



**SWE-RMS 2006 Election Results**

The results of the SWE-RMS election of officers for FY2007 is shown below. There were 33 returned valid ballots.

Congratulations to our slate of officers for the coming year. I hope all members of the Rocky Mountain Section will step forward and support our officers. Many hands make for lighter work.

President: Lori Stucky

Vice President: Chris Kruse

Secretary: Liz Black

Treasurer: Aspen Obering

Council of Representatives: Heather Doty and

Joan Graf

**Fundraiser for SWE – A Great Shopping Event**

In celebration of the Grand Opening of MACY'S NORTHFIELD AT STAPLETON, Macy's is hosting **Preview Charity Shopping Day 2006**, an in-store shopping event and fundraiser for charities in the Denver community. Macy's **Preview Charity Shopping Day** will be held on the *Private Preview Grand Opening Day, Tuesday, October 10* at Macy's Northfield at Stapleton. **SWE-RMS will be participating in this event.**

The purpose of **Preview Charity Shopping Day** is to raise money for local non-profit organizations through the sale of \$10 tickets that entitles the bearer to an exclusive 15-20% discount of almost everything at Macy's. In addition, customers will enjoy an exciting day filled with food and beverage samples, entertainment, promotional gifts, and the opportunity to win a **\$1,000** shopping spree.

Macy's will coordinate, produce and finance the entire event. Participating organizations will be asked to sell the tickets, retaining 100% of ticket sale proceeds, and to provide volunteers for the day of the event. We ask that each group set a minimum sales goal of 100 tickets. I need volunteers to help sell these tickets at your office, to your friends, relatives, etc. Let me know who will help out on this. Just think – if you take 10 tickets and sell them – you have helped SWE get \$100!!

On **Preview Charity Shopping Day**, sales associates at Macy's Northfield at Stapleton will sell tickets to their customers. This money will be divided among the top 5 organizations that generate the most redemption stubs on event day. Plus those same top 5 organizations would win bonus prizes, valued from \$500 to \$2,000.

SWE-RMS will be advertised in their media information as one of the beneficiaries of this charity event. We also will need 2 volunteers from our organization that day.

Please let me know if you can help sell tickets. I will get them on 7/20/06. Also, let me know if you are available to be our volunteer – our allocated time slot will be known on 7/20. What a great and easy way to raise funds for SWE!!

*Submitted by Joan Graf  
grafjj@msn.com  
303 794 0692*

**2006 National Conference  
Registration is OPEN!**



**October 12-14, 2006  
Kansas City Convention Center  
Kansas City, MO**

*Note: To view this information with links please visit [www.swe.org/2006](http://www.swe.org/2006).*

The SWE National Conference is the largest professional development and career conference for women engineers. In 2005, our conference attracted more than 4,000 engineering professionals, engineering students, and corporate representatives. Our 2006 Kansas City conference theme, *Women Blazing Technology Trails*, focuses on technology, professional development, career advancement, leadership, and much more. Whether you are an undergraduate or graduate engineering student, a professional in a corporation or government, or an academic professional, this conference is for you! Join us for the premier event of the year!

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## Internet Safety

In 2005, Qwest and the National Center for Missing & Exploited Children launched <http://www.incredibleinternet.com/onlinesafety> -- an online safety resource for today's connected families.

There is always a concern for internet safety. This online safety website provides valuable information for parents working with their children and for educating themselves on the internet usage.

The website features tests, guides and references to assist parents.

*Submitted by Joan Graf*

## BHAG: SWE's Vision Statement

The BHAG forum is up and running, and SWE is collecting feedback to create a motion at SWE's National Conference this year. What do you think about using our vision statement to say: To achieve and sustain parity for women in engineering? Similarly, how about, To increase the number of women in engineering? Do you think these statements align with SWE's mission and values? Do you think these are goals we should be reaching for in 10 - 30 years? Let us know what you think via the forum or via email. Thanks for your continued participation!

*Taken from SWE NEWS – July 06*

## 2006 National Conference (continued from page 1)

### Registration Information

You can now register online by visiting the conference website at [www.swe.org/2006](http://www.swe.org/2006). General information for registration, and registration forms for download can be found at the same website.

#### **Early bird discount deadlines are:**

Professional Members – August 25, 2006

Undergraduate and Graduate Collegiate Members – September 25, 2006

Exhibitors, please register with the materials provided by the conference manager.

After September 29th, registrations can only be made on-site.

- NEW! Overview Schedule of Events
- NEW! Sign up here to volunteer at the 2006 Conference.

## Exhibitors and Sponsors

The 2006 Exhibitor and Sponsor Prospectus and Booth Application is available for download. See our current list of Exhibitors and Sponsors

## Call for Participation

The call for participation is now closed. Each person who submitted a session will be informed of the status by March 15, 2006. Questions can be forwarded to:

Jeanne Elipani  
[Jeanne.Elipani@swe.org](mailto:Jeanne.Elipani@swe.org)

## Hotel Block is Open – Make Your Reservations Now!

1. Kansas City Marriott  
200 West 12th Street  
Kansas City, MO 64105  
Phone: 816-421-6800  
Rates: \$125.00 Single/Double \$135.00 Triple \$145.00 Quad  
You can make your reservations online by using the following codes:  
SWESWEA – Single/Double  
SWESWEB – Triple  
SWESWEC – Quad

\*Note: Some nights may be sold out. Located in the heart of the city's business, government and theater districts, the stunning Kansas City Marriott Downtown provides a delightful stay for business and leisure travel. This two-tower complex, unique among Kansas City hotels, combines newly restored historic elegance with modern luxury. The atrium waterfall at the entrance accents the hotel's dramatic beauty. All 946 guest rooms and 37 suites offer spacious design and wireless Internet access (available for a daily fee). Each and every room is a Room that Works® -- ergonomically designed for maximum efficiency. These are a welcome sight for our business travelers! In the evening, relax with a fine dinner at Lilly's Restaurant, or enjoy the lively atmosphere at the 12th Street Lounge.

2. Radisson Hotels & Suites  
Kansas City - City Center  
1301 Wyandotte  
Kansas City, MO 64205  
Reservations: (800) 333-3333 Toll Free  
Fax: (816) 474-0424  
Rate: \$99.00 Single or Double

Situated in the heart of downtown Kansas City adjacent to Bartle Hall KC Convention Center, the Kansas City – City

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Center Hotel offers luxury with stunning views of downtown Kansas City. Magnificent room views, full service dining, and superior service will greet your business or leisure stay at the Radisson Hotel & Suites Kansas City - City Center.

- Hotel Phillips  
106 W. 12th Street  
Kansas City, MO 64105  
Reservations: (816) 221-7000  
Fax: (816) 221-3477  
Rate: \$129.00 Single

Hotel Phillips is a downtown Kansas City art deco landmark styled with hip atmosphere. With a contemporary vintage luxury featuring lush accommodations and superb service, Hotel Phillips carries a rich tradition of excellence into the 21st century

*Taken from SWE NEWS – July 06*

## **FY07 Professional Development Grants Call for Volunteers and Proposals**

### **Volunteer Call:**

The Professional Development Grants (PDG) Committee is seeking members for the FY07 PDG committee. Volunteers will be evaluating proposals for new programs supporting SWE's mission across the U.S. In addition, the volunteers will be involved in team base decisions and will participate in projects to enhance the PDG process and spotlighting the program to SWE members. The time commitment is about four hours per quarter. Please contact PDG Chair Connie Truong.

