

Evening Orientations

The Scholarship of Teaching Options 1 and 2

Four Types of Scholarships, Boyer (1990)
Teaching versus Research
Today's Students
Learning Communities
Types of Classroom Research
Reflective Practice
Intentional Instructional Design
Program Outcomes

Cooperative Learning Option 3

Learning Outcomes
CL Issues
CL Benefits
CL Perspectives
CL Strategies

Faculty Learning Community



New Strategies



Resources: The Teaching and Learning Tool Box



Workshop Agendas

Workshop Option 1 The Scholarship of Teaching Faculty Development Program (1 evening and 3 days)

Talk and Walk (available at national sites and/or by contract)

Interactive sessions and discussions while program content and process is explained. Partial program participation.

Day 1

Teaching and Learning Assessment
Self Competency Assessment
GAPS Analysis
ABET/NAIT Outcomes → Course Outcomes
Bloom's Knowledge Dimension → Outcomes
Course Outcomes → General Education
Bloom's Cognitive Dimension → Outcomes
Student Learning Styles
Dale's Cone of Learning
Teaching Models → Student Learning Styles
Teaching Styles → Student Learning Styles
Critical Thinking
Multifaceted Student Assessment
Test and Assessment Analysis
Bloom's Cognitive Analysis
Test Items → ABET/NAIT and Course Outcomes
Other Assessments → ABET/NAIT and Course Outcomes Analysis

Day 2

Student Learning Outcomes → Student Learning Outcomes ABET/NAIT → Bloom's taxonomy (Knowledge and Cognitive Dimensions)
Student Learning Outcomes → Dale's Cone of Learning
Multifaceted Student Assessment Plan
Student Assessment – Purpose
Bloom's Taxonomy for Assessment
Assessment “of,” “for,” and “as” Learning
Traditional Tests
Authentic Performance Assessments
Rubrics
Other Alternative Assessments

Day 3

Relationship between teaching models and learning styles
Burden of Learning – Faculty or Students?
Learning Styles (Kolb, Grasha, and Felder)
Professors' Role
*Teaching Models (22)
Teaching Styles
Instructional Goals
*Cooperative Learning Model (CL)
Individual and Group Accountability
Individual and Group Behavior
The Super Syllabus
Course Development
The Scholarship of Teaching
Action Research

*See Workshop 3, full workshop on CL and Teams.

Workshop Option 2 The Scholarship of Teaching Faculty Development Program (1 evening and 6 days)

Full Participation (offered on site at your institution only by contract)

Real-time analysis and course development; program is performance based.

Day 1

Teaching and Learning Assessment
Self-Competency Assessment
GAPS Analysis
ABET/NAIT Outcomes → Course Outcomes
Bloom's Knowledge Dimension → Outcomes
Course Outcomes → General Education
Bloom's Cognitive Dimension → Outcomes
Student Learning Styles
Dale's Cone of Learning
Teaching Models → Student Learning Styles
Teaching Styles → Student Learning Styles
Critical Thinking
T-K-LA Centered?

Day 2

Multifaceted Student Assessment
Test and Assessment Analysis
Bloom's Cognitive Analysis
Test Items → ABET/NAIT and Course Outcomes
Other Assessments → ABET/NAIT and Course Outcomes Analysis

Day 3

Student Learning Outcomes → ABET/NAIT Student Learning Outcomes → Bloom's Knowledge and Cognitive Dimensions
Student Learning Outcomes → Dale's Cone of Learning

Day 4

Multifaceted Student Assessment Plan
Student Assessment – Purpose
Bloom's Taxonomy for Assessment
Assessment “of,” “for,” and “as” Learning
Traditional Tests
Authentic Performance Assessments
Rubrics
Other Alternative Assessments

Day 5

Relationship between teaching models and learning styles
Burden of Learning – Faculty or Students?
Learning Styles (Kolb, Grasha, and Felder)
Professors' Role
*Teaching Models (22)
Teaching Styles
Instructional Goals
*Cooperative Learning Model (CL)
Individual and Group Accountability
Individual and Group Behavior

Day 6

Course Development; The Super Syllabus
The Scholarship of Teaching
Action Research

*See Workshop 3.

