

Team Science
GMS 6945, 1 credit
Fall 2018 – Thursdays, 2:00-3:00 pm, room R5-265

draft 7/18/18

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Canvas Site: <https://ufl.instructure.com/courses/354343>

Course Description: Addressing today’s complex research and societal problems requires integration of specialized knowledge bases and cross-disciplinary collaboration. This course offers practical guidance about engaging in Team Science to pursue complex research questions, work effectively with team members, and assess team performance in order to produce high impact research outcomes.

Learning Objectives: At the end of this course students should be able to:

- Describe changes in scientific authorship patterns that have occurred in the past 50 years
- Differentiate between multidisciplinary, interdisciplinary, and transdisciplinary research
- Describe factors to consider when deciding whether join an interdisciplinary research team
- Discuss factors to consider and steps to take when evaluating others as potential collaborators
- Develop a research team vision and mission statement
- Develop a collaboration plan for a new research team
- Demonstrate an understanding of meta-cognitive processes important for team functioning
- Recognize and resolve conflict that arises during the life cycle of a scientific team
- Use strategies for team evaluation and self-correction
- Describe factors that contribute to the success of a scientific team

Course Format and Outline: Readings will be posted at the course Canvas site. In addition to lectures and class discussions about team science **principles, strategies, and evidence** of effectiveness, students will be expected to identify a current research team of their choice that they are involved in, and **practice** team science strategies during the semester. Assignments will include preparation of a written team vision and mission statement and collaboration plan, oral presentation of your plan, and an oral report about a team debriefing experience. Students will be expected to attend each class and actively participate in discussions. Class sessions will involve combine lectures and small group discussions. Class will meet once weekly for 1 hour sessions, according to the schedule below. Weeks during which a session is not scheduled may be used to work on team assignments. Due dates for assignments will be posted in Canvas.

Date	Topic	Assignment
Aug 23	Intro to Team Science	DISC Assessment
Aug 30	Preparing for Team Science – Are You Ready?	Collaboration Readiness
Sep 6	Team Leadership – Which Style Works Best When?	Draft Team Vision & Mission Statement
Sep 13	Building a Research Team – Who and Why?	Team Needs Assessment
Sep 20	Writing a Collaboration Plan	Draft Collaboration Plan
Sep 27	No class (WTM out of town)	Work on Collaboration Plan
Oct 4	Managing Research Teams	Final Team Vision & Mission Statement
Oct 11	Collaboration Plan Reports	
Oct 18	Collaboration Plan Reports	Final Collaboration Plan
Oct 25	Conflict Management	
Nov 1	Team Monitoring	Team Monitoring (Team Dimensional Training)
Nov 8	No Class (WTM out of town)	Work on Team Monitoring
Nov 15	Team Evaluation	Team Evaluation Plan
Nov 22	No Class – Thanksgiving Holiday	
Nov 29	Team Reports	
Dec 6	Team Reports	Team Science Final Written Report

Grading

The assignments for this course are designed for each student to put into practice the team science principles and best practices being discussed in class. The team may be a close collaborator or their research lab group.

Team Vision, Mission & Values Statement (first draft → instructor and peer feedback → final draft)

The final product will be a concise statement about your overall goal(s), what motivates your team, and what kind of research culture your team will have.

Collaboration Plan (first draft → instructor and peer feedback → final draft)

1. Rationale for Team Approach and Team Configuration
2. Collaboration Readiness
3. Technological Readiness
4. Team Functioning
5. Communication & Coordination
6. Leadership, Management, and Administration
7. Conflict Prevention and Management
8. Training
9. Quality Improvement Activities
10. Budget/Resource Allocation

Team Monitoring Activity (not graded)

A rubric for Team Dimensional Training will be provided, which will be used to guide a team discussion about performance of the team. The following four dimensions will be discussed:

- Information Exchange
- Communication Delivery
- Supporting Behavior
- Team Leadership/Followership

The rubric will lead the discussion to seek suggestions for improving performance and ensure that the team agrees on goals, direction and priorities.

Final Report (oral presentation and written report)

Part 1 – may be written collaboratively with team members. The intended audience for this is your team members, whether current or new. The goal of this portion is for you to have a real working document that can support your project.

- Team name
- Team vision & mission statement
- Team description (may be partially anonymous)
- Collaboration plan

Part 2 – this must be an individual effort. This portion is more “academic”.

- Reflection about team monitoring – please see below for more information
- Please list at least 3 important things you are committed to implementing or continuing with your team moving forward

Reflection about team monitoring: Four dimensions of teamwork – Comment about at least two of the four dimensions. When examples are mentioned in the overall reflection, please mention which dimension they fit with. Overall reflection about team monitoring should address these questions:

- Which dimensions were helpful? In what ways?
- Were any dimensions not helpful? Why did they not seem to be helpful?
- How open or accepting were team members about participating in this activity?
- Were there any “A ha!” moments? What were they?
- Do you think this will help your continuing work relationship in your team? Why or why not? How?

Assignments and Point Values:

Team Vision-Mission-Values Statement, First Draft, 10 points
Team Vision-Mission-Values Statement, Final Draft, 15 points
Research Team Collaboration Plan, First Draft, 10 points
Research Team Collaboration Plan, Final Draft, 15 points
Team Science Final Report, Oral Presentation, 25 points
Team Science Final Written Report, 25 points

Grading Rubric:

A 90-100	B- 77-79	D+ 63-66
A- 87-89	C+ 73-76	D 60-62
B+ 83-86	C 70-72	F <60
B 80-82	C- 67-69	

Attendance: Attendance and participation are expected for all scheduled sessions. Absences for illness, family emergencies, etc. will be excused per university policy. Depending on the session missed, makeup assignments may be made. <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Absence Due to Professional Travel: Planned absences for professional travel, such as for a conference or extramural training, may be excused, but you must notify the course director **in advance**. Depending on the session(s) missed, you may be asked to complete a makeup assignment or assessment either before or after your trip.

Accommodations for students with disabilities: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Required and recommended textbooks: Lecture materials and reading assignments (both required and optional) will be provided in PDF format in Canvas. There is no required textbook. Required readings include: Bennett LM, Gadlin H, Marchand C. Collaboration & Team Science Field Guide. NIH Publication No. 18-7660. National Institutes of Health, 2018.
Hall KL, Crowston K, Vogel AL. How to Write a Collaboration Plan. Science of Science Toolkit.

Information on current UF grading policies: Grades will be assigned in a manner consistent with UF policy. <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Evaluation process: Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students online at <https://evaluations.ufl.edu/results>.