### **Proposal Call:**

The deadline for PDG proposals for this quarter is August 1, 2006. To expedite the evaluation, please be sure to provide complete, informative proposal and budget forms. For sections that have overdue reports and unused funds from previous proposals, please close them prior to submitting any new proposals.

*Taken from SWE NEWS – July 06*

## **Newsletter Sponsor**

We would like to thank **Washington Group International, Inc.**, for their support in printing and mailing the SWE-RMS newsletter.

## **Improving SWE National Communications and SWE NEWS**

To better align SWE information with its membership's interests, FY07 introduces improvements in SWE's national communications.

Each month, beginning in August, the President will email communications to update SWE leadership. Also included in the President's monthly message will be the "SWE business news" for section and regional leadership, previously included in *SWE NEWS*. Although *SWE NEWS* will no longer include section and regional business news, please continue to submit this information to the **SWE NEWS editor**.

*SWE NEWS* will publish only stories of **national** interest. Announcements of local programs or sponsorship will not be included in *SWE NEWS*; however, local stories that share **best practices** are welcome.

To improve its readability, *SWE NEWS* will start with "At a Glance" and will contain only brief summaries of articles. Through links to the SWE Web site, a reader can get the complete text of a story.

The current *SWE NEWS* will be divided into two editions. The Collegiate Edition of *SWE NEWS* will be launched on September 1 and will be emailed, consecutively, the first Friday of each month through the academic year. This edition will focus on the news of interest to SWE's collegiate members.

Beginning August 18, a Professional Edition of *SWE NEWS* will be emailed to SWE's professional membership. To support the schedule of the Collegiate edition, the Professional Edition of *SWE NEWS* will be emailed the third Friday of every month. There will not be an edition of *SWE NEWS* released on August 4.

Note that all section presidents, COR members, region governors, RCRs, national committee chairs and BOD members will receive copies of each publication. For other members who like to stay informed with all of the news within SWE, each issue will conclude with a link to the previous issue of the other edition of *SWE NEWS* and the President's monthly letter to the leadership.

*Taken from SWE NEWS – July 06*

## Results of “Great Women in Engineering & Science” Essay Contest

The results of the 19th annual “Great Women in Engineering and Science” essay contest are in! This year’s essay contest was sponsored by the Xcel Energy Foundation. The competition was fierce again this year with a total of 153 entries from 12 schools in Colorado. A panel of 15 judges enjoyed reviewing all of the essays. Congratulations to every entrant!

The top three awards are a \$500 savings bond, a \$250 savings bond and a \$150 savings bond. The top three award winners listed below were announced at the Society of Women Engineers, Rocky Mountain Section award banquet held on June 10, 2006:

**Rachel Nease of Ft Collins, Colorado won 1st Place (\$500 Savings Bond)** for her essay featuring Dame Kathleen Lonsdale, 20th Century Irish-English Crystallographer, Physicist, and Chemist. Rachel attends 6th grade at Saint Joseph Catholic School and was sponsored by teacher Mr. Morris.

**Lauren O’Brien of Littleton, Colorado won 2nd Place (\$250 Savings Bond)** for her essay on Maria Mitchell, 19th Century American Astronomer. Lauren attends 6th grade at Columbine Hills Elementary School and was sponsored by teacher Mrs. Angus.

**Hannah Barkey of Steamboat Springs, Colorado won 3rd Place (\$150 Savings Bond)** for her essay on Lise Mietner, 20th Century Austrian Physicist. Hannah attends 6th grade at Steamboat Springs Middle School and was sponsored by teacher Mrs. Carroll.

**School Awards:** This year five schools received the school library award for outstanding participation in the essay contest. To qualify for this award, a teacher must submit essays from at least 20% of the 6<sup>th</sup> graders in her/his class. The award this year is *Changing Our World: True Stories of Women Engineers* by Sybil E. Hatch (2006). The books provide information on women engineers and scientists. This excellent reference will support teachers and classrooms in future research, not only for this contest, but also for other scientific, historical or biographical projects.

The aim of the school library award is two-fold: to supply 6th graders throughout Colorado and Wyoming with research materials, and to encourage teachers to include the essay contest in their curricula in order to expose all of their students to the significance and the opportunities of various science-related careers. The schools receiving awards this year are:

- Johnson Elementary School, Ft Collins, CO
- Saint Joseph School, Fort Collins, CO
- South Lakewood Elementary, Lakewood, CO
- Spring Creek School, Ft Collins, CO
- TLC Christian School, Salida, CO

**Honorable Merit Awards:** Ten students received Honorable Merit Awards this year. This year’s merit prize is a laboratory bubble gum making kit from DiscoveryKids™. The Honorable Merit award recipients are:

- Alexis Cox Columbine Hills Elementary
- Madeline O’Connell Ricks Center for Gifted Children
- Katie Rohwer South Lakewood Elementary
- Sam Lewis Spring Creek School
- Logan Hynes Spring Creek School
- Ellie Scott Spring Creek School
- Anna DeFrancia St. Joseph Catholic School
- Blair Haviland St. Joseph Catholic School
- Molly Momphard St. Joseph Catholic School
- Kelsey Brady St. Joseph Catholic School

**Honorable Mention Awards:** Twenty students received Honorable Mention Awards this year. The award for Honorable Mention this year is *Mistakes That Worked: 40 Familiar Inventions and How They Came to Be* by Charlotte Foltz Jones (1991). The Honorable Mention award winners are:

- Emma Pettit Johnson Elementary School
- Beth Benn Johnson Elementary School
- Libby Looft Johnson Elementary School
- Samantha Hall Johnson Elementary School
- William Satterwhite St. Joseph Catholic School
- Chloe Speshock St. Joseph Catholic School
- Katalin Kenney St. Joseph Catholic School
- Addison Overholt St. Joseph Catholic School
- Victoria Wimer St. Joseph Catholic School
- Kitryn Gardner St. Joseph Catholic School
- Alexa Norrigan St. Joseph Catholic School
- Ryan Lembitz Spring Creek School
- Alex Chambers Spring Creek School
- Aiden Coyle Spring Creek School
- Morgan Carpenter Columbine Hills Elementary
- Whitney Clark Columbine Hills Elementary
- Amanda Lewis TLC Christian
- Cole Hiser TLC Christian
- Sarah Decker South Lakewood Elementary
- Kelsey Hammer South Lakewood Elementary

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## SWE-RMS Listing of Volunteer Opportunities

(continued from previous page) All participants received a certificate of participation and a Great Women in Engineering Essay Contest t-shirt. Announcements of the contest results will be featured in the *Denver Post* Colorado Kids section, as well as in the hometown newspapers of the top three prizewinners.

