

Polytechnic University of Puerto Rico
Center of Professional Education and Training



*Continuing Education:
Because your professional
life should keep growing.*

Continuing Education
August-October 2003
www.pupr.edu

The Polytechnic University of Puerto Rico is an authorized provider of Continuing Education for Engineers and Land Surveyors, approved by the Professional School of Engineering and Land Surveying of Puerto Rico.

Every day in your profession there is a challenge: new equipment, materials, methods and procedures. New discoveries and advances in science and technology will never stop and you know it. Trying to ignore this is to fall in obsolescence: your professional career will stop growing and so will, your opportunities in life.

We know the importance and responsibility of keeping professionals in the vanguard, because we graduate hundredths every year. Aware of this, we have redesigned our **continuing education center**. We will be designing activities for architecture, business administration, engineering, land surveying and other subjects of main relevance for your professional development. Different methodologies, speakers and places...we will be reaching you, no matter where you live.

We are planning this in alliance with the CIAPR's Continuing Education office, and they already certified us as a continuing education provider for engineers and land surveyors. Therefore, you may feel the confidence that we know your continuing education needs. Every change or new information during the recertification cycle will be provided to you immediately.

Soon, we will be receiving IACET's certification as an authorized continuing education unit provider. IACET maintains a very prestigious position among continuing education and training institutions. They are the creator and custodian of the CEU's concept. Renamed organizations like the American Society of Civil Engineers and American Society of Mechanical Engineers are its members.

We will be continuously improving, updating and searching so you can receive excellence in continuing education. So, join us in this effort.

Cuahtémoc Godoy, P.E.

Associate Dean

School of Engineering and Land Surveying

Center for Professional Education and Training (CPET) Procedures and Guidelines






General Information

1. The CPET will be publishing four educational activities programs per year.
2. Each program will provide multiple choices that include technical courses and other areas of professional development.
3. Every activity description will specify all relevant details that the participant should know to make a right selection.
4. Participant may select as many activities as desire.

Registration

1. Spaces are limited, so we encourage you to reserve seats by enrolling as early as possible.
2. Registration may be done by telephone, e-mail, fax, mail or in our office*.
3. Methods of payment: check, credit cards (Visa, Master card, American Express).
4. Yes, we accept purchase orders from companies; it should be attached to the registration form and delivered to our office.
5. Registrations in the activity are possible, if spaces are still available.
6. Once the speaker has begun, the registration process will be closed.
7. If for some reason it is necessary to cancel an activity, participants will be notified immediately.

***Registration options:**

-  Call us! (787) 758-7915 or (787) 754-8000 ext. _____ and _____
-  Faxing your registration (787) 765-9207 or (787) _____
-  On-line www.pupr.edu- e-mail: lwattley@purpr.edu
-  By visiting our office located at: Mayorca Street #35 Hato Rey, PR 00919
-  Mailing your registration to:
Polytechnic University of Puerto Rico
Center for Professional Education and Training
PO Box 192017
San Juan, Puerto Rico 00919-2017

Once in the activity

1. If for some reason a participant has to leave the activity, he/she must indicate it to the CPET officer.
2. CIAPR and the State Board of Engineers and Land Surveying Examinations require us some evaluation processes. Therefore, is very important to complete the evaluation form and brief test that is included in the materials folder.
3. Participants should be present in the activity until the end to receive certification.
4. We will be planning different methodologies. Courses, for instance. This methodology require many sessions. So, if a participant should be absent of any course session, he has to call to the CPET office, to be excused by the instructor.
5. With two absences or more, the participant will not be able to receive certification.
6. At the end of the activity, participants will receive a certificate of attendance.

Cancellations

1. We will refund 80% of tuition in cancellations made seven days before the activity.
2. If cancellations have to be done within less than seven business days, prior to the activity, the participant may send a substitute from his organization. Otherwise, we will provide a credit memo to be used in future CPET activities within a nine-month period of the original activity date scheduled.
3. Please note that if the participant does not cancel, or does not attend the activity there will be no refund.

