

COM 1102-001 Communication Foundations for Engineers

Villanova University

Syllabus Fall 2020: In-person/adapted for online hybrid modality

Class Schedule: Garey 101 – Mon.-Wed.-Fri., 9:10-10:00 a.m.

Instructor

John Gainer, MA
Adjunct Professor

Course Overview

Communication and rhetoric for the engineering profession. Oral and visual presentation of technical reports. Formulation and evaluation of data-driven arguments. Critical communication and listening skills.

Prerequisite: Mechanical Engineering majors

E-mail

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Required Text

Irish, R., & Weiss, P.E. (2013). Engineering Communication: From Principles to Practice (2nd ed.). Ontario, Canada: Oxford University Press.

OFFICE HOURS

Virtually through Zoom:
Mon.-Wed.-Fri. – 10:30-
11:30 a.m.

[I can supply you a digital copy. I do encourage you to buy the printed as well]

Schwabish, J. (2017). Better Presentations: A Guide for Scholars, Researchers, and Wonks. New York: Columbia University Press.

[Free online access for Villanova students at
<https://www.jstor.org/stable/10.7312/schw17520>]

Additional materials as posted online in Blackboard.

Specific Learning Outcomes

- Students will learn how effective communication is defined and recognize it as audience-centered and strategic.
- Students will learn rhetorical processes for developing persuasive arguments, based on the classical tenets of invention, arrangement, and style.
- Students gain confidence as effective public speakers, by acquiring skills in preparation and practice, as well as delivery.
- Students will gain familiarity with the standard IMRaD (Introduction/Methods/Results/Discussion) genre for reporting technical information, and understand the foundations of this structure in the classical arrangement of a persuasive argument.
- Students will develop research skills for gathering information to support technical arguments.

- Students will learn to design effective visual displays, and how to leverage visual aids in technical communication.
- Students will learn ethical practices relevant to technical communication and persuasion.
- Students will learn to improve listening and feedback skills.

Resources

Center for Speaking and Presentation

Each student is encouraged to use the Center for Speaking & Presentation at least once during the semester. The Center for Speaking and Presentation is located in Falvey Library, Old Falvey 301. The center provides expert guidance on topics including organizing presentation material, performing as a cohesive group, voice modulation, vocal interruptions, speaking anxiety and more! Walk-ins are welcome, or you may book in advance online: villanova.mywconline.com, register for an account and select “Center for Speaking and Presentation.” White boxes represent available sessions. Click any white box to book. For information, contact juliana.studer@villanova.edu or call 610-519-5862.

Office of Disabilities and Learning Support Services

It is the policy of Villanova to make reasonable academic accommodations for qualified individuals with disabilities. You must present verification and register with the Learning Support Office by contacting 610-519-5176 or at learning.support.services@villanova.edu or for physical access or temporary disabling conditions, please contact the Office of Disability Services at 610-519- 4095 or email Stephen.mcwilliams@villanova.edu . Registration is needed in order to receive accommodations.

Course Components and Assignments

ASSIGNMENT #1: UNGRADED SPEECH OF INTRODUCTION

An introductory 2-3 minute speech without slides. Simply introduce yourself or someone who has influenced you within engineering.

ASSIGNMENT #2A/B: TECHNICAL ARGUMENT ESSAY AND SPEECH

A 2-4 page literature review essay and brief presentation. The goal here is to apply what we learn in class about either the IMRaD, CARS, or the building blocks of the Toulmin model to effectively and critically review a piece of engineering literature.

ASSIGNMENT # 3: TECHNICAL MECHANISM/PROCESS DESCRIPTION

A 3-5 minute speech with slides. The goal here is to focus on individual aspects of “big-picture” projects. You will draw from your own design projects and attempt to “translate” engineering material for a general audience using the Toulmin Model.

ASSIGNMENT #4: PERSUASIVE SPEECH

A 4-6 minute speech with slides or an object to display. The goal here is to isolate and persuade the audience to critical think differently about an engineering concept, person, object, or event. Must have a minimum of 4 academic sources.

EXAM

Multiple choice midterm covering the basic and fundamental aspects of technical presentation and communication as illustrated throughout the **Engineering Communication: From Principles to Practice (2nd ed.)** text.

EVALUATIONS

Self and peer evaluation forms, looking for the quality of comments, not quantity. Required in-class and online

PARTICIPATION/ATTENDANCE

Simply show up to class, participate, and have fun!

