

PRWR 731 Science & Its Public Audience

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Section 102
W 5:30-8:10pm
LA 4211

Towson University
Course Syllabus

Words to Remember

“People assume that authors are experts in the field about which they have chosen to write. Possibly most are. Possibly I’m the only one who begins a project from a state of near absolute ignorance.” -- Mary Roach

Course Description and Prereqs

Addresses scientific writing as analyzable discourse, increasingly issue-oriented, public and available to nonscientists. Choosing issues, writing queries and articles. No background in sciences necessary. Prerequisite: Admission to a graduate program or consent of instructor. Not open to students who have successfully completed WRIT 731.

Why We’re Here: Course Purpose and Topics

In this course, you will engage critically with scientific discourse. You will read primary and secondary texts, including books, journal articles, and websites, and will consult other types of media, such as film and social media. You will be exposed to theoretical frameworks that provide the foundation for different types of scientific discourse, and you will learn rhetorical skills necessary to achieve course goals.

To succeed in this course, you do not need to be a scientist or an expert. You do, however, need to be open to asking many questions, thoroughly reading texts, and taking risks to make connections among new ideas.

Among the topics and questions covered in the course are:

- What is public? What is science?
- How does science convey itself to the public?
- What role does rhetoric and language play in scientific discourse?
- How can the public make decisions regarding science?
- How has scientific communication evolved over the past few centuries?
- What is the future of scientific communication?
- How can/does the public engage with the scientific community? Vice versa?
- What role do ethics play in scientific discourse?

What We'll Learn: Course Goals and Learning Outcomes

In completing course requirements, you will be able to do the following:

- Summarize complex readings
- Ask critically engaged questions
- Develop thoughtful, analytical responses that synthesize readings
- Write a final paper on a current topic related to scientific discourse that demonstrates your thorough understanding of course concepts
- Apply rhetorical and theoretical frameworks to scientific discourse

These learning outcomes incorporate all four of the learning outcomes established by the Towson University English Department, which are as follows:

Read. Interpret written materials flexibly: understand that although multiple meanings are possible, textual evidence needs to support individual interpretations of the literature being read as well as the implications drawn from it.

Write. Write in a variety of forms (e.g. expository, argumentative, imaginative, business/technical) as appropriate to audience, purpose, and occasion, using evidence to support interpretations.

Research. Use research skills that include understanding of methods, technology, and conventions.

Reflect. Be reflective and lifelong learners.

Information Literacy and Technological Competence. Use software as appropriate to writing and research.

Global Awareness. Engaging intellectually in the experiences and views of people with different cultural backgrounds and beliefs.

What You'll Need: Books and Materials

Required Books and Video

You will read a lot in this class, averaging 75-100 pages a week. The required books (below) may even find permanent homes on your bookshelves. They are intended to serve as reference material for you throughout your career.

Gross, A. (2006). *Starring the text: The place of rhetoric in science studies*. Carbondale, IL: Southern Illinois University Press.

Harris, R. A. (Ed.) (1997). *Landmark essays on the rhetoric of science*. Mahwah, NJ: Hermagoras Press.

Helms, R. (Ed.). (2002). *Guinea pig zero: An anthology of the journal for human research subjects*. New Orleans: Garrett County Press.

Kuhn, T. S. (1962). *The structure of scientific revolutions* (4th ed.). Chicago: University of Chicago Press.

Roach, M. (2004). *Stiff: The curious life of human cadavers*. New York: W. W. Norton & Company, Inc.

Tufte, E. R. (2001). *The visual display of quantitative information* (2nd ed.). Commerca, CA: Graphics Press.

Soechtig, S. (Director). (2014). *Fed up* [DVD]. United States: Atlas Films.
(Available on Amazon or Netflix)

Link to e-reserves: <http://tinyurl.com/nuwbhjd>

I will post additional required and recommended readings on Blackboard.

Required Software and Computer Accessories

You must have ready, convenient access to the following:

- Microsoft Word. Any Towson student can purchase Microsoft Word, or the Office suite, at a discount from the University Store.
- Blackboard
- Towson email

If you do not have access to any of the above items, contact me ASAP.

