee: $950
- Online
- April 3–June 25
- Enrollment deadline: April 9.
- No refund after April 16.

**Kip Haggerty**, PhD, principal systems engineer, H&A Systems Engineering

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**Integrated Circuit Design**

For a complete certificate description, visit uclaextension.edu/engineering. For information, call (310) 825-4100 or email et@uclaextension.edu.

**EL ENGR X 457.58**

**CMOS Digital-to-Analog and Analog-to-Digital Converter Design**

4.0 units

The course begins with an overview of data conversion systems followed by the analysis and design of basic building blocks of data converters: CMOS sampling circuits, operational amplifiers, comparators, and sample-and-hold architectures. With these fundamental concepts clarified, the course then continues with the basic principles of architectures of digital-to-analog converters, focusing on advantages, disadvantages, and performance tradeoffs of various topologies. Following that, instruction covers basic types of analog-to-digital converters focusing on design issues, sources of errors, and performance improvement techniques. These include offset cancellation, digital correction, and calibration techniques. The course concludes with a design project where participants apply their skills to design and characterize a simulated CMOS data converter circuit.

**Reg# 352636**

Fee: $950
- Online
- April 3–June 25
- Enrollment deadline: April 9.
- No refund after April 16.

**Cosmin Iorga**, PhD, founder and president, Noisecontrol.com

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**Biotechnology Engineering**

Biotechnology engineering has widespread uses in both medicine and industrial manufacturing. Learn the design cycle, manufacturing process, and regulatory approval requirements of this fast-growing field. Courses provide theoretical and practical knowledge you can apply immediately in this 6-course (24-unit) certificate.

**Required Courses**
- X 431.1 Fundamentals of Biotechnology Engineering
- X 431.2 Manufacturing Processes in Biotechnology
- X 431.3 Process Development and Quality Systems for Biotechnology
- X 431.4 Regulatory Affairs for Biotechnology

**Elective**
- X 430.001 Introduction to Nanotechnology

In addition, choose 2 elective courses (8 units). Any Medical Device Engineering course can apply as an elective.

**For More Information**

ET@uclaextension.edu | (310) 825-4100 | uclaextension.edu/engineering

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**Bioengineering**

**BIOENGR X 431.3**

**Process Development and Quality Systems for Biotechnology**

4.0 units

Overview of drug development from molecule to product, manufacture to regulatory, and product launch. Basic scientific principles in drug development are covered with an emphasis on quality management principles, focusing on GxPs, including GLP, GMP, GDP, GCP, and GAMP.

**Reg# 352589**

Fee: $950
- Online
- April 3–June 25
- Enrollment deadline: April 9.
- No refund after April 16.

**Bill Tawil**, PhD, director, Bioinnovation, Baxter Health; adjunct professor, Bioengineering, UCLA.

**BIOENGR X 431.1**

**Fundamentals of Biotechnology Engineering**

4.0 units

This course provides an overview of central biotechnology engineering topics covering the various approaches on how to engineer products using genes and genome; recombinant DNA technology and genomics; microbiology biotechnology; plant biotechnology; animal biotechnology; forensic analysis; and medical biotechnology. The course also covers biotechnology regulations, ethics, and biotechnology.

**Prerequisite(s):** Knowledge of cell biology or molecular biology.
Scientific Neuromodulation, principal manufacturing engineer, Boston David Deily

No refund after April 16.
Enrollment deadline: April 9.

Reg# 352646

Techniques, product volume, and cost constraints. Manufacturing strategies based on engineering require-
capabilities of manufacturing processes and developing medical devices. Instruction emphasizes understanding the highest quality components for the lowest cost. This course focuses on state-of-the-art manufacturing processes to deliver the next generation of consumer products. In each lecture, there will be an emphasis on the science enabling the most advanced applications of nanotechnology. We will see how nanoscience can be explained using the existing laws, theories, and principles of physics, chemistry, and biology, and how nanomaterials can be integrated into functional devices for the benefits of the next generation of consumer products. Elective course in the Biotechnology Engineering Certificate and Medical Device Engineering Certificate.

Reg# 352990
Fee: $950
Online
April 3–June 25
Enrollment deadline: April 9.
No refund after April 16.
Marco Currell, Ph.D, Executive Director, Omni Nano

Medical Device Engineering

BIOENGR X 430.5 Medical Device Manufacturing: Processes, Equipment, and Techniques
4.0 units
Today’s medical manufacturing environment requires state-of-the-art manufacturing processes to deliver the highest quality components for the lowest cost. This course focuses on manufacturing processes and techniques that are routinely used in the manufacturing of implantable medical devices. Instruction emphasizes understanding the capabilities of manufacturing processes and developing manufacturing strategies based on engineering requirements, product volume, and cost constraints.

Reg# 352646
Fee: $950
Online
April 3–June 25
Enrollment deadline: April 9.
No refund after April 16.
David Deily, principal manufacturing engineer, Boston Scientific Neuromodulation

Information Systems

For a complete certificate description visit uclaextension.edu/computers. For information call (310) 825-4100 or email et@uclaextension.edu.

Systems Analysis

COM SCI X 414.51 Relational Database Management
4.0 units 3.6 ceus
Understanding client-relational database design is vital to system design and implementation. Learn relational database technology, data modeling, SQL, data normalization, and the translation of logical designs to physical storage structures. Additional topics include indexes; storage management; transactions; database integrity; concurrency control; recovery; client/server relational database management; and introduction to query optimization.

Reg# 352291
Fee: $950
Online
April 5–June 7
Enrollment deadline: April 12.
No refund after April 19.
Ronald Landers, BS, owner, Right-Click Consulting, LLC.

Reg# 352838
Fee: $950
Classroom
12 mtgs
Wednesday, 6:30-9:30pm, April 5–June 21
Extension Lindbrook Center: 10520 Lindbrook Dr.
Enrollment limited; early enrollment advised.
Enrollment deadline: April 12.
No refund after April 19.
Instructor to be announced

COM SCI X 420.1 Fundamentals of Information Systems Security
4.0 units 3.6 ceus
This course combines theoretical security models with practical state-of-the-art examples for a comprehensive and useful introduction to this field and should benefit auditors, system administrators, or anyone else with a basic understanding of information technology. Topics include security policies, risk analysis, cryptography, and network security. Course material is consistent with relevant portions of the Certified Information System Security Professional (CISSP) certification exam’s Common Body of Knowledge (CBK).

Reg# 352248
Fee: $950
Online
April 6–June 8
Enrollment limited; early enrollment advised.
Enrollment deadline: April 13.
No refund after April 19.
Irfan Ahmed, global cyber security consultant, HP

Medical Device Engineering

This certificate consists of 6 courses (24 units), including 5 required courses and 1 elective.

Medical devices play a critical role in the effectiveness of today’s health care. Advance your career or enter this field by increasing your knowledge of medical device design, manufacturing, quality control, biomaterials, biocompatibility, and European and U.S. FDA regulatory approvals. Courses benefit engineers, program managers, regulatory and clinical staff, and suppliers.

Required Courses
+ X 450.1 Fundamentals of Medical Device Engineering
+ X 450.2 Regulatory Affairs for Medical Devices
+ X 450.3 Process Development and Quality Systems for Medical Devices
+ X 450.4 Biomaterials and Biocompatibility
+ X 450.5 Medical Device Manufacturing: Processes, Equipment, and Techniques

Electives
+ X 410.100 Principles of Systems Engineering
+ X 410.200 System Requirements and Design
+ X 410.300 Systems Modeling and Simulation and Design Integration
+ X 410.400 Systems Integration, Verification, and Validation
+ X 430.001 Introduction to Nanotechnology

In addition, choose 1 elective course (4 units). Any Biotechnology Engineering course can apply as an elective.

+Offered this quarter.

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/engineering

Linux/Unix Certificate

System users and designers learn the Linux/Unix operating system in this 20-unit certificate.

Required Courses
+ X 417.31 Introduction to Linux/Unix
+ X 417.31A Linux/Unix Administration
+ X 417.39A Linux/Unix Shell Scripting

In addition, choose 8 units of electives.

+Offered this quarter.

For Complete Details
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/et
Computer Science & Information Systems

Certificates and Courses
Learn emerging technologies in Information Systems that can advance your career.
Key courses and Information Systems Certificates are offered in Westwood or online.

- Applications Programming with Concentration in C#.NET
- Applications Programming
- Database Management
- Data Science
- Embedded Software
- Information Systems Security
- Java Programming
- Linux/Unix
- Mobile Application Development
- Operating System Administration
- Systems Analysis

Highlighted Courses
+ X 414.61 Introduction to SQL
+ X 418.102A Website Development with Adobe Software: Photoshop, Dreamweaver & Animate

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/computers

Map Out a Better Future

With UCLA Extension's GIS & Geospatial Technology Certificate Program

With location-aware technologies becoming more prevalent in everyday life, the Geographic Information Systems (GIS) industry is growing and becoming more important than ever before.

