

COLLEGE OF TECHNOLOGY
INFORMATION & LOGISTICS TECHNOLOGY
GRAPHIC COMMUNICATIONS TECHNOLOGY

Course Syllabus — subject to change with notice
GRTC 3351: Graphic Production
Process Control I

Fall 2009

Professor:	Dr. Jerry Waite
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Course Web Site:	http://www.graphics.tech.uh.edu/courses/3351/
Course Location:	Lecture: Room 207-T2 (section #30218) Lab: Room 102A, 102B, & 102F T (section # 30220)
Course Day/Time:	Lecture: M 9:00–11:00 am Lab: W 9:00–12:00 pm
Office Hours:	MW: 8:00–8:30 am; T: 3:00–4:30 or by appointment
Open Lab:	When posted (separate handout).
Course Description:	Graphic communication production control emphasizing job engineering; techniques used to reproduce varying types of original images; tone capture and correction; proofing; platesetting; and final output.
Prerequisite:	None
Credit:	3 semester hours
Course Goals:	This course is designed to familiarize students with single-color tone reproduction and correction. It is not intended to produce proficient technicians. Rather, students completing the class will

have a broad overview of print production operations so that they may effectively supervise or estimate printing jobs, communicate technically with printing vendors or buyers, and/or design graphic products giving full consideration to the limitations inherent in pre-press operations.

Students completing the course will be familiar with:

1. the graphic production workflow including traditional, pure digital, and hybrid models; job engineering; and relevant hardware, software, and file formats.
2. methods of reproducing various types of copy, including type, linework, grayscale, process color, and duotones.
3. tone reproduction, including densitometry, halftoning, scanning, conversion of color images to grayscale, up- and down-sampling, the Nyquist theorem, choice of LPI, the relationship between LPI, DPI, and PPI, and the effect of incorrect LPI, DPI, or PPI choices.
4. tone correction, including the impact of tonal value increase (TVI), maximum and minimum effective dot sizes, tone range compression, substrate, and ink.
5. proofing, including the role and limitations of various proofing systems and the analysis of proofs.
6. platesetting, including the output of grayscale images and line work to plate.
7. image transfer systems, including an introduction to off-set lithographic presses, laser printers, and direct digital devices.
8. bindery systems, including cutting, chipping, and padding.

Required textbooks: Kipphan, H. *Handbook of Print Media*. Berlin: Springer-Verlag: 2001. ISBN 3-540-67326-1. (This is an expensive book, but it will also be used for GRTC 3350, 3352, and 4373. Suggestion: buy this book on-line...\$79+ [used] from Amazon.)

Botello, C. *Adobe InDesign CS4—Revealed*. Delmar Cengage Learning, 2010. ISBN 1-4354-8267-0 (hardback); 1-4354-4185-0 (paperback). (Suggestion: buy this book on-line...\$35+ [used] from Amazon.)

Required tools: Ball point pen(s), scientific calculator.

Optional tools: (you'll need to get these sooner or later!) 20X magnifier (loupe), stainless steel ruler graduated in inches and picas.

Required disk: Blank CD-R disks for backing up and archiving your projects.

PDF files: Several handouts for the course will only be supplied in Adobe Acrobat Portable Document Format. These files can be read on any Windows, Mac, or Unix computer providing you have the correct Acrobat Reader Software. Acrobat Reader is available free of charge from the Adobe Website (www.adobe.com). You can read the files on-screen or print the files on your own printer. However, you may not print them using the Image Tech Lab's machine (we don't have the budget for all the paper and toner it would take). The PDF files for this course can be copied from the instructional materials folder on the lab's computers to your Zip disk or you may access the instructional materials server from any computer using your web browser (<http://www.graphics.tech.uh.edu>).

