



**Engineers' Club of Philadelphia**  
**Technical and Engineering Management Courses**  
**Spring 2010**

**COURSE LISTINGS**

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## BUSINESS COURSES

### [B-1: Six Cylinders of the High Performing Business](#)

**Course Description:** Tired of working a 70-hour week for a 40-hour paycheck? If you're like most entrepreneurs and business owners, you went into business for yourself because you have a special skill or talent. So why aren't you making the kind of money you thought you would? And why are you working so many hours? If you only attend one seminar event this year, this one should be it. You'll learn everything you need to know to start making some real money in your business...in ANY economy...and leave your competition in the dust!

**Cost:** Non- Member: \$160.00, Member: \$135.00

**Instructor:** Mr. Frank Mummolo, PhD, P.E.

#### **Section B-1a**

Tuesday, March 2, 2010 (1 session), 11:30 am-1:30 pm

#### **Section B-1b**

Thursday, April 8, 2010 (1 session), 11:30 am-1:30 pm

#### **Section B-1c**

Tuesday, June 1, 2010 (1 session), 6:00 pm – 8:00 pm

### [B-2: Finance Basics for Engineers](#)

**Course Description:** Gross margins, Break-Even, Cash Gap, Cash Flow, Marginal Contribution. There's a wealth of information available when you understand how to analyze financial statements. Your managers and finance people use this all the time, but do you really understand it? It's a LOT easier than calculus! We'll teach you how to master these and other finance basics so you can converse intelligently with the business people around you. This is practical, street-wise information, not accounting gobbledegook! You'll be impressed!

**Cost:** Non- Member: \$160.00, Member: \$135.00

**Instructor:** Mr. Frank Mummolo, PhD, P.E.

**Date:** Tuesday, April 13, 2010 (1 session), 11:30 am-1:30 pm

### [B-3: The Compounding Growth Formula \(CGF\) – The Most Powerful Business Secret You Will Ever Learn!](#)

**Course Description:** This course will introduce you to a powerful, yet little-known, technique for growing a business...ANY business. By understanding the five basic inputs that drive business growth, you will be able to control the outputs which are every entrepreneur's goal: more customers, higher revenue and greater profits. You'll learn, first-hand, how to use the power of compounding to turn small improvements into profit improvements of 60% or more. You will be amazed!!

**Cost:** Non- Member: \$160.00, Member: \$135.00

**Instructor:** Mr. Frank Mummolo, PhD, P.E.

#### **Section B-3a**

Tuesday, March 2, 2010 (1 session), 6:00 pm – 8:00 pm

#### **Section B-3b**

Thursday, April 8, 2010 (1 session), 6:00 pm – 8:00 pm

#### **Section B-3c**

Tuesday, May 11, 2010 (1 session), 11:30 am-1:30 pm

### [B-4: Sales for Engineers](#)

**Course Description:** Getting leads but not enough business? For most entrepreneurs, the solution is to spend more on advertising and generate more leads. In many cases, this is unnecessary and flat-out *wrong!* In this workshop, we'll look at the most powerful (but virtually unknown) formula for creating dramatic increases in revenue.....without spending a cent!

**Cost:** Non- Member: \$160.00, Member: \$135.00

**Instructor:** Mr. Frank Mummolo, PhD, P.E.

#### **Section B-4a**

Thursday, March 11, 2010 (1 session), 11:30 am-1:30 pm

#### **Section B-4b**

Tuesday, April 13, 2010 (1 session), 6:00 pm – 8:00 pm

### [B-5: Marketing Basics for Engineers](#)

**Course Description:** Marketing isn't "black magic". It's *math!* Is your advertising an expense or an investment? Do some of your ads fail to generate any business? We'll teach you how to "Test & Measure" to know for sure what is working and what isn't. You'll learn the economics of advertising and how to decide whether to invest or not. And ... we'll teach you how to create *ads that work!*

**Cost:** Non- Member: \$160.00, Member: \$135.00

**Instructor:** Mr. Frank Mummolo, PhD, P.E.

#### **Section B-5a**

Thursday, March 11, 2010 (1 session), 6:00 pm – 8:00 pm

#### **Section B-5b**

Tuesday, May 11, 2010 (1 session), 6:00 pm – 8:00 pm

### [B-6: Create Winning Teams](#)

**Course Description:** Can't seem to hire the right people? Your team just doesn't seem to "get it"? Don't know how to be the owner instead of one of the guys? Did you know that 47% of people hired the "conventional" way (i.e., resume, interview, reference check) are gone in 12 months or less? Not only is this expensive, but the collateral damage caused by hiring the wrong people can have long-lasting (even permanent) results on your customer base! You'll learn the biggest and most common mistakes managers make when screening and selecting new members for their teams. Remember, the best ideas and plans will go nowhere without the right people advancing them!