Created in collaboration with the UCLA Department of Geography, this 1-year online program will give you the conceptual and practical knowledge to apply GIS and mapping in the workplace.

Required Courses
+ GEOG XL 7: Introduction to GIS
+ GEOG XL 168: Intermediate GIS
+ GEOG XL 170: Advanced GIS
+ GEOG XL 173: GIS Programming
+ Offered this quarter.

COM SCI X 418.85A
Java Programming I
4.0 units | 3.6 ceus
Powerful enough to build large N-tiered Internet and intranet applications. Java is a well-designed object-oriented language that allows rapid development of programs. Due to its simplicity, it also is an excellent first-time programming language to learn. This hands-on course presents the fundamentals of programming using Java and covers object-oriented programming, classes, constructors, flow control statements, data types, methods, inheritance, data hiding, abstraction, and the Java library. Students gain experience through a number of programming projects during the course and instruction stresses practical programming skills to prepare them for follow-on Java courses.
Prerequisite(s): Requires computer work outside of class as well as a computer with any operating system that supports Java, familiarity with that operating system, and the ability to create files and folders, use an Internet browser and email, create zipped files to send as email attachments, and download software from the Internet for class and programming assignments.

Reg# 352295
Fee: $950

- Classroom
10 mtgs
June 5-June 7
Enrollment limited; early enrollment advised.
Enrollment deadline: April 12.
No refund after April 19.

Fred Zerez, MS, MCSE, MCT, IT manager, Athene Asset Management LLC.

Amir Hallajpour, software consultant, AITech Defense Systems
Reg# 352306
Fee: $950

- Online
April 5-June 7
Enrollment limited; early enrollment advised.
Enrollment deadline: April 12.
No refund after April 19.

Rashed Iqbal, PhD, program manager, Agile transformation, Teledyne Corporation
Reg# 353117
Fee: $950

- Classroom
10 mtgs
Wednesday, 6:30-10pm, April 5-June 7
Extension Lindbrook Center: 10920 Lindbrook Dr.
Enrollment limited; early enrollment advised.
Enrollment deadline: April 12.
No refund after April 18, 2016.
Operating System Administration Certificate

Learn all aspects of supporting business Local Area Networks in this 32-unit certificate, including requirements analysis, design, installation, operation, and management.

Required Courses

X 417.08A Microsoft Windows Server Administration
+ X 417.31 Introduction to Linux/Unix
+ X 417.31A Intermediate Linux/Unix
+ X 417.96 Network Communications with TCP/IP
+ X 420.1 Fundamentals of Information Systems Security
+ X 418.694 Microsoft SQL Server Administration

In addition, choose 12 units of electives.

For Complete Details
uclaextension.edu/et

Reg# 352851
Fee: $950
Online
April 8-June 10
Enrollment limited; early enrollment advised. Enrollment deadline: April 15.
No refund after April 14, 2016. 

Reg# 352875
Fee: $1,040
Classroom
12 mtgs
Monday, 6:30-10pm, April 3-May 22
UCLA Extension Bldg.: 10995 Le Conte Ave.
Enrollment limited; early enrollment advised. Enrollment deadline: April 10.
No refund after April 16.

Systems Analysis Certificate

System Analysts are in demand. Learn requirements analysis, design, development, installation, and operation, as well as online systems, network communications, testing, and documentation. You may complete this 32-unit certificate entirely online.

Approved for International Students (I-20/F1)

Required Courses

X 414.51 Relational Database Management
+ X 414.20 Fundamentals of Software Development
+ X 414.61 Introduction to SQL
X 420.1 Fundamentals of Information Systems Security
X 417.96 Network Communications with TCP/IP
X 418.85A Java Programming I

In addition, choose 8 units of electives. Any X-400 level course in Computer Science and Information Systems may be applied as an elective.

For Complete Details
uclaextension.edu/et

Reg# 353238
Fee: $950
Classroom
10 mtgs
Monday: 6:30-10pm, April 3-May 22
UCLA Extension Bldg.: 10995 Le Conte Ave.
Enrollment limited; early enrollment advised. Enrollment deadline: April 10.
No refund after April 16.

Course Icons

Provide Information At-a-Glance

ON-GROUND COURSE
WEB-ENHANCED COURSE
TEXTBOOK REQUIRED

May be transferable to other colleges and universities, page II.
Information Systems Security

Understand the broad spectrum of information systems security and cybersecurity. Our specialized courses cover network security, cryptography, database and network risk management, and regulatory policies. Theoretical security models, combined with state-of-the-art examples, give you a comprehensive overview of the field in this 6-course (24-unit) certificate.

Required Courses

+X 420.1 Fundamentals of Information Systems Security
+X 420.2 Information Systems Security Risk Management
+X 420.3 Information Systems Infrastructure Security Management
X 420.5 Network Operating System and Database Security

In addition, choose 8 units of electives.

Defined Elective Courses (Select 2 Courses)

+X 420.7 Information System Security Regulatory Compliance
+X 420.8 Information System Security Lab (Offensive Tools)
+X 420.9 Information System Security Lab (Defensive Tools)
X 420.11 Malware and Rootkits
+X 420.12 Information Security of Cloud Computing

+Offered this quarter.

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/computers

Finishing Your Certificate?

UCLA Extension Certificate Graduation Ceremony
Friday, June 30 at Royce Hall

Make sure you’re eligible to take part!
For details, contact your certificate advisor.

Learn more about Extension Certificates at graduation.uclaextension.edu.

COM SCI X 417.31A
Linux/Unix System Administration
4.0 units 3.6 ceus
This intermediate course covers local and network system administration within the Red Hat-derived family of Linux distributions, Fedora and CentOS. Instruction emphasizes configuration files, the foundation of operation and control. It teaches local and web-based interfaces to the power of these files. Administering user accounts, processes, and filesystems are the most basic functions studied. Beyond that, this course covers specialized responsibilities like recurrent task scheduling, local and remote logging, trans-network backup and filesystem synchronization, and network time control, all with their attendant security concerns. Learn about the network servers that implement these features, and their clients, as well as startup control of these servers. Once grounded in the nuts-and-bolts, you learn automation and labor-saving front-end techniques to rationalize and ease your configuration management tasks. Students need user-level familiarity with the Unix environment and a Unix editor.
Prerequisite(s): X 417.31 Introduction to Linux/Unix, or consent of instructor.
Reg# 353240
Fee: $950
Classroom
10 mths
Wednesday, 6:30-10pm, April 5–June 7
UCLA Extension Bldg.: 10995 Le Conte Ave.
Enrollment limited; early enrollment advised.
Enrollment deadline: April 12.
No refund after April 18.
David Morgan, MBA, principal, Skydesign Tech Service

COM SCI X 420.2
Information Systems Security Risk Management
4.0 units 3.6 ceus
This course covers Information Security Risk Management (what it is, different approaches, threats, and mitigating controls), international (ISO 27001:2005) and national standards (NIST), and frameworks (ITIL, CoBit). Making the right business decisions related to information security requires the skills to identify, understand, and mitigate risks. This course presents the foundations for developing an information risk management program based on mature risk management frameworks such as ISO 27005 and OCTAVE.
Reg# 352253
Fee: $950
Online
April 6–June 8
Enrollment limited; early enrollment advised.
Enrollment deadline: April 13.
No refund after April 16.
Vincent LeJeune, MS, business information security officer, AIG

COM SCI X 420.3
Information Systems Infrastructure Security Management
4.0 units 3.6 ceus
This security course covers physical and logical security over datacenters, buildings, and offices. It defines a management program that protects assets across all levels of technology and the core components that support that technology. In addition, the course analyzes hacking methodology and how to create a functioning IT infrastructure program for businesses, whether large or small, and includes change management scenarios and how to approach daily business security issues from an IT perspective. Much of the challenge of IT security remains the fundamental fact that management does not see it as a profit center and as long as there has been no reported breach there is clearly nothing to worry about. With this as a starting point, you investigate how best to explore the myriad options for network security.
Reg# 352281
Fee: $950
Online
April 3–June 5
Enrollment limited; early enrollment advised.
Enrollment deadline: April 10.
No refund after April 16.
Gary Sevelin, MS, information systems security officer, U.S. Department of Defense, U.S. Special Operation Command

