

The Writing Consultant

Collaboration and Team Teaching

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Both the philosophy and structure of writing across the curriculum make collaboration a natural outcome. Collaboration among students through the peer review process in courses and through writing fellows programs like that at Brown University (which is described in this volume), has received considerable attention. The positive effects of students helping students are well documented.

A less publicized but equally valuable aspect of writing across the curriculum involves collaboration among teachers. In many cases "the writing consultant," often the WAC administrator, responds to faculty or administrative interest in teaching writing in disciplinary courses. As the writing expert, the consultant brings knowledge of the writing process and pedagogy to the interaction, but such expertise is not sufficient to ensure that students learn to write psychology or history. The professor of anthropology, for example, must learn about drafting and revising, but the writing consultant must also learn about the conventions of anthropology. Successful outcomes depend on an exchange of information and ideas between two experts, the writing consultant and the content area instructor.

Nearly every program featured in a recent book subtitled *Models and Methods for Writing Across the Curriculum* (Fulwiler and Young)

depends at least in part for its success on collaboration among writing consultants and nonwriting teachers. Although this collaboration typically involves faculty from different departments or even different schools working together on a writing committee, or experienced writing instructors consulting with nonwriting faculty teaching writing-intensive courses, more intimate arrangements not infrequently occur. As the Baltimore Area Consortium has documented (McCarthy and Walvoord), collaborators in writing across the curriculum sometimes undertake research together. In other cases, faculty from different disciplines work as a team, creating new courses and teaching them collaboratively. In this chapter, I present one model of consultation that involves collaborative course design and team teaching.

THEORETICAL FRAMEWORK

The rationale for the type of collaboration I present rests on a few theoretical assumptions generally associated with writing across the curriculum. The first specifies the existence of discourse communities (see Bizzell), often linked to disciplinary communities to which students seek, through reading and writing, access. The reality of these different discourse communities within the larger academic community, each with its own distinctive conventions, makes the need for collaboration among insiders in various communities imperative. Obviously, outsiders cannot effectively prepare students for entry into a community to which they themselves do not belong. Only by learning about each other's communities can teachers help ease the transitions for students as they learn about writing, not once and for all, but repeatedly as they take courses across the curriculum and are exposed to the variety of conventions and practices that characterize writing in different fields and in different courses within those fields (Jolliffe and Brier).

James Kinneavy divides the theoretical foundations for WAC into two dimensions: the dimension of audience and that of functions of language. The audience dimension he affiliates with concern about discourse communities. This school of WAC, Kinneavy suggests, focuses on teaching student writers how to join the ongoing conversation of their disciplines. He associates the second dimension with writing to learn. Practitioners cite the need to

encourage students to use writing as a tool for learning (and creating knowledge) and less as a means of relaying existing knowledge. These WAC courses use journals; freewriting; and responses to discussion, lectures, and readings to accomplish their goals. These distinctions have been reviewed by McLeod (this volume).

Again, as numerous researchers have demonstrated (e.g., Faigley and Hansen), teaching students to use writing as a tool for learning requires knowledge about the subject being learned to which writing instructors on their own do not have access. Only as a result of collaboration can writing instructors and so-called content instructors work together to create assignments, develop criteria for evaluation, and help students realize the intimate relationship that exists between thinking and writing in any field.

In addition to emphasizing the need to socialize students into discourse communities and the role of writing in learning, many WAC instructors see critical reading (often defined as critical thinking) and writing as closely allied. Students learn to write in the context of learning the discourse of the discipline, which is communicated to them largely through readings. Learning to read intelligently, with a critical eye to the conventions being observed and their role in both creating and communicating knowledge, is an essential tool for students seeking mastery over a particular type of discourse. All writers depend on appropriate models when making choices about their own texts. The processes of deciding on appropriate models and identifying critical reading strategies proceed more smoothly in a collaborative environment. With a writing instructor asking the right questions and a content instructor proposing answers, both teachers learn more than they could possibly discover alone.