**Cost:** Non- Member: \$160.00, Member: \$135.00

**Instructor:** Mr. Frank Mummolo, PhD, P.E.

**Date:** Tuesday, March 23, 2010 (1 session), 11:30 am-1:30 pm

### [B-7: Differentiation- Standing out in a Sea of Competition](#)

**Course Description:** Effective marketing and advertising starts with differentiation. If you don't differentiate yourself from your competition you leave the customer just one choice – select a company based on price! And, long-term, that's not a battle you can win. This workshop will introduce you to a number of the dozens of ways you can differentiate your firm in the eyes of the customer. Moreover, once you understand your points of differentiation, you can build a powerful marketing program around them that will attract a very different kind of prospect....one that's prepared to buy! You'll also learn the "Seven Key Words" to use when describing your company. This workshop will give you a whole new way of looking at your business!

**Cost:** Non- Member: \$160.00, Member: \$135.00

**Instructor:** Mr. Frank Mummolo, PhD, P.E.

**Date:** Thursday, April 22, 2010 (1 session), 11:30 am – 1:30 pm

[B-8: Stop Selling & Close More Sales](#)

**Course Description:** You read it correctly! Because today's top salespeople don't "sell". They are masters of attracting people who want to buy. This workshop covers some unconventional and counter-intuitive techniques used by today's top sales pros. Your competition will never know what hit them!

**Cost:** Non- Member: \$160.00, Member: \$135.00

**Instructor:** Mr. Frank Mummolo, PhD, P.E.

**Date:** Tuesday, June 1, 2010 (1 session), 11:30 am – 1:30 pm

[B-9: Setting Your Plan](#)

**Course Description:** Did you know studies have shown that 98% of the wealth is concentrated in the 3% of the population that uses written plans? Are you managing your business against written financial and strategic plans? Is your plan in your head or worse yet, on your daily "To Do" list? If you're not working against a long-term strategy using short-term goals and milestones, then who in your organization is? We'll teach you how to create a plan, set meaningful goals and take steps to realize the dream you had when you started your career...or your business.

**Cost:** Non- Member: \$235.00, Member: \$200.00

**Instructor:** Mr. Frank Mummolo, PhD, P.E.

**Date:** Saturday, May 1, 2010 (1 session), 8:30 am – 12:30 pm

[B-10: Engineers as Entrepreneurs: Business Boot Camp](#)

**Course Description:** Based on the "Six Cylinders of a High-Performance" model, this course can be thought of as "Basic Training" for business owners, entrepreneurs and anyone thinking of starting a business.

A 2-day, intensive, "soup to nuts" business training program that will teach you all the essential skills you need to survive and prosper in your own business. Topics include marketing and promotion, ad architecture, developing your unique selling proposition, selling skills, testing & measuring, basic finance, hiring and building a super team, systemization and much, much more. A MUST for every business owner...don't even *think* about running a business without this!

**Cost:** Non- Member: \$725.00, Member: \$625.00

**Instructor:** Mr. Frank Mummolo, PhD, P.E.

**Section B-10a**

Saturday, April 10, 2010 **and** Saturday, April 17, 2010 (2 days), 8:00 am – 5:00 pm

**Section B-10b**

Saturday, May 8, 2010 **and** Saturday, May 15, 2010 (2 days), 8:00 am – 5:00 pm

## CONSTRUCTION COURSES

[CO-1: 2009 International Building Code](#)

**Course Description:** This course primarily covers in depth the non-structural provisions of the "2009 International Building Code" with a structural and materials overview. This code has been adopted as the state code for Pennsylvania, New Jersey, New York, Maryland, and two counties in Delaware. The 2009 International Building Code will be the course text.

**Cost:** Non-Member: \$550.00, Member: \$495.00

**Instructor:** James Rossi

**Additional Course information:** Students will need to bring the 2009 International Building Code to the first class.

**Section CO-1a (morning course)**

**Class Dates:** Starts Wednesday, March 31, 2010, 10 weeks (ending Wednesday, June 2, 2010), 8:30 a.m. - 11:00 a.m.

**Section CO-1b (evening course)**

**Class Dates:** Starts Wednesday, March 31, 2010, 10 weeks (ending Wednesday, June 2, 2010), 6:00 p.m. - 8:30 p.m.

[CO-2: Construction Cost Estimating](#)

**Course Description:** A comprehensive review of the methods and procedures used for estimating construction costs.

**Cost:** Non-Member: \$300.00, Member: \$275.00

**Instructor:** Daniel Shovlin

**Class Dates:** Starts Tuesday, April 6, 2010, 4 weeks (ending Tuesday, April 27, 2010), 6:00 pm – 8:30 pm

[CO-3: Construction Project Management](#)

**Course Description:** This Course develops a comprehensive management system for planning, scheduling, estimating costs, and financial control of construction projects.