COM SCI X 420.8
Information System Security Lab (Offensive Tools)
4.0 units 3.6 ceus
This course provides a hands-on application of common tools used during penetration assessments and of the specialized security tools available. It also provides an opportunity to create a custom tool or extension to a known tool. Beginning with an overview of the offensive hacking methodology and how to create a functioning IT infrastructure program for businesses, whether large or small, and includes change management scenarios and how to approach daily business security issues from an IT perspective. Much of the challenge of IT security remains the fundamental fact that management does not see it as a profit center and as long as there has been no reported breach there is clearly nothing to worry about. With this as a starting point, you investigate how best to explore the myriad options for network security.
Reg# 352236
Fee: $950
Online
April 3–June 5
Enrollment limited; early enrollment advised.
Enrollment deadline: April 10.
No refund after April 16.
Kevin Cardwell, president, CESI

Database Management

For related courses see page 101.
COM SCI X 414.61
**Introduction to SQL**

**4.0 units 3.6 ceus**

Structured Query Language (SQL) is an American National Standards Institute (ANSI) standard computer language for accessing and manipulating database systems. SQL works with such database programs as Microsoft Access and SQL Server, DB2, Informix, Oracle, and Sybase. Designed for individuals with little or no SQL experience, this hands-on course covers SQL syntax. Instruction presents an overview of SQL and how to use SQL statements to retrieve and update data in a database. Students begin by creating basic select statements and progress into the more advanced, detailed, and complex features of SQL, including using keywords such as SELECT, UPDATE, DELETE, INSERT, WHERE, and others. The course also covers table joins, sub-queries, if and case statements, cast and covert statements, and much more.

**Prerequisite(s):** Basic knowledge of Windows is recommended.

**Reg# 352459**

- **Fee:** $950
- **Online**
- **April 3–June 5**
- **Enrollment limited; early enrollment advised.**
- **Enrollment deadline: April 10.**
- **No refund after April 16.**

**Richard Patlan**, DBA/programmer analyst, Capital Programs, UCLA

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**COM SCI X 414.65**

**Advanced Structured Query Language (SQL) Syntax**

**4.0 units 3.6 ceus**

Structured Query Language (SQL) is an American National Standards Institute (ANSI) computer language for accessing and manipulating database systems. It works with such database programs as MS Access, DB2, Informix, MS SQL Server, Oracle, and Sybase. Designed for those with some knowledge of SQL, this hands-on course covers advanced SQL statements used in inserting, retrieving, and updating data in a database. Students learn how to use advanced features of SQL commands, including operators such as IN, AND, OR, BETWEEN, LIKE, DISTINCT, AGGREGATE, CONCAT, SUBSTRING, HAVING, and others. In addition, instruction covers advanced usage of table joins; sub-queries; if and case statements; and cast and convert statements, as well as stored procedures, triggers, functions, and cursors. You also learn how to stream text into a field, retrieve and send results in email, create search functions using full text index, and create pivot tables with hyperlinks.

**Prerequisite(s):** COM SCI X414.61 Intro to SQL.

**Reg# 352283**

- **Fee:** $950
- **Online**
- **April 5–June 7**
- **Enrollment limited; early enrollment advised.**
- **Enrollment deadline: April 12.**
- **No refund after April 19.**

**Fred Savage**, MBA, ACE (Authorized Crystal Engineer), MCT, MCSD, consultant

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**COM SCI X 414.735**

**Programming in C# For Visual Studio .NET Platform I**

**4.0 units 3.6 ceus**

This course provides new developers and application developers unfamiliar with the C# language the knowledge and skills to develop C# applications using the Microsoft .NET platform. Focusing on C# program structure, language syntax, and object-oriented concepts, students build projects using console applications, Windows forms, web forms, and XML web services. Upon completing the course, students should be able to list the major elements of .NET framework; analyze the basic structure of a C# program; and use the IDE to debug, compile, and run simple applications.

**Prerequisite(s):** Experience in other programming languages, such as Visual Basic, C, C++, and Java, is useful.

**Reg# 35224**

- **Fee:** $950
- **Classroom**
- **12 mtgs**
- **Thursday, 6:30-9:30pm, April 6–June 22**
- **UCLA Extension Bldg.: 10995 Le Conte Ave.**
- **Enrollment limited; early enrollment advised.**
- **Enrollment deadline: April 13.**
- **No refund after April 19.**

**Instructor to be announced**
COM SCI X 418.735A Programming in C# for Visual Studio.NET Platform II 4.0 units 3.6 cius
This project-oriented course covers intermediate-level topics in Microsoft application development within the context of building a complete client-server database application using a Microsoft SQL Server database and a Windows desktop client application. Students should already be familiar with Visual Studio and have some experience with the C# language. Students should be conversant with variable declaration, initialization and assignment, expressions, reference and value types, and conditional and looping constructs, and have a basic understanding of classes and interfaces and how they support inheritance and polymorphism. We look at how to structure a multiple-assembly Visual Studio solution to support domain-driven development of a line-of-business application and embark on development of a sample application, starting with development of the domain model classes and introducing unit testing, generic and collections, and LINQ. Students learn to design and build relational databases using Microsoft SQL Server and develop SQL queries for manipulating data, then develop a Data Access Layer for persisting domain model objects to the database using ADO.Net. Windows Presentation Foundation (WPF) is then introduced as Microsoft’s current user interface technology for implementing Windows desktop client applications. In parallel with the sample application, students each design and develop an application of their own choosing from scratch as their course project. 
Prerequisite(s): Students are assumed to have experience equivalent to the UCLA Extension course Programming in C# for Visual Studio.NET Platform I.
Reg# 352285 Fee: $950
❖ Online April 5-June 7 Enrollment limited; early enrollment advised. Enrollment deadline: April 12. No refund after April 18. Fred Savage, MBA, ACE (Authorized Crystal Engineer), MCIT, MCSD, consultant

Reg# 352668 Fee: $950
❖ Classroom 12 mtgs Thursday, 6:30-9:30pm, April 6-June 22 UCLA Extension Bldg.: 10995 Le Conte Ave. Enrollment limited; early enrollment advised. Enrollment deadline: April 13. No refund after April 19. Instructor to be announced

The Coding Boot Camp at UCLA Extension
Become a Web Developer in 12 Weeks
New full-time program starts April 3 at UCLA Extension Woodland Hills

Don’t miss out on UCLA Extension’s NEW three-month Coding Boot Camp where you can learn the skills to become a full-stack web developer in just 12 weeks. This program is for working professionals interested in web development or who are actively seeking a career change or advancement.

Monday-Friday, 10am-3pm

Did you know that web development is one of the fastest-growing careers in today’s economy? The Bureau of Labor Statistics projects that web development will grow 20% by 2022. Web developers can earn a median salary of $65,000 and up to $100,000 per year.

The Coding Boot Camp will cover:
• Skills to be a full stack developer, including proficiency in frontend and backend development
• HTML, CSS, JavaScript, jQuery, Node, Java, and more
• Career coaching, and an active employer network in collaboration with TES

Register least 30 days before course start date and save up to 10% during early enrollment. Use discount code: EARLY

For More Information codingbootcamp@uclaextension.edu | (310) 955-4093 codingbootcamp.uclaextension.edu/full-time

Reg# 352651 Fee: $950
❖ Classroom 5 mtgs Saturday, 9:30am-4:30pm, April 22-May 20 UCLA Extension Bldg.: 10995 Le Conte Ave. Enrollment limited; early enrollment advised. Enrollment deadline: April 29. No refund after May 5.

David Henson, BA, Microsoft-Certified Trainer and system engineer, Certified Networks, Inc.; recipient, UCLA Extension Distinguished Instructor Award, 2010.
COM SCI X 418.39
Introduction to PHP with MySQL
4.0 units  3.6 ceus
This course provides an introduction to the fundamentals of the PHP scripting language that currently controls the presentation of web pages based on user input and data stored on a server. Students learn the basics of HTML using the MySQL database; how to create, access, and manipulate MySQL data from within a PHP program; and how to set up and use HTML forms to gather input from a web page user. Special topics include file handling, how to handle data in a grid-like (spreadsheet) format in a web page, PHP security, and a brief overview of using AJAX with PHP.

Reg# 352976
Fee: $950
- Online
April 5–June 7
Enrollment limited; early enrollment advised.
Enrollment deadline: April 12.
No refund after April 18.
Prentiss Knowlton, PhD, senior systems engineer, QSS

COM SCI X 418.104B
Python Programming I
4.0 units  3.6 ceus
Python is a high-level, dynamically typed, and portable programming language that excels when the cost of software development outweighs performance considerations, which is quite often in practice. Python covers similar territory as Perl and is similarly an open-source product, but it is considered easier to learn, write, and maintain. NASA, Industrial Light and Magic (ILM), Honeywell, and many other companies all use Python to handle jobs for which classical programming languages are not well-suited. This course introduces Python and its libraries as a general programming environment, then applies Python to real-world problems, such as website development, database access, text processing, XML editing, GUI development, and system administration.

