

PURPOSE OF COURSE is to teach participants how to apply principles of operations research to solve problems in the operating room and perioperative environment:

- Monitoring operational and financial performance of surgical suites and anesthesia groups (“descriptive analytics”),
- Forecasting case durations, time remaining in cases, use of staffed OR time (“predictive analytics”),
- Applying principles of operations research to make common decisions, such as staffing levels, block time planning, case scheduling and assignment, financial management, and strategic planning (“prescriptive analytics”),
- Identifying in-house expertise to aid in problem-solving and determining whether outside consultants are needed,
- Evaluating current decision-support systems.

See: Wachtel RE, Dexter F. [Curriculum providing cognitive knowledge and problem-solving skills for anesthesia systems-based practice.](#)

ACGME Journal of Graduate Medical Education 2: 624-632, 2010

INTENDED AUDIENCE includes anesthesiologists, CRNAs, nurse managers, surgeons, hospital engineers and other analysts responsible for the organization and delivery of surgical care. Participants should have knowledge of middle/high school level algebra, Excel functions, and basic statistics (e.g., Student’s t-test). The course is designed to be especially relevant to engineers and analysts from other fields preparing to work in anesthesia/ ORs.

GROUP AND EVENING CASES are an integral part of the course. All teams include both clinicians and analysts. Many of the case questions include electronic literature searching using publicly available materials. The cases help participants learn which techniques should be applied to different types of problems, identify personnel at their hospitals with the skills needed to apply those techniques, and present results to hospital stakeholders.

CME CREDIT FOR COURSE COMPLETION:

The University of Iowa Carver College of Medicine designates this educational activity for a maximum of 35 *AMA PRA Category 1 Credits*[™]. Physicians should only claim credit commensurate with the extent of their participation in the activity.

COURSE SCHEDULE (www.FranklinDexter.net/education.htm)

DAY 1

8:00 AM Use of economically rational ordered priorities to make patient flow decisions

Material on which lecture will be based:

Dexter F, Epstein RH, Traub RD, Xiao Y.

[Making management decisions on the day of surgery based on OR efficiency and patient waiting times.](#)

Anesthesiology 101: 1444-1543, 2004

11:30 AM Group problem solving and lunch

1:00 PM Incorporating uncertainty into decision-making

3:30 PM 2.5 hr for groups to complete cases

6:00 PM Discussion of cases

DAY 2

8:00 AM Allocating OR time operationally (few months before day of patient care)

Material on which lecture will be based:

McIntosh C, Dexter F, Epstein RH. [Impact of service-specific staffing case scheduling, turnovers, and first-case starts on anesthesia group and operating room productivity: tutorial using data from an Australian hospital.](#)

Anesthesia & Analgesia 103: 1499-1516, 2006

10:00 AM Allocating OR time tactically based on utilization (1 yr before day of patient care)

Material on which lecture will be based:

Wachtel RE, Dexter F. [Tactical increases in OR block time for capacity planning should not be based on utilization.](#)

Anesthesia & Analgesia 106: 215-226, 2008

11:15 AM Group problem solving and lunch

1:00 PM Allocating OR time tactically based on financial and strategic criteria

Material on which lecture will be based:

Dexter F, Ledolter J, Wachtel RE. [Tactical decision-making for selective expansion of operating room resources incorporating financial criteria & uncertainty in sub-specialties’ future workloads.](#)

Anesthesia & Analgesia 100: 1425-1432, 2005

3:00 PM 3 hr for groups to complete cases

6:00 PM Discussion of cases

DAY 3

8:00 AM Economics of small reductions in OR times and turnover times

10:15 AM Financial impact of differences among hospitals

Material on which lecture will be based:

Wachtel RE, Dexter F, Lubarsky DA.

