

# Systems Engineering Initiative for Patient Safety (SEIPS) Short Course on Human Factors Engineering and Patient Safety—Part I

June 24–27, 2004  
University of Wisconsin–Madison  
702 Langdon Street  
Madison, WI 53706–1487

## GENERAL INFORMATION

### Conference Fee

The conference fee of \$1250 (\$1000 for each additional registrant from the same organization) includes the cost of tuition, materials, a nonrefundable registration fee of \$75, an opening reception, three full breakfasts, refreshment breaks, and three lunches. Should you cancel your registration up to 72 hours prior to the short course, you will be refunded the entire short course fee except the \$75.00 nonrefundable portion of the fee. No refunds will be made after that time.

### For further course information

For short course information please contact Dr. Carla J. Alvarado (Course Coordinator), CQPI, 575 WARF, 610 Walnut Street, University of Wisconsin–Madison, Madison, WI 53726; telephone (608) 263–2678 or (608) 263–2520. Email: [calvarado@cqpi.engr.wisc.edu](mailto:calvarado@cqpi.engr.wisc.edu)

## SCHEDULE

<b>Thursday, June 24, 2004</b>	6:30–8:00 P.M. <b>Registration and Reception</b> , Lakeside Room—Pyle Center
<b>Friday, June 25, 2004 AM</b>	7:00–8:30 <i>Breakfast and Conversation</i> 7:30–8:30 Registration 8:30–9:00 <b>Overview and Course Objectives</b> Dr. Pascale Carayon 9:00–10:00 <b>Overview of Human Factors Engineering and Patient Safety</b> Dr. Kerm Henriksen 10:00–10:45 <b>Videotape</b> 10:45–11:00 <i>Break</i> 11:00–12:00 <b>What is Human Factors Engineering, What is an Error and What is a System, Part One</b> Dr. Ben-Tzion Karsh
<b>Friday, June 25, 2004 PM</b>	12:00–1:00 <i>Lunch</i> 1:00–2:45 <b>What is Human Factors Engineering, What is an Error and What is a System, Part Two</b> Dr. Ben-Tzion Karsh 3:00–5:00 <b>Physical Environment</b> Dr. Carla Alvarado
<b>Saturday, June 26, 2004 AM</b>	7:30–8:00 <i>Breakfast and Conversation</i> 8:30–10:30 <b>Technology Design and Usability</b> Dr. John Gosbee 11:00–12:00 <b>Cognitive Ergonomics, Part One</b> Dr. Pascale Carayon
<b>Saturday, June 26, 2004 PM</b>	12:00–1:00 <i>Lunch</i> 1:00–2:15 <b>Cognitive Ergonomics, Part Two</b> Dr. Pascale Carayon 2:30–3:30 <b>Physical Ergonomics</b> Dr. Carla Alvarado 3:30–4:30 <b>Physical Ergonomics—Preventing Injuries Using an Ergonomic Approach</b> Dr. Bernice D. Owen
<b>Sunday, June 27, 2004 AM</b>	7:30–8:00 <i>Breakfast and Conversation</i> 8:30–10:30 <b>Job and Organizational Issues</b> Dr. Robert Wears and Dr. Pascale Carayon 10:30–10:45 <i>Break</i> 10:45–12:00 <b>The Role of the Healthcare Provider</b> Dr. Robert Wears
<b>Sunday, June 27, 2004 PM</b>	12:00–12:45 <b>Wrap up and Evaluation</b> and <i>Box lunch</i> Drs. Pascale Carayon, Carla Alvarado and Ben-Tzion Karsh

## COPI

Founded in 1985, the University of Wisconsin **Center for Quality and Productivity Improvement (CQPI)** is recognized for multidisciplinary research, requiring input and interaction from many different fields. Since its inception, CQPI has been at the forefront in the development of new techniques for improving the quality of products and processes. Today, the Center's Systems Engineering Initiative for Patient Safety (*SEIPS*) is also at the forefront of developing methods aimed at improving the quality of healthcare work processes, quality of working life, and quality of healthcare patient safety.

## FACULTY



**John W. Gosbee, M.D., M.S.,** Human Factors Engineering and Health Care Consultant, Ann Arbor, MI



**Kerm Henriksen, Ph.D.,** Staff Service Fellow, Agency for Healthcare Research and Quality (AHRQ), Rockville, MD



**Bernice D. Owen, Ph.D., R.N.,** Professor Emeritus, School of Nursing, University of Wisconsin-Madison



**Carla J. Alvarado, Ph.D.,** Research Scientist CQPI (SEIPS Short Course Coordinator), University of Wisconsin-Madison



**Ben-Tzion Karsh, Ph.D.,** Assistant Professor, Industrial Engineering, University of Wisconsin-Madison



**Robert L. Wears, M.D.,** Professor, Emergency Medicine, University of Florida College of Medicine



**Pascale Carayon, Ph.D.,** Professor, Industrial Engineering and Director CQPI, University of Wisconsin-Madison

## SPECIFIC LEARNING OBJECTIVES

**At the conclusion of this activity, participants should be able to:**

- Identify the objectives of human factors engineering
- Promote the use of human factors engineering to minimize patient related error
- Recognize the difference between micro and macro human factors engineering approaches
- Summarize what a system is, and what are the implications for its design
- Target and evaluate medical device design and usability issues for patient safety
- Identify cognitive ergonomics issues, such as information processing and human error
- Understand organizational issues related to patient safety (e.g. transitions of care, communication, teamwork, process analysis.)
- Ability to assess the physical environment for patient safety associated issues
- Give examples of physical environment issues and patient safety
- Understand the aims, objectives and benefits of ergonomics
- Identify human characteristics, capabilities and limitations
- Define the scope of ergonomics and systems of work
- Recognize interfaces between job, person and environment
- Develop solutions that are successful in reducing musculoskeletal injuries
- Set up a successful ergonomics process
- Attain skills in the HFE method of usability testing and how it fits into proactive risk assessment (e.g., FMEA) and problem investigation

**Accreditation Statement:** This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the Center for Quality and Productivity Improvement, University of Wisconsin-Madison and The University of Wisconsin Medical School. The University of Wisconsin Medical School is accredited by the ACCME to provide continuing medical education for physicians.

