

BUSINESS ESSENTIALS FOR ENGINEERS

April 3-4, 2017

EUCI Offices

4601 DTC Blvd., Suite 800

Denver, CO



EUCI is authorized
by IACET to offer
1.2 CEUs for the
course

OVERVIEW

For the past 20 years, utilities have gradually been transitioning from engineering-driven to business-driven decision-making. In the past, most top executives at utilities came from the engineering ranks and understood engineering issues in detail. Today, most top executives at utilities have business backgrounds and are primarily concerned with investor relations and “the bottom line.” One consequence of this shift is an increasing communications gap between utility executives and the engineers. Spending can no longer be justified with the argument “it makes good engineering sense.” Rather, spending must be justified with “it makes good business sense.” It is now the responsibility of the engineer to communicate engineering needs in terms of business goals and metrics. To do this, it is critical for utility engineers to be armed with the essential business skills covered in this two-day course.

The book *Business Essentials for Utility Engineers*, written by course instructor Richard Brown, will be included with the course materials.

LEARNING OUTCOMES

This course will review and discuss seven topics that are essential for utility companies transitioning from an engineering-based to a business-based paradigm:

- Accounting
- Economics
- Finance
- Risk management
- Utility ratemaking
- Business case justification
- Spending prioritization

WHO SHOULD ATTEND

This is a perfect course to balance the technical skills of engineering with the business skills of management. This course is ideal for utility planners, engineers, managers, and consultants who wish to learn the essentials of business through a rigorous and tailored approach.



“I am looking forward to using what I learned in *Business Essentials for Engineers* both to aid my company and further my career.”

Associate Substation Engineer, American Transmission Company



“Good overview of how and why top-level financial decisions are made in electric utility companies, and how this affects conversations and communication between engineering and the finance people that are running the company.”

Cost Analyst, Xcel Energy

AGENDA

MONDAY, APRIL 3, 2017

- 8:00 – 8:30 am** **Registration and Continental Breakfast**
- 8:30 – 9:00 am** **Introduction: Why Engineers Need to Understand Business Issues**
- Communications gaps
 - Cultural gaps
 - Perspective gaps
- 9:00 – 10:00 am** **Economics and Regulated Monopolies**
- Microeconomic theory
 - Vertically integrated utility regulation
 - Vertically unbundled utility regulation
 - Ratemaking process and the rate base
- 10:00 – 10:15 am** **Morning Break**
- 10:15 – 11:45 am** **Basic Accounting**
- Types of accounting
 - Accounting principles
 - Journals, ledgers, and accounts
 - Depreciation, amortization, and the rate base depletion
- 11:45 am – 12:45 pm** **Group Luncheon**
- 12:45 – 2:15 pm** **Financial Statement Analysis**
- Balance sheet
 - Income statement
 - Statement of cash flows
 - Financial ratios
- 2:15 – 2:30 pm** **Afternoon Break**
- 2:30 – 4:00 pm** **Finance and Capital Structure**
- Company valuation
 - Market efficiency
 - Debt and equity financing
 - Tax shields and bankruptcy effects



“This class was organized and easy to follow. I think it covered enough material to be helpful without getting overwhelming. I would take another class.”

Analyst, Eversource Energy

AGENDA

TUESDAY, APRIL 4, 2017

8:00 – 8:30 am	Continental Breakfast
8:30 – 10:00 am	Financial Risk Management <ul style="list-style-type: none">• Portfolio theory• Beta and the capital asset pricing model• Financial options and Black-Scholes pricing• Real options
10:00 – 10:15 am	Morning Break
10:15 – 11:45 am	Utility Ratemaking <ul style="list-style-type: none">• Revenue requirements and the rate base• Rate design• Rate cases• Rate base misconceptions
11:45 am – 12:45 pm	Group Luncheon
12:45 – 2:15 pm	Business Case Justification <ul style="list-style-type: none">• Cost considerations• Projects, programs, and blankets• Benefit assessment• Budget impact assessment
2:15 – 2:30 pm	Afternoon Break
2:30 – 3:45 pm	Budgeting and Spending Prioritization <ul style="list-style-type: none">• Utility budgeting process• Marginal benefit-to-cost assessment• Multiple performance targets• Risk-based spending
3:45 – 4:00 pm	Summary and Conclusions



“As a mid-career utility engineer with very little exposure to business essentials, I thought the material was just what I needed to improve current job performance and give me a skillset that will make me more marketable for future positions.”

Engineer, Nuclear Fuel Procurement, Arizona Public Service



“I learned a great deal over the two day course. The speaker was very knowledgeable and the material was incredibly robust. I would definitely attend another conference with EUCL and recommend these events to colleagues and friends.”

Data Analyst, Xcel Energy

INSTRUCTOR



Richard E. Brown
Practice Director, Exponent

Richard E. Brown is Director of the Engineering Management Consulting practice for Exponent. He has been on the leadership team for three successful startup organizations, has published more than 90 technical articles related to asset management and performance management, and is the author of the books *Business Essentials for Utility Engineers* and *Electric Power Distribution Reliability*. Prior to Exponent, he held executive positions with ABB, KEMA, Quanta Services, and WorleyParsons. Richard earned his BSEE, MSEE, and Ph.D. from the University of Washington in Seattle and his MBA from the University of North Carolina at Chapel Hill. He is a registered professional engineer and a Fellow of the IEEE.

REQUIREMENTS FOR SUCCESSFUL COMPLETION OF PROGRAM

Participants must sign in/out each day and be in attendance for the entirety of the course to be eligible for continuing education credit.

INSTRUCTIONAL METHODS

PowerPoint presentations, discussion, and case studies will be used in this program.

PROCEEDINGS

The proceedings of the course will be published, and one copy will be distributed to each registrant at the course.

EVENT LOCATION

EUCI Offices

4601 DTC Blvd. Suite 800
Denver, CO 80237

NEARBY HOTELS

Hyatt Regency Denver Tech Center

7800 E. Tufts Ave
Denver, CO 80237
Phone: 303-779-1234
0.3 miles away

Hilton Garden Inn Denver Tech Center

7675 E. Union Ave
Denver, CO 80237
Phone: 303-770-4200
0.6 miles away

Denver Marriott Tech Center

4900 S. Syracuse St
Denver, CO 80237
Phone: 303-779-1100
0.7 miles away

Hyatt Place Denver Tech Center

8300 E. Crescent Parkway
Greenwood Village, CO 80111
Phone: 303-804-0700
0.9 miles away

IACET CREDITS



EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.

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View nearby hotels on page 5.

PLEASE REGISTER

- BUSINESS ESSENTIALS FOR ENGINEERS COURSE:**
 APRIL 3-4, 2017: US \$1495,
 Early bird on or before March 17, 2017: US \$1295

How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

Print Name Job Title

Company

What name do you prefer on your name badge?

Address

City State/Province Zip/Postal Code Country

Phone Email

List any dietary or accessibility needs here

CREDIT CARD INFORMATION

Name on Card Account Number

Billing Address Billing City Billing State

Billing Zip Code/Postal Code Exp. Date Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)

OR Enclosed is a check for \$ _____ to cover _____ registrations.

Substitutions & Cancellations

Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before March 3, 2017 in order to be refunded and will be subject to a US \$195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of course cancellation, EUCI's liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices at (201) 871-0474.