[Financial implications of a hospital’s specialization in rare physiologically complex surgical procedures.](#)

Anesthesiology 103: 161-167, 2005

11:00 AM Group problem solving and lunch

1:00 PM Empirical methods for staffing and assignments

Material on which lecture will be based:

Dexter F, Epstein RH. [Optimizing second shift OR staffing.](#) AORN Journal 77:825-830, 2003

2:30 PM Physician agreements: Anesthesia institutional support and surgeon block time

Material on which lecture will be based:

Dexter F, Epstein RH. [Calculating institutional support that benefits both the anesthesia group and hospital.](#)

Anesthesia & Analgesia 106: 544-553, 2008

3:30 PM 3.5 hr for groups to complete cases

DAY 4

8:00 AM Discussion of cases from preceding day

9:30 AM Differentiating among hospitals and surgical practices

Material on which lecture will be based:

Wachtel RE, Dexter F. [Differentiating among hospitals performing physiologically complex operative procedures in the elderly.](#)

Anesthesiology 100: 1552-1561, 2004

10:30 AM Group problem solving

11:50 AM End of course

INSTRUCTORS are Franklin Dexter, MD, PhD, Professor, University of Iowa and Ruth E. Wachtel, PhD, MBA, Associate Professor, University of Iowa.

COURSE FEE (includes lunch & afternoon break):

\$2000 for first participant from an organization
 \$1500 for each additional participant from an organization when forms & payment are sent at the same time

There is a \$150 fee for cancellation up to 7 wk before the course starts, \$500 up to 2 wk before the course, and \$1000 afterwards.

SEND CHECK PAYABLE TO: The University of Iowa

MAIL TO: Jodi Kazerani
 Department of Anesthesia
 Division of Management Consulting
 University of Iowa
 200 Hawkins Drive, 6JCP
 Iowa City, IA 52242

FAX REGISTRATION FORM TO: +1 (603) 947-1304

For hotel accommodations, call the Hampton Inn Iowa City at 319-351-6600. Use the "Operations Research" course group rate of \$99.00 plus tax.

The Eastern Iowa Airport (CID) is located 30 minutes from Iowa City. The airport is served by American, Delta, and United airlines. Ground transportation to Iowa City includes Airport Express (800-383-2219).

For travel questions, contact Jodi Kazerani at Jodi-Kazerani@UIowa.edu or 319-353-8605.

The University of Iowa Roy J. and Lucille A. Carver College of Medicine is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

First Name: _____ Last Name: _____

Title: _____ Degree(s): _____

Organization: _____

Mailing Address: _____

City: _____ State _____ Zip Code: _____

Daytime Phone: _____

Email: _____

How did you hear about the course? _____

Please answer the following questions to assist in group assignments:

- | | | |
|---|-----|----|
| Will you be bringing a laptop computer with Excel 2003 or later? | YES | NO |
| Have you ever participated in the decision to move a surgical case from one OR to another? | YES | NO |
| Have you ever participated in a decision influencing physician recruitment? | YES | NO |
| Have you ever performed linear programming, used Monte-Carlo simulation such as @Risk or Crystal Ball, or created a quality control chart with limit lines? | YES | NO |
| Have you ever studied statistics more advanced than the prerequisite knowledge? | YES | NO |

Material on which questions are based: Dexter F, Masursky D, Wachtel RE, Nussmeier NA. [Application of an online reference for reviewing basic statistical principles of operating room management](#). American Statistical Association: Journal of Statistics Education 18(3), 2010

The course can be hosted by a hospital or other facility for an unlimited number of participants. Download www.FranklinDexter.net/Contracts/ContractCalculatOR.doc. Budget 3.5 days for the course, 0.5 day for preparation, and 1 day for travel to/from the site, total \$12,500 plus Dr. Dexter's travel expenses. Detailed specifications are sent for the room's setup, forms for CME credit, computer and projector requirements, etc., to be arranged by the host. For presentation using web conference software instead of on-site (e.g., during 2 successive weekends or 1 weekend and 3 evenings), exclude travel (i.e., total \$10,000).