Prerequisite(s): X 414.20 Fundamentals of Software Development, programming experience, or consent of instructor.

Reg# 353029
Fee: $950
- Online
April 5–June 7
Enrollment limited; early enrollment advised.
Enrollment deadline: April 12.
No refund after April 18.
Amir Hallajpour, software consultant, AITech Defense Systems

COM SCI X 418.735B
C++ Fundamentals for Visual Studio .NET
4.0 units  3.6 ceus
(Includes instructor’s materials and instructions on obtaining Windows 7 operating system.)
This course provides new developers, as well as application developers unfamiliar with the C++ language, with the knowledge and skills to develop C++ applications using the Microsoft .NET platform. Focusing on C++ program structure, language syntax, and object-oriented concepts, students build projects using console applications, Windows forms, dialog boxes, controls, and various graphical output techniques. Upon completing the course, students should be able to list the major elements of .NET framework; analyze the basic structure of a C++ program; and use the IDE to debug, compile, and run simple applications. Beyond user-friendly design, this course introduces field-tested, programmer-friendly, and customer-friendly techniques.

Reg# 352987
Fee: $950
- Online
April 5–June 7
Enrollment limited; early enrollment advised.
Enrollment deadline: April 12.
No refund after April 18.
Prentiss Knowlton, PhD, senior systems engineer, QSS

COM SCI X 418.737G
Data Structures and Design Patterns in C#
4.0 units  3.6 ceus
Design patterns are solutions to commonly encountered programming challenges. In this practical, hands-on course, students learn how to write C# applications using the most common design patterns. Emphasis is on the design and interaction of objects and building communication platforms embracing elegant, reusable, object-oriented technology. The course work is structured as a series of modules focusing on a particular design pattern. Each module also presents the UML (Unified Modeling Language) diagram illustrating how the classes interact. In subsequent labs, students discover how to implement working example programs that use the pattern under consideration.

Prerequisite(s): X 418.735A Programming in C# for Visual Studio .NET Platform II, or consent of instructor.

Reg# 352878
Fee: $950
- Online
April 5–June 7
Enrollment limited; early enrollment advised.
Enrollment deadline: April 12.
No refund after April 18.
Scott Robertson, MS, consultant/MCS/DS, Oak Park Microsystems, Inc.

COM SCI X 418.88B
JavaScript
4.0 units  3.6 ceus
Web users today expect sites to provide dynamic user interfaces, fast response times, and advanced features. JavaScript delivers that, which is why JavaScript has become such an important programming language for web developers. This course benefits anyone who is involved with web development, including server-side programmers who use ASP, JSP, PHP, or other languages, and web designers who use HTML and CSS and would like to build rich Internet applications (RIAs) with JavaScript and DOM scripting. Students learn HTML and CSS (Cascading Style Sheets) skills and learn how to use Firefox and its free Firebug extension to debug JavaScript applications. Additionally, students learn how to use arrays, functions, regular expressions, exception handling, libraries, and user-defined objects.
The course provides an introduction to closures, recursion, prototype-based inheritance, extension of built-in JavaScript objects, and an object-oriented approach to data validation that students can use as a model for their own applications. Students also learn how to use DOM Scripting to build applications that run slide shows, do image rollovers, use dropdown menus, rotate headlines, sort the data in tables, and provide animation. The course also covers how to use the objects, methods, and properties of a web browser and how to use third-party libraries, such as jQuery and Dojo.

Reg# 353243
Fee: $950
- Online
April 5–June 7
Enrollment limited; early enrollment advised.
Enrollment deadline: April 12.
No refund after April 18.
Prentiss Knowlton, PhD, senior systems engineer, QSS

Reg# 353021
Fee: $950
- Hybrid
5 mths
Online sessions
Saturday, 9am-12:30pm, April 8–June 3
Extension Gayley Center: 1145 Gayley Ave.
Enrollment deadline: April 15.
No refund after April 21.
Rashed Jafab, PhD, program manager, Agile transformation, Teledyne Corporation

Data Science Courses

Data Science, also known as Big Data, is a rapidly growing field. Enormous amounts of data are created to track the online behavior of social media users, patient data, purchasing habits of shoppers, or financial statistics, among others. Data Scientists play a key role in crunching the data, using mathematical algorithms to analyze and visualize the data, and making decisions.

Data Science courses address the key knowledge domains in Big Data, including data exploration, machine learning, predictive analytics, prediction, and visualization. You’ll learn languages and tools such as Hadoop, NoSQL, and R, and Tableau.

- X 450.1 Introduction to Data Science
- X 450.2 Exploratory Data Analysis and Visualization
- X 450.3 Hadoop and Managing Big Data
- X 450.4 Machine Learning Using R
- X 450.5 Big Data Analytics Information Management
- X 450.6 Data Governance
- X 450.7 Predictive Analytics
+ Offered this quarter.

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/computers
Embedded Software

Explore the latest embedded technologies, gain proficiency in programming logic design and analysis, learn to program embedded devices, and increase your understanding of real-time operating systems in our new three-course (12-unit) series.

X 457.55 Embedded Software I
  + X 457.55A Embedded Software II
  * X 457.55B Using FPGAs in Embedded Systems

Prerequisite(s):
- Familiarity with KEIL Microvision Integrated Development Environment (IDE).
- Ability to read/write software in C language and some object serialization. Students learn to
- Develop complex GUI interfaces using Swing; connect to a database and execute SQL queries; and write efficient and maintainable Java code.
- Knowledge of Java programming.
- Understanding of basic computer science concepts such as data structures, algorithms, and object-oriented programming.
- Experience with development environments like Eclipse or IntelliJ IDEA.
- Basic understanding of database concepts such as SQL and relational databases.
- Familiarity with version control systems like Git.

Java Programming Series

Learn to use Java to develop software for web services, mobile applications, and distributed enterprise systems in this new 3-course (12-unit) series.

+ X 418.85A Java Programming I
+ X 418.100 Java Programming II
X 418.85C Java Programming III
X 418.104F Google Android Development

+ Offered this quarter.

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/computers

COM SCI X 450.4 Machine Learning Using R

4.0 units 3.6 ceus

This course focuses on machine learning, which is concerned with algorithms that transform information into actionable intelligence. This field is made possible due to the rapid and simultaneous evolution of available data, statistical methods, and computing power. The machine learning language, R, is a cross-platform, zero-cost statistical programming environment, which offers a powerful but easy-to-learn set of tools that can assist students with finding data insights. Students learn the origins and practical applications of machine learning, how knowledge is defined and represented by computers, and the basic concepts that differentiate machine learning approaches. Machine learning algorithms can be divided into two main groups: supervised learners that are used to construct predictive models, and unsupervised learners that are used to build descriptive models. Students learn the classification, numeric predictor, pattern detection and clustering algorithms. Students learn to train a model, evaluate its performance, and improve its performance. Algorithm uses are illustrated with real-world cases, such as breast cancer diagnosis, spam filtering, identifying bank loan risk, predicting medical expenses, estimating wine quality, identifying groceries frequently purchased together, and finding teen market segments. By the end of this course, successful participants will be able to collect data required for the machine learning algorithm; explore and prepare the data for the machine learning algorithm; select the appropriate machine learning algorithm for the data and proposed task; train a model on the data; evaluate the model performance; and improve the model performance.

Prerequisite(s):
- Prior knowledge in R, X450.1 Introduction to Data Science, or consent of instructor.

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/computers

COM SCI X 418.104F Google Android Development

4.0 units 3.6 ceus

Android Development

Examines the development of an Android application for a mobile device using the Android programming language. The course covers the concepts and tools necessary to develop and test Android applications. Students will learn about the Android development environment, the Android Developer Tools, and the Android Studio Integrated Development Environment (IDE). They will also learn about the Android architecture, Android components, Android resources, Android layouts, Android programming, Android views, Android user interfaces, Android storage, Android testing, and Android deployment.

Prerequisite(s):
- Prior knowledge in X418.85A Java Programming I or consent of instructor.
- Basic knowledge of Java programming.
- Understanding of basic computer science concepts such as data structures, algorithms, and object-oriented programming.
- Experience with development environments like Eclipse or IntelliJ IDEA.
- Basic understanding of database concepts such as SQL and relational databases.
- Familiarity with version control systems like Git.
- Knowledge of Android programming.

Java Programming

COM SCI X 418.100 Java Programming II

4.0 units 3.6 ceus

Java Programming II examines more advanced object-oriented programming, collections and generics, graphical user interface design, threading and asynchronous processing, and files, streams, database usage, and object serialization. Students learn to develop platform/framework neutral applications for desktop, Web, and mobile situations. On course completion, students are able to choose the appropriate Java technology to solve their business problem; develop complex GUI interfaces using Swing; connect to a database and execute SQL queries; and write efficient and maintainable Java code.

