

Technology 496 - Industrial Project Management

Prof: Dr. Scarborough **Grad. Asst:** _____ **Ph:** 753-0210(Dr. Scarborough)/1570(GA) **Off.Hrs:** T12-3 **Email:** _____

I. Catalog Course Description: Industrial Project Management (3). Basic concepts, principles, and skills of project management. Designed to cover a variety of types of project management. Emphasis on computer tools and project management techniques. Analysis of case studies. Culminating project required.

II. Course Purpose & Objectives: To prepare project leaders and team members to formally initiate, execute and terminate industrial projects effectively. To integrate and apply knowledge, skills, and abilities acquired or extended during students' college careers (general education and major) and work experience to research, design, build and finalize a technical project within a team and formal project environment.

III. Required Text: Project Management. Cleland & Ireland, 2006 or latest edition. **Required: Date book/Calendar for scheduling and notes; Handout packet.**

IV. Pre-requisites: Tech 265-Mfg. Processes; Tech 302- Graphic Pres.& Comm.; Tech 395-Ind. Data Processing; **Senior Status**

Expected Computer Usage: CAD, MS Office, MS Project, CNC, industrial equipment, or other, depending upon semester/ team project. **Required Laboratory Team Project:** Changes each semester; each team will engage in a complex technical project with specific technical standards to achieve, e.g. Go-kart, 3-car passenger train, hovercraft, paddle wheel boat, personal transport vehicle etc. Research, design, assembly of electrical/mechanical systems, testing, modifications/finalization with formal documentation, formal team products and team requirements. See requirements section, handouts, and rubrics.

V. Course Requirements:

Individual Course Requirements:	Points:	Team Course Requirements:	Points:	Grading:
Text Project (broken into sections/due dates)	7	Team Operations Manual	5	Benchmark
Project Research	5	Community Leadership Service	3	A=98-100
Project Design	5	Project & Articles		
Literature/Internet Research Tables A & B (Projs/Tms/Lead/Int'l/MCTms/MCLd)	7	Team Project Plan	5	A=93-97
Career Project	5	Team Project & Assessment (Final Exam)	7	B=92-85 C= 84-77
Individual Case Study	5	*Peer Assessment Process & Team Success Assessment	5	D=76-70 F=69-below
Paper	7	*Team Member Participation (Ind. Pts. 3/5)		
Midterm: Individual Project Plan	7	Team Presentation & Success	5	
Software Workshop/Test	5	(Final Exam)		
*Team Participation Awarded by Team	3	Team Project Portfolio & Website	5	
Project Feedback Logs	1			
Individual Portfolio & Assessment Process (Final Exam)	3	Final Exam II: TBD (if needed to confirm competencies)		
Professor's Overall Assessment		Total Team Points Possible	35	
Ind.Presentation within Team Presentation.	5			
Total Individual Points Possible	65			
Professor's Privilege	See Note #2			