**Cost:** Non- Member: \$625.00, Member: \$575.00

**Instructor:** Ronald Kerins, Jr., C.C.M.

**Class Dates:** Starts Wednesday, March 24, 2010, 8 weeks (ending Wednesday, May 12, 2010), 6:00 pm – 8:30 pm

## ELECTRICAL COURSES

[EL-1: Fiber Optics and Network Wiring](#)

**Course Description:** A hands on course on the installation, troubleshooting, and repair of small fiber optic networks.

**This course satisfies the requirements for students who want to take the certification test for fiber optic installers.**

**Cost:** Non- Member: \$800.00, Member: \$725.00

**Instructor:** Richard Agard

**Class dates:** Starts Tuesday, March 16, 2010, 12 weeks (ending Tuesday, June 1, 2010), 6:30 pm - 8:30 pm

[EL-2: Advanced Fiber Optics and Network Wiring](#)

**Course Description:** This Hands-On course will cover the details of how fiber optic networks are designed within a complete communications systems or building structure and provide an in-depth knowledge of all aspects of a successful fiber optic system. The focus is on the design from network protocols, network configurations, optical cabling, industry communications standards, hardware selection, splicing termination methods, determination of fiber count, and cable system testing troubleshooting and documentation.

**Cost:** Non-Member: \$700.00, Member: \$650.00

**Instructor:** Richard Agard

**Class Dates:** Starts Wednesday, March 31, 2010, 10 weeks, (ending Wednesday, June 2, 2010), 6:30 pm - 8:30 pm

[EL-3: FCC License Exam Preparation](#)

**Course Description:**

This course will prepare students for taking the new FCC exam. The revisions to the FCC exam reflect many of the current changes in the commercial radio industry. This class will review the test pool, offer students strategies for taking the exam, and update students on some of the latest technology. The new exams is more pertinent and up to date for measuring and verifying the skills of the licensees. **This course satisfies the requirements for students who want to take the FCC license exam.**

**Cost:** Non-Member: \$600.00, Member: \$550.00

**Instructor(s):** Richard Agard

**Class Dates:** Starts Monday, March 15, 2010, 10 weeks (ending Monday, May 17, 2010), 6:30 pm – 8:30 pm

[EL-4: Photo Voltaic Systems Installation](#)

**Course Description:** This course is designed to provide students with the knowledge and skills necessary to install photovoltaic systems supplying electric power to residential and commercial buildings. The course's objective is to prepare students for entry level positions working with photovoltaic systems in roles such as installers, designers, and or estimators. It will also prepare them for other entry level positions requiring basic electrical wiring skills. While the course's major focus is photovoltaic systems, basic electrical theory and the National Electrical Code, as it pertains to photovoltaic systems, will be introduced. Other areas of training include common wiring methods and the bid process. Safe working practices when working with electricity will be covered throughout this course. After successfully completing the course students will receive a certificate.

**Cost:** Non- Member: \$950.00, Member: \$850.00

**Instructor(s):** Richard Agard and Mr. Brian Spaziani

**Class Dates:** Starts Thursday, April 1, 2010, 8 weeks (ending Thursday, May 20, 2010), 6:30 pm – 8:30 pm

[EL.5: Grounding and Bonding](#)

**Course Description:** The Electrical Grounding and Bonding one day seminar will explore the general requirement for grounding and bonding electrical installations (NEC article 250) plus concepts, principles, and theory associated with grounding and bonding such as isolated grounds, floating grounds, and ground loops.

**Cost:** Non- Member: \$350.00, Member \$325.00

**Instructor:** Richard Agard

**Class Dates:** Tuesday, April 6, 2010 (1 session), 9:00 am – 4:00 pm

[EL-6: Changes in National Electrical Code](#)

**Course Description:** This one-day seminar is a review of changes in the 2009 National Electrical Code. The course will provide a general introduction on how to use the NEC book plus highlight important changes including the expansion of AFCI and GFCI requirements and revisions of grounding and bonding definitions.

**Cost:** Non-Member: \$425.00, Member: \$375.00

**Instructor:** Richard Agard

**Class Dates:** Tuesday, April 27, 2010 (1 session), 9:00 am – 4 pm

[EL-7: Fundamentals of Instrumentation and Control](#)

**Course Description:** This course presents the fundamentals of instrumentation and process control as found in industrial plants.