Prerequisite(s):
- Completion of X418.85A Java Programming I.
- Basic knowledge of Java programming.
- Understanding of basic computer science concepts such as data structures, algorithms, and object-oriented programming.
- Experience with development environments like Eclipse or IntelliJ IDEA.
- Basic understanding of database concepts such as SQL and relational databases.
- Familiarity with version control systems like Git.
- Knowledge of Java programming.

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/computers

Course Icons

Provide Information
At-a-Glance

- ONLINE COURSE
  - Technical requirements, page 4
- HYBRID COURSE, page 4
- WEB-ENHANCED COURSE, page 4
- ON-GROUND COURSE
- TEXTBOOK REQUIRED
  - Visit our website for textbook information.
- UC CREDIT
  - May be transferable to other colleges and universities, page 11.
Web Technology

Learn the content, design, technology, and management of websites in this 16-unit sequential program.

**Prerequisite:** X 418.102AB HTML and CSS

**Required Courses**

- **X 418.51 Relational Database Management**
- **X 418.102A Website Construction with Adobe Software: Dreamweaver, Flash, and Fireworks**
- **X 418.13 Web Technology Fundamentals**
- **X 418.62A Introduction to Adobe Dreamweaver**

In addition, choose 8 units of electives. Any X 400-level course in information systems offered by UCLA Extension may serve as an elective toward this certificate upon approval by the department.

Offered this quarter.

For Complete Details
uclaextension.edu/et

Mobile Application Development Series

Learn how to program applications for mobile devices, including Apple iPad and iPhone, and Google Android systems. Choose 3 courses from the list below to complete the series.

- **X 418.104D iPhone and iPad Application Programming**
- **X 418.104F Google Android Development**
- **X 418.104G Intermediate Google Android Development**

+Offered this quarter.

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/computers

Mobile Application Development

**COM SCI X 418.104F Google Android Development**

4.0 units 3.6 ceus

Android is a software platform for mobile devices widely used in smartphones and tablets. Android is based on the Linux kernel and currently developed by Google. This course is a hands-on introduction to writing applications for Android smartphones and tablets. The course provides developers unfamiliar with the Android application development environment the knowledge and skills to develop Android applications using the Android SDK and Android Studio development platform. The course will focus on basic Android program structure, language syntax, and object-oriented concepts. Students will build Android applications, learning how to create user interfaces, handle data, use Android library code, and debug programs.

**Prerequisite(s):** Experience in Java programming and the use of Android Studio or consent of instructor.

**Reg# 352266**

- **Fee:** $950

  - Online
  - April 6-June 7

Enrollment limited; early enrollment advised.

Enrollment deadline: April 12.

No refund after April 18.

Laurie Lasslo, PhD, Genetics; MS, Computer Science; senior software engineer, Hewlett-Packard.

**COM SCI X 418.104D iPhone and iPad Application Programming**

4.0 units 3.6 ceus

iPhones and iPads are everywhere. Learn the fundamentals for developing on this popular platform. Instruction provides an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad platforms. Beginning with fundamental objects, such as buttons and text fields, students then learn about views, view controllers, navigation controllers, and other complex subjects. Students also learn about Quartz graphics, multimedia, mapping, and GPS functionality, as well as using the accelerometer. The course also introduces the newest APIs from the latest production SDK from Apple.

**Prerequisite(s):** Knowledge of at least one object-oriented programming language: C/C++, C#, Java, or Objective-C.

**Reg# 352896**

- **Fee:** $950

  - Classroom
  - 10 mtgs

  Wednesday, 6:30-10pm, April 19–June 21
  Extension Lindbrook Center: 10920 Lindbrook Dr.

All assignments require an Apple Macintosh computer. Students may wish to bring a laptop to class.

Enrollment limited; early enrollment advised.

Enrollment deadline: April 26.

No refund after May 2.

David Henson, BA, Microsoft-Certified Trainer and system engineer, Certified Networks, Inc.; recipient, UCLA Extension Distinguished Instructor Award, 2010

**Online Courses**

Now you can earn continuing education or academic credit from UCLA Extension—anytime, anywhere. Simply take a UCLA Extension online course.

To find online courses, look for this icon: 📚

Like our classroom courses, UCLA Extension online courses let you advance your professional development, work toward a certificate, acquire skills needed for a career change, or simply explore your creative side.

For more information about online study see page 4.

Technical Management

For a complete certificate description, visit uclaxextension.edu/techmanagement. For more information, email et@uclaextension.edu or call (310) 825-4100.

**Advanced Project Management**

**MGMT X 443.18A Executive Communications for Project Managers**

4.0 units

Effective communication is the single most important element of effective leadership. And the ability to effectively communicate with executives is one of the most critical factors in career and professional advancement. Communication is a multidimensional discipline, and effective executive communication is a dynamic integration of science and art. This highly interactive and experiential course uncovers the multiple dimensions of executive communications: written, spoken, and, perhaps most important, the silent communication of body language, that effective leaders use to influence and inspire. This course is designed to equip participants with actionable insights, techniques, and the opportunity to apply the elements of executive communication to help strategically communicate their ideas and influence executives and decision makers.

Students will learn how effective executives communicate and how to apply these communication techniques to their management styles to learn how to effectively communicate with executives.

**Reg# 352349**

- **Fee:** $950

  - Classroom
  - 12 mtgs

  Thursday, 6:30-9:30pm, April 6–June 22
  Extension Gayley Center: 1145 Gayley Ave. Internet access required to retrieve course materials.

Required course in Advanced Project Management Sequential Program; elective in Project Management Certificate.

Enrollment deadline: April 12, 2016.

No refund after April 16, 2016.

Gurpreet Dhillon, JD, MSIS, senior associate, Point B Management Consultants
**Contract Management**

**MGMT X 408.5 Negotiation Principles and Techniques**

4.0 units

This course provides a framework for analyzing how to negotiate a contract and dealing with the goals of the other party. Mock negotiations illustrate the principles and skills needed to achieve planned objectives. Topics include human behavior theories and their applications in negotiation; as well as the negotiation; plus techniques, tactics, strategies, and countermeasures.

**Reg# 352157**

Fee: $950

Online April 3–June 25

Required core course in Contract Management Certificate. Enrollment limited; early enrollment advised. No refund after April 16.

Vincent Padilla, JD, contracts manager, OEM for Moog, Inc.

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**Highlighted Spring Courses**

- **X 443.18A Executive Communications for Project Managers**
- **X 408.7 Types, Application, and Structuring of Contracts (Now available in DTLA)**
- **X 418.24A Information Technology Management II (Now available in DTLA)**
- **X 443.1 Fundamentals of Project Management**
- **X 443.3 Managing Project Quality**

**For More Information**

et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/et

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**Technical Management**

**Certificates**

Accelerate your projects and career with our Project and Technical Management courses taught by practicing experts in their fields. Plus, all courses and instructors are approved by UCLA’s Anderson School of Management.

Complete your certificate courses entirely online. Select courses are also offered in Westwood, Downtown Los Angeles, and Woodland Hills.

**Certificates**

- Contract Management
- Government Cost Estimating and Pricing
- Information Technology Management
- Project Management
- Advanced Project Management
- Supply Chain Management

**Also of Interest**

- 5-day Technical Management Program

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**Government Cost Estimating & Pricing**

**MGMT X 442.11 Government Acquisition Process**

4.0 units

This course covers the principles and current trends of contracting with the federal government as a prime- or subcontractor with emphasis on applying the Federal Acquisition Regulations (FAR) to daily problems. Through lectures, case studies, and interactive exercises, students obtain the information needed to understand government procurement from formation to contract completion. The types of contracts used by the federal government and the application of each type to the statement work are explained with emphasis placed on Department of Defense contracting. Commercial contracting methods as compared with contracting under FAR, and key issues and their practical application in contracting are also analyzed.

**Reg# 352098**

Fee: $950

Online April 4–June 25


Marek Gwiazdowski, MBA, contracts manager, ThalesRaytheonSystems

Offered Entirely Online
Estimators, project managers, pricers, business managers, price analysts, auditors, and cost analysts from all industries benefit from this 6-course (24-unit) certificate, which covers all aspects of the cost proposal and evaluation cycles.

Required Courses
+ X 442.11 Government Acquisition Process
  X 442.12 Proposal Planning
  X 442.13 Principles of Cost Estimating
  X 442.14 Cost/Price Analysis
  X 442.15 Compliance
  X 442.16 Pricing and Proposal Development

Many of our courses satisfy professional continuing education requirements for the National Contract Management Association and the Institute for Supply Management certifications.
+ Offered this quarter.