*Workshop Option 3 Cooperative Learning The Essential Teaching Model (1 evening and 3 days)

Full Participation (available at national sites and/or by contract)

Real-time analysis and course development; program is performance based.

Day 1

Cooperative Learning (Active Learning)
Theory and Best Practices
Formal, Informal, or Base Groups?

Day 2

*Teaming – What students need to know about?
Purpose, goals, organization, performance, conflict resolution, formal problem solving, team decision making, team member styles, roles, responsibilities, team operations preparation, hidden agendas, values, strategic fit, and more!
Teaming – How to Prepare Student Teams
Teaming – Defining Team Success
Teaming – Monitoring, Assessment, Control, and Evaluation

Day 3

Student Groups or Teams?
Preparing for Cooperative Learning
Performance Tasks and Rubrics
Tasks and/or Projects
Individual and Team Behaviors

*Teaching materials provided for use with students.

Student Learning Communities



The Scholarship of Teaching

in

**Engineering and
Technology Classrooms**

Workshops 2009



The Ultimate Goal

The Scholarship of Teaching
by
Engineering and Technology Faculty
and
Student Learning Communities

Promod Vohra, Dean

Jule Scarborough, Distinguished
Professor Emeritus and Program Leader

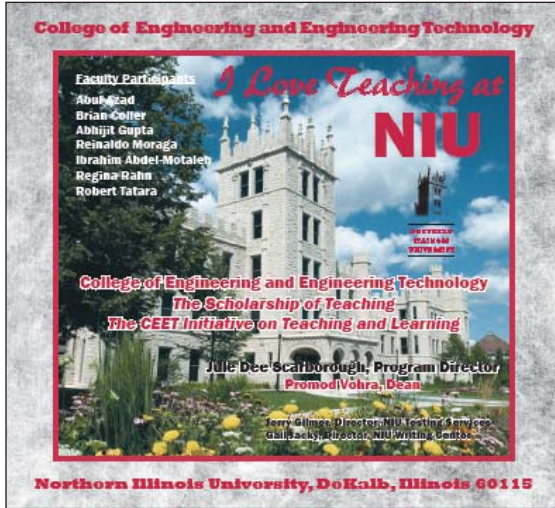


**College of Engineering
and
Engineering Technology**
Northern Illinois University

The Scholarship of Teaching

A Faculty Development Program to Prepare Engineers and Technologists for Teaching and Research on Learning in Their Own Classrooms

The Scholarship of Teaching



Receive the complete CD presenting the Initiative's Portfolio:

Volume I, Section A Initiative

Volume II, Section B Data and Reports

Volume III, Section C Instruments, Forms, Worksheets

Volume IV, Section D Program Presentations

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Electrical Engineering
Industrial and Systems Engineering
Mechanical Engineering
Technology

Electrical Engineering Technology
 Industrial Technology
 Manufacturing Engineering Technology

Northern Illinois University
DeKalb, Illinois 60115

Volume I, Section A Initiative

- A.1 Introduction
- A.2 Results – Executive Summary and Tables
- A.3 Program and Classroom Research Design: The Scholarship of Teaching: What Counts as Research
- A.4 Today's Students
- A.5 Faculty Development Program
- A.6 Literature
- A.7 Student Performance Assessment
- A.8 a-c All References

Volume II, Section B Data and Reports

- B.0 Portfolio Summary Chart
- B.1 Faculty Self-Perception of Competency
- B.2 Program Content Knowledge Assessments – Faculty
- B.3 Program Feedback and Evaluation
- B.4 End-of-Course Teaching and Learning Questionnaire
- B.5 Course Analysis
- B.6 Test Analysis and Development
- B.7 Student Learning Outcomes (ABET/NAIT)
- B.8 Course Schedule, Teaching and Learning Analysis
- B.9 Multifaceted Student Assessment
- B.10 2005-06 Syllabus Evaluation
- B.11 Models of Teaching
- B.12 Professors' Classroom Research
- B.13 Research Manuscript Reviews