VI. Student Learning Outcomes

Student Learning Outcomes	Embedded NIU General Ed Goals	Embedded NAIT/ABET Learning Standards	Assessments/Rubrics
<p>1A/B. Identify and describe major problems, issues, concerns, and solutions (PICS) that relate to (a) projects, (b) project management, (c) project teams, and (d) project leaders, also for (e) Int'l projects and (f) multicultural (MC) teams.</p> <p>2. Identify and describe best practices for managing projects and leading teams; include Int'l teams and MC teams.</p>	<p>a.i. communicate clearly in English, demonstrating ability to comprehend, analyze and interrogate critically;</p> <p>ii. communicate in a manner that unites theory, criticism, practice in speaking & listening;</p> <p>a.iv. Aware of and able to use various resources, including modern technology</p>	<p>g. demonstrate an ability to communicate effectively in writing;</p> <p>h. demonstrate an ability to communicate effectively orally;</p> <p>m. demonstrate an ability to ...utilize computer applications effectively;</p> <p>k. demonstrates a respect for diversity and knowledge of contemporary professional, societal and global issues.</p>	<p>Text Project or Text Test Research- Literature/Internet; Case study; Group analysis process Formal paper; group analysis 1-5 minute learning papers; Individual portfolios; Team Project portfolio/website; Individual/team presentations Team participation & Peer Assessment Team Operating Manual Individual and Team Project Plan Community leadership project</p>
<p>3a. Demonstrate effective project management of a technical project using appropriate PM techniques, tools, and processes:</p> <p>a. planning, b. initiation, c. execution, d. termination e. evaluation f. problem solving g. leadership h. financial management i. procurement management j. scheduling k. MACE process and procedures</p> <p>3b. Design, develop, and deliver:</p> <p>e. executive team presentation f. team portfolio g. team website</p> <p>4. To integrate mathematics, the sciences, English, management, technical, technological systems knowledge and skills to accomplish individual and team project objectives:</p> <p>(a) Design, (b) Build a vehicle to technical specification that will operate; (c) Solve technical problems encountered; (d) test and evaluate the vehicle for meeting technical specifications and standards</p>	<p>a. cultivate habits of writing, speaking, quantitative reasoning for continued learning:</p> <p>a.i. communicate clearly in English, demonstrating ability to comprehend, analyze and interrogate critically;</p> <p>ii. communicate in a manner that unites theory, criticism, practice in speaking & listening;</p> <p>a.iii. perform basic computations, display facility with use of quantitative reasoning in forming concepts for analysis and in problem solving, and interpret mathematical models and statistical info</p> <p>a.iv. Aware of and able to use various resources, including modern technology</p> <p>b. develop an ability to use modes of inquiry across a variety of disciplines in the physical sciences, mathematics:</p> <p>b.iii. demonstrate ability to use scientific methods, theories to science phenomena;</p> <p>c. develops understanding of discipline interrelatedness, applying that knowledge to an understanding of important problems & issues.</p>	<p>a. demonstrate appropriate mastery of knowledge, techniques, skills, and modern tools of the discipline;</p> <p>b. demonstrate ability to apply current knowledge and adept to emerging applications of math, science, engineering and technology;</p> <p>d. demonstrate ability to apply creativity in the design of systems, components or processes appropriate to program objectives;</p> <p>f. demonstrate ability to identify, analyze, and solve technical problems;</p> <p>g-h. demonstrate ability to communicate effectively in writing and orally;</p> <p>l. demonstrate commitment to quality, timeliness, and continuous improvement;</p> <p>m. demonstrate ability to ...utilize computer applications effectively;</p> <p>o. demonstrate an ability to manage projects, industrial systems, lead personnel effect.</p> <p>p. demonstrate an ability to manage and manipulate industrial systems;</p> <p>q. demonstrate knowledge, strategies and/or techniques of how to lead personnel and teams effectively</p>	<p>Individual & Team project research Individual & Team project design</p> <p>Written individual & team plan(s);</p> <p>Technical project prototype product produced to technical standards and specifications using technical processes</p> <p>Project testing & evaluation against established standards and specifications using formal evaluation tools and procedures</p> <p>MS Project 2003 test and application in project planning, execution, termination, assessment and evaluation MACE-Project assessment (Plan compliance & adjustments) Individual & Team Logs</p> <p>Individual and Team Portfolio(s); website(s); Individual and team presentations; Industrial panel evaluation</p> <p>Project termination with lessons learned Project evaluation by industrial panel</p>
<p>5. Develop the team for project and team work by:</p> <p>a. developing a team operations manual b. developing peer and team assessment system c. creating team organization & process d. developing team project plan</p> <p>6. Demonstrate effective team performance (hopefully MC team) while:</p> <p>a. engaged in a community service project; plan, execute, & report relevance. b. engaged in the initiation, planning, execution and termination of a technical project c. engaged in course Team & Project activities</p>	<p>d. develops social responsibility & preparation for citizenship through service and an appreciation of cultural diversity.</p>	<p>e. demonstrate ability to function effectively on teams;</p> <p>j. demonstrate ability to understand professional, ethical, social responsibilities;</p> <p>k. demonstrate respect for diversity, knowledge of contemporary professional, societal and global issues;</p>	<p>Team Operations Manual; Team Plan Team presentation; portfolios; website; Team peer, team, & conflict assessments/logs; Industrial panel evaluation; Formal paper ;5 minute learning papers Team success rubric</p>