The Society of Women Engineers is a national organization of women and men who support the growth of women's roles as engineering students and professionals. One of the society's missions is to "inform young women, their parents, counselors and the general public of the qualifications and achievements of women engineers and the opportunities open to them."

Submitted by Sonya Reiser, 2006 Essay Contest Chairwoman, Society of Women Engineers, Rocky Mountain Section

### Message from the President

I would like to send out a huge THANK YOU to last year's officers and everyone who donates their time and talent on behalf of the Section. A special thank you to Diana Dede for chairing this year's Teller Committee.

Welcome to this year's officers. We are looking forward to an active and exciting year. If we haven't had the pleasure of seeing you in a while, come to a meeting, networking event, program, call or email us!

On August 3, SWE-RMS and GE Women's Network will have a joint Networking event at NBC Telemundo, 4:30pm-6:00pm. Telemundo is located at 1120 Lincoln Street, Denver, CO 80203. Please RSVP to Linda Combs at [linda.combs@ge.com](mailto:linda.combs@ge.com)

Stay Cool and have a safe rest of the summer~

Submitted by Lori Stucky, SWE-RMS FY 06-07 President

### SWE-RMS Brainstorming for the Year Forward Event

Do you have ideas for SWE-RMS events and goals for the upcoming year?

Would you like to give feedback as to how the section grows, meets and learns?

Come to a brainstorming and preparation get-together on Saturday August 26 at 9:00am. Your input would be greatly appreciated!

Please pencil this one in and watch email announcements for location of our brainstorming session.

### MACY's Northfield at Stapleton Preview Charity Shopping Day

- (1) Volunteers needed to sell \$10 tickets that entitle the bearer to an exclusive 15-20% discount of almost everything at Macy's.
- (2) Volunteers needed the day of the event, October 10, 2006. Allocated time slot will be known on July 20, 2006.

Please contact Joan Graf at [grafjj@msn.com](mailto:grafjj@msn.com)

### 2007 Region i Conference at Colorado School of Mines

The SWE-RMS professional section will be helping the students plan the conference. Please contact Heather Doty at [heather.doty@swe.org](mailto:heather.doty@swe.org) to volunteer

## Bulletin Board

No new postings this month.

### Subscribe to SWE-RMS Email



Subscribe to the SWE-RMS Email list to get the latest information on events and programs of the Rocky Mountain Section.

Be the first to know about tours, programs, networking meetings, and conferences. Be on the list. Be in the know!

To subscribe to the SWE-RMS mailing list: email [listproc@lists.colorado.edu](mailto:listproc@lists.colorado.edu) with the message:

subscribe swe-rms last name, first name

You should receive an email confirmation.

To unsubscribe, email [listproc@lists.colorado.edu](mailto:listproc@lists.colorado.edu), and leave the subject line blank, and type the following in the body of the message: unsubscribe swe-rms

## Discussion Board

**This newsletter's question:** At work, a customer representative will sometimes touch my leg, arm and once even my rear end in a way that makes me feel uncomfortable. It's not obvious and I'm not sure he's intentionally doing it to cause me discomfort. However, I would like to say something to him to let him know that behavior makes me feel uncomfortable. Any ideas on how to approach the subject?

*Please email discussion responses or topic ideas to Sandra.Wiese@gmail.com.*

**Last newsletter's question** How do you know it is time to leave you job?

### Responses:

"I have known it was time to leave when there were no more opportunities for me to grow, and when I felt I needed to leave to keep learning. It's important for me to have growth and learning opportunities and when I get stale I try to change job responsibilities or leave the company.

*Submitted by. Kristin Ramey*

## New Belgium Brewery Tour



This past May, the Fort Collins Networking Night featured a tour of the New Belgium Brewery. Matt Jones from New Belgium led the tour, and the group met afterwards with Jim Spencer, New Belgium's engineering manager, for a Q&A session. Everyone had a great time with the tour, and the ladies were treated to a discount at New Belgium's store. Several ladies went out to dinner afterwards in Old Town. The next Ft. Collins Networking Night will be held in September, following a summer break.

## University of Colorado at Denver and Health Sciences Center Downtown Denver

College of Engineering and Applied Science  
Continuing Engineering Education Program

**Extended Studies Fall Semester  
July - December 2006**

### Program Areas include:

F.E. and P.E. Refresher Courses  
Civil Engineering/ Water  
Civil Engineering/ Transportation  
Mechanical Engineering/Manufacturing  
Project Management  
Computer Science/Information Technology  
Systems Engineering

**Website:** [www.cudenver.edu/engineer/cont](http://www.cudenver.edu/engineer/cont)  
**Call** 303-556-4907  
**Or Toll Free** 1-877-859-7304

## F.E. and P.E. Refresher Courses

*Professional Development/Non-Credit*

### Fundamentals of Engineering (FE) Examination Refresher Course

#### Course Description

**NCES 8030.** Designed for those who need an advanced review before taking the National Fundamentals of Engineering (FE) Examination, this course offers 44-hours of intense instruction. Aimed at covering the morning session of the exam and the general section in the afternoon, each of the eleven sessions deals with a different examination subject area. Additionally, a different instructor drawn from the University faculty and private industries conducts each session.

**Dates:** Eleven Saturdays

July 29 - October 14, 2006

*No class September 2, 2006 due to Labor Day Holiday.*

**Times:** 8:30 a.m. to 12:30 p.m.

**Location:** Auraria campus, Downtown Denver

**Cost:** \$495; review course only. Students are responsible for the purchase of the text. Registrations received July 22, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus late fee is \$530.

**CEUs:** The course carries 4.4 Continuing Education

Units (CEUs). Students who attend at least nine of the eleven sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **Professional Engineer Examination Refresher Course for Civil Engineering**

#### Course Description

**NCES 8040.** Designed for those who need an advanced review before taking the National Principles and Practice of Engineering Examination for civil engineering, this course offers 40-hours of intense instruction. Aimed at covering the morning session of the exam and the general section in the afternoon, each of the ten sessions deals with a different examination subject area. Additionally, a different instructor drawn from the University faculty and private industries conducts each session.

**Dates:** Ten Saturdays

August 5 - October 14, 2006

**Times:** 8:30 a.m. to 12:30 p.m.

*No class September 2, 2006 due to Labor Day Holiday.*

**Location:** Auraria campus, Downtown Denver

**Cost:** \$525; review course only. Students are responsible for the purchase of the text. Registrations received July 29, 2006 or later are assessed a Registration Late Fee of \$35. Class cost plus fee is \$560.

**CEUs:** The course carries 4.0 Continuing Education Units (CEUs). Students who attend at least eight of the ten sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **Professional Engineer Examination Refresher Course for Electrical Engineering**

#### Course Description

**NCES 8050.** Designed for those who need an advanced review before taking the National Principles and Practice of Engineering Examination for electrical engineering, this course offers 32-hours of intense instruction. Aimed at covering the morning session of the exam and the general section in the afternoon, each of the eight sessions deals with a different examination subject area. Additionally, a different instructor drawn from the University faculty and private industry conducts each session.