THE PROCESS OF COLLABORATION: A WORKING MODEL

With such strong reasons supporting collaborative course design and team teaching, why not incorporate both as clearly desirable features of WAC? Time and money spring immediately to mind as forces working against collaboration. The process of collaboration takes precious time from professionals in a highly labor-intensive field, professionals who already need more time

than they can give for their students; and team teaching, unless responsibilities are carefully defined so that each instructor teaches only half the course, can rapidly drain a program's resources. To work effectively, to the benefit of both teachers and students, collaboration needs to be carefully structured. A description of one model that was developed by a team of instructors at the University of Pennsylvania can serve as a model (see Figure 9.1).¹

As a result of student initiative, as well as administrative and faculty concern about students' communication skills, the School of Engineering and Applied Science at the University of Pennsylvania decided to develop an upper-level communications course designed for third-year students in all departments of the engineering school. Because Writing Across the University (WATU), Penn's WAC program, enjoyed a good working relationship with engineering, WATU was called in to consult and eventually asked to direct the project. Funds were provided to support two graduate assistants in English to research programs across the country and gather resources as well as, and most important, to provide release time for a senior professor in engineering to work with me, the director of WATU, as part of a team. This relationship proved fruitful, and we have now offered the course, taught first by the graduate students/research assistants and then by me, repeatedly and successfully as part of the engineering curriculum. In addition, I worked collaboratively with an assistant professor in the nursing school on a similar course for nursing students, which we team taught the first semester and then the nursing professor taught herself. (Syllabi for both courses appear in the Appendix to this chapter.) Details of both experiences follow.

Stage 1: Joint Goal Setting

Our initial team meetings were devoted to understanding each other's interests, primarily those of the engineering faculty and those of the writing instructors, and identifying goals and the means to achieve those goals on which we could agree. We decided immediately to avoid the constraints of so-called technical writing courses and to aim for a high level of proficiency comparable with what we would expect of any student in the university. The following questions guided our discussions:

- A. Stage 1: Joint Goal Setting
 - 1. What is the relationship between reading and writing?
 - 2. What should students learn about each?
 - 3. What kinds of reading and writing should they do?
 - 4. How should we evaluate students' progress?
 - 5. What type of classroom environment should we foster?
- B. Stage 2: Inquiry and Self-Study
 - 1. What are the forms of writing used in this discipline?
 - 2. What do these forms reveal about how practitioners think?
 - 3. How is new knowledge created?
 - 4. What type of reasoning, what type of questions, what type of evidence does this discipline respect?
 - 5. What kind of language is used?
- C. Stage 3: Creating a Context
 - 1. What forms of writing are appropriate for student writers?
 - 2. What audiences should they address?
 - 3. What purposes should they achieve?
 - 4. What models should they read?
 - 5. How do we want students to think?
 - 6. What is their relationship to knowledge inside their field and outside it?
- D. Stage 4: Implementation
 - 1. What will the writing assignments be?
 - 2. What texts will we assign?
 - 3. How will we emphasize the writing process?
 - 4. In what ways can we combine writing and thinking activities?
- E. Stage 5: Evaluation
 - 1. How will we define success?
 - 2. What feedback do we want?
 - 3. How can we best acquire that feedback?

Figure 9.1 A Collaborative Model for Creating Writing Across the Curriculum Courses

1. What relationship should be established between reading and writing?
2. What should students learn about each?
3. What kinds of reading and writing should students do?
4. How should they be evaluated?
5. What type of classroom environment should be fostered?

Answering these questions required some negotiation, but no major obstacles appeared. We agreed that because reading and writing are best taught in conjunction we would offer readings that could serve as models for the various ways writers could address technical subjects. We also wanted to create a course both students and faculty could enjoy. We believed it was particularly important for engineering students to emerge from the course with a positive attitude about communication skills and self-confidence about their ability to communicate effectively. We agreed that students should become comfortable with the writing process, that they should write about technical subjects with which they were familiar, and that they should gain experience with the forms of writing they would encounter as professionals. As part of this endeavor, we also agreed that we wanted students to learn how the values and assumptions about knowledge are transmitted in the forms of writing practiced in their discipline, along with how the purpose of a piece of writing influences its form and style, and how the audience with which they intend to communicate guides decision making at all stages of the writing process.