Required Requisite Computer Technology Access and Knowledge

Students must have routine, ready access to computer technology and the requisite knowledge enabling them, at a minimum, to perform all of the following tasks you:

- Send and receive Towson email. Check your Towson email daily.
- Create a folder for this course so that you may archive all messages you receive and send. Keep copies of all class-related emails.
- Download and open PDF, Word, PowerPoint, and Internet files.
- Use Microsoft Word to produce well-formatted, easy-to-read documents fulfilling the requirements of written assignments.
- Use Blackboard to read, download, and print pages and documents.

If you do not have the above knowledge or skills, please let me know immediately.

Required Time Commitment

On average, you will need at least 6 to 9 hours a week to keep up and perform reasonably well. As in any new routine, you may need more hours during the initial weeks as you learn to complete assignments in a way that balances efficiency (time required) and effectiveness (extent of coverage, depth of comprehension). You may need more time in some weeks to work on your major course project.

You will read about four chapters/articles a week, averaging 75-100 pages a week. The workload, though, should balance out; aside from serving as a discussion leader and preparing reading responses, you will not have weekly assignments. This approach is intended to give you the time you need to delve into the readings each week.

My Responsibilities as the Professor

Throughout the course, I will do the following:

- Establish and explain course objectives, assignments, evaluation criteria, and schedule to ensure student comprehension
- Lead and moderate discussions of assigned readings, encouraging students to express their opinions
- Challenge students to engage with texts and course concepts critically by offering feedback on all work submitted on time
- Maintain Blackboard site containing materials that can help students complete assignments
- Maintain a regular schedule of office hours
- Return graded evaluations within two weeks of when they are handed in
- Reply to emails within 24 hours Monday through Friday and within 36 hours Saturday and Sunday

Your Responsibilities as a Student

To receive a credit-earning grade in this course, you are expected to do the following:

- Abide by the course policies
- Read the readings and come to class prepared
- Participate actively and cooperatively in discussions and group work
- Ask questions regarding reading, assignments, deadlines, concepts, etc.
- Appropriately apply prerequisite knowledge, including:
 - citing and formatting papers following APA, MLA, or CMS style;
 - using proper grammar and style;
 - revising writing; and
 - creating Microsoft Word documents.

--- Note: If you are concerned about or need help with these items, contact me ASAP.
- Hand in carefully written and edited assignments that fulfill the purpose and scope detailed in the instructions for the assignment
- Demonstrate professional standards for reliability, communication, pro-active problem solving, critical analysis, and cooperation

How You'll Achieve Course Goals: Course Work

The following chart outlines Towson's grading scheme for graduate courses.

<i>Percentage Range</i>	<i>Letter Grade</i>	<i>Quality Points</i>
100-93	A	4.00
92-90	A-	3.67
89-83	B+	3.33
82-75	B	3.00
74-50	C	2.00
0-49	F	0.00

The numerical course grade is determined by component grades given during the semester for the following activities and deliverables.

Class Participation, Grids, and Reading Responses 30%

Each class period, you will be expected to come to class prepared to engage in class discussion actively. As such, you will prepare a reading grid for each reading, and a brief reading response and one discussion question (DQ) for each class.

Grids

Grids are heuristics that help you interpret and critically engage with texts. By completing grids for each reading, you'll see how different authors define terms, approach topics, and use evidence to support their claims. These grids will help you complete course work, including the reading responses, Thomas Paper, and the final paper. Grids are not graded but bring them to class to aid class discussion. The template and instructions are here: <http://tinyurl.com/pfux8u5>

You will upload your grids twice this semester to Blackboard: once before the Thomas Paper and second before the final paper is due. By reading each other's grids, you can learn from each other and see how your colleagues are approaching the readings.

Reading Responses and DQs

You will submit a response and DQ when you're not leading discussion. You will turn in your response and question at the end of class, and it will be graded. This assignment will promote class discussion and demonstrate that you have read the readings.