Course Schedule

Week	Subject	Assignment Due
Week 1	Introduction to technical communication	
Monday 8/17	Introductions, first day of class	
Wednesday 8/19	Baseline Quiz. Introduce Speech #1	
Friday 8/21	Speech #1-Introductory Speeches	Assignment #1 Due
Week 2	Technical argumentation	
Monday 8/24	Basic structuring. Purpose, Genre, Audience	I&W Ch. 1
Wednesday 8/26	Arguments. Audiences. Library research	
Friday 8/28	“ “	I&W Ch. 1
Week 3	Intro to engineering writing continued	
Monday 8/31	Creating effective introductions	I&W Ch. 3
Wednesday 9/2	Technical Argument Intro to C.A.R.S.	
Friday 9/4	IMRaD (the technical paper structure)	Outlines Due
Week 4		
Monday 9/7	No Class!	

Wednesday 9/9	Using visual aides for technical comm.	Literature Review Due
Friday 9/11	Assertion- Evidence method	I&W Ch. 8
Week 5		
Monday 9/14	Extemporaneous speaking	
Wednesday 9/16	Informative speaking	I&W Ch. 5
Friday 9/18	Intro to the rhetorical situation	
Week 6		
Monday 9/21	“Framing” knowledge in your writing	I&W Ch. 3
Wednesday 9/23	Documents exercise in technical comm.	
Friday 9/25	Moving from known-new information	I&W Ch. 4
Week 7		
Monday 9/28	Assignment #2 Speeches	Assignment #2 Speeches
Wednesday 9/30	Assignment #2 Speeches	Assignment #2 Speeches
Friday 10/2	Readability in rhetoric	
Week 8		
Monday 10/5	Rhetoric and argumentation	I&W Ch. 9
Wednesday 10/7	Logos, Pathos, Ethos	
Friday 10/9	Midterm Review	
Week 9		
Monday 10/12	Midterm quiz	Midterm Quiz
Wednesday 10/14	Toulmin Model of Argument (the discussion/conclusion section structure)	I&W Ch. 2
Friday 10/16	“ “	
Week 10		
Monday 10/19	Language-jargon, managing anxiety	
Wednesday 10/21	More visual representation of material	Schwabish
Friday 10/23	“ “	Outlines Due
Week 11		
Monday 10/26	Critical listening and evaluation	
Wednesday 10/28	Knowing your audience	
Friday 10/30	Assignment #3 Speeches	Assignment #3 Speeches
Week 12		
Monday 11/2	Persuasion vs. coercion	

Wednesday 11/4	Visual representation of data	Schwabish
Friday 11/6	Ethics and values in engineering	
Week 13		
Monday 11/9	“ “	
Wednesday 11/11	Finding your narrative in engineering	
Friday 11/13	Philosophy of engineering	Outlines Due
Week 14		
Monday 11/16	Argumentation revisited	
Wednesday 11/18	(Open day)	
Friday 11/20	Final Presentations	Final Presentations
Week 15		
Monday 11/23	Final Presentations	Final Presentations

Academic Integrity: All students are expected to uphold Villanova’s Academic Integrity Policy and Code. Any incident of academic dishonesty will be reported to the Dean of the College of Liberal Arts and Sciences for disciplinary action. For the College’s statement on Academic Integrity, you should consult the CLAS Enchiridion. You may view the university’s Academic Integrity Policy and Code, as well as other useful information related to writing papers, at the Academic Integrity Gateway web site: <http://library.villanova.edu/Help/AcademicIntegrity>

Assessments based on performance standards below

Advanced(4) –Proficient(3)—Basic(2)—Minimal(1)—Deficient(0)

The Student. . . .

1. Selects a topic appropriate to the audience and occasion
2. Formulates an introduction that orients audience to topic and Speaker
3. Uses an effective organizational pattern
4. Locates, synthesizes, and employs compelling supporting materials
5. Develops a conclusion that reinforces the thesis and provides psychological closure
6. Demonstrates a careful choice of words
7. Effectively uses vocal expression and paralanguage to engage the Audience
8. Demonstrates nonverbal behavior that supports the verbal Message
9. Successfully adapts the presentation to the audience
10. Skillfully makes use of visual aids

11. Constructs an effectual persuasive message with credible evidence and sound reasoning

Grading percentages

A = 93 - 100

A- = 90 - 92

B+ = 87 - 89

B = 83 - 86

B- = 80 - 82

C+ = 77 - 79

C = 73 - 76

C- = 70 - 72

D+ = 67 - 69

D = 63 - 66

D- = 60 - 62

F = Below 60