**Dates:** Eight Saturdays

August 19 - October 14, 2006

**Times:** 8:30 a.m. to 12:30 p.m.

*No class September 2, 2006 due to Labor Day Holiday.*

**Location:** Auraria campus, Downtown Denver

**Cost:** \$475; review course only. Students are responsible for the purchase of the texts. Registrations received August 12, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus fee is \$510.

**CEUs:** The course carries 3.2 Continuing Education Units (CEUs). Students who attend at least six of the eight sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **Professional Engineer Examination Refresher Course for Mechanical Engineering**

#### Course Description

**NCES 8070.** Designed for those who need an advanced review before taking the National Principles and Practice of Engineering Examination for mechanical engineering, this course offers 32-hours of intense instruction. Aimed at covering the morning session of the exam and the general section in the afternoon, each of the eight sessions deals with a different examination subject area. Additionally, a different instructor drawn from the University faculty and private industry conducts each session.

**Dates:** Eight Saturdays

August 19 - October 14, 2006

**Times:** 8:30 a.m. to 12:30 p.m.

*No class September 2, 2006 due to Labor Day Holiday.*

**Location:** Auraria campus, Downtown Denver

**Cost:** \$475; review course only. Students are responsible for the purchase of the texts. Registrations received August 12, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus fee is \$510.

**CEUs:** The course carries 3.2 Continuing Education Units (CEUs). Students who attend at least six of the eight sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **FE and PE Examination Refresher Course: Review of Undergraduate Mathematics for Engineers and Scientists**

#### Course Description

**NCES 8090.** This course is a review of undergraduate university mathematics taught in the engineering and science curriculum. The course will start with a review of algebra, geometry, and trigonometry required for calculus. Next, differential and integral calculus will be reviewed followed by a review of vector algebra, vector calculus, complex variables, and linear algebra. The course finishes with a review of ordinary differential equations. The emphasis will be on working problems in each of these topics rather than a review of theory. The goal is to review the applications of mathematics

in engineering and physical sciences.

**Dates:** Four Saturdays

September 9 - 30, 2006

**Times:** 1:00 p.m. to 5:00 p.m.

**Location:** Auraria campus, Downtown Denver

**Cost:** \$295 includes instructor notes. Registrations received September 2, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus fee is \$330.

**CEUs:** The course carries 1.6 Continuing Education Units (CEUs). Students who attend at least three of the four sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **Professional Engineer Examination Refresher Course for Civil Engineering: Boot Camp**

#### Course Description

**NCES 8020.** This intense 40-hour course is a review of subject matter related to the National Principles and Practice of Engineering Examination for civil engineering. Boot Camp is fast-paced and focused on problem-solving with sample test questions from Michael Lindeburg's *Practice Problems for the Civil Engineering PE Exam*. This course is designed for students who have already begun a thorough review of civil engineering fundamentals and need an accelerated practice session. A different instructor drawn from University faculty and industry conducts each topic.

**Dates:** Thursdays, Fridays, and Saturdays from October 5 - October 14, 2006.

October 5 - October 14, 2006

**Times:** Thursday sessions are held from 1:00 p.m. to 5:00 p.m., and Friday and Saturday sessions are held from 8:00 a.m. to 5:00 p.m.

**Location:** Auraria campus, Downtown Denver

**Cost:** \$525; review course only. Students are responsible for the purchase of the texts. Registrations received September 28, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus late fee is \$560.

**CEUs:** The course carries 4.0 Continuing Education Units (CEUs). Students who attend at least eight of the ten sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **Civil Engineering/Water**

*Professional Development/Non-Credit*

### **River and Floodplain Modeling Using HEC-RAS v.3.1.3**

#### Course Description

**NCES 8322.** This three-day course presents the latest

version of HEC-RAS and its applications to model streams, rivers, and floodplains under a flood flow condition. The first day focuses on how to compute water surface profiles for a river network; Day two covers culvert and bridge hydraulics and modeling techniques; and Day three illustrates how to manage HEC-2 data files and GeoRAS for a floodway analysis by various methods. Workshops are designed to have hands-on operations using HEC-RAS to analyze common and practical floodplain problems. Participants will have an opportunity to prepare input files and analyze output.

#### Course Details

**Dates:** Wednesday through Friday

August 16 - 18, 2006

**Times:** 8:30 a.m. - 4:30 p.m.

**Location:** Auraria campus, Downtown Denver

**Cost:** \$895 includes course notes and HEC-RAS software. Registrations received August 9, 2006 or later will be assessed a Registration Late Fee of \$35. Course cost plus fee is \$930.

**CEUs:** The course carries 2.1 Continuing Education Units (CEUs). Students who attend all three sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **The Engineering Essentials of Wetlands and Wetland Regulations**

#### Course Description

**NCES 8271.** This 2-day course provides an overview of what engineers, planners, and construction professionals really need to know about wetlands and wetland-related regulations. The first day of the course focuses on Clean Water Act Section 404 Nationwide and Individual Permits and Section 401 Water Quality Permits. Instructors define what makes a wetland a wetland. The second day consists of field visits to wetlands and wetland mitigation sites in the Denver metro area.

This course proactively promotes recognizing and avoiding potentially significant project delays and increased costs associated with wetlands and wetland regulations.

#### Course Details

**Dates:** Thursday and Friday

September 14 and 15, 2006

**Times:** 8:30 a.m. - 4:30 p.m.

**Location:** Auraria Campus, Downtown Denver for first day of lecture, and wetland and wetland mitigation sites in the Denver metro area on the second day.

**Cost:** \$450 includes instructor notes. Registrations received September 7, 2006 or later will be assessed a Registration Late Fee of \$35. Course cost plus fee is



\$485.

Students will be responsible for State Park admittance fees of \$5 - 10. Please bring cash or utilize a vehicle with a State Park pass.

**CEUs:** The course carries 1.4 Continuing Education Units (CEUs). Students who attend both sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### Advanced Topics in Floodplain Management

#### Course Description

**NCES 8237.** This 2-day course presents information necessary for those more experienced in the floodplain management profession to understand important aspects of a more advanced nature. Critical facets of the field will be covered including the roles and responsibilities of the local floodplain manager, an in-depth discussion of rules and regulations regarding the National Flood Insurance Program, procedures and implications for changes and amendments to floodplain maps, and additional discussion of post-disaster implications and responsibilities. Other sources of information and tools for use by the floodplain management professional will be presented.

#### Course Details

**Dates:** Thursday and Friday

October 26 and October 27, 2006

**Times:** Thursday, 8:00 a.m. - 5:00 p.m.

Friday, 8:00 a.m. - 12:00 noon

**Location:** Auraria Campus, Downtown Denver

**Cost:** \$450 includes class notes and slides.

Registrations received October 19, 2006 or later are assessed a Registration Late Fee of \$35. Class cost plus fee is \$485.