Continuing Education Program *
August – October 2003

For a complete description of each activity please turn to the page associated with each of the courses presented belows. Course schedules (date and time), location and cost are presented on page____ of this catalog. Detailed agendas for each course, as well as a brief biographical sketch for each course instructor(s) can be accessed through our internet home page. Please notice the URL address associated with each category of courses presented in the catalog.

Automation / Process Instrumentation and Control

PLC Programming

Civil Engineering/ Construction/ Construction Management

The Construction Inspector and the Contract: Legal Aspects
Land Surveying and Geotechnia in Construction
Quality Control in Asphalt Pavements
The New AIA General Conditions: "97 vs. "87
Pre-stressed Application on Concrete Structures
Design of Shear Walls for Earthquake Resistance
New Seismic Provisions in Building Structural Design
Earth Pressures and Retaining Structures
Management of Special Problems in Deep Foundations
Soil Compaction

Computer Science/ Computers Programming/ Engineering Software/ General Software

Basic AutoCad
Advanced AutoCad
Electronic Commerce and Web Information Systems
Project Management Techniques & MS Project
MatLab Management
Systems Simulation using ARENA
Data Analysis Using Statgraphics Plus for Window
Introduction to Statgraphics Plus for Windows
Design of Experiments with Statgraphics Plus for Windows

Electrical Engineering/ Communications and Networking

National Electrical Code/ Residence Application

Environmental Protection / Environmental Engineering

Environmental Site Assessment for Real Estate Transactions

Ergonomics/ Occupational Health and Safety

Overview of Ergonomics Principles and their Application in the Reduction of Musculoskeletal and Nerve Disorders
Occupational Safety and Health Topics

Pharmaceutical, Medical Devices and Biotech Manufacturing

Introduction to Tablet Press Technology

Industrial Engineering

Lean Manufacturing/Quality Improvement, Manufacturing, Philosophies and Techniques

Six Sigma: The New Quality Strategy
Military Std. Acceptance Sampling Plans
SPC: Design of Variables Control Charts
Applied Probability and Statistics
Continuous improvement workshop: a problem-solving and quality tools methodology
Process Improvement with Design of Experiments
Pharmaceutical Quality Systems: A systems inspection approach
Validation Techniques and Strategies to Comply with FDA requirements
Packaging Components for the Pharmaceutical and Medical Devices Industries
Quality Tools for Developing Statistical Process Control in Pharmaceutical Industries
Ergonomics Productivity Improvement Operations

Mechanical Engineering: Systems Design and Maintenance

Designing of Air Conditioning Systems

Organizational Behavior/ Leadership

Personal and Professional Development by a Goal Setting Program

Professional Development Areas

Business Writing and Presentation Skills

* Most courses area also available to be offered as in-house/tailor made activities. Please contact us to discuss your training and continuing education needs. Call us at (787) 758-7915 or by e-mail alt lwattley@pupr.edu.

Polytechnic University of Puerto Rico
Continuing Education Program
August – October 2003

Automation / Process Instrumentation and Control

www._____

PLC Programming

Herbert Jaramillo, ME, PE

Description: This seminar will provide the knowledge required on PLC programming. It also will give the tools for controlling processes using a PLC. Speaker will be discussing most relevant definitions, PLC components and applications. In the programming area, the following will be discussed: basic instructions, ladder logic, mnemonic codes, timers, counters and special functions. PLC programming, sensors and process control.

Civil Engineering/ Construction, Construction Management

www._____

The Construction Inspector and the Contract: Legal Aspects

Victor Torres Carrasquillo, PE and José Cabiya, Esq.