In preparing your response, you should explore a concept, issue, conflict, theme, etc. that you notice in the week's reading. Your response and discussion questions should follow this format:

1. Write a ~450-word, single space, and in a common 12 point font (Times New Roman, Palatino, Cambria, etc.)
2. Include word count at the end of your response
3. Write your discussion question at the end of your response and label it "DQ"
4. Do not include references for readings included on the syllabus
5. Stick to that week's reading primarily, although you may find it useful to refer to previous week's reading

The goal of this assignment is to develop the necessary skills to summarize and critically engage with texts. Furthermore, it will allow you to synthesize course readings in preparation for the Thomas Paper and the final paper. Reading responses and discussion questions will be graded on a check system; see below.

Leading Class Discussion 15%

Each of you will lead discussion throughout the semester. You'll sign up for your week at the start of class. As a discussion leader, you will prepare for class:

- A brief summary (250 words) of each reading for that week. Consider this activity an exercise in communicating complex information briefly. Bring 8 copies for everyone in class, including me. Include the word count at the end of each summary.
 - If we are reading a book that week, summarize each chapter we read.
- Three discussion questions for class
- A recent news story or popular press article related to your week's theme. Print 8 copies and have the URL ready to pull up on the classroom computer.

Turn in your summary, questions, and the news article. You'll be graded on:

- Each summaries' accuracy and length (not over 250 words each)
- The quality of discussion questions
- The level of relevance of the article
- Quality of discussion during class

The Thomas Paper 15%

Once during the semester, you'll turn in and read aloud to the class the Thomas Paper. Bring enough copies for each member of the class, including me.

The Thomas Paper is a paper written on one legal-size piece of paper—no more, no less—or the equivalent. You can choose to write a formal paper or a comic strip on the legal paper, for example. The preferred format is:

- The first half to three quarters of the paper will summarize the previous weeks' readings.
- The rest of the paper will be a collection of two things:
 - a discussion of the readings and how they relate to an issue or concern
 - a reflection on how the readings develop our understanding of public, science, discourse, rhetoric, or other central course themes

You should use at least three course texts in your Thomas Paper. Instead of merely summarizing the texts, you must develop a larger understanding of the issues and theories involved. It is not enough to agree or disagree with texts. As Dr. Thomas Rickert, for whom this paper is named, once said, "It's not the length of the blank paper that's intimidating; it's what you choose to leave out that's the challenging part."

The purpose behind this paper is to challenge you in a positive way. This paper will take time to write; you'll notice we have fewer readings the day of the Thomas Paper. This type of writing requires you to push yourself and be creative. You may find that a one-sided legal sheet of paper doesn't work for you. If that's the case, find another medium of the equivalent length that allows you to represent your thoughts better. We'll have one class period where you'll read your paper to the class, and the class will discuss it. I will show you examples of the Thomas Paper in class. The Thomas Paper, like the final paper, will be graded on an A-F scale. Please see below for descriptions.

Final Paper and "Presentation " 40%

You'll turn in a 15-page final paper; this page length does not include any front matter, endnotes, or references. Use at least eight sources; most of these sources should come from course readings, though you should consult outside texts.

For the paper, select a topic related to scientific discourse that interests you. You will use an appropriate theoretical, rhetorical framework to analyze this topic and shed the some new light on the topic. You will have an individual conference with me during the semester to discuss your topic and paper. Here are some examples:

- Environmental concerns, including the government's reaction to the BP spill
- Veterinary medicine's influence on human medicine
- "Alternative" medicine, including acupuncture and chiropractic care
- Infographics' role in the "obesity epidemic"
- Social media's effect on the scientific community

When considering a topic, narrow your idea as much as possible. Doing so will result in a stronger paper. For example, you could analyze how a specific company structures and writes their communication with the public regarding climate change. To extend it further, you can find how publics have reacted to these communications and assess the communications' effectiveness.