To provide students with experience communicating with an audience, we decided to create a community of readers and writers in the class who would routinely work collaboratively, read each other's writing, and offer feedback. We hoped in this way to avoid the problem of students writing exclusively for an instructor whose background and interests might be quite different from theirs. To promote independence and help them develop good judgment, we also wanted students to evaluate their success as writers based on the feedback received from their peers rather than the grade assigned by the teacher.

So much common ground is not easily established, but some common ground is mandatory for a collaborative venture of this

sort to succeed. I found that, although we used different words to express it, we had similar goals for our students. By raising the same questions I would raise in any writing situation, we were able to identify our priorities and to reach a common understanding about how issues of form, audience, purpose, and the relationship between reading and writing would be handled in the course. The specific answers to questions such as "What audiences should students address?" came later, after a period of self-discovery and learning about each other's ways of thinking. By this point, however, we had established some common goals that paved the way for the next stage.

Stage 2: Inquiry and Self-Study

In the most typical forms of WAC consultation among faculty, writing instructors try to initiate nonwriting faculty into the mysteries of teaching writing. In some cases, however, and definitely in this one, both participants educate each other. Although simply hearing about the field of engineering proved stimulating, a guided inquiry, centering on some carefully identified questions, elicited the information I needed to know to be able to make suggestions about the writing component of the course:

1. What are the forms of writing practiced in engineering?
2. What do those forms reveal about how engineers think?
3. How is new knowledge created?
4. What type of reasoning, what type of questions, what type of evidence do engineers respect?
5. What type of language do they use?

This process of inquiry produced interesting results, one of which was a theme for the course, the theme of building, later modified to the theme of problem solving, both metaphors for writing with which we thought engineers could readily identify. The questions themselves led to profitable discussions about the role of writing in the engineering profession and in academic engineering, which were enriched by readings in composition research related to teaching technical writing. They also helped to reveal the intellectual foundation in composition theory that I

used to structure the inquiry. By addressing these questions, we eliminated any temptation to rely on the surface features of writing to create a shared vocabulary or to identify common interests. My collaborator from engineering became engaged in the intricacies of discourse as I absorbed the premises of engineering. Once we were comfortable with each other's habits of mind, making joint decisions about the content of the course seemed almost inevitable.

Stage 3: Creating a Context

Learning about engineering discourse was a prerequisite for understanding how students might relate to that discourse. Sensitive to the problems Herrington cites in her description of two engineering classes, we wanted to create as appropriate and realistic a context for student writing as we could.

To help ourselves translate the results of our inquiry into a classroom context, we raised the following questions:

1. How do we want engineering students to think?
2. What is their relationship to knowledge in their field and outside it?
3. What forms and styles of writing are appropriate for them to practice?
4. What audiences should they address?
5. What purposes should they consider?
6. What texts can serve as models for them?

Recognizing that their status as students defined their relationship to their discourse community, we knew that we could not expect them to read and write like professional engineers. In fact, we were not sure such a goal was even desirable. We wanted them to learn to write like engineers, but we also wanted them to learn to write like their peers across the university. My collaborator in engineering represented the needs of his discourse community toward which we wanted to encourage students to move; and my function as the writing specialist became that of ensuring that engineering students, like any students I might teach, learn what I could teach them about the cognitive processes that inform writing (e.g., planning and goal setting), including how to write for diverse purposes and meet the needs of a variety of audiences. After some investigation, we determined that engineering students wrote

primarily lab reports and technical reports for their instructors until their senior design projects, which were written for professionals. Only as seniors did they have an opportunity to influence an audience actively or to make claims of their own. We wanted to correct this situation. At the same time, we wanted to recognize the significance of effective communication with audiences, like professors, with whom they were already familiar. Our concerns about critical thinking and writing led us to the same conclusions. As we answered the questions we had posed, the concrete features of our curriculum emerged. We decided that:

1. Students should learn to define, describe, inform, report, instruct, and propose. They should also learn to generate purposes of their own, to recognize that a variety of needs might be served through written communication, and to use writing along with other tools, particularly their refined visual thinking skills, to enhance learning.
2. Students should write lab reports/technical reports, instructions, proposals, and descriptions as well as become acquainted with more open-ended forms of writing, primarily the essay.
3. They should write for their current discourse community (other engineering students), their future discourse community (professional engineers), their peers across the university, and themselves.
4. They should learn to write the professional style of choice and also a more informal style appropriate for nonengineers as well as an informal academic style similar to that required of students in arts and sciences. They should learn about the conventions of their disciplines and about those that govern other disciplines or define other discourse communities to which they might at some point wish to gain access (such as the community of well-informed citizens).
5. They should become familiar with all stages of the writing process, with a special emphasis on planning, which seemed compatible with their usual approach to problem solving. They should have opportunities to practice those stages with feedback from all members of the classroom community, not just the instructor.
6. Many models exist with which they are not familiar. We sought historical, technical documents to help them achieve some perspective on their own discourse community, well-written technical documents, and a variety of writings about technical subjects that we felt they might reasonably aspire to write some day. We developed long lists of documentary works, novels, books of poetry, academic studies as well as examples of more conventional technical writing.

Stage 4: Implementation

Once the conceptual work was done, implementation proceeded smoothly. We decided on four major writing assignments: a lab/technical report, a set of instructions, a proposal, and an essay. In each case, students were to use their knowledge and perspective as engineers to inform their writing. We planned to require drafts of each of these four assignments. In between the longer assignments we created shorter, informal assignments, such as a problem definition, a problem solution, and a brief nontechnical report written for a lay audience.

We discussed in detail how to articulate these assignments and ensure that they met established engineering standards as well as standards of common discourse. The lab report proved the most problematic to pin down. We thought about creating a minilaboratory in class, using a paper clip experiment, but eventually my colleague in engineering proposed to contribute a computer-simulated design experiment, which the students could use as the subject of their technical reports. We defined the problem in a way that would allow students to recommend any one of three possible solutions, depending on how they used the data. As a result, we would be able to concentrate on the rhetoric of the report rather than the accuracy of the "solution."

Other collaborative assignments included readings of historical, technical documents (supplied by our engineer) to give students some idea of the development of technical communication. (The prose in older, technical documents tends to be much more literary than that used by engineers today.) By mutual agreement we used *Zen and the Art of Motorcycle Maintenance* as the foundation reading for the instructions assignment, and Alan Trachtenberg's *Brooklyn Bridge: Fact and Symbol*, an account of the building of the Brooklyn Bridge written by a professor of American studies that emphasizes the bridge's role as a cultural symbol.

Because team teaching was not an option in this first collaborative venture, we worked out procedures for cooperation and support. Our representative engineer would be available to consult with students and the instructors on the technical aspects of the work for the class and would visit periodically to reinforce the notion that the course, identified as a humanities elective, also had validity from the perspective of engineering.

Stage 5: Evaluation

We developed a questionnaire for students and spent the last class evaluating the course; both my colleague in engineering and I read sample papers in an effort to determine whether the goals we had established for the course were met. After the course had been taught a few times, we hired an outside evaluator to gain additional perspective and to enable us to provide the dean, who had financed our efforts, with some external evidence of accomplishment. A suggestion by the evaluator led us to restructure the course somewhat, but the basic format, guided by the same objectives, has persisted over quite a few years.