Why 5 hours per week? GRTC 3351 is a lecture/lab class and is governed by University policy as well as policies of the accrediting bodies. First, students should understand that each hour of class credit requires three hours per week: one hour in lecture and two hours of personal study/homework. Thus, a three-hour course requires nine hours per week: three in class and six on your own. However, lab earns in-class credit at one-third the rate of lecture. Thus, it takes three hours of lab to earn one hour of lecture credit. GRTC 3351 requires you to spend two hours in lecture. For those two hours, you receive two hours of credit. The three hours of lab, counted together, are worth one hour of credit. Thus, you spend five hours per week in a three-hour lecture/lab class. Remember that you still "owe" Dr. Waite a total of nine hours for the three-hour course. Nine minus five equals four. Thus, you should spend four hours per week on your own reading, studying, and working on homework and on-line quizzes. That's the expectation of this course.

Important Information: As a student of the University of Houston, information available at http://www.uh.edu/provost/stu/stu_syllabsuppl.html will be critical to you in insuring that your academic pursuits meet with success and that you encounter the fewest financial and academic difficulties possible. Please take a few moments to review each of the areas, and become familiar with the resources detailed on the website with regard to: The UH Academic Honesty Policy; the UH Academic Calendar; Students with Disabilities; Religious Holy Day FAQs; and Other Information.

Week	Read Kipphan/ website articles	Read and work through Botello	Lecture Topic	Lab Topic	Lab Project	Lecture Blackboard Quiz	Botello Blackboard Quiz
1 8/24	1.1 (pp 4–13)	Chapter 1	Introduction and orientation	Intro to InDesign InDesign Basics Part 1	Orientation, InDesign Demo + Notebooks Export to PDF; Output to laser, cut, pad	—	
2 8/31	1.2–1.3 (pp 14–67)	Chapter 2	Production of Print Media Lecture on Wed in Lab	InDesign Basics Part 2	InDesign Demo + Business Card Export to PDF; Output to laser, cut	Quiz 1	Chapter 1
3 9/7- 14*	3.1 (452–463) & Diff. Between Digital & Trad Prepress	Chapter 3	Prepress overview (traditional, pure digital, and hybrid)	Typography in InDesign Part 1	InDesign Demo + Brochure Export to PDF; Output to laser, cut, bi-fold	Quiz 2	Chapter 2
4 9/21	3.2.1 (pp503–508) & Workflow: Electronic	Chapter 4	Digital Prepress	Typography in InDesign Part 2	InDesign Demo + VDP Brochure Export to PDF; Output to laser, cut, trifold	Quiz 3	Chapter 3
5 9/28	GRACoL Student Workbook	Chapter 4	Job Engineering	Working with Images in InDesign	InDesign Demo + Theatre Program Export to PDF; Output to laser, cut	Quiz 4	
6 10/5	Calculations for Enlarg & Reductions Types of Photo Repro: Typefaces and Sizes	Chapter 5	Types of Copy	Types of copy	InDesign project with h/t, text, process color, linework, duotone	Quiz 5	Chapter 4
7 10/12	Densitometry Densitometry Study Sheet	Chapter 6	Densitometry	Intro to Photoshop	Measurement of grayscale values with Info Palette	Quiz 6	Chapter 5
8 10/19	NOTE: Your midterm will be on-line AND you'll have class, too.	Chapter 7	Half-toning	Half-tone terms	Half-tone dot size, shape, angle project Mandatory portfolio review	Midterm Exam	—
9 10/19	pp 476–482; 508–514 & Demystifying the Half-tone Process	Chapter 8	LPI/DPI/PPI Lecture on Wed in Lab	LPI/DPI/PPI Lab on Monday in Lab	Grayscale/linework image template Inspect file and output plate	Quiz 7	Chapter 6
10 10/26	Setting Half-tone LPI: Taming the Beasts of Resolution; Viewing Distance...Screen Freq.	Chapter 9	Capturing Digital Images— Scanning and Digital Cameras	Scanning	Capture scanned image, convert to gray- scale, output from Photoshop to laser.	Quiz 8	Chapter 7
11 11/2	Photography for Reproduction & Printing Industry Process Control Guidelines	Chapter 10	Tone Targeting	Tone targeting	Tone Targeting (TV), maximum and mini- mum dot sizes)	Quiz 9	Chapter 8
12 11/9	Altering Grayscale Images to Compensate for Press Fingerprints	Chapter 11	Black & White Tone Correction	Tone correction	Complete Tone Correction Project (curves to improve image)	Quiz 10	Chapter 9
13 11/16	Conversion of Color Images to Grayscale; Application of Tone Correction Curves to Grayscale Images	Chapter 12	Proofing & Plates	Calibration and Proofing	Proof color/grayscale image on laser and inkjet printer. Compare to monitor	Quiz 11	Chapter 10
14 11/23	3.2.11 (pp 562–566) & Film Carriers, Proofs, and Plates; Callouts of a Flat	Chapter 12	Direct-to...technologies	Open Lab	Portfolios due: Print all projects to web PDFs for student's on-line portfolio...	Quiz 12	Chapter 11
15 11/30	4.1 (pp 581–592)	—	Final Exam (8 am)	—	—	Quiz 13	Chapter 12
12/15	—	—	Final Exam (8 am)	—	—	—	—