**CEUs:** 1.2 Continuing Education Units. Students who attend both sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### Civil Engineering/Transportation

*Professional Development/Non-Credit*

### Wildlife Crossing Level I - Planning, Design, and Construction

#### Course Description

**NCES 8292.** This 30-hour course will:

\* Provide an educational opportunity for transportation and conservation professionals to plan, design, construct, and monitor effective and economic wildlife crossing structures in Colorado

\* Facilitate communication between transportation planners, engineers and biologists

\* Provide a means for government agencies to gauge the experience of engineering firms who apply

for highway projects that involve wildlife crossings.

#### Course Details

**Dates:** Fridays and Saturdays

September 22 and 23; October 20 and 21; and November 17 and 18, 2006

**Times:** Fridays, 9:00 a.m. - 5:00 p.m.; Saturdays, 10:00 a.m. - 1:00 p.m.

**Location:** Auraria Campus, Downtown Denver

**Cost:** \$995 includes course materials. Registrations received September 15, 2006 or later are assessed a Registration Late Fee of \$35. Class cost plus fee is \$1,030.

**CEUs:** The course carries 3.0 Continuing Education Units (CEUs). Students may miss one Friday or two Saturdays and still earn a passing grade and be awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### Explicit Consideration of Safety in Highway Design

#### Course Description

**NCES 8291.** This hands-on, six-week course offers a methodological foundation and an analytical framework for the explicit consideration of safety in geometric design of highways. It provides a practical approach to solving a complex problem of road safety by integrating elements of geometric design, traffic operations, statistics, and risk analysis. Students taking the course gain a comprehensive understanding of the relationships between road safety and geometric design, safety performance of various roads and junctions, principles of diagnostics and pattern recognition, benefit cost analysis, and optimization strategies. Throughout the course, numerous real life case histories illustrate the application of the introduced concepts.

It is important to make clear at the outset what 'Road Safety' means: of two alternative highway designs connecting points A and B and serving the same traffic, which highway design is likely to have fewer and less severe accidents. Thus, the safety of a road is measured by the frequency and severity of accidents expected to occur on it. If so, safety of a road is always a matter of degree. A road can be safer or less safe, but how much safety is enough? How much safety can we reasonably expect for a certain amount of money? Are roads designed to meet current standards as safe as they can be? Are they as safe as they should be? These and many other questions related to explicit consideration of safety in geometric design of highways are explored by the students taking this class.

#### Course Details

**Dates:** Monday evenings

October 9 - November 13, 2006

**Times:** 6:00 p.m. - 9:00 p.m.

**Location:** Auraria Campus, downtown Denver  
**Cost:** \$550 includes instructor notes. Registrations received October 2, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus fee is \$585.

**CEUs:** The course carries 1.8 Continuing Education Units (CEUs). Students who attend five or more of the six sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **Mechanical Engineering/Manufacturing** *Professional Development/Non-Credit*

#### **Introduction to Geometric Dimensioning and Tolerancing**

##### Course Description

**NCES 8183.** The goal of this six session, eighteen hour introductory course is to gain knowledge in the interpretation and application of geometric tolerances and practices as defined by the ASME National Standard (Y14.5M-1994). Course topics include tolerances of form, orientation, location, runout and profile.

##### Course Details

**Dates:** Tuesday evenings  
September 5 - October 10, 2006

**Times:** 5:30 p.m. - 8:30 p.m.

**Location:** Auraria Campus, Downtown Denver  
**Cost:** \$550 includes course references and class notes. Registrations received August 29, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus fee is \$585.

**CEUs:** The course carries 1.8 Continuing Education Units (CEUs). Students who attend at least five of the six sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

#### **Advanced Concepts of Geometric Dimensioning and Tolerancing**

##### Course Description

**NCES 8182.** The goal of this six session, eighteen-hour advanced course is to expand knowledge in the interpretation and application of geometric tolerances and practices as defined by the ASME National Standard (Y14.5M-1994). Tolerances of form, orientation, location, runout and profile are covered.

##### Course Details

**Dates:** Tuesday evenings  
October 17 - December 5, 2006  
*No class on October 31 or November 21, 2006.*

**Times:** 5:30 p.m. - 8:30 p.m.

**Location:** Auraria Campus, Downtown Denver

**Cost:** \$550 includes course references and class notes. Registrations received October 10 or later are assessed a Registration Late Fee of \$35. Course cost plus fee is \$585.

**CEUs:** The course carries 1.8 Continuing Education Units (CEUs). Students who attend at least five of the six sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **Project Management**

*Professional Development/Non-Credit*

#### **Project Management Methods: Preparation for the PMP and CAPM Examinations**

##### Course Description

**NCES 8999: E50 and E51.** This interactive course helps students understand the processes, terms, and concepts in project management and also serves as preparation for the Project Management Professional (PMP®) and Certified Associate in Project Management (CAPM®) examinations. The Project Management Institute's (PMI) *A Guide to the Project Management Body of Knowledge (PMBOK) Third Edition* and Rita Mulcahy's *PMP® Exam Prep Book - Fifth Edition* form the foundation for the course material.

##### Course Details

**Dates:** Section E50 meets Friday afternoons  
September 15 - November 17, 2006

**Times:** 1:00 p.m. - 5:30 p.m.

**Location:** CU at Interlocken at Level (3)  
Communications, Broomfield

**Cost:** \$1,995 includes instructor notes and course texts. Registrations received September 8, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus fee is \$2,030.

*Deferred payment is available.*

**CEUs:** The course carries 4.5 Continuing Education Units (CEUs). Students who attend at least eight of the ten sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

**Dates:** Section E51 meets Saturdays  
September 16 and 30, October 14 and 28, November 11 and 18, 2006

**Times:** 9:00 a.m. - 4:30 p.m. *Please bring a lunch, lectures will continue over the lunch hour.*

**Location:** Auraria Campus, downtown Denver

**Cost:** \$1,995 includes instructor notes and course texts. Registrations received September 9, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus fee is \$2,030. *Deferred payment is available.*

**CEUs:** The course carries 4.5 Continuing Education

Units (CEUs). Students who attend at least five of the six sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **Establishing Budgets: Project Estimating and Cost Control**

#### Course Description

**NCES 8978.** This twelve-hour course engages owners, design professionals, project managers, construction managers, and project controls professionals in estimating practices and methodologies in the engineering and construction industry. The course focuses on the realities of estimating in this rapid response, competitive environment and controlling budget "surprises". Students will gain better control of projects and confidence in budget numbers.

#### Course Details

**Dates:** Thursday, Friday, and Saturday  
September 28 - 30, 2006

**Times:** Thursday and Friday, 6:00 p.m. - 9:00 p.m.  
Saturday, 8:30 a.m. - 3:30 p.m.

**Location:** Auraria Campus, Downtown Denver

**Cost** \$595 includes course materials. Registrations received September 21, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus fee is \$630.