REPLICATING THE RESULTS

Our success in engineering aroused interest in another professional school and led us to clone the class for nursing students. The same process of collaboration guided our decisions about writing activities and readings, although this time we had a model, which made the process much simpler. As a result of our inquiry into nursing practice and discussion of what we might expect of nursing students, we chose to keep the theme of problem solving and most of the writing activities, varying the readings and the parameters of the assignments to make them more appropriate for and more interesting to nursing students. We added writing activities like case notes, a routine writing activity for nurses, and changed the instructions into a health care brochure. We also added readings such as Susan Sontag's *Illness as Metaphor*, to broaden the students' perspective on health and illness, and sample case referrals to provide examples of writing in professional practice. We substituted an account by a consumer of the health care system for the Trachtenberg book. In spite of these differences, the courses had more in common than not. Probably the most significant difference resulted from the additional funding that allowed us to team teach the nursing course.

TEAM TEACHING

Establishing Common Goals

Probably the most important issue in team teaching is compatibility, which enables the team to establish common goals. To work effectively together, both instructors must feel secure and each must respect and value the other's expertise. The process of designing the course and setting goals offers a reasonable test of compatibility. If possible, it's a good idea to withhold a decision about team teaching until the design process is near completion. The specific arrangement you work out will depend a great deal on what you learn about each other as you gain experience working together (see Figure 9.2). I have found faculty who volunteer for collaborative projects generally make comfortable teammates. This case was no exception.

Assigning Responsibilities and Defining Roles

Teams made up of content instructors and writing instructors are common in WAC programs, but these teams infrequently work together in the same classroom. Determining who takes responsibility for what in a subject matter-based writing course can raise difficult questions about the relationship between the content of a text and its expression.

In the case of the nursing class, our roles tended to define themselves naturally in relation to our respective areas of expertise. We agreed that we should both attend class as much as possible, but that one of us would act as primary instructor each time. It seemed sensible for me to teach those classes that focused on the writing process, critical reading, and peer review. My colleague in nursing took responsibility for discussing the readings, explaining formats, and interpreting the discourse conventions of nursing. Because our roles sometimes overlapped (learning how to read critically also involved discussing an article), we simply

1. Establishing common goals.
 - Reach consensus on the purposes and aims of the course.
 - Decide how reading and writing will interact.
 - Determine the type of classroom environment you want to create.
2. Assigning responsibilities.
 - Identify tasks and divide them as equitably as possible between you.
 - Ensure that someone is in charge of each class.
 - Determine how often each of you will attend class and who will read each assignment.
 - Decide who will teach what material.
3. Defining roles.
 - Clarify each instructor's status in the classroom.
 - Make sure students understand the relationship between you.
 - Identify roles with which each instructor feels comfortable.
 - Ensure that writing instructor is not reduced to grammarian or stylist.
 - Clarify relationship of each instructor to each assignment.
 - Use differences in perspective as material for the course.
4. Establishing evaluation procedures.
 - Establish procedures for evaluation jointly.
 - Separate evaluation procedures from judgments about quality of writing.
 - Ensure that both instructors have equal status as evaluators.

Figure 9.2 A Model for Team Teaching WAC Courses

took turns or contributed our individual perspectives as appropriate. The differences in how, for example, we read a text created valuable discussion about audience and how discourse conventions work to include targeted readers and exclude outsiders.

Establishing Evaluation Procedures

The same issues arose in relation to response to writing. Students always received feedback from both of us (as well as from each other). Depending on the identified audience for a paper, we

took turns playing the role of primary reader. Students learned that because we brought our individual interests to our reading they needed to decide whose concerns they should respond to first. Not infrequently, we attended to different aspects of their writing. For the health care brochure, for example, the nursing instructor focused on the accuracy and appropriateness of the information provided, whereas I was concerned primarily with my ability to learn from and be influenced by the material. Because of our different perspectives, evaluation could have posed a problem. Our earlier decision to refrain from grading the weekly assignments and use portfolio assessment to evaluate the students made the process much smoother. Because we had been careful to articulate our goals before we began, by the end of the semester, we found our views of student work and progress quite similar. The grades students received depended not on whether we thought a paper was good but on how well the student had accomplished the goals for the course, goals such as learning about the conventions of writing in nursing and learning to meet the needs of the intended audience.