* 9/7 is a holiday; Dr. Waite will be out of town on 9/14. So you will have week three's lecture on Wednesday the 9th and week three's lab on Wednesday the 16th.

Lecture assignments:

On-Line Quizzes:

There will be weekly quizzes on Blackboard. These quizzes are open notes/open book and may be taken at your leisure during the week each quiz is available. They will form the basis of the midterm and final, although questions not appearing in the quizzes may be used in the exams.

Written Exams:

There will be two exams given—a midterm and a final. An on-line midterm will cover all lecture material covered up to the exam. A face-to-face final will cover all material covered after the midterm. These exams will NOT be open book or notes. In general, plan to answer those on-line quiz questions that stumped a large percentage of the class.

Memo

Assume that you are the prepress supervisor and Dr. Waite is the General Manager of a full-service printing company. Read articles in print-related hard-copy or on-line magazines/journals (check graphics.tech.uh.edu for links). Keep reading until you find an idea or product that you think would good for our company to buy or implement. Then, write a one-page (maximum) memo to Dr. Waite (use traditional memo format) in the form of a REQUEST FOR AUTHORIZATION. Explain the idea you'd like to implement or item you'd like to buy. Tell Dr. Waite the benefits you foresee as a result of such a purchase or implementation. Cite costs as well as benefits. Request approval to proceed. Submit the Memo on the day of your midterm.

If your paper has more than three spelling or grammatical errors, you will earn no higher than a **D** grade. If the idea is explained well and the English grammar and spelling are OK, you will earn a **C**. To earn an **A**, you must also provide realistic costs and benefits for proceeding with your idea. If either the costs or benefits are not provided, you will earn a **B**. If neither costs nor benefits are provided, you will earn a **C**.

Extra credit:

Overall course extra credit may be earned through participation in the University of Houston chapter of the International Graphic Arts Education Association (IGAEAUH). Students who *join* IGAEAUH *and* attend a minimum of three association meetings will earn three points extra credit on their final grades. IGAEAUH *officers* will receive five points of extra credit on their final grades.

Should the IGAEAUH not meet during the semester, Dr. Waite will assign alternative course extra credit assignments.

Exam extra credit: Students may earn up to 3% extra credit on each **exam** by demonstrating Cougar Pride by wearing an article of Cougar clothing. *Note:* Wearing jerseys or other clothing advertising other universities is **EXTREMELY** discouraged.

Attendance: Attendance at all class sessions is expected. There will be a grade penalty for **all** absences. In other words, **there is no such thing as an excused absence. Be on time for lectures and labs!** Tardies of more than 10 minutes count as 1/2 an absence. You may only accumulate three total absences—lecture or lab, full-days or tardies. You may be dropped after the fourth absence. Look at it this way: there is no way to make up any lecture or lab that you miss. Notes from friends or textbook readings are no substitute for actually being present in class when Dr. Waite explains a concept or process. Here's another thought: you and the taxpayers of the State of Texas are paying Dr. Waite to be present in the GRTC 3351 class. **Why pay money for something you don't take?** Another notion: class minutes are like cell-phone minutes: if you don't use them, you lose them.