**CEUs:** The course carries 1.2 Continuing Education Units (CEUs). Students who attend all three sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **Real World Portfolio Management**

#### Course Description

**NCES 8987.** Portfolio Management has experienced the same growth as Project Management in the last few years. Yet, according to the Project Management Institute (PMI), there are few best practices or documented processes available in this arena. This class will present PMI's recommended approaches to Portfolio Management, as well as real world experience to manage a company's portfolio. A portfolio is defined as a collection of active programs, projects and other work activities that reflect a company's strategic priorities. Determining how and when to implement programs/projects can help determine the success of an organization.

#### Course Details

**Dates:** Tuesday Evenings  
October 3 - 24, 2006

**Times:** 6:00 p.m. - 9:00 p.m.

**Location:** Auraria Campus, downtown Denver

**Cost:** \$595 includes materials. Registrations received September 26, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus fee is \$630.

**CEUs:** The course carries 1.2 Continuing Education Units (CEUs). Students who attend at least three of the four sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **Project Management for Technical and Business Managers in Engineering, Science, and Information Technology**

#### Course Description

**NCES 8986.** This Project Management course is a refresher for business and technical managers who are interested in furthering their practical applications and processes for managing engineering, Science, IT, and other technical projects. The course content helps prepare students for the Project Management Institute's Project Management Professional Certification Exam. Participation in the course is recognized for continuing education credits for technical professional license requirements.

#### Course Details

**Dates:** Thursday and Friday  
October 12 and 13, 2006

**Times:** 8:30 a.m. - 4:30 p.m.

**Location:** Auraria Campus, downtown Denver

**Cost:** \$595 includes course texts and notes.

Registrations received October 5, 2006 or later will be assessed a Registration Late Fee of \$35. Course cost plus fee is \$630.

**CEUs:** The course carries 1.4 Continuing Education Units (CEUs). Students who attend both sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

### **Computer Science/Information Technology**

*Professional Development/Non-Credit*

### **Database Systems Concepts**

#### Course Description

**NCES 8696.** This fifteen-week course introduces database design, database management systems, and the SQL standard database language. It includes data modeling techniques, conceptual database design, theory of object-relational and relational databases (among others), relational algebra, normalization, and database integrity and efficiency.

#### Course Details

**Dates:** Tuesday evenings

August 29 - December 12, 2006

No class on November 21, 2006 due to Thanksgiving Break.

**Times:** 7:00 - 9:00 p.m.

**Location:** Auraria Campus, downtown Denver

**Cost:** \$995 includes course materials. Students are responsible for providing a drawing program and computer. Registrations received August 22, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus fee is \$1,030.

**CEUs:** The course carries 3.0 Continuing Education Units (CEUs). Students who attend at least twelve of the fifteen sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

## **Computer Networking/Cisco CCNA Certification Program**

### Program Description

**NCES 8634.** The CCNA certification (Cisco Certified Network Associate) indicates a professional's knowledge of, and foundation in basic networking. CCNA certified professionals can install, configure, and operate LAN, WAN, and dial access services for small networks (100 nodes or fewer), including, but not limited to use of these protocols: IP, IGRP, Serial, Frame Relay, IP RIP, VLANs, RIP, Ethernet, and Access Lists.

The Computer Networking/Cisco CCNA Certification Program includes two courses that prepare students for the most current Cisco Certified Network Associate (CCNA) #640-801 exam:

\* *Introduction to Cisco Networking Technologies* (INTRO)

\* *Interconnecting Cisco Network Devices* (ICND), v 2.1

*Students are responsible for scheduling and payment of the Cisco-specific exams.*

During the program, students practice networking with hands-on activities and e-labs. Students develop the skills necessary to both prepare for the Cisco CCNA examination and administer a network in a working environment. The program includes 63 classroom hours of instruction and the provided texts.

### INTRO

*Introduction to Cisco Networking Technologies* presents important networking fundamentals using the Open Systems Interconnect (OSI) seven-layer model concepts; terminology and technologies are explained and illustrated using text and graphics animation. The course includes online assessments that allow students to measure their progress throughout the learning experience.

### Prerequisites

To fully benefit from INTRO, students should already possess certain prerequisite skills. Please review our list of Basic Competencies at

[www.cudenver.edu/engineer/cont](http://www.cudenver.edu/engineer/cont)

### ICND v 2.1

*Interconnecting Cisco Network Devices* (ICND), v 2.1 focuses on using Cisco Catalyst switches and Cisco routers connected in local-area networks (LANs) and wide-area networks (WANs) typically found at small to medium network sites. Upon completion of this course, students are able to select, connect, configure, and troubleshoot the various Cisco networking devices.

### Prerequisites

To fully benefit from ICND, students should already possess certain prerequisite skills, which are gained from completing INTRO or through workplace experience.

### The CU-Denver Difference

There are many CCNA prep courses, books, and Boot Camps available, whose chief goal is preparing you to pass the CCNA exam. The CU-Denver program will also enable you to pass the CCNA tests, but beyond this, CU-Denver's main goal is that you are fully prepared to enter the networking world. The instruction includes real-world networking examples, facts, and tips that will enable you to have confidence entering your first networking assignment. Passing a test is significantly different than really knowing the fundamentals of networking. Be prepared for a motivated and accelerated course presented in a university styled setting.

### Course Details

**Dates:** Tuesday and Thursday evenings

September 12 - December 7, 2006

*Class will not meet October 24, 26 and 31 and November 21 and 23, 2006.*

**Times:** 6:00 p.m. - 9:00 p.m.

**Location:** CU at Interlocken at Level (3) Communications, Broomfield

**Cost:** \$2,995, includes texts and simulator.

Registrations received September 5 or later are assessed a Registration Late Fee of \$35. Class cost plus fee is \$3,030. *Deferred payment available.*

**CEUs:** The course carries 6.3 Continuing Education Units (CEUs). Students who attend at least sixteen of the twenty-one sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

## **Excel for Engineering Application Program**

### Program Overview

The *Excel for Engineering Applications Program* is offered in three segments, allowing students to choose

a focus that meets their specific needs or take all three segments to learn the full slate of features within Excel for solving simple to complex engineering problems. The program is taught with a mix of lectures and hands-on exercises building applications in Microsoft Excel.

This program teaches students how to use a very powerful analysis tool, Microsoft's Excel program. Companies prefer that engineering calculations be prepared using an electronic analysis package. This allows for rapid changes to a problem definition without needing to recalculate the entire problem, plus allows the analysis approach to be used repeatedly. Knowing how to use Excel in this manner becomes a valuable tool for anyone working in a technology-based field.

The *Excel for Engineering Applications Program* includes:

#### **Excel Basics in Engineering Applications**

Provides an overview of Excel features and works through general problem solving available through the Spreadsheet Environment. (10 hour segment)

#### **Advanced Engineering Analysis using Excel**

Building and working with complicated workbooks, utilizing data analysis tools, numerical integration, and differentiation techniques in the Spreadsheet Environment. (10 hour segment)

#### **Using the VBA Programming Environment in Excel**

Learn Visual Basic code architecture and syntax to create customized functions, using Macros, building Forms for alternate access into the VBA Environment, and building custom code into an Excel Add-In. (20 hour segment, Spring 2007)

#### **Excel Basics in Engineering Applications**

Course Description

**NCES 8775.** This course provides an overview of Excel features and works through general problem solving available through the Spreadsheet Environment. It focuses on problems typically found in engineering applications and scientific analysis. Students learn basic spreadsheet manipulation, building formulas, the range of built-in functions, cell referencing, construction of sequential algorithms, intuitive spreadsheet layout, and many other fundamental aspects of Excel. Statistical analysis, approximations to numerical differentiation and integration, and root-finding techniques will be covered.