On the last day of class, you will deliver a brief, informal presentation to the class about your final paper. You do not need to have your final paper completed; this informal presentation is an opportunity for you to receive feedback from your colleagues and work through any questions or concerns. In developing your presentation, prepare a one-sided handout to give to the class. This handout will guide you while talking to the class about your paper, and it will help your colleagues better understand your ideas.

Grading Schemes

The following items will count against your final grade:

- Being absent
- Delivering late or perfunctory contributions to discussions
- Routinely participating in discussions in a passive, pro-forma way
- Failing to complete or doing rushed, unprofessional work

This class requires a willingness to engage with challenging text and ideas. As such, part of your final grade will account for your effort put into the course.

Assessment for Discussion Leading and Reading Responses

Your weekly work will be assessed on a check system: check-plus, check, and check-minus. The explanations of these marks are as follows:

√+ = exceptional work

You've demonstrated that you completed the readings and understood them to the best of your ability. Your reading response synthesizes the week's reading clearly and directly quotes from three of them. Your discussion question illustrates a critical engagement with the text and goes well beyond general questions. The question synthesizes course readings or readings/media outside of class. It also demonstrates you're pushing your limits in understanding the material. Examples of check plus questions include:

√+ How does Habermas's notion of public relate to Mayhew's definition? Are the differences reconcilable?

√+ Aristotle states that rhetoric is the art of persuasion. Do the readings for this week discount that notion? Why or why not? How? In particular, does Gross define rhetoric differently?

√+ Graham and Teston use stasis theory to analyze court hearings. What results do you think they would have gotten using a different theoretical framework, such as Aristotle's proofs?

All writing is professional, clear, and carefully edited. If you are leading class discussion, you facilitated discussion successfully and ensured discussion stayed on topic. Your reading summaries are accurate and stay within word count limit.

√ = average work

You've demonstrated that you completed the readings and generally understood them. Your reading response generally discusses the week's readings and relies heavily on one or two texts. Your response may include quotes from one or two texts. Your discussion question shows that you read the readings, but it may not go beyond general questions, or they may be expected. The question may or may not synthesize course readings or reading/media outside of class. It illustrates that you may not be pushing your limits to ask critical questions. Examples of check questions include:

√ What do you think Aristotle means when he says rhetoric is the art of persuasion?

√ In the documentary *Flow*, the water industry stakeholders do not seem bothered by their effects on the environment. We see this attitude in *An Inconvenient Truth*. Should stakeholders care? Why or why not?

√ Mary Roach mentions that she asks naïve questions. What is a naïve question? What place does it have in science?

Most writing is clear, though it may lack some professionalism. If you are leading discussion, you mostly facilitated discussion successfully, and discussion mostly stayed on track. Your summaries are mostly accurate and may or may not stay within the word count limit.

√- = unacceptable, poor work

You've failed to demonstrate that you've completed the readings, and/or you misunderstood the assignment. Any work that doesn't meet the requirements will earn this score. Discussion questions do not refer to readings or could be based off a brief skim through a book jacket or Wikipedia page. Examples of check-minus questions include:

√- Is Henrietta Lacks's privacy really at stake?

√- Should we revise medical education?

√- Are pharmaceutical companies responsible for patients asking doctors about medication?

The majority of the writing is unclear and unprofessional. If you are leading discussion, you failed to come prepared for class, and/or you did not facilitate discussion successfully. Discussion did not stay on topic for most of the class. Your summaries were mostly inaccurate and/or incomplete.

Please note that you may ask any question during class. Discussion questions, though, should indicate your critical engagement with the readings.

Assessment for the Thomas Paper and the Final Paper

The Thomas Paper and final paper will be graded on an A-F scale.

A range = exceptional work

You completed the requirements as outlined below, and you develop new knowledge. You integrate this knowledge seamlessly into your work. You use multiple sources, and you've appropriately integrated direct quotes to support

your ideas. Your theoretical and rhetorical frameworks are appropriate and clearly stated, and your audience clearly understands your points. Your paper is virtually free from grammatical errors and is written in a professional tone. Work in this range rarely needs revision.