Grading:	Item	Percent of grade
	Attendance	10%
	Exams (2 @ 20% each)	40%
	Weekly quizzes	20%
	Paper	5%
	Laboratory activities	25%

Percent/letter grades:	A	94-100	A-	90-93
	B+	87-89	B	84-86
	B	84-86	B-	80-83
	C+	77-79	C	74-76
	C	74-76	C-	70-73
	D+	67-69	D	64-66
	D	64-66	D-	60-63

Lab assignments: Lab assignments are to be completed as soon as possible. In addition, they are to be placed into a hard-copy portfolio (as appropriate) to be submitted on the lab day during midterm week (for review purposes) and on the day of the final exam (for grading). Include all the projects listed on the course schedule (page 4) unless otherwise instructed by your instructor or lab instructor. Hard-copy portfolios may be as simple or elaborate as desired. However, students should remember that they only get one opportunity to make a good first impression.

All lab assignments are also to be converted to web-optimized PDF format for placement on the student's on-line portfolio. Instructions will be given in class.

Lab assignments are all graded according to the following rubric:

Unsubmitted projects will receive an **F** grade.

If a project is submitted but has **any** technical flaw that will prevent it from working, it will receive a **D** grade. For example, if the project is submitted at the wrong size, it will receive a D.

C is the standard project grade. It means that the content of the project is technically accurate.

A **B** project is not only technically accurate, but also attractive. In addition to "working," the project shows that the student has applied the basic principles of graphic design (use of type, balance, and so forth).

A is assigned to projects in which the student has obviously gone above and beyond the call of duty. Captions and attractive presentation are examples of "beyond the call of duty."

There is no need for a student to earn any less than a B on any project. Don't be meek! Show your work to Dr. Waite or to your lab instructor in advance for advice!

Projects are to be kept and submitted in a 13 X 19" portfolio (samples will be shown in class). This oversized format is necessary to support the printing plates you will make in class as well as the press sheets you will print.

Portfolios are due for preliminary review on the day of the midterm and again on the day of the final. *Any grade earned on a project during the midterm preliminary review can be upgraded by the student by repairing defects or improving the appearance of the work.* Simply resubmit your reworked projects to Dr. Waite or your lab instructor. Grades for projects submitted on the day of the final examination are final.

Grade expectations: Dr. Waite expects students in the course to be capable and motivated professionals. No such student should be content with a grade less than "B." Please provide the attention, motivation and effort necessary to reach this grade expectation.

Test/exam policy: Blackboard quizzes: you may use any materials you'd like during these quizzes and you may take them at you leisure during the available period. Exams **are closed notes and books** and will be allotted the entire class session. Missed quizzes and exams cannot be "made-up." If a student is aware that s/he cannot be present for a test, arrangements must be made with

Dr. Waite to take the test early. No student may begin taking a test or exam after the first person has completed it.

Due date policy: Late work is “yesterday’s news.” In keeping with this idea, assignments must be turned in as scheduled. Please see the class schedule for specific due dates. Late work will receive a grade penalty of 10% per class session. If you cannot attend class on a day that an assignment is due, you must make arrangements to get the work to Dr. Waite no later than the next business day.

Adds/drops: Please refer to the University’s *Undergraduate Catalog* and the *Schedule of Classes* for the appropriate add/drop dates and procedures. Those procedures must be followed to the letter.

Incompletes: An “incomplete” grade will only be issued if the student is maintaining an acceptable level of achievement and cannot, due to some factor **beyond the control of the student**, complete one or more major assignment. If a student wishes an “incomplete” grade, s/he must explain the situation to Dr. Waite in advance and make specific arrangements to make up missing work no later than one year after the “incomplete” is issued.

Classroom cleanliness: Janitorial services are rarely provided in rooms 102A-T, 102B-T and 102F-T. For this reason, and to keep the equipment clean, **no food or drink is allowed in the room for any reason at any time. Please clean up after yourself!**

FAX: The college will not accept assignments that are faxed to the office. There is no use trying.

Americans with Disabilities Act: Any student who may be in need of additional help under the ADA guidelines should contact Dr. Waite ASAP.