Description: The contract between a contractor and an owner establishes the rights and obligations agreed by these parts to carry out a construction project and govern its relation during that process. The inspector has many contractual obligations with the owner. Between these, it is the administration of that contract during the period of construction, causing that the owner receives the contracted goods and services. Speaker will be presenting subjects like: importance of contractual documents, implicit obligations of the parts and where they come from, foundations on contracts and the rules interpretation rules of functions of the designers, contractors and inspectors before the contract and the state; guideline for the inspector, so he/she can make his/her work, evaluate what was made and to base his decisions. Many very important themes will be presented.

Land Surveying and Geotechnia in Construction

Luis Carrillo, PE

Description: There are many factors involved in the success and useful life of a construction project. Among these, the precision and quality of the phases of investigation are extremely important. The geotechnical conclusions and every aspect of the land surveying process will be crucial too. Therefore, in this seminar, the relevance of each one of these aspects will be studied to avoid future failures, claims and legal implications.

Quality Control in Asphalt Pavements

Luis M. Carrillo, PE

Description: Aspects related to the control and affirmation of the quality of asphalt pavements and relation with the security in the highways. The seminary has been made for the benefit of all who in profession task it has to do with the evaluation, design, preparation, positioning, inspection and maintenance of asphalt pavements. It will include in detail the inspection techniques, including the plant, aggregates, preparation of the base, aggregates it mixes, temperature, completion and security.

The New AIA General Conditions: "97 vs. "87

Víctor Torres Carrasquillo, PE and José Cabiya, Esq.

Description: The General Conditions of the American Institute of Architects (AIA), are the contractual document most widely used in the construction industry in Puerto Rico. In addition, it is one of the most studied and on which more jurisprudence has been established. The new AIA version contains changes and approaches different from those previous versions of 1987 and 1976. In this seminar, it will be discussed in detail, the New General Conditions from 1997, the most significant changes related with the previous version of 1987, the reasons for those changes and the implications for each part that are involved in the contract.

Pre-stressed Application on Concrete Structures

Luis M. Carrillo, PE

Description: This seminar discusses in detail the background of the pre-stress, how came the idea and who develop it and effect of the pre-stress on concrete structures. It will include different terms of Pre-stress including post-tension procedures, post tension systems, limits and reaches, loss factors generated. How to realize adaptations from a pre-stress, characteristics, quality control, installation and applications. Procedures of pre-stress on different projects and advantages of post-tension systems in building slab. Requirements for a correct application of pre-stress and recommendations on installation of ducts, cables, anchorages, jack, etc.

Design of Shear Walls for Earthquake Resistance

Bernardo Deschappelles, PhD, PE

Description: This seminar discusses in detail the computation of available flexural capacity in shear strength reduction factor based on two different criteria: concrete compression stress and steel tensile strain (ACI 318 Appendix B). Moreover, it includes the identification of shear wall boundary zone for which concrete confinement is required, in accordance with stress or strain parameters, as recommended.

New Seismic Provisions in Building Structural Design

Bernardo Deschappelles, PhD, PE

Description: This seminar discusses in detail the seismic provisions of current Puerto Rico codes based on the model code UBC-97. Emphasis is given to the meaning and evaluation of all the parameters leading to the building base seismic shear. It includes comments on specific

design of seams and columns in special moment resisting frames. Moreover, it incorporates overviews of regulations established by more recent codes that will be adopted by P.R. in the near future.

Earth Pressures and Retaining Structures

Carlos Rodríguez, PhD, PE

Description: Application of Geotechnical Engineering in the Design and Construction of Retaining Structures. The seminar will cover types of retaining structures, earth pressures, and states of equilibrium. discussion of Rankine's and Coulomb's earth pressures. Theories as well as the Trial Wedge Method; stability of retaining walls, practical considerations, types of backfill, drainage systems. Gabion walls. MSE walls and temporary lateral support systems.