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/et

Information Technology Management

MGMT X 418.24 Information Technology Management I

4.0 units
This course provides business skills and practical expertise for managing the changing demands of contemporary information technology (IT) organizations. Instruction covers business, technical, and management principles associated with managing IT organizations. Topics include IT disciplines, infrastructure management; IT metrics; budgets; outsourcing; vendors; and staffing and skill management. Other topics include the roles and responsibilities of IT units; design of efficient organizational structure; alignment with the company’s goals and objectives; business aspects of developing and maintaining IT policies; procedures for selecting the proper technologies for the organization; and the pros and cons of “buy versus build” decisions. Learn methods for developing and implementing strategic IT plans to reach business objectives and to gain a competitive edge, as well as methods for developing gap analysis for IT applications, computing resources, IT infrastructure, information architecture, and staffing and skill levels. Instruction also explores emerging IT trends and addresses implementation issues related to the impacted businesses and technologies.

Prerequisite(s): Background in the IT field. Must be taken before IT Management II.

Reg# 352183
Fee: $950
Online
April 5–June 25
Required course in Information Technology Management Certificate. Students must take IT Management I before IT Management II.
May be used as a substitute elective for Information Systems Certificate.
Enrollment limited; early enrollment advised.
Enrollment deadline: April 9
No refund after April 16.
John Alvertos MBA, PMP, ITIL, CISSP

Elective Courses
In addition, choose 2 elective courses (8 units).

Commercial Track
+ X 408.66 Commercial Contracts: Bidding and Financial Management
+ X 408.64 Technology Contracting

Government Track
+ X 408.65 Government Contracts: Bidding and Financial Management
+ X 408.4 Legal Aspects of Government Contracts and Subcontracts
+ X 445.7 Federal Acquisition Regulations (FAR)
+ Offered this quarter.

Contract Management Certificate

Offered Entirely Online
Learn the skills to advance your career in Contract Management in this 6-course (24-unit) certificate. Students can choose electives in commercial or government fields to strengthen their understanding of contracting processes.

This certificate is for new and experienced contract managers in both the public and private sectors. Our highly experienced instructors share their expert advice in contract law, negotiation, international business contracting, bidding, financial management, and technology contracting.
The 2014 NCMA Salary Survey reports the average salary for contract managers is $97,000. Managers with certifications can earn an average of about $124,000, while the top 11% of executives earn more than $150,000.
Visit uclaextension.edu/techmanagement for scheduling and fees.

This program is offered in cooperation with the Los Angeles-South Bay Chapter of the National Contract Management Association (NCMA). Many of the courses satisfy professional continuing education requirements for NCMA and Institute of Supply Management certifications.

Required Core Courses (4):
+ X 408.5 Negotiation Principles and Techniques
+ X 408.7 Types, Applications, and Structuring of Contracts
+ X 445.5 Legal Aspects of Supply Chain and Commercial Contracts and Subcontracts
+ X 408.61 International Business Contracting

Reg# 352123
Fee: $950
Classroom
12 mtgs
Wednesday, 6:30-9:30pm, April 5–June 21
Extension Lindbrook Center: 10920 Lindbrook Dr.
Required course in Information Technology Management Certificate. Must be taken before Information Technology Management II.
May be used as a substitute elective for Information Systems Certificate.
Enrollment limited; early enrollment advised.
Visitors not permitted.
Enrollment deadline: April 11
No refund after April 18.
Raffi Simonian MBA, UCLA, senior technical project manager/senior business analyst, Office for Research Information Systems (ORIS)

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/et
Management Certificate

Information Technology Management Certificate

IT professionals and managers—learn to manage your resources more effectively, implement new technologies, and efficiently use existing technology to maximize IT investments. Complete this 8 course (32-unit) certificate on campus or entirely online.

Required Courses

- X 418.24 Information Technology Management I
- X 418.24A Information Technology Management II
- X 418.26 Information Technology Project Management
- X 418.27B Business Cases for IT Projects and Investments

X 418.27C Information Technology Finance

In addition, choose 3 elective courses (12 units).

Sample of Electives Offered for Spring

+ XGMNT X 443.1 Fundamentals of Project Management
+ XGMNT X 443.4 Leadership and the Human Element in Project Management
+ CMPS CI X 420.1 Fundamentals of Information Systems Security
+ XGMNT X 443.5 Managing Outsourced Projects

Visit uclaextension.edu/et for a full list of electives.

+ Offered this quarter.

For More Information

et@uclaextension.edu | (310) 825-4100

Technical Management Program

Sunday-Friday, March 26-31 at UCLA Extension

The Technical Management Program (TMP) is an intensive week-long program that helps supervisors of all skill levels improve their managerial and leadership skills. The program is specifically geared to address the challenges of management and leadership in technical fields.

You’ll learn to:

- Sharpen your leadership skills
- Improve your interpersonal interactions
- Stay up-to-date on the latest business trends and paradigms
- Develop a set of tools to help solve problems, plan strategies, and motivate colleagues
- Network with people across a diverse range of industries

“I’ve had leadership opportunities at Blizzard Entertainment prior to my attendance at TMP, but I hadn’t realized the importance of leadership development until I attended TMP. Since then, I’ve been seeking out ways to further my skill set, and find ways we can develop leaders at Blizzard.”

Frank Pearce, Chief Development Officer and Co-founder, Blizzard Entertainment

MGMT X 418.24A

Information Technology Management II

4.0 units

Successful IT professionals and managers require skills in business, management, finance, and project management. This course provides students with the necessary knowledge and skills to effectively manage IT departments and successfully communicate with technical staff, business customers, vendors, and different levels of management. Topics include strategic and short-term IT planning; application development and management; infrastructure management; portfolio management; staffing and skill levels; vendor and contract management; outsourcing; IT metrics; change management; IT governance, and customer service. The course also provides a review of IT project management, budgets, IT benchmarking, business case development, and IT management best practices.

Prerequisite(s): IT Management I. Two years of IT experience or consent of instructor.

Reg# 352203

Fee: $950

❖ Classroom

11 mtgs

Monday, 6:30-9:30pm, April 3–June 19

1010 Westwood Center: 1010 Westwood Blvd.

Required course in Information Technology Management Certificate. May be used as a substitute elective for Information Systems Certificate Programs. Enrollment limited to 25 students.

Enrollment deadline: April 9.

No refund after April 16.

Raffi Simonian, MBA, UCLA, senior technical project manager/senior business analyst, Office for Research Information Systems (ORIS)

Reg# 352205

Fee: $950

❖ Classroom

10 mtgs

Wednesday, 6:30–9:30pm, April 19–June 21

UCLA Extension DTLA: 261 S Figueroa St.

Required course in Information Technology Management Certificate. May be used as a substitute elective for Information Systems Certificate Programs. Enrollment limited to 25 students.

Enrollment deadline: April 25.

No refund after May 3.

Alex Azmi, DPA, PMP, PE, founder, CITM; recipient, UCLA Extension Distinguished Instructor Award, 2013.

MGMT X 418.26

Information Technology Project Management

4.0 units

This course covers the four major aspects of information technology (IT) project management: technologies, people, organizations, and procedures. Topics include project justification; planning; scheduling; budgeting; identifying and managing risks; reporting, controlling, and closing projects; project management tools, such as work breakdown structure, critical path, and earned value analysis; and Gantt and PERT charts. This course discusses IT-specific project management System Development Life Cycles (SDLC), as well as addresses essential project management-related topics, such as scope creep, project communications, expectation management, team management, and defining and managing project resources. Instruction presents portfolio management, business cases, and IT governance as well as the various project management software on the market, including Microsoft Project. The course includes hands-on individual and group projects, and covers the major project management processes outlined by PMI’s A Guide to the Project Management Body of Knowledge (5th ed.).

Prerequisite(s): Background in IT field or two years of management experience; familiarity with and access to the Internet and some productivity software, including Word, Excel, and PowerPoint.

For More Information

tmp@uclaextension.edu | (310) 825-3858 | uclaextension.edu/TMP
Spring Quarter Highlights

Calendar of Events
For upcoming events of special interest, including free open houses, see page 1.

New Courses for Spring
Explore one or more of our exciting new courses. For a complete list of new summer courses, see page 5.

Online Courses
Online courses provide a convenient and flexible alternative to classroom instruction. For more information, see page 4.

Project Management

MGMT X 443.1 Fundamentals of Project Management
4.0 units
36.0 Hours Professional Development Units (PDUs) for Project Management
This course integrates project management theory with practical approaches to establish a fundamental knowledge base to use in a contemporary dynamic business environment. Instruction explores project management concepts from planning and selection through all aspects of the project life cycle. Students gain practical techniques to organize and control non-routine activities to ensure successful project outcomes.