**Cost:** Non- Member: \$575.00, Member: \$525.00

**Instructor:** Mr. Nathan Tadlock

**Section EL-7a (8 evenings)**

**Class Dates:** Starts Tuesday, March 16, 2010, 8 weeks (ending Tuesday, May 4, 2010), 6:00 pm – 8:30 pm

**Section EL-7b (2 days)**

**Class Dates:** Tuesday, May 4, 2010 **and** Wednesday, May 5, 2010, 9:00 am – 4:00 pm

## FIRE PROTECTION COURSES

### [FP-1: Sprinkler Systems Basics](#)

**Course Description:** Detailed review of the NFPA standards for commercial and residential sprinklers, fire pumps, standpipes, water supplies, and underground systems.

**Cost:** Non-Member: \$650.00, Member: \$585.00

**Instructor:** Philip L. Gaughan, SET

**Class Dates:** Starts Monday, March 15, 2010, 10 weeks (ending Monday, May 17, 2010), 7:00 pm - 9:00 pm

### [FP- 2: Advanced Sprinkler Systems](#)

**Course Description:** Detailed review of the NFPA standards for commercial and residential sprinklers, fire pumps, standpipes, water supplies, and underground systems.

**Cost:** Non-Member: \$650.00, Member: \$585.00

**Instructor:** Michael Venneri, PE, SET, CFPS

**Class Dates:** Starts Wednesday, March 17, 2010, 10 weeks (ending Wednesday, May 19, 2010), 6:00 pm - 8:30 pm

### [FP-3: Smoke Control Systems](#)

**Course Description:** This 10 session course will review in depth the design of smoke control systems for buildings. The ASHRAE/SFPE book, *Principles of Smoke Management* will be used as the text for the course (included in the tuition).

**Cost:** Non-Member: \$650.00, Member: \$585.00

**Instructor:** John Kampmeyer, PE

**Class Dates:** Starts Monday, March 15, 2010, 10 weeks (ending Monday, May 17, 2010), 7:00 pm - 9:00 pm

### [FP-4: IBC Smoke Control Requirements](#)

**Course Description:** Detailed review of the NFPA standards for commercial and residential sprinklers, fire pumps, standpipes, water supplies, and underground systems.

**Cost:** Non-Member: \$350.00, Member: \$300.00

**Instructor:** John Kampmeyer, PE

**Additional Course information:** Students will need to bring the 2009 International Building Code to the class.

**Class Date:** Wednesday, March 17, 8:00 am – 4:00 pm

## MECHANICAL COURSES

### [ME-1: Basic Piping Design](#)

**Course Description:** Basic Theory and application of piping design found in boilers, air conditioning, refineries, nuclear and fossil fuel power plants, chemical processing, metallurgical industries and drainage systems.

**Cost:** Non-Member: \$550.00, Member: \$495.00

**Instructor:** Gregory Wilhelm, PE

#### **Section ME-1a (10 weekday evenings)**

**Class Dates:** Start Thursday, March 18, 2010, 10 weeks (ending Thursday, May 20, 2010), 6:00 pm - 8:30 pm

#### **Section ME-1b (1 week, 5 days)**

**Class Dates:** Monday, April 12, 2010 through Friday, April 16, 2010 (5 days), 8:30 am – 12:30 pm

[ME-2: Heating and Ventilation](#)

**Course Description:** Covers building heating codes, heat loss calculations, heating and ventilation systems design, and equipment selection.

**Cost:** Non-Member: \$650.00, Member: \$585.00

**Instructor:** Dan Beggarly

**Class Dates:** Wednesday, March 17, 2010, 10 weeks (ending Wednesday, May 19, 2010), 6:30 pm - 8:30 pm

[ME-3: Air Conditioning for Designers](#)

**Course Description:** Covers building cooling codes, heat gain calculations, cooling and air conditioning systems design, and equipment selection. **Successful completion of Engineers Club Heating and Ventilation Course is a prerequisite.**

**Cost:** Non-Member: \$550.00, Member: \$495.00

**Instructor:** William Ivey

**Class Dates:** Starts Tuesday, March 16, 2010, 10 weeks (ending Tuesday, May 18, 2010), 7:00 pm - 9:00 pm

## MANAGEMENT COURSES

[MA-1: Project Management](#)

**Course Description:** Projects have traditionally been the basic unit of work for many engineering organizations—consulting, design, and construction firms. Other types of engineering organizations—government agencies, utilities, manufacturing—are using projects more and more as a way to tackle problems, make improvements, or bring new products and services to market more quickly and cost-effectively. This two-day course involves you in a project leadership model that you can take back to your workplace and apply immediately.