Management of Special Problems in Deep Foundations

Carlos Rodríguez, PhD, PE

Description: Application of Geotechnical Engineering to determine the static and dynamic capacities of piles and drilled shafts. Installation of piles and drilled shafts. The seminar will cover types of deep foundations: driven piles and drilled shafts. Methods of prediction of load capacity in compression, uplift, and lateral. Dynamic methods of prediction, installation of piles and drilled shafts and pile load tests. Other practical considerations.

Soil Compaction

Carlos Rodríguez, PhD, PE

Description: Geotechnical Aspects of Soil Compaction and Practical Considerations. The seminar will cover weight-volume relationships. Soil classification, laboratory compaction tests, compaction curves, specifications and compaction of soils in the field. Field density tests, compaction equipment, typical problems in field compaction and other practical considerations.

Computer Science/ Computers Programming / Engineering and General Software

www._____

Basic AutoCad

Herbert Jaramillo, ME, PE

Description: This course requires a basic knowledge of PC computers and MS Windows environment. Participants will receive a working knowledge on up-to-date AutoCad features. The course will provide hands-on experience in computer modeling of two-dimensional (2D) drawings. Also, this course will be working with the following topics: introduction to the AutoCAD environment, MS Windows Standards, the AutoCad Windows layout, menu-driven and command-driven strategies, coordinate systems: WCS and UCS, settings, drawing limits, units, grid and snap options, text fonts and styles. Also will be covered 2D Engineering Drawings topics: primitives like points, lines, polylines, circles, arcs. Drawing Aids and Editing

Tools, viewing commands, layers, linetypes, colors and object properties and special commands.

Advanced AutoCad

Herbert Jaramillo, ME, PE

Description: Basic AutoCad is necessary to participate in this course. The participant will receive an advanced knowledge on AutoCad 2000, and will be managing advanced tools for developing design projects. 3D solid modeling will be emphasized. Other areas that will be covered: 3D Engineering Drawings, Solid Modeling, Isometric views, Boolean operations on solids, Complex shapes using Union, Subtract and Intercept commands, Solid of revolution for generating 3D objects, 2D views from a 3D drawing. In the tools and advanced utilities, these themes will be presented: advanced solids features, rendering techniques, views: tile mode, floating and paper space models, getting mass properties, importing spreadsheets into your drawing, converting from CAD systems that don't support DXF and customizing Auto Cad using AutoLISP.

Electronic Commerce and Web Information Systems

Alfredo Cruz, PhD

Description: Enterprises thrive on receiving, creating and disseminating information. The Internet has emerged as the dominant server for academic organizations and network hosts. This course will study the structure, organizations, and use of the Internet. Internet technologies and their potential applications are examined including electronic commerce, database connectivity, and security.

Project Management Techniques & MS Project

José O. Rivera, PhD (C), PE

Madeline Pérez, MBA, BSIE

Description: This seminar provides critical knowledge for effective project management. It helps identify the pitfalls of traditional project management techniques, its performance measurements and their effects on project cost, quality and performance. It also provides the tools required to carry out successful project managements.

MatLab Management

Rodrigo Martínez, ME, PE

Description: In this course, the participant will be introduced to MATLAB[®] as a useful tool in the area of numerical computations and/or scientific visualization. Topics like data manipulation, graphical visualization, matrix, programming, file I/O and advanced data types will be discussed. A step-by-step tutorial approach is adopted. By the end of this short course, the user will know how to create a program and make great plots. No prior knowledge of MATLAB[®] is required, but participants should have knowledge of the terminology and concepts related to linear algebra, and experience with basic computer operations.

Systems Simulation using ARENA

Alex Ruiz, PhD

Description: Discrete event simulation (DES) has dramatically evolved and is one of the most powerful tools in the improvement of industrial systems. Companies like GE and Motorola have used simulation as a key element of their Six Sigma programs. Introduction to Simulation. What is simulation including benefits and costs, basic simulation mechanics, simple by hand simulation. Process mapping and process variability are introduced.