**Dates:** Friday Afternoons  
September 8 - 29, 2006.

**Times:** 2:00 p.m. - 4:30 p.m.

**Location:** Auraria Campus, Downtown Denver

**Cost:** \$395 includes instructor notes. Registrations received September 1, 2006 or later will be assessed a Registration Late Fee of \$35. Course cost plus fee is \$430.

**CEUs:** The course carries 1.0 Continuing Education Units (CEUs). Students who attend at least three of the four sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

#### **Advanced Engineering Analysis using Excel**

Course Description

**NCES 8776:** This course focuses on building and working with complicated workbooks, utilizing data analysis tools, and implementing root-finding techniques, numerical integration, and numerical differentiation techniques within the Spreadsheet Environment. Students build on the basics of Excel through construction of detailed algorithms for solving differential and integral problems numerically. The Excel Solver Tool and other advanced root-finding algorithms are covered along with statistical optimization techniques. Interaction between worksheets and creating an intuitive layout is included, along with a view for multiple users of the spreadsheet.

**Dates:** Friday Afternoons

October 20 - November 10, 2006.

**Times:** 2:00 p.m. - 4:30 p.m.

**Location:** Auraria Campus, Downtown Denver

**Cost:** \$395 includes instructor notes. Registrations received October 13, 2006 or later will be assessed a Registration Late Fee of \$35. Course cost plus fee is \$430.

**CEUs:** The course carries 1.0 Continuing Education Units (CEUs). Students who attend at least three of the four sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

#### **Introduction to Java for C++ Programmers**

Course Description

**NCES 8779.** With this course, you will learn the basics of the Java programming language. Once you have these foundations, you can learn the library packages that make programming many aspects of the Internet easy.

You will learn how to:

- \* Download and use Sun's Java Developers'Kit.
- \* Build packages of code.
- \* Write Java statements and expressions.
- \* Use Exceptions to escape handle failures.
- \* Use the most common data structure packages.
- \* Start designing object-oriented programs.

Course Details

**Dates:** Friday

October 6, 2006.

**Times:** 8:30 a.m. - 4:30 p.m.

**Location:** CU at Interlocken, Level (3)  
Communications, Broomfield

**Cost:** \$325 includes course materials and notes.

Registrations received September 29, 2006 or later will be assessed a Registration Late Fee of \$35. Course cost plus fee is \$360.

**CEUs:** The course carries 0.7 Continuing Education Units (CEUs). Students who attend the one day session earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

## Relational Management and Display of Site Environmental Data

### Course Description

**NCES 8451:** Many environmental projects have reached the point where the amount of data that has been collected requires a robust tool to manage it. In an effort to equip environmental professionals with the skills they need to effectively implement a data management system this course covers a spectrum of topics from the theory of relational management of site data to practical suggestions about working with laboratories. It starts with an overview of site data management concepts and then progresses through relational data management, implementing the database system, the design of the database tool, and ends with pitfalls, horror stories, and successes in site data management. The concepts covered apply to any database management system, from stand-alone through client-server to web-based. Exercises cover database design, import issues, data problems, and use of the data, including reporting, graphing, and mapping.

### Course Details

**Dates:** Wednesday evenings

October 11 - 25, 2006

**Times:** 6:00 p.m. - 9:00 p.m.

**Location:** CU at Interlocken Campus, Level (3)  
Communications, Broomfield

**Cost:** \$350 includes course text and class notes.

Registrations received October 4, 2006 or later are assessed a Registration Late Fee of \$35. Course cost plus fee is \$385.

**CEUs:** The course carries 0.9 Continuing Education Units (CEUs). Students who attend all three sessions earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

## Introduction to the Java Abstract Window Toolkit

### Course Description

**NCES 8778.** This teaches the fundamentals of the Java Abstract Window Toolkit and how to use it to make simple graphical user interfaces. You will learn how to open windows on the screen, lay out graphical components that gather information from the user, and create applets that interact with the user and the web browser.

Command-line and text based programs are becoming obsolete. This course provides an entry into the use of Java's Abstract Window Toolkit. The AWT is a large and complex package, but it does provide the facilities to write machine and operating system-independent programs with graphical user interfaces.

### Course Details

**Dates:** Friday

October 13, 2006.

**Times:** 8:30 a.m. - 4:30 p.m.

**Location:** CU at Interlocken, Level (3)  
Communications, Broomfield

**Cost:** \$325 includes course materials and notes.

Registrations received October 6, 2006 or later will be assessed a Registration Late Fee of \$35. Course cost plus fee is \$360.

**CEUs:** The course carries 0.7 Continuing Education Units (CEUs). Students who attend the one-day session earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

## How to Create and Use Java Threads

### Course Description

**NCES 8780.** Threads are "lightweight processes," parts of the same program in execution at the same time. Networked client/server and web-based programming requires multithreading to have any decent performance. This course teaches how to create and use Java threads and introduces the networking and java.util.concurrent packages.

You will learn how to:

- \* Create threads.
- \* Protect critical sections of code from multiple accesses.
- \* Prevent deadlock.
- \* Control groups of threads.
- \* Prevent starvation.
- \* Create sub-processes.
- \* Write network clients and servers using TCP/IP.

### Course Details

**Dates:** Friday

October 20, 2006.

**Times:** 8:30 a.m. - 4:30 p.m.

**Location:** CU at Interlocken, Level (3)

Communications, Broomfield

**Cost:** \$325 includes course materials and notes.

Registrations received October 13, 2006 or later will be assessed a Registration Late Fee of \$35. Course cost plus fee is \$360.

**CEUs:** The course carries 0.7 Continuing Education Units (CEUs). Students who attend the one-day session earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

## Introduction to Python for C++ Programmers

### Course Description

**NCES 8782.** This course will teach C++ programmers all they need to know to start programming in the Python programming language.

The Python language is popular for web and network development, and for operating system scripting. It is available on all major platforms and comes with extensive libraries for handling Internet protocols, databases, and graphical user interfaces. Zope, Django, TurboGears, Twisted, and other web and networking frameworks are written in Python.

### Course Details

**Dates:** Friday

November 3, 2006.

**Times:** 8:30 a.m. - 4:30 p.m.

**Location:** CU at Interlocken, Level (3)

Communications, Broomfield

**Cost:** \$325 includes course materials and notes.

Registrations received October 27, 2006 or later will be assessed a Registration Late Fee of \$35. Course cost plus fee is \$360.