Reg# 352191
Fee: $950
- Online
April 3–June 25
Required course in Project Management Certificate. Enrollment limited; early enrollment advised.
Enrollment deadline: April 9.
No refund after April 16.
Robert Stone, PMP, executive director, The Larston Group

Reg# 352210
Fee: $950
- Classroom
12 mtgs
Monday, 6:30-9:30pm, April 3–June 26
UCLA Extension DTLA: 261 S Figueroa St.
Required course in Project Management Certificate. Enrollment limited to 30; early enrollment advised.
Visitors not permitted.
Enrollment deadline: April 9.
No refund after April 16.
Artin Mytrichian, MISM, MPM, PMP, project manager, MedMedia Group

Reg# 352227
Fee: $950
- Online
April 3–June 25
Required course in Project Management Certificate. Enrollment limited; early enrollment advised.
Enrollment deadline: April 9.
No refund after April 16.
Robert Stone, PMP, executive director, The Larston Group

Reg# 352237
Fee: $950
- Online
April 3–June 25
Required course in Project Management Certificate. Enrollment limited; early enrollment advised.
Visitors not permitted.
Enrollment deadline: April 9.
No refund after April 16.
Robert Stone, PMP, executive director, The Larston Group

Reg# 352241
Fee: $950
- Classroom
12 mtgs
Wednesday, 6:30-9:30pm, April 5–June 21
Extension Gayley Center: 1145 Gayley Ave.
Required course in Project Management Certificate. Enrollment limited; early enrollment advised.
Visitors not permitted.
Enrollment deadline: April 11.
No refund after April 18.
Bill Hackenberg, MBA, PMP, CSIM, CSPO, CSQA; founder, ExecutiveToolShed.com

Reg# 352240
Fee: $950
- Classroom
12 mtgs
Thursday, 6:30-9:30pm, April 6–June 22
Extension Lindbrook Center: 10820 Lindbrook Dr.
Required course in Project Management Certificate. Enrollment limited to 25; early enrollment advised.
Visitors not permitted.
Enrollment deadline: April 12.
No refund after April 19.
Artin Mytrichian, MISM, MPM, PMP, project manager, MedMedia Group

Required Courses

+ X 443.1 Fundamentals of Project Management
+ X 443.17 Project Earned Value, Procurement, and Cost Management
+ X 443.2 Risk Analysis and Project Management
+ X 443.3 Managing Project Quality
+ X 443.4 Leadership and the Human Element in Project Management

Benefits of Certificate

UCLA Extension is a Registered Education Provider with PMI and graduates of the certificate program are fully prepared to take the rigorous Project Management Professional (PMP) Exam to earn internationally recognized PMP certification.

According to the Project Management Institute’s 2015 report, “Earning Power: Project Management Salary Survey,” the median annual salary of a project manager is $108,000 in the U.S. The PMI survey also found that the median annual salary of project managers in the U.S. jumps 22% from $91,000 for those without a PMP certificate to $111,000 for those with the certificate.

Want to learn more?

Join us for a free online information session April 17–29.

Gain a comprehensive overview of Project Management, and learn how UCLA Extension courses prepare you to enter the field, explore career opportunities, and obtain or maintain your PMP Certification.

Enroll today!

Get a Head Start on a Master of Science in Project Management

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For Complete Details

gouwp.com/ucla

+ Offered this quarter.
MGMT X 443.1
Project Earned Value, Procurement, and Cost Management
4.0 units
36.0 Hours Professional Development Units (PDUs) for Project Management
The primary goals for any project are performance and quality, cost management, and schedule compliance—referred to as the triple constraint. This course introduces three essential project management core concepts: earned value management (EVM), cost management, and procurement (supplier relations)—to project budgets and assure project financial goals.

The primary goals for any project are performance and cost. Topics include EVM metrics; strategies to effectively involve suppliers in projects, and financial controls of the project. Students learn analytical methods for evaluating the selection of projects, the development of project cost estimates, analysis of the financial costs and benefits of projects, and the financial control of the project. Topics include project estimating, project financial analysis, project simulation, project risk analysis and management, project budgeting, and cost/schedule integration. The course provides a methodology for a systematic approach to risk management and discussion of project risk management in the context of the project management task as a whole.

Prerequisite(s): X 443.1 Fundamentals of Project Management or consent of instructor.

Reg# 352272
Fee: $950
Classroom
12 mtgs
Monday, 6:30-9:30pm, April 3-June 26
UCLA Extension DTLA: 261 S Figueroa St.
Required course in Project Management Certificate. Enrollment limited; early enrollment advised. Enrollment deadline: April 9. No refund after April 16. Instructor will provide information regarding books during first week.

Don Kim, PMP, senior project manager, Project.com

Reg# 352225
Fee: $950
Classroom
12 mtgs
Monday, 6:30-9:30pm, April 4-June 20
UCLA Extension DTLA: 261 S Figueroa St.
Required course in Project Management Certificate. Enrollment limited; early enrollment advised. Enrollment deadline: April 9. No refund after April 16. Instructor will provide information for Course Reader in the first week of class.

Tony Swain, DBA, MBA, PMP, principal, Tony Swain & Associates

Reg# 352274
Fee: $950
Classroom
12 mtgs
Wednesday, 6:30-9:30pm, April 5-June 21
Extension Gayley Center: 1145 Gayley Ave.

Don Kim, PMP, senior project manager, Project.com

Reg# 352276
Fee: $950
Online
April 5-June 25
Required course in Project Management Certificate. Enrollment limited to 35; early enrollment advised. Enrollment deadline: April 11. No refund after April 18.

Al Hirsch, managing director, CTARCo International

Reg# 352268
Fee: $950
Classroom
12 mtgs
Thursday, 6:30-9:30pm, April 6-June 22
Extension Lindbrook Center: 10920 Lindbrook Dr.
Required course in Project Management Certificate. Enrollment limited to 30; early enrollment advised. No refund after April 19.

David Nwachukwu, PE, PMP, communications engineer, Los Angeles World Airports

MGMT X 443.2
Risk Analysis and Project Management
4.0 units
36.0 Hours Professional Development Units (PDUs) for Project Management
Risk management is key in any project. This course helps project managers to understand and apply advanced tools and techniques for evaluating risk associated with various stages of the project life cycle. Students learn analytical methods for evaluating the selection of projects, the development of project cost estimates, analysis of the financial costs and benefits of projects, and the financial control of the project. Topics include project estimating, project financial analysis, project simulation, project risk analysis and management, project budgeting, and cost/schedule integration. The course provides a methodology for a systematic approach to risk management and discussion of project risk management in the context of the project management task as a whole.

Prerequisite(s): X 443.1 Fundamentals of Project Management or consent of instructor.

Reg# 352215
Fee: $950
Online
April 3-June 25

Al Hirsch, managing director, CTARCo International

Reg# 352265
Fee: $950
Classroom
12 mtgs
Tuesday, 6:30-9:30pm, April 4-June 20
UCLA Extension DTLA: 261 S Figueroa St.

Jonathan Woe, MPH, PMP, CITM, program manager, HealthCare IT

Reg# 352270
Fee: $950
Online
April 4-June 25

Al Hirsch, managing director, CTARCo International

Reg# 352268
Fee: $950
Classroom
12 mtgs
Tuesday, 6:30-9:30pm, April 4-June 20
UCLA Extension DTLA: 261 S Figueroa St.

John Sarakatsannis, MBA, PMP, professor of contract management, Defense Acquisition University, West Region

MGMT X 443.3
Managing Project Quality
4.0 units
Project managers and team members must manage project and product quality to meet customer requirements; and project objectives. This course discusses when and how to use a variety of quantitative tools for planning, assuring, and controlling quality. The techniques presented align to international standards, Six Sigma methods, and the philosophies of Deming, Juran, Crosby, et al.

Reg# 352226
Fee: $950
Online
April 3-June 25
Required course in Project Management Certificate. Enrollment limited to 30; early enrollment advised. Visitors not permitted. Enrollment deadline: April 9. No refund after April 16. No books need to be purchased for this course.

John Sarakatsannis, MBA, PMP, professor of contract management, Defense Acquisition University, West Region

Reg# 352228
Fee: $950
Classroom
12 mtgs
Monday, 6:30-9:30pm, April 3-June 19
Extension Lindbrook Center: 10920 Lindbrook Dr.

John Sarakatsannis, MBA, PMP, professor of contract management, Defense Acquisition University, West Region

Reg# 352517
Fee: $950
Classroom
12 mtgs
Tuesday, 6:30-9:30pm, April 4-June 20
Extension Woodland Hills: 21650 Onward Street Suite 200

Instructor to be announced

Reg# 352245
Fee: $950
Classroom
12 mtgs
Monday, 6:30-9:30pm, April 3-June 19
UCLA Extension DTLA: 261 S Figueroa St.