B range = above average work

You completed the requirements at a high level of quality. You use sources, though you may rely only on a few texts and /or they do not fully support your ideas. Work in this range needs some revision, but the content is complete and has a logical organization. Your theoretical frameworks are stated and explained. The work contains some grammar errors that may impede meaning.

C range = average work

You completed the basic requirements for the assignment. The work is complete in content and has logical organization. The ideas presented in the work and /or the sources used to support the ideas need significant revision. Your theoretical frameworks are stated, but they may be unclear or not appropriate. The work contains grammar errors, resulting in an unprofessional document.

F = failing work

You did not complete the required assignment or you have not shown up to class. You may have completed the required assignment, but your work does not demonstrate your clear understanding of the readings.

Late Work and Attendance Policies

Deadlines for Assignments and Penalties for Missing Them

Most assignments are due during class unless otherwise noted. All assignments are due on the due date. I will post deadlines for all assignments well in advance. Late work will receive zero credit and no feedback unless you have received an extension. If a serious and unavoidable problem arises, contact me in writing before the deadline.

Penalties for Absences and Getting Them Waived

This class is a community of learners. It is vital that you do your share of community building. You will learn much from one another through online discussions. Given the importance of student-student and student-teacher interaction in this course, there are penalties for missing class.

What Counts as an Absence?

You are absent if you miss a class or arrive/leave more than 30 minutes into class.

From the Towson student handbook:

“Students are expected to adhere to all university attendance policies. Students who are absent from class are responsible for any missed work.

Absences due to illness, bereavement, or athletic events require documentation in order to be considered for an excused absence. Absences due to religious

holidays are excused on the holiday date(s). Absences due to travel associated with observance of religious holidays are unexcused.”

You can miss one class without penalties. Do your best to attend each week in case you need to miss class for an unexpected reason.

Penalties for Absences

If you have more than one absence that does not fall within the parameters of the handbook guidelines, the following penalties apply:

- Two absences lowers a final grade by half a letter grade.
- Three absences lowers a final grade by whole grade.
- Four or more absences results in an F for the course.

Code of Conduct

Because this course will cover controversial topics, I expect we will have heated and lively discussions. As such, you are expected to govern your communication and interaction in a courteous and respectful behavior. I will caution and counsel violators in private. Repeated serious violations will be reported to the Graduate Studies Committee, as stipulated in the Graduate School catalog.

Academic Integrity

You will be held to the traditional standards for academic honesty, which are codified in the Student Academic Integrity Policy (<http://tinyurl.com/pq4bxfx>). Violating this policy is likely to have grave consequences for your grade in the course and could even lead, in severe cases, to dismissal from the university. Students caught cheating will immediately receive a grade of F on the assignment and may result in a grade of F in the course. I will report the incident to the Division of Student Affairs.

To ensure you do not plagiarize, we will use APA (6th ed.), MLA (7th ed.), or CMS (16th ed.) citation style. Consult the citation rules online.

- APA from the Purdue OWL: <http://tinyurl.com/qy22v>
- APA Style Blog: <http://blog.apastyle.org/>
- MLA from the OWL: <http://tinyurl.com/lo2mkg>
- CMS from the OWL: <http://tinyurl.com/9bbav4p>

You may also buy the manuals online or at the bookstore.

Students Needing Accommodation for a Disability

Students needing accommodation due to a disability should contact me. You will need a statement from Disability Support Services authorizing your accommodation. You may contact Towson’s Disability Support Services (<http://tinyurl.com/a49wp8r>) at 410- 704-2638.

Course Schedule (subject to change)

Please use this schedule for long-range planning. I will inform you of changes.

