BIOS 844: Leadership in Biostatistics

Fall 2011

Monday-3:00 PM to 5:45PM

Room: 2302

Course Instructors:

Lisa LaVange, PhD
Professor of the Practice, Dept. of Biostatistics
William A. Sollecito, DrPH
Clinical Professor, Public Health Leadership Program

Course Overview

The general goal of this course is for students to understand where and how biostatisticians can offer leadership (statistical and otherwise) in both academic and non-academic public health settings. It is seen as complementary to BIOS 841, which emphasizes basic methodological competence in practical applications, but does not cover leadership in biostatistics.

The proposed teaching approach is to combine an examination of leadership principles with practical exposure to these principles in biostatistics by learning from the experiences of biostatisticians who have served in various statistical leadership roles. Classroom sessions dealing with principles and methods will follow a lecture format. Other sessions will involve presentations and discussions. The quality of the group papers and class participation will determine each student’s grade in the course.

COURSE OBJECTIVES

This course is designed for students to learn:

1. About leadership and its basic principles
2. The different leadership “styles” one might adopt
3. Where in academic and non-academic settings in public health there are opportunities for biostatisticians to provide both statistical and non-statistical leadership
4. About specific elements of leadership in: (i) research teams of which biostatisticians are members, (ii) administrative and non-administrative roles in academia, (iii) organizations

Revised December 11, 2011
in which biostatisticians are employed, and (iv) settings in which biostatisticians provide leadership through professional service

5. (Through practical exposure) what prominent biostatisticians have experienced as leaders and thereby learned about leadership

### Modules

1. Broad Leadership Concepts
2. Facilitative / Management Skills
3. Personal vs Team vs Organizational Leadership
4. Leadership Stories/Examples
   - Guest lectures will be presented by current leaders in biostatistics
   - Historical examples of leaders will be presented as vignettes throughout the course

### Course Schedule

<table>
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<tr>
<th>Week : Date</th>
<th>Topic (Instructor)</th>
<th>Student Responsibilities</th>
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| 1: Aug. 29 | Course Overview Module 1 : Broad Concepts (WS/LL) What is leadership? (WS)  
  - Leadership vs. Management  
    - Management pathways to leadership  
  - Vision  
Ethics (LL) | Assignment:  
  - Complete pre-course survey (Due 8/29)  
  - Student write-up / presentation of a Leadership profile using broad concepts (Due 9/12)  
  - Complete Leadership Assessment Tools (Due 9/19)  
Reading (Due 9/12) :  
Required:  
  - AMS Ch. 1,2,3, and 5  
  - Knowling, R, “Why vision matters” (online link)  
Optional:  
  - Kotter, Ch. 7*  
  - Northouse Ch.13,15 * |
| 2: Sept. 5 | HOLIDAY | |
| 3: Sept. 12 | Student Presentations – Assignment 1 | Reading :  
Required: |

Revised December 11, 2011
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<tr>
<th>Day</th>
<th>Module 1: Strategic Thinking (WS)</th>
<th>Module 1: Strategic Planning (WS)</th>
<th>Diversity in Leadership (LL)</th>
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<td>4: Sept. 19</td>
<td>Module 1: Communications/meetings(WS)</td>
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<td>Motivation and Empowerment(WS)</td>
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<td>• AMS Ch. 10</td>
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<td>• Gale, S.F. The upside of failure*</td>
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<td>• Sollecito &amp; Johnson: Chap 1,3*</td>
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<td>Module 1: Transactional vs</td>
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<td>Module 2: Management Skills</td>
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Revised December 11, 2011
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| 6: Oct. 3  | Module 3: Personal Leadership Styles: David Steffen (DS) Review/ discussion of leadership style instruments for students | Required:  
  - DS to assign  
  Midterm Assignment posted to Bb |
| 7: Oct. 10 | Module 3: Personal Leadership Styles (cont’d) (DS) Emotional Intelligence Other Personal Leadership Topics | Required:  
  - AMS Ch. 8  
  - Lencioni 5 Dysfunctions  
  Optional:  
  - Northouse : Ch. 11*  
  - Swanson, Masters of servitude * |
| 8: Oct. 17 | Module 3: Team / Project Leadership / Management: Lori Evarts Projects  
  - Selected topics / overview of project management  
  - PM Tools  
  - Overview of Lencioni 5 Dysfunctions Reading  
  - Class discussion of 5 Dysfunctions Reading | Required:  
  - AMS Ch. 7  
  Optional:  
  - Grove, Ch.8-9*  
  - Shortell and Kaluzny, Ch.10*  
  - Kotter, Ch.10*  
  - Sollecito & Johnson, Chap 2* |
| 9: Oct. 24 | Module 3: (WS and LL) Organizational Leadership (WS) Case study: The matrix structure at CSCC (LL) Tichy’s Leadership Story Model (WS) | Required:  
  - AMS Ch. 6  
  - Readings as identified by guest lecturer |
| 10: Oct. 31 | Conflict Resolution: Vaughn Upshaw, SOG | Required: Readings as identified by guest lecturer  
  Optional: Tichy, Chap. 1, 3* |
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| Nov. 7     | Professional Service/Society Leadership (Guest lecturer: Bob Rodriguez, President-elect, American Statistical Association) | Required: Readings as identified by guest lecturer  
Midterm Assignment Due |
| Nov. 14    | Industry Leadership (Guest lecturer: Laura Myerson, Vice-President, Biogen Idec.) | Required: Readings as identified by guest lecturer  
Final Assignment posted to Bb |
| Nov. 21    | Academic Leadership (Guest lecturer: Michael Kosorok, Chair, UNC BIOS Department) | Required: Readings as identified by guest lecturer  
Guest Lecturer Team Assignment |
| Nov. 28    | Leadership in a Government Agency (Lisa LaVange, FDA)  
Decision making (WS)  
Decision Analysis(LL) | Required:  
AMS Ch. 9  
Gale, S.F., Building Leaders, Intel Case study*  
Optional:  
Kotter, Ch.12* |
| Dec. 5     | Course wrap up (WS):  
- Org. Culture  
- Case studies:  
  - Quintiles  
  - IBM (Changing a culture)  
- Financial literacy (WS)  
- Mentoring (WS)  
  - Intel Mentoring Case Study  
- Leadership and Lifelong Learning | Final Assignment Due |
Grading:
Grading will include individual and small-group exercises that are designed to provide students with practical exposure to leadership principles. Class participation, including in–class exercises and interaction with guest lecturers will be an important part of the weighting for the final grade.

Weighting of activities to assign grades:

- Leadership Profile: 20%
- Other Assignments(combined, including Midterm): 30%
- Class Participation: 20%
- Final Assignment: 30%
Readings: (@ to be purchased for course; * will be put on reserve in BIOS Dept):

Required:

@Lencioni, Patrick M. 2002. The Five Dysfunctions of a Team: A Leadership Fable, Jossey-Bass

Mintzberg: The Fall and Rise of Strategic Planning


Optional / Leadership Bibliography


*DelGrosso, S. 2010. The courage to fail, PM Network, Leadership – Do you have what it takes? 24(10), October, 2010, pp.56-57


Revised December 11, 2011


Mintzer, B. “The power of a vision …A leaders journey”, *Caring Magazine*, July,2001