VII. Topics, Class Schedule & Due Dates

Week/Date	Topics	Date	Topics/Lab Act.	Assignment Due Dates
1 Course Intro	9:30 Writing Center Requirements (Jacky) 9: 45Career Project Intro and Requirements (Norwood) 10:00 Team Selection/Scheduling 10:30 Course Intro 11:30 Legacy Group Use of Planner & The Nature of Multitasking Project Research Assignment Schedule Writing Center NOW!!!!	Teaming Team Assess.	Team Skills Bank Finalize Teams & Schedules Plan Team Service Project Project Research Review	Due 1/20 Writing Center Appointments Project Research Bring Planner Community Service Art. & Plan Due 1/20 4:00pm
2 Text 1-4, 19	TEXT Highlights	Teaming *210 sched.	Project Design Lab	Writing Center Appts. Due 1/25 Text Proj. 1-4, 19, 20 due 1/25 Industry Case ID due 1/25 Final Project Research due 1/27
3 Teaming Text 18 & HB	Project Teams: hidden agendas, teamwork, effective teams & members, member roles & responsibilities – Peer Assessment (Team Packet Required)	Research Design *210 sched.	Project Design Lab	Text Project 18, 21 due 2/1 Project Design due 2/4 Friday
4 Teaming Text 20	Project Teams: conflict resolution, decision-making, teams in trouble, empowerment, trust, recognition (Team Packet Required)	Teaming	Team Manual Lab	Lit. Research Table due 2/8 Career Project due 2/11
5 Project Planning Text 11,6	Project Planning - Section I Rubric & TEXT Vision, Mission, Intro, Purpose, Scope, Objectives, Deliverables, Charter, Org. Charts, Stakeholder Analysis, Com Interface, Project Review, Change Plan [Paper due]	Teaming	Research, Case, Paper, Career Validation Activity – Group Process Team Manual Lab	Industry Case due 2/15 Text Proj. 6, 8, 11, 16 due 2/15 Team Manual due 2/14
6 Project Planning Text 13,	Project Planning - Section II Rubric & TEXT Business & Proj. Success Factors, SWOT Analysis, Project Constraints, Risk Analysis, Contingency Plans & Trade Offs, Statement of Work, Goals, Work Break-down Structure	Project Planning *210 sched.	Project Planning – Section II Lab	Community Leadership Project and Articles due 2/25 Friday Paper due 2/21
7 Project Planning	Section II Rubric & TEXT (Continued) Life Cycle, Productivity Plan, Quality Standards & Metrics, Project Monitoring, Assessment, Control and Evaluation, Linear Charts, Resource Plan/Budget MS Project - PM Software	Software Workshop *210 sched.	MS Project-PM Software	Text Proj. 5,9, 12, 13, 14, 15 due 3/1
8 Project Planning	Section III Rubric & TEXT Environmental/Safety Plan, Security Plan, Documentation/Configuration Mgmt. Plan, Project Divestment & Termination Plan	Software Workshop *210 sched.	MS Project-PM software	Individual Plans due 3/11 Software Test due by 3/9
	BREAK	3/17	BREAK	
9	Project Development & Teamwork	3/24	Project Development & Teamwork [Logs]	Individual Portfolios due 3/22 Team Plans due 3/25
10	Project Development & Teamwork	3/31	Project Development & Teamwork [Logs]	Individual Portfolios due
11	Project Development & Teamwork	4/7	Project Development & Teamwork [Logs]	
12	Project Development & Teamwork	4/14	Project Development & Teamwork [Logs]	
13	Project Development & Teamwork	4/21	Project Development & Teamwork [Logs]	
14	Project Development & Teamwork	4/28	Project Testing and Initial Assessment	Proj. Test./Assess due 4/28-29
15	[Final Project Assessment & Grade] [Peer Assessments Executed & Due] [Team Member Participation Determined]	5/5	[Team Presentations 8:30am-12:30] [Team Portfolio/Website/Success due]	Team Project Assessment due 5/3 Team Pres./Port./Web. Due 5/5
16 May _____ Finals Week		5/12	Final Exam: TBD If needed to confirm competencies	

VIII. Course Requirements Explanation -- Individual Requirements:

Technical Research and Design

Project Research: Research project assigned. More information about this research will be provided in class. However, it will entail an Internet/Literature search, possibly interviewing technical experts, local or suburban vendors or manufacturers, or other professors, and/or researching specific technicalities. It will also include research of all properties of materials, mathematics, and scientific principles, theories involved in the technical aspects of the project. Use research information to design the project. *See Rubric. Individual and Group Process.*

Project Design: Students will design and prepare visuals and working drawings, schematics, etc. for the project using prior design and computer aided drafting or mechanical drawing knowledge and skills. *See Rubric. Individual and group process.*

Real World Validation – Culminating Paper

Literature/Internet Research A: Search the literature (Internet) on project management, project teams, and project leadership; identify 45 quality sources, 15 each about (a) industrial projects, (b) project teams, and (c) project leadership. Develop a literature/source review **Table** summarizing what the literature/sources revealed. Topics of focus should be the (1.) problems, issues, concerns, (PICs) difficulties that arise on projects or for the teams and leaders and (2.) success strategies that have worked for projects, project teams or leaders in resolving the problems/issues. There must be 45 sources; these must be from major recognized journals or books on the topics. You may, however, include up to five non-traditional sources, e.g. Internet sources from industrial groups, project teams, etc. Sources must show depth in content; short “briefs” are not acceptable. **Copy** all sources if not books on **diskette** or **CD** rather than hardcopies. *See Table Format and Rubric. Group Process-Be prepared to discuss; thus, if no hardcopies available for reference, you need to know the material well. **Create tables that are categorized, numbered and