Week Topic	Readings (to be done before class)*	In class work/drafts**
1: 8/26 Define terms	<ol style="list-style-type: none"> 1. Syllabus 2. Smith "What is Rhetoric" (PDF) 3. "Broccoli is Bad for You" http://tinyurl.com/p6c2pj5 	<ol style="list-style-type: none"> 1. Sign up for discussion leader
2: 9/2 Science, the public, and media (Dr. Angeli at medical rhetoric conference; work at home)	<ol style="list-style-type: none"> 1. "An Illustrated Book of Bad Arguments" (PDF) 2. Habermas: excerpt from <i>The Structural Transformation of the Public Sphere</i> (PDF) 3. Watch <i>Fed Up</i> at home through Amazon or Netflix 4. Hall "Does the Movie <i>Fed Up</i> Make Sense?" http://tinyurl.com/qhfhndz 	<ol style="list-style-type: none"> 1. Post your reading responds and grid this week only 2. Grid Habermas, <i>Fed Up</i>, and Hall 3. Read your colleagues' responses before next class
3: 9/9 Sci. paradigms	<ol style="list-style-type: none"> 1. Kuhn: I, II, V, VI, VII, IX, XI, XIII 	<ol style="list-style-type: none"> 1. Review responses, grids from last class
4: 9/16 Rhetoric in science	<ol style="list-style-type: none"> 1. Fahnestock "Accommodating Science" (PDF) 2. <i>Landmark Essays</i>: Ch. 6, 8, and 9 	
5: 9/23 Argument and structure in science	<ol style="list-style-type: none"> 1. Fahnestock and Secor "Stases in Scientific and Literary Argument" 2. Gross: Ch. 2, 3, 4, 8 	
6: 9/30 Science and ethics	<ol style="list-style-type: none"> 1. Katz "The Ethic of Expediency" (PDF) 2. Aristotle: Book 1 (E) 	
7: 10/7 Visuals in science	<ol style="list-style-type: none"> 1. Tufte: Intro, Ch. 1, 2, and 9 2. "5 Science Infographics Everyone Should See" http://tinyurl.com/np3w5pw 3. "Making Sense of Science Infographics" http://tinyurl.com/m29lmrt 	
8: 10/14 Methods	<ol style="list-style-type: none"> 1. Feyerabend "Against Method" (PDF) 2. <i>Landmark Essays</i>: Ch. 10 3. Gross: Ch. 7 	
9: 10/21 Human subjects research	<ol style="list-style-type: none"> 1. Lederer: Ch. 4 (E) 2. Helms: Intro, pp. 3-9, 18-21, 34-8, 45-52, 65-91 	
10: 10/28 Pop. sci. writing	<ol style="list-style-type: none"> 1. Roach: <i>Stiff</i> (read it all) 	
11: 11/4 The Thomas Paper	<ol style="list-style-type: none"> 1. Bernhardt and McCulley "Knowledge Management and Pharma. Develop. Teams" (PDF) 	<ol style="list-style-type: none"> 1. Sign up for conferences 2. Read papers in class

12: 11/11** Mary Roach Visit	<ol style="list-style-type: none"> 1. **Class starts at 7pm tonight at goes until 9pm** 2. Mary Roach is skyping into class at 7:45pm 	<ol style="list-style-type: none"> 1. Bring 3-5 questions for Mary Roach 2. Submit outline/rough draft of your paper. I'll provide feedback at your conference.
13: 11/18 Conferences	Attend your conference Class cancelled	<ol style="list-style-type: none"> 1. Bring questions to your conference 2. Bring a copy of your paper draft
14: 11/25	No class; Happy Thanksgiving	
15: 12/2 Public, truth	<ol style="list-style-type: none"> 1. Simmons: <i>Participation and Power</i>, Ch. 4 (E) 2. Nietzsche "On Truth and Lies in a Nonmoral Sense" (E) 3. Kuhn: Postscript 	
16: 12/9 "Presentations"		<ol style="list-style-type: none"> 1. Handout for the class
Finals Week Paper due 12/16	Paper due before 9:30pm, Wednesday, 12/16	<ol style="list-style-type: none"> 1. Upload your paper to Blackboard by the end of our final exam time.

*E = E-reserve (link on Blackboard); PDF = PDF in Blackboard folder "Course Readings"

**Reading responses, grids, and discussion questions are due each class. If leading class discussion, materials are due during class.