Volume III, Section C Instruments, Forms, Worksheets

- C.1 Course Content Analysis Forms
- C.2 GAPS Analysis Forms
- C.3 a-g Engineering and Technology Learning Outcomes ABET/NAIT Worksheets
- C.4 a-c Course Content Schedule Forms
- C.5 a-c Course – Test Analysis Worksheet
- C.6 a-c Models of Teaching Map – Forms
- C.7 a-c Course Content Calendar by Teaching Model, Style, Learning Style Analysis Worksheets
- C.8 Teaching Portfolio – Faculty Assessment Forms
- C.9 Program Knowledge Competency – Faculty Self-Assessment Instrument
- C.10 End-of-Course Teaching/Learning Questionnaire [administration and point values]
- C.11 a-f Faculty Development Program Assessment Forms
- C.12 Teaching Portfolio Assessment Process and Forms
- C.13-21 Program Feedback/Evaluation Forms

Volume IV, Section D Program Presentations

- D.1 Reflective Practice
- D.2 Learning: What Does It Mean?
- D.3 Student Learning Outcomes
- D.4 Student Assessment
- D.5-6 Item/Test Analysis and Development
- D.7 Teaching Models
- D.8 Active Learning (Cooperative Learning Model)
- D.9 Classroom Research

Workshop Descriptions

(See Workshop Agendas on other side for daily content)

Workshop Option 1 The Scholarship of Teaching Faculty Development Program (1 evening and 3 days)

Talk and Walk (available at national sites and/or at your institution)

This will be a detailed presentation revealing the complete program, its processes, tools, and results interwoven with discussions, Q/A, and small group activities. Participants will engage in partial individual course analysis and development to experience the program firsthand. They will leave the workshop with an understanding of how to use the program presented in the portfolio CD as well as changes they can consider making in their own classrooms.

Workshop Option 2 The Scholarship of Teaching Faculty Development Program (1 evening and 6 days)

Full Participation (offered on site at your institution only)

This intense, hands-on, and rewarding workshop will take participants through an abbreviated version of the original 21-day program. Participants will engage in course analysis and perform redevelopment of one course. They will become intimate with the program, learning process, and program tools, and will leave with an understanding of how to analyze and redevelop a course to improve teaching and in preparation for classroom research on teaching and learning. They will consider the difference between traditional engineering research and The Scholarship of Teaching as defined by Boyer (1990). Considerations will include research questions and design, experimental and action research, as well as the difference between traditional engineering research and The Scholarship of Teaching.

Workshop Option 3 Cooperative Learning The Essential Teaching Model (1 evening and 3 days)

Full Participation (available at national sites)

Cooperative learning requires more than assigning students to groups and providing them a project. To achieve learning integrity of knowledge, skills, and behaviors, there must be both individual and group accountability. Also, it is important to determine and measure individual and team function while teams are performing. This hands-on workshop will provide participants with the knowledge, tools, and skills to implement formal student teams where learning is measured and assured. Participants will develop materials to use in their own classrooms. Also, teaching materials will be provided.

Workshop Dates, Locations, Cost

Workshop Option 1 The Scholarship of Teaching Faculty Development Program (Talk and Walk/1 evening and 3 days) \$600 per participant

Dates to be determined or requested; see contacts below for upcoming dates.

Workshop Option 2 The Scholarship of Teaching Faculty Development Program (Full Participation/1 evening and 6 days)

Dates to be determined or requested; see contacts below for upcoming dates.

Workshop Option 3 Cooperative Learning The Essential Teaching Model (Full Participation/1 evening and 3 days) \$600 per participant

Dates to be determined or requested; see contacts below for upcoming dates.

Notes for Workshop Participants

Evening Orientations: 6-9 p.m.

Workshop Hours: 9 a.m.-6 p.m.
(1 hour for lunch-meals on your own)

Faculty Participants are expected to:

- a. Bring laptops and jump drives
- b. Bring course syllabus
- c. Bring all Student Assessments (e.g., tests, performance tasks, projects, etc., required in the course)
- d. Bring all textbooks for course
- e. Bring any other important course materials
- f. E-mail course syllabus to workshop leader before workshop



Contacts

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Program Leader

Jule Dee Scarborough, Ph.D., holds 25 years of teaching, research, grants, and service at NIU, nationally, and internationally. Well awarded, published, and traveled, Scarborough developed and led the NIU College of Engineering and Engineering Technology's new initiative on teaching and learning.