Data Analysis Using Statgraphics Plus for Window

Wilfred Fonseca, ME, BSIE

Description: To provide users with an intensive period of hands-on instruction on how best to use the system for analyzing data. To discuss the usefulness and interpretation of the most commonly used procedures.

Introduction to Statgraphics Plus for Windows

Wilfred Fonseca, ME, BSIE

Description: Objective: To instruct new and less experienced users on the setup and usage of STATGRAPHICS Plus for Windows. To allow user to gain hands-on experience with software in the areas of data management, customizing output and running statistical procedures. Introduce users to customizing and editing graphics for presentation, printing, and interactive data analysis.

Design of Experiments with Statgraphics Plus for Windows

Luis Olivares, ME, BSIE

Description: To introduce participants to three basic principles underlying the statistical design of experiments using Statgraphics Plus for Windows. Experiments to compare several treatments.

Electrical Engineering: Communications and Networking

[www.](#)

National Electrical Code: Residence Application

Eugenio Mulero, ME, PE

Description: General design of electrical system in the national Electrical Code and the Puerto Rico Electric Power authority Code. Provide the basic working knowledge of electrical systems. Study the codes rules, standards and calculations that apply to this system, as well as the procedures required to obtain the necessary approvals of government agencies for the designs. To able to design system, components, or process to meet desired needs. Understand professional and ethical responsibility.

Environmental Protection / Environmental Engineering

www._____

Environmental Site Assessment for Real Estate Transactions

Omar Muñiz Díaz, PhD, PE

Description: The seminar will discuss in detail the elements of a formal Environmental Site Assessment for Real Estate Transactions. At the end of the course the student will have basic tools to: identify and recognized environmental conditions in connection with the properties. To the extent feasible, pursuant to the process described under ASTM standard E-1 527-00. Understand how to follow the standards practice of the National Registry of Environmental Professionals and its code of ethics for Registered Environmental Property Assessors and the ASTM 1527-00 as accepted by the US Environmental Protection Agency. Legal issues that may be related to Real Estate Transactions and finally will be capable of understanding and preparing Site Assessment Reports following proper protocols.

Ergonomics / Occupational Health and Safety

www._____

Overview of Ergonomics Principles and their Application in the Reduction of Musculoskeletal and Nerve Disorders

Sergio Caporali, PhD

Description: Topics include an overview of ergonomic risk factors, back safety body mechanics, musculoskeletal disorders, anthropometry, video display terminals and manual material handling. This course also includes the analysis of one industrial case study covering the evaluation of a workstation, and one group exercise covering the application of the NIOSH lifting equation.

Health Products Manufacturers: Pharmaceutical, Medical Devices and Biotech Companies

www._____

Introduction to Tablet Press Technology

James Mossop

Description: Discussion of granulation flow through the hopper, follomatic and eventually onto the die table. Review basic steps of trough the ejection stage. Review of common difficulties encountered while running the press including diagnosing and solving the problem: feeding principle, tablet ejection, pull down and overfill, tablet compression, weight adjustment and containment of fill, tablet filling depth.

Industrial Engineering: Quality Improvement, Manufacturing, Philosophies and Techniques

www._____

Six Sigma: The New Quality Strategy

Luis Olivares, ME, BSIE

Description: The combined effect of Lean Manufacturing and Six Sigma has led to improvements in product quality and cycle time in many industrial and service industries. These improvements have resulted not only in cost reduction, but also in the possibility of building the reputation of the company as a leading supplier of quality solutions. The objective of this workshop is to provide key players of different organizations with the knowledge to understand Six Sigma as a methodology for Continuous Improvement and to ensure knowledge of different tools to master the DMAIC process for Six Sigma.

Military Std. Acceptance Sampling Plans

Description: In this seminar, participants will be prepared on the correct use of Military Standard Tables 105e and 414. The following topics will be covered: introduction to acceptance sampling, single sampling by attribute, military standard 105E (ANSI/ASQC Z1.4), acceptance sampling by variables and military standard 414 (ANSI/ASQC Z1.9).

SPC: Design of Variables Control Charts

Luis Olivares, ME, BSIE

Description: Participants will acquire the required Control Chart design capabilities to develop and operate variable OC charts for most manufacturing or service application. Other topics that will be discussed are: Quality & Manufacturing Competitiveness, pillars of WCM, trends in market distribution, results of lack of competitiveness, dimensions of quality; quality, variability and SPC, process variability/relation to product quality, Also, the following themes will be presented: the sources of process variability, in/out control process conditions, spc vs. 100% inspection, qc chart (in/out of control representation), tools for process behavior interpretation, product specifications, process behavior, graphical tool for process behavior, statistical tools, estimation of process parameter. The normal distribution, process capability index, design and interpretation of qc charts, general model and parameters, the in/out-of-control process states, definition of type I and type II errors, general criteria for ac charts, critical shift in a process parameter.

Applied Probability and Statistics

Jose O. Rivera, PhD (C), PE

Description: Present basics concepts in probability and statistics such as random variable, probability distributions, introduction to statistical inference and hypothesis testing. Introduction to regression analysis, simple descriptive statistics, statistics and parameters, measure of location, measure of spread, frequency tables and histograms, common probability models, binomial, hyper geometric, poisson, normal, exponential. In addition,

introduction to statistical inference, confidence intervals, hypothesis testing for independence, goodness of fit test, regression analysis

Continuous improvement workshop: a problem-solving and quality tools methodology

Luis Olivares, ME, BSIE

Description: A Continuous improvement process (CIP) requires close loops of actions using problem-solving and process analysis tools as key elements to foster teamwork and consensus-building in order to enhance process performance. Users will learn to organize a problem-solving process, monitor for results, quantify benefits and improve the process. A hands-on experience approach on selected projects will foster the learning experience and the application of the discussed methodology in the workshop. Introduction to the continuous improvement process, define problems and opportunities, evaluate characteristics critical to quality from the customer's perspective and establish high-level map of process will be presented.

Process Improvement with Design of Experiments

Luis Olivares, ME, BSIE

Description: Objective: Present the fundamentals of process improvement using design of experiments. Discussion of the basic techniques for designing and experiment, analyzing and interpreting its results.

Background: Bachelor of Arts/Sciences. Statistical knowledge.

Pharmaceutical Quality Systems: A systems inspection approach

Magaly Vega, PhD, RPh

Description: Building a Quality System is paramount to passing an FDA inspection under the new systems approach to plant inspections; however, guidelines are not available on how such a system has to be built. This training provides a guide to building a quality system.

This seminar highlights the following topics: What is the FDA expectation? How is the new "top-down: approach different? Quality Systems; an overview and importance

Validation Techniques and Strategies to Comply with FDA requirements

Magaly Vega, PhD, RPh

Description: For anyone engaged in any manner in validation practices, this seminar will provide the information needed to expand the knowledge base for validation. This seminar highlights the following topics: Review the Fundamentals of Validation, Maintain Adequate Validation Documentation Systems, Facilities, utilities and equipment validation, Implement an effective Process Validation.

Packaging Components for the Pharmaceutical and Medical Devices Industries

Madeline Pérez, MBA, BSIE

Description: This seminar gives the elements for the manufacturing of packaging components commonly use in the pharmaceutical and medical devices companies: chemistry, properties and material composition of packaging components. The development processes for packaging components considering environmental issues, Regulatory documentation and new trends.

Quality Tools for Developing Statistical Process Control in Industries

Madeline Pérez, MBA, BSIE

Description: How to design a Statistical Process Control for manufacturing stages of tablets and capsules products. Includes define the input, process and output parameters: design of experiments as a tool to select statistical parameters; and regulatory restriction during the development and approval process of SPC. Implantation guidelines.

