Course title and number: (VTPP 489 and 689) Special Topics: Biomedical Research Leadership
Term: Spring 2014
Meeting times and location: TBA, VMA 300D

Course Description and Prerequisites

Course Description: Theory and practice of leadership specifically applied to leading interdisciplinary biomedical research teams, focusing on balancing the competing goals of enhancing research productivity, personnel training, group cohesion, and resource allocation.

Prerequisites: Permission from Instructor. This is a stacked course open to undergraduates and graduate students. However, you must 1) have a current supervised research project, 2) at least one semester of previous research experience, and 3) permission from your current research advisor to lead a team of undergraduate interns to work in your advisor’s lab. The Instructor will coordinate with your research advisor to recruit undergraduate interns who will be independently registered in research 291/491.

Unique nature of course: Upon graduation, you will be expected either to be a part of a multidisciplinary team or to lead one. To be a successful team leader, you must balance research productivity, personnel training, group cohesion, and resource allocation. Instead of teaching you about leadership with lectures, this course is designed so that you learn how to effectively lead an interdisciplinary research team while actually leading an interdisciplinary research team. You will be assigned to lead a team of three undergraduates who will work with you on one of your research projects throughout the semester. Your decisions as a team leader will be informed by your own personal experiences, the collective experiences of other team leaders, and general principles readily found in the literature. In class, you will be expected to critically evaluate these diverse sources of guidance, synthesizing approaches to address real challenges, and analyze consequences of your decisions and those of your peers.

Time commitment: You are expected to commit to a total of 9 hours/week. Three hrs/week will be spent in class. The other six hours will be dedicated to mentoring undergraduates with limited experience in biomedical research.
Learning Outcomes or Course Objectives

The objective of this course is to prepare you to lead a small interdisciplinary team dedicated to biomedical research. By the end of the course you will be able to:

- Develop skills to become effective members in a biomedical research team
- Balance the competing goals inherent in interdisciplinary research
- Understand different approaches to dealing with conflict in a team, and be able to apply them and evaluate their usefulness
- Give and receive critical feedback effectively
- Gather, analyze, interpret and evaluate relevant information about team leadership from a variety of sources
- Communicate decisions and defend them rationally, while articulating thoughtful consideration of differing solutions
- Recognize the role of diversity in creating conflicts and providing novel solutions
- Identify the key ethical requirements, and recognize alternative viewpoints when presented with ethical problems and dilemmas
- Build credentials and enrich your resume/cv to be a more competitive job seeker

Instructor Information

Name: Christopher M. Quick, Ph.D.
Telephone number: 979-845-2645
Email address: cquick@tamu.edu
Office hours: Monday 9-11
Office location: VMA 300D

Textbook and/or Resource Material

No Textbook Required
Grading Policies

This is a Pass/Fail (Satisfactory/Unsatisfactory) class. This course is based on experiential learning outside of the classroom coupled with intensive, structured analysis and reflection in the classroom. Your active participation in and out of the classroom is therefore essential. You will be graded on classroom participation, and participation outside of class with the team you lead.

Graded Points:

Research Team Reports (489/689): 2 points each (24 max)
- 0: did not participate
- 1: participated in activity, analysis lacking.
- 2: participated and presented analysis

Case Study Responses (489/689): 2 points each (24 max)
- 0: did not participate
- 1: participated in activity, analysis lacking.
- 2: participated and presented analysis

Small Group Bibliography (489/689): 8 points each (24 max)
- 0: did not provide bibliography
- 4: provided bibliography
- 8: provided bibliography with analysis

Summative Analysis (489/689): 24 points max
- 0: Not turned in
- 12: report turned in, no evidence of evaluation
- 24: report turned in and conclusions based on evidence from class

Graduate Student Final Report (689 Only): Final Point Multiplier
- 0.8 X Final Points: Final report not useful to implement
- 1 X Final Points: Final project useful to implement

Final Grade

Satisfactory ≥ 80 Points
Unsatisfactory < 80 Points

Attendance Policy: (See Student Rule 7: http://student-rules.tamu.edu/rule07) “The university views class attendance as an individual student responsibility. Students are expected to attend class and to complete all assignments…If the student is seeking an excused absence, the student must notify the instructor as soon as possible after the absence, but no later than the end of the second working day after the last date of absence.” Extensions to deadlines will only be given for excused absences.
Course Topics, Calendar of Activities, Major Assignment Dates

Outside of class: Time spent outside of class (i.e., your “homework”) is to mentor undergraduate interns performing research with you. From this “homework”, you will be well-prepared to discuss leadership principles in class from the basis of personal experience.

Class time: You will start and complete all assignments during class time, first working independently, then in your peer leadership team, and finally with the entire class. Class is split between two activities: 1) finding solutions to make your own research team more effective and 2) finding solutions for a selected Case Study to make another team more effective.

   Individual. You will first fill out your weekly team report, indicating what strategies you tried with your team the previous week, from what sources you formed the strategy, whether it worked or not, and why. Then you will identify either a problem with your team that needs to be addressed or a barrier to reaching a team goal. Finally, you will write your initial solution to the case study and rate the confidence of your solution.

   Small Peer Group. You will work in a new Small Peer Group every 3 weeks. In each of these groups, you will be focusing on one of four goals: research productivity, personnel training, group cohesion, and resource allocation. In the first half of the small peer group meeting, you will share your selected research team problem with the group, elicit suggestions for solutions, and rate the value of those suggestions. In the second half, you will again address the Case Study, finding resources online that address the issue, and debating solutions. You will compare group solutions to your original solution. You can nominate problems to be addressed for the next week’s Case Study.

   Full class. The full class will address a Case Study. When addressing a Case Study, one team will act as an advocate for solutions they developed in the Small Peer Group, and all other groups will act as devil’s advocates that challenge the solutions in terms of unintended consequences on competing team goals.

Research Team Reports (489 AND 689): Research Team Reports will be turned in at the end of each class and graded.

Case Study Responses (489 AND 689): Case Study Responses will be turned in at the end of each class and graded.

Leadership Bibliography (489 AND 689): At the end of three weeks, you will submit an annotated bibliography, indicating URL, time taken to read material, and subjective rating of its relevance to biomedical research leadership.

Summative Analysis (489 AND 689): In the last weeks you will analyze your responses to the Small Peer Group for developing personalized advice for leading your team, as well as your responses to the Case Studies to evaluate the relative contribution of personal experiences, your peers, the literature, and the class debates on shaping your decisions as a leader. You will then make recommendations for creating an evidence-based leadership training program for leading biomedical research teams.
Graduate Student Final Report (689 Only): In addition to the activities above, graduate students taking 689 will have to produce additional final report. You are encouraged to design your own final report, but it must be useful to yourself, Texas A&M, or the greater scientific community. For example:
1. Write an abstract about the learning experience to be submitted to a conference
2. Prepare responses based on your personal experiences to standard interview questions about working in an interdisciplinary team, dealing with conflict, and leadership.
3. Develop a training manual for team leaders using bibliographic materials.

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Classroom Communication

The university has established a formal process for handling of student grievances associated with any course. If there are major concerns about the conduct of a course, which cannot be resolved by meeting with the instructor of a course, a Classroom Communication Concerns form should be completed and submitted to the appropriate department head. (This form is available in the VTPP Departmental Office, Room 332, VMA.)

Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit http://disability.tamu.edu

Academic Integrity

For additional information please visit: http://aggiehonor.tamu.edu

“An Aggie does not lie, cheat, or steal, or tolerate those who do.”