John Sarakatsannis, MBA, PMP, professor of contract management, Defense Acquisition University, West Region

MGMT X 443.4
Leadership and the Human Element in Project Management
4.0 units
36.0 Hours Professional Development Units (PDUs) for Project Management
Effective leadership skills are perhaps the greatest determinant of project success. Project managers must demonstrate leadership effectiveness throughout each phase of the project life cycle. Review and recognize specific leadership styles in the context of real-world examples. Participative assignments help both current and future project managers enhance their own leadership effectiveness. Course content covers project communication, motivation, conflict resolution, negotiation, stress management, and effective leadership in the project management context. Participants identify the leadership challenges unique to the project environment; identify their own leadership strengths and weaknesses; identify five conflict resolution modes and when to use them; and learn to differentiate between position power and personal power.

Reg# 352217
Fee: $950
Online
April 3-June 25

Ehsan Sakhhaee, PhD, founder, CEO, Inspirational Management, lecturer, The University of Sydney.

Reg# 352216
Fee: $950
Online
April 3-June 25

Margaret Meloni, MBA, PMP, president, Meloni Coaching Solutions; recipient, UCLA Extension Distinguished Instructor Award, 2012.

Reg# 352242
Fee: $950
Classroom
12 mtgs
Tuesday, 6:30-9:30pm, April 4-June 20
Extension Lindbrook Center: 10920 Lindbrook Dr.

Karen Van Kummer, PMP, MBA, CSM, consultant, Software Management Consultants, Inc. (SMCI)

Reg# 352244
Fee: $950
Classroom
12 mtgs
Thursday, 6:30-9:30pm, April 6-June 22
UCLA Extension DTLA: 261 S Figueroa St.

Instructor will provide book information in the first week of class.
MGMT X 443.5
Managing Outsourced Projects
4.0 units
36.0 Hours Professional Development Units (PDUs) for Project Management
Outsourcing has become a way of life in the 21st century. Much of the project work that used to be performed at domestic and foreign suppliers. Firms are transitioning from being "doers" of projects to "buyers" of project work. How can you be sure things are being done as you desire? This course is designed to help you increase your satisfaction levels with project outputs that enhance your effectiveness as a buyer and seller of products or services, especially for large contracts that include subcontractors and a supply chain of vendors. Instruction also covers decisions regarding make versus buy and the type of contract to use. Solicitation and source selection focuses on procurement and helps you understand the use of the statement of work, common solicitation documents, seller evaluation criteria, pricing, and contract law considerations. Additionally, the course covers the contract administration process, which addresses seller performance and payment on external procurements; and the closing process, which covers contract completion, termination, and disputes.
Prerequisite(s): X 443.1 Fundamentals of Project Management or consent of instructor.
Reg# 352159
Fee: $950
❖ Online
April 3-June 25
Elective course in Project Management, Information Technology Management, and Supply Chain Management Certificate.
Enrollment limited to 30; early enrollment advised. Enrollment deadline: April 9. No refund after April 16.

Vincent Padilla, JD, contracts manager, OEM for Moog, Inc.

MGMT X 443.6
Project Planning with Microsoft Project
4.0 units
36.0 Hours Professional Development Units (PDUs) for Project Management
Microsoft Project is one of the most widely recognized project management tools. Professionals across many industries have come to accept its output as a standard for project reporting. Despite its popularity, many people find Microsoft Project difficult to learn and to use effectively. This course reviews the practical skills needed to exploit the program's usefulness. You begin by reviewing the pre-work required to build a schedule and then progress through the planning, tracking, and closing phases of project scheduling. Participants learn to use the program to communicate important information about project schedules, including critical path, resource allocation, and budget performance (via earned-value metrics). Students who want to pursue the Microsoft Project certification gain valuable exposure to the skill competencies measured by Exam 77-178. Those not pursuing certification find this course assists the beginner, the pre-beginner, and the experienced scheduler.
Prerequisite(s): Proficiency in using computers with Windows operating system; working knowledge of MS Office also is helpful.
Reg# 352278
Fee: $975
❖ Classroom
12 mtgs
Wednesday, 6:30-9:30pm, April 5-June 21
UCLA Extension Bldg.: 10905 La Cienega Ave.
Latest version of MS Project Software is provided to students. Students need access to a MS Windows computer. Mac users will need a virtual Windows environment, such as Parallels. This approach requires a registered copy of Windows. Internet access required to retrieve course materials. Elective course in Project Management Certificate. Enrollment limited to 25; early enrollment advised. Visitors not permitted. Enrollment deadline: April 11.
No refund after April 18.

Supply Chain Management

Reg# 352280
Fee: $975
❖ Online
April 6-June 25
Latest version of MS Project Software is provided to students. Students need access to a MS Windows computer. Mac users will need a virtual Windows environment, such as Parallels. This approach requires a registered copy of Windows. Elective course in Project Management Certificate. Enrollment limited to 30; early enrollment advised. Enrollment deadline: April 12. No refund after April 19.
Information provided the first week of classes. Ebook and instructional video. No textbook.

Reg# 352143
Fee: $950
❖ Online
April 3-June 25
Required course in Supply Chain Management Certificate.
Enrollment limited; early enrollment advised. Enrollment deadline: April 9.
No refund after April 16.
Lee Schuh, JD, contracts and financial consultant; recipient, UCLA Extension Distinguished Instructor Award, 2007.

For More Information
et@uclaextension.edu | (310) 825-4100 | uclaextension.edu/et

Supply Chain Management Certificate

Offered Entirely Online

Acquire precise tools and practical knowledge to manage all aspects of supply chain management, including purchasing, logistics, inventory management, compliance, and outsourcing.

You may complete this 8-course (32-unit) certificate—offered in cooperation with the Los Angeles Chapter of the Institute for Supply Management (ISM-LA), and the California Association of Public Purchasing Officers (CAPPO). Use courses as continuing education hours to maintain all ISM certifications and to help prepare you for ISM exams.

The 2015 ISM Salary Survey shows the average salary for supply chain professionals to be about $102,000. Directors and VPs average $145,000 and $210,000 respectively, with top executives earning about $230,000.

Required Courses

+ X 445 Fundamentals of Supply Chain Management
+ X 445.4 Supply Chain Analysis and Compliance
+ X 445.5 Legal Aspects of Supply Chain and Commercial Contracts and Subcontracts
+ X 445.6 Principles and Practices of Negotiations
+ X 445.66 Technology and Cost Management in the Supply Chain
+ X 445.67 Logistics, Operations, Methods, and Systems

In addition, choose 2 elective courses (8 units).

+ X 408.4 Legal Aspects of Government Contracts and Subcontracts
+ X 443.5 Managing Outsourced Projects
+ X 445.1 Advanced Topics in Supply Chain Management
+ X 445.61 Global Sourcing
+ X 445.68 Supply Chain Inventory Management
+ X 445.7 Federal Acquisition Regulations (FAR)

For Complete Details
uclaextension.edu/et

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For Complete Details
gouwp.com/ucla

+Offered this quarter.
Web Development

Web Technology

COM SCI X 418.102AB
HTML and CSS
4.0 units  3.6 ceus
Any person who does web work needs to understand HTML (Hypertext Markup Language) and CSS (Cascading Style Sheets). Together they provide the foundation on which web pages are built. HTML labels types of information and CSS specifies how that information will look. Using step-by-step code-writing exercises, students learn how HTML and CSS work together to create responsive web pages, starting with the very basics up to the intermediate level. Topics include HTML5 tags and elements, links, forms, lists, images, and color. Also covered are page layout, properties, selectors, CSS3, media queries, menus, the box-model, specificity, the cascade, pseudo elements and classes, adding video, animation, JavaScript, and jQuery, as well as site deployment. Free software is used and there are no prerequisites.

Reg# 352292
Fee: $950
- Online
- April 5–June 7
- Enrollment limited; early enrollment advised.
- No refund after April 18.
- Dan Vaughan, BA, proprietary software instructor, technical writer, and usability specialist, Rhythm & Hues Studios

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Reg# 352135
Fee: $950
- Online
- April 5–June 7
- Required course in Supply Chain Management Certificate.
- Enrollment limited; early enrollment advised.
- No refund after April 16.
- Tony Swaim, DBA, MBA, PMP, principal, Tony Swaim & Associates

Prerequisite(s): X 445 Fundamentals of Supply Chain Management or consent of instructor.

UCLA Extension DTLA

Located at 261 S. Figueroa Street, our downtown center offers:

- Easy access to public transportation
- A diverse range of courses and professional certificate programs
- Evening and weekend classes

Invest in your career without the cross-town commute to Westwood.

For this quarter’s courses see page 8.