THE RISKS OF COLLABORATION

The examples just described worked well in our particular context, but each situation will present a unique set of circumstances to which creative faculty will have to respond. Funding or release time for team teaching can be difficult to obtain, requiring instructors to define responsibilities carefully so that no one becomes overloaded. In some institutions scheduling could pose problems. Administrators do not always recognize the value of such projects, creating the possibility that considerable work can go unrecognized as well as unrewarded. Ideally, deans, relevant chairpeople, and faculty should all be approached and should all take an interest in the success of joint ventures of this kind.

The risks of collaboration accrue largely to the instructors involved, although the reputation of the WAC program can be at stake when the collaboration is highly visible, usually in a small college setting. To avoid reinforcing the distinction often made between content and style, collaborators will need to take time to

explain what they're doing to their colleagues. Good record keeping can provide material for public presentation of the experience as well as make it easier for this team or another team to revise the course.

When collaboration breaks down, generally one person must cede authority to the other or the effort falls apart. Should an impasse occur, you can often transform a collaborative relationship into a simpler consultation. The person with the least investment becomes the consultant, and planning can continue with the lines of authority redrawn. If the WAC program has established criteria for affiliation, the WAC administrator can determine whether or not the course maintains its identity as a WAC course.

ALTERNATIVE MODELS OF COLLABORATION

Team teaching allows us to explore new ground that cannot be approached any other way. What we learn about how discourse communities function enhances our ability to teach writing in any situation. Because of the amount of labor involved, however, team teaching arrangements rarely endure for long. When team teaching is not feasible, alternative models for collaboration can also produce valuable results.

Common alternatives include paired or adjunct courses, usually a writing or writing intensive class attached to an existing course, often one that meets a distributional or similar type of requirement (see Graham, this volume). UCLA's English 100W, a two-credit writing workshop paired with a course outside English, is one model of an adjunct course. UCLA also offers a four-credit version, English 110W. The University of Washington (also described by Graham), the University of California at Santa Barbara, the University of Southern California, and Illinois State University have other versions of collaborative courses.

Many WAC programs, including ours at the University of Pennsylvania, depend on collaboration among writing instructors and teaching assistants (TAs) in the disciplines who teach writing in their own departments. Although such arrangements tend to bypass faculty, the value of the collaboration is not significantly diminished. Programs that aim to influence TAs across the curriculum have the virtue of influencing the faculty of the future.

PROSPECTS FOR THE FUTURE

The department-based authority structure that characterizes most American colleges and universities today restricts many WAC activities to the margins of the curriculum. Formal collaboration and team teaching suffer from marginalization and have proven difficult to institutionalize. Yet much can be learned from experiments, and when viewed as a learning experience, collaborative ventures have much to offer WAC programs. Receptive faculty have a great deal to teach each other as well as their students about the practicalities of discourse communities and their day-to-day operation, including often critical information about the specific institution sponsoring the collaboration. This information can help the WAC program chart its course and maximize its effectiveness in its particular situation. Perhaps most important, the bonds formed through collaboration enrich WAC and bring us closer to our goal of creating a community of readers and writers that reaches across disciplines and helps break down the barriers that divide students and teachers from each other.

APPENDIX: COURSE DESCRIPTION FOR COMMUNICATIONS AND TECHNOLOGY PROBLEM SOLVING IN A HUMAN CONTEXT

This course is especially designed to help engineers become writers and public speakers. It is also designed to place the field of engineering in a human context, encouraging students to recognize that communication about any subject takes place between people. Consequently, effective communication requires much more than mastery of the subject or the mechanics of writing and speaking; it requires sensitivity to the needs of all people involved in the transaction, especially to the needs of the audience without whose active involvement no communication can take place.

Because this is an advanced course, we assume that students are familiar with grammar, punctuation, the rudiments of good style, and basic modes of organization. As a result, we will focus on larger issues of communication: writing for different purposes; controlling a variety of forms and styles; organizing complex material; expressing complicated ideas in simple terms; reaching

different audiences; using analogy, metaphor, and other means to facilitate understanding; finding a satisfactory speaking voice; and establishing oneself as writer.