**Credit Designation Statement:** The University of Wisconsin Medical School designates this educational activity for a maximum of 17 category 1 credits toward the AMA Physician's Recognition Award. Each physician should claim only those credits that he/she actually spent in the activity.

**Continuing Education Units:** This program is accredited by the University of Wisconsin, Continuing Medical Education, for up to 1.7 CEU's (17 hours). This credit applies to nurses, engineers, and other health professionals.

**American Osteopathic Association, American Academy of Physicians Assistants:** AOA and AAPA accept AMA category 1 for their credit requirements.

**Conference Completion Report:** You will be mailed a completion report 4 to 6 weeks after the conference.

### Policy on Faculty and Sponsor Disclosure

It is the policy of the University of Wisconsin Medical School that the faculty and sponsor disclose real or apparent conflict of interest relating to the topics of this educational activity, and also disclose discussions of unlabeled/unapproved uses of drugs or devices during their presentation(s). Detailed disclosure will be made in the course handout materials.

### Intended Audience

This educational activity is designed for all physicians, nurses, physician assistants, pharmacists, engineers, patient safety officers, and other professionals interested in human factors engineering and patient safety.

## REGISTRATION

Register online at [www.peopleware.net/2723](http://www.peopleware.net/2723) or use the form below.

### SEIPS Short Course on Human Factors Engineering and Patient Safety June 24-27, 2004

Complete a separate registration form (or copy) for each registrant.

Name \_\_\_\_\_

Company/Affiliation \_\_\_\_\_

Address \_\_\_\_\_

Circle one: Home or Business address

City/State/Zip \_\_\_\_\_

Daytime Phone \_\_\_\_\_ Fax \_\_\_\_\_

E-mail \_\_\_\_\_ Web \_\_\_\_\_

#### Registration Fees:

- \$1,250 Full Short Course/First Registrant from an Organization  
 \$1,000 Each Additional Registrant from the Same Organization

\$ \_\_\_\_\_ Total Enclosed

#### Additional Options (check all that apply):

- Yes, I plan on attending the reception June 24  
 Yes, I prefer vegetarian meals

#### Checks payable to **UW-Madison**

- Check attached.  
 Bill Purchase Order Number: \_\_\_\_\_  
 Please charge on the following account:

_____ VISA _____ Master Card
Card Number _____
Exp. Date _____ Name on Card _____
Signature _____

If you have registration questions, please call CALS Outreach Services at 608-263-1672.  
No phone registrations please.

**Mail or fax this form to:**  
UW-Madison CALS Outreach Services  
620 Babcock Drive  
Madison, WI 53706  
FAX: 608-262-5088

The University of Wisconsin provides equal opportunities in employment and programming, including Title IX requirements.

The University of Wisconsin Medical School fully complies with the legal requirements of the ADA and the rules and regulations thereof. If any participant in this educational activity is in need of accommodations, please notify Dr. Carla J. Alvarado in order to receive service. Please call (608) 263-2678.

## ACCOMMODATIONS

Blocks of rooms are reserved at the following hotels. Please call or write to the hotels directly to reserve your accommodation. Be sure to reference the short course "CQPI/SEIPS" to receive the special room rate.

#### The Lowell Inn and Conference Center

University of Wisconsin-Extension  
610 Langdon Street  
Madison, WI 53703-1195  
Guest Room Reservations: 866-301-1753  
Rate: \$70/single, \$80/double  
Reservations must be made prior to May 24, 2004.

#### Howard Johnson Plaza Hotel—Madison

525 West Johnson Street  
Madison, WI 53703-1993  
Phone: 608-251-5511 Fax: 608-251-4824  
Rate: \$89/single  
Reservations must be made prior to May 24, 2004.

#### The Campus Inn

601 Langdon Street  
Madison, Wisconsin 53703  
Phone: 608-257-4391 or 800-589-6285  
Fax: 608-257-2832  
info@thecampusinn.com  
Rate: \$93/single  
Reservations must be made prior to May 7, 2004.





June 24–27, 2004  
Pyle Center  
University of Wisconsin–Madison  
Madison, WI

## Systems Engineering Initiative for Patient Safety (SEIPS) Short Course on Human Factors Engineering and Patient Safety—Part I

This 3 day course for professionals presents nationally recognized speakers discussing a variety of Human Factors Engineering and Patient Safety topics including:

- Human Factors Engineering
- Design of the Physical Environment
- Cognitive Ergonomics
- Sociotechnical Systems and Macroergonomics
- Technology Design and Implementation
- Job Design
- Physical Ergonomics
- Healthcare-related Case Studies

[www.fpm.wisc.edu/seips/courses/coursehome.html](http://www.fpm.wisc.edu/seips/courses/coursehome.html)

Jointly Sponsored by the University of Wisconsin Center for Quality and Productivity Improvement (COPI) and the University of Wisconsin Medical School Office of Continuing Medical Education



Center for Quality and Productivity Improvement  
610 Walnut Street/575 WARF Building  
Madison, Wisconsin 53726

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Human Factors Engineering and  
Patient Safety—Part I

Please Route to:

PATIENT SAFETY OFFICER \_\_\_\_\_

QUALITY IMPROVEMENT \_\_\_\_\_

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