**CEUs:** The course carries 0.7 Continuing Education Units (CEUs). Students who attend the one-day session earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

## Introduction to Python for Java Programmers

### Course Description

**NCES 8781.** This course will teach Java programmers all they need to know to start programming in the Python programming language.

The Python language is popular for web and network development and for operating system scripting. It is available on all major platforms and comes with extensive libraries for handling Internet protocols, databases, and graphical user interfaces. Zope, Django, TurboGears, Twisted, and other web and networking frameworks are written in Python.

### Course Details

**Dates:** Friday

November 10, 2006.

**Times:** 8:30 a.m. - 4:30 p.m.

**Location:** CU at Interlocken, Level (3)

Communications, Broomfield

**Cost:** \$325 includes course materials and notes.

Registrations received November 3, 2006 or later will be assessed a Registration Late Fee of \$35. Course cost plus fee is \$360.

**CEUs:** The course carries 0.7 Continuing Education Units (CEUs). Students who attend the one-day session earn a passing grade and are awarded a *Certificate of Completion*. (No academic degree credit(s) are earned, only CEUs.)

## Computer Science/Information Technology

### Credit

## Java Programming Leading Toward Sun

### Certification: Preparation for the Sun Certified Java Programmer 1.5 Exam

### Course Description

**C SC 1801.** This course is an introduction to Java, the in-demand object-oriented programming language from Sun Microsystems. In the process of learning Java, students are introduced to basic concepts of object-oriented programming. The course is a solid introduction to the programming language constructs of Java and its core libraries `java.lang`, `java.util`, `java.awt`, `java.net`, and `java.io`. Our students are poised to develop the next generation of web-based applications and prepared for the *Sun Certified Java Programmer 1.5* exam.

### Course Details

**Dates:** Monday evenings

September 11 - December 4, 2006

*Class will not meet November 20, 2006.*

**Times:** 5:30 p.m. - 9:35 p.m.

**Location:** CU at Interlocken at Level (3)

Communications, Broomfield

**Cost:** \$1,275; includes course materials. Registrations received September 5, 2006 or later are assessed a Registration Late Fee of \$35. Class cost \$1,310.

*Deferred payment is available.*

**Credits:** The course carries 3 undergraduate credit hours or 4.5 Continuing Education Units (CEUs). Students who attend nine or more of the eleven sessions receive a *Certificate of Completion*.

## Systems Engineering

### Credit/Non-Credit

## Certificate Program in Systems Engineering

### Program Overview

In the *Certificate in Systems Engineering*, students

learn the basics of Systems Engineering by following the life cycle of complex engineering systems. Upon completing the core courses, a student is granted a *Certificate in Systems Engineering*. The credit hours count toward any of the College of Engineering's Master's degree programs. Classes are designed to be taken in any order.

The series is co-developed with senior systems engineers at Lockheed Martin, Raytheon, Sun Microsystems, and professional educators at the University of Colorado at Denver and Health Sciences Center.

#### Background

Systems Engineering is a vital expertise in many industrial sectors: aerospace, energy and power, information technology, telecommunications, medical and healthcare, and civil infrastructures (such as transportation, water supply and wastewater, and environmental and urban facilities). Systems Engineers provide necessary leadership to engineers who are working on subsystems, integrating specialty groups into a team effort, and forming a structured development process that proceeds from concept to detailed engineering and from production to systems operation.

Key tasks for Systems Engineers are (1) helping customers define requirements, (2) developing overall systems concepts, (3) integrating results from parts into a whole, and (4) managing risks and costs. Systems Engineers consider both business and technical issues related to the solution systems development.

#### Prerequisites

The program is appropriate for individuals with a Bachelor's degree in various fields of engineering and related fields who are or want to be employed in systems-oriented domains. The class is designed for the practicing engineer.

### **Systems Engineering: Principles and Practice**

#### Course Information

ENGR 5301: *Systems Engineering: Principles and Practice* is part of a three-course sequence that leads to a *Certificate in Systems Engineering*. Skills for a Systems Engineer include project selection, systems specifications, conceptual designs, interface skills including customer understanding, and systems integration. This course introduces the principles of systems engineering and covers vocabulary, concepts, methods, and tools.

#### Course Details

**Dates:** Thursday afternoons  
August 24 - December 7, 2006.

*No class November 23, 2006.*

**Times:** 4:00 p.m. - 7:00 p.m.

**Location:** Auraria Campus, downtown Denver

**Cost:** \$1,800, includes course texts and materials. Registrations received August 17, 2006 or later are assessed a Registration Late Fee of \$35. Class cost plus fee is \$1,835. *Deferred payment is available.*

**Credits:** 3 graduate level credit hours or 4.5 Continuing Education Units. Students who attend twelve or more of the sessions earn a *Certificate of Completion*.

#### **HOW TO REGISTER**

1. Obtain Registration Form from website at [www.cudenver.edu/engineer/cont](http://www.cudenver.edu/engineer/cont)

CLICK on "Course Information"

CLICK on a "Course Number" (exp. NCES 8030)

\* PAGE DOWN

CLICK on "Registration Form"

2. You can FAX a completed Registration Form to 303-556-6688

3. You can EMAIL a completed Registration Form to [heidi.utt@cudenver.edu](mailto:heidi.utt@cudenver.edu)

4. You can MAIL a completed Registration Form to:  
University of Colorado at Denver and Health Sciences Center

Continuing Engineering Education Program

P.O. Box 173364, Campus Box 115

Denver, Colorado 80217-3364

5. Call us if you have any questions or concerns at 303-556-4907 or toll free at 1-877-859-7304

6. Registrations received less than 8 days before a class start date will be assessed an additional \$35 Late Registration Fee.

--

Colleen Anderson, Program Manager

CU-Denver Continuing Engineering Education Program

and CU at Interlocken Program

Campus Box 115, P.O. Box 173364

Denver, Colorado 80217-3364

Voice: 303-556-4907

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E-Mail [csanders@carbon.cudenver.edu](mailto:csanders@carbon.cudenver.edu)

Web: [www.cudenver.edu/engineer/cont](http://www.cudenver.edu/engineer/cont)

Web: [www.cu.edu/Interlocken](http://www.cu.edu/Interlocken)





## Who Ya Gonna Call?



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<b>SWE Reps</b>		
CEC (CO Eng'g. Council)	Kim Blair	KBlair@pbsj.com

Please call Sandra Wiese

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SWE Rocky Mountain Section Website: <http://www.swe.org/SWE/RegionI/Sections/RockyMtn>

## Calendar of Events

For complete details, directions, and more, visit the RMS website calendar

July/August 2006	Have a great summer!
August 3, 2006	Joint Networking Event with GE Women's Network, NBC Telemundo Denver
August 26, 2006	Planning/Brainstorming Session
September 14, 2006	Membership Event
September 16, 2006	Alzheimer's Memory Walk
October 8, 2006	Race for the Cure
October 10, 2006	MACY'S Preview Charity Shopping Day at Stapleton
October 12 – 14, 2006	SWE National Conference, Kansas City, Missouri
March 4 – 5, 2007	Region i Conference, Colorado School of Mines, Golden, CO