Because problem solving is a mode of thinking with which engineers feel comfortable, we have chosen that mode of representing the various activities associated with effective communication. We will approach both reading and writing activities from this perspective, focusing on defining problems and working out strategies to solve them. Because creative problem solving demands creative thinking, we will emphasize the critical role played by imagination as well as the foundation provided by logic and solid reasoning skills.

We chose the required readings for this course with these goals in mind. Through them we offer students models of the variety of writing about technical subjects that exists and stimulation to think about technology, and especially communication about technology, in a broad, human context. We also believe that reading and writing are related activities. To acquire effective communication skills, you must become a critical reader as well as a competent writer.

We have planned this course as a seminar and expect significant class participation. Part of the time we will adopt a workshop format, listening to speeches or working as a class or in teams on each other's writing. All students will receive regular feedback on their writing and speaking.

Brief Topic Outline

1. Defining the problem: What constitutes good writing?
 - Problem-solving strategies in writing
 - Writing as decision making
 - Setting and reaching concrete goals
 - Language and the art of communication
 - Writer, reader, and text
 - Writing and speaking as social acts
2. Exploring ideas: How can you expand your thinking?
 - Thinking and writing
 - Creative thinking and creative writing
 - The role of ideas in writing

Brainstorming and other methods for expanding thinking

Methods for blocking and facilitating communication

3. Informing the public: How can you communicate technical information effectively to a nontechnical audience?

The right to know

Accuracy versus getting the general idea

Creating an informed reader

Analogy, metaphor, and other means of increasing understanding

4. Reporting to your peers: How do you communicate effectively with technical readers?

The language of scientific investigation

Objectivity and the voice of authority

Techniques for organizing information

The conventions of technical communication

5. Instructing consumers: How can you teach people what you know?

Identifying the audience

Asking the right questions

Creating knowledge and understanding

Demystifying technology

6. Proposing: How do you influence people to believe what you believe?

Influencing, arguing, and persuading

Getting your reader's attention

Creating a shared vision

7. Communicating in a human context: How can engineers become writers?

Overcoming specialization

Developing a personal voice

Risk-taking and effective communication

Technology and literature

Course Requirements

There will be four formal and two less-formal writing assignments for this class as well as two speaking assignments, one shorter (5 minutes) and one longer (15 minutes). The four formal papers will include a technical report, a set of instructions, a proposal, and an essay. Each of these will be addressed to a different audience and

written for a different purpose. Your classmates will be your audience for your oral presentations. You are free to choose your subjects, but the first one must be to inform and the second to persuade. I will provide detailed information about each assignment when the time comes.

The procedural requirements for this course are very specific. Please read them through carefully and raise any questions you might have now.

1. Because this is a small class and work missed cannot be made up, attendance is mandatory.
2. All reading and writing assignments must be completed on time for students to benefit from discussion of them.
3. Drafts of the four major writing assignments and informal writing and speaking activities, although not graded, are required and must be done on time.
4. At least three conferences, spaced more or less evenly throughout the semester, are required. These may take place during reserved Writing Lab hours or during office hours.
5. Conscientious responses to the writing and speaking of classmates will help you develop your own skills as writers and speakers and are required. Ability to work effectively as part of a team will also be evaluated.
6. In lieu of an exam, we will ask you to turn in a folder of your work at the end of the semester, accompanied by a letter explaining how you have satisfied the requirements for the course and what you have learned.

Because the word processor has become an essential tool for writers, we expect that you will do most of your writing on a computer. The Writing Lab on the fourth floor of Bennett Hall is available to students in this class.

The books for this course are available at the Penn Book Center. They include:

Conceptual Blockbusting by James Adams

Problem-Solving Strategies for Writing by Linda Flower

Revising Prose by Richard Lanham

Soul of a New Machine by Tracy Kidder

Double Helix by James Watson

Zen and the Art of Motorcycle Maintenance by Robert Pirsig

Brooklyn Bridge: Fact and Symbol by Alan Trachtenberg

You should also pick up a bulk pack of readings at the copy center.

NOTE

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