**Cost:** Non-Member: \$995.00, Member: \$895.00

**Instructor:** Ann Tomalavage PE, PMP, M.ASCE

**Class Dates:** Saturday, March 13, 2010 **and** Saturday, March 20, 2010 (2 days), 8:30 am – 5:00 pm

## TELECOMMUNICATIONS COURSES

[T-1: Tower Designs, Structural Upgrades and Maintenance using ANSI/TIA-222-G](#)

**Course Description:** There have been approximately 40 guyed broadcast tower collapses in the US in the last 20 years. 30% have collapsed due to ice or combination ice and wind, 20% have collapsed due to hurricanes and tornadoes, 10% have collapsed due to impact from airplanes, 5% have collapsed due to corrosion and 35% have collapsed during construction activities. 222-G was developed to increase the structural reliability of towers and, therefore, reduce tower collapses. The major changes to the 222 standard, that addresses reliability, will be presented. Included will be the effects the 222-G standard has on new tower designs, condition assessment of existing towers, analyzing and modifying existing towers and erection stresses. Also, case studies of actual tower collapses will be presented and discussed.

**Cost:** Non-Member: \$150.00, Member: \$120.00

**Instructor:** Thomas Hoenninger

**Section T-1a**

**Class Date:** Tuesday, March 30, 2010 (1 session) 6:30 pm – 9:30 pm

**Section T-1b**

**Class Date:** Tuesday, April 20, 2010 (1 session) 6:30 pm – 9:30 pm

**GENERAL INFORMATION AND REGISTRATION**

Most courses will be held at the Engineers' Club of Philadelphia, located in the Racquet Club at 215 South 16<sup>th</sup> Street, Suite 16, Philadelphia, PA 19102. Other locations may be selected to accommodate a firm's on-site program or for the convenience of the students and/or faculty. The Racquet Club is not handicapped-accessible; if a student needs such accommodation, please notify us upon registration and we will arrange for a handicapped-accessible location.

Tuition for courses generally includes texts and reference materials, unless noted otherwise. Tuition does not cover meals for all day courses.

Registration for each course will close one week before the first session. Courses will be cancelled if there are insufficient registrations (and all fees refunded).

These courses may be eligible for Professional Development Hours.

Engineers' Club dues-paying members receive a discount on tuition, as noted in the course information.

The Engineers' Club does not discriminate in offering its educational courses.

Additional course and registration information, including a pdf file of this catalog, is located on the website ([www.engrclub.org](http://www.engrclub.org), click Professional Development) or contact Susan Best ([sbest@engrclub.org](mailto:sbest@engrclub.org) or (215) 985-5701, ext 1#).

Registration can be made online, by emailing [reservations@engrclub.org](mailto:reservations@engrclub.org), mailing the below form, or by calling (215) 985-5701, ext. 3#. Clicking the course title in this pdf will direct you to the online store for that course.

Payment is due at time of registration. Payment will be refunded if requested not less than seven days prior to the start of the course.

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**REGISTRATION**

**Name:** \_\_\_\_\_

**Company:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**City, State, Zip:** \_\_\_\_\_

**Telephone** \_\_\_\_\_ **Email** \_\_\_\_\_

Please register me in the following course(s):

Course Number and Title	Starting date	Tuition
<b>TOTAL PAYMENT</b>		

Print your name, as it should appear on the Certificate of Course Completion: \_\_\_\_\_

Are you a member of the Club? : Yes \_\_\_\_\_ No \_\_\_\_\_

<p><b>Ways to Register:</b></p> <ul style="list-style-type: none"> <li>• Online at <a href="http://www.engrclub.org">www.engrclub.org</a> (click Professional Development)</li> <li>• Mail this form to the Engineers' Club of Philadelphia at the address below:                         <ul style="list-style-type: none"> <li>○ Check enclosed made payable to: "The Engineers' Club of Philadelphia"</li> <li>○ Pay by credit card</li> </ul> </li> <li>• Call 215-985-5701 and pay by credit card</li> <li>• Email this form to <a href="mailto:reservations@engrclub.org">reservations@engrclub.org</a> with credit card information</li> </ul>
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<p><b>If paying by credit card:</b></p> <p>Credit Card type _____ Exp Date _____</p> <p>Number _____</p> <p>Name on Card _____</p> <p>Billing Address (if different from registration address)</p> <p>_____</p> <p>_____</p>
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