Productivity Improvement Operations

Madeline Pérez, MBA, BSIE

Description: Enhance manufacturing, service, distribution and packaging operations. The seminar has two levels: Basic: Includes how to measure operations, develop productivity indicators, analysis of indicators data and documentation implication; Advance: Use Simulation tools to evaluate the performance of manufacturing or services operations. Simulate different scenarios in order to determine the best system alternative.

Mechanical Engineering: Systems Design and Maintenance

www._____

Designing of Air Conditioning Systems

Jacinto Solano, ME, PE

Description: This course covers the fundamental aspects of air conditioning design and others such as psychometrics, fenestration and load calculation using the CLTD method. The course's last section is a review of fluid mechanics with application in fan selection and duct design. Those interested in this short course should have knowledge on thermodynamics, heat transfer, and fluid mechanics

Organizational Behavior/ Leadership **www._____**

Personal and Professional Development by a Goal Setting Program

Edouard F. Lafontant

Description: This seminar will provide the participant the tools and knowledge required to discover the potentiality inside him and to improve his leadership style. It will be presented the way to create a program of personal and professional goals. Learning this will allow the participant to have a better environment in his workplace and promote team working. This system will teach to improve self and co-workers productivity.

Other Professional Development Areas **www._____**

Business Writing and Presentation Skills

Rafael León, Prof. Polytechnic University
Dean Dept. of Sciences and Arts

Description: This seminar is divided in two major areas. The first one corresponding to an English composition workshop designed to provide students with specialized knowledge and skills to make public presentation with electronic means written business report. The second one provides students with the knowledge and skills to make public presentations using electronics media.

Find these themes in our next activities program corresponding to October - December 2003:

Automation / Process Instrumentation and Control

- PLC Programming
- Industrial Pneumatics
- Industrial Sensing Devices
- Instrumentation and Controls

Civil Engineering/ Construction/ Construction Management

- Sick Buildings Syndrome
- Extended Overhead
- Contract Termination
- Delay Damages Claims (Extended Overhead)
- The New AIA 1997 General Conditions vs. AIA 1987
- The Inspector and the Construction Contract: Legal Principles
- Contract Termination by Default
- Contract Termination by Convenience
- The Change Orders in Construction Contracts
- Change Orders and their Effect in Productivity
- Construction Projects Documentation
- Construction Tolerances
- Inspection of Construction Projects
- Risk Management in Construction Contracts
- The Construction Inspector and his Relation to Bonds and Insurances
- Construction Costs Estimates
- CPM Scheduling: Original Flowchart and Updating Procedures
- The Expert Witness in Court or Arbitration
- Express and Implicit Obligations in Construction Contracts
- Construction Defects Claim

Electrical Engineering/ Communications and Networking

- National Electrical Code: Industries
- Computer Networks
- Electrical System Protection
- Internet Programming
- UNIX Operative System
- Optic Fiber
- Electrical Design

Environmental Protection / Environmental Engineering

- Emissions Control

Ergonomics/ Occupational Health and Safety

- Occupational Safety and Health Standards for General Industry
- Industrial Hygiene

Land Surveyor

- Introduction to Geographic Information System
- Geographic Information Systems for Appraisal

Pharmaceutical, Medical Devices and Biotech Manufacturing

- Packaging Technology

Industrial Engineering

Lean Manufacturing/Quality Improvement, Manufacturing, Philosophies and Techniques

- Total Quality Management
- Job Design and Work Measurements

Ergonomics and Human Factors in the Workplace
Material Handling Automation

Mechanical Engineering: Systems Design and Maintenance

Pipes and Bombs Systems Design
Elevators and Escalators Inspection
Pro Engineering

Professional Development Areas

Conflict Resolutions Alternatives

Real State

Real Estate Appraisal Principles
Mathematics for Appraisers
Capitalization and Use of the Financial Calculator in Real Estate Appraisals Applications

Refreshment Courses

Fundamental Engineering
Electrical Engineering
Industrial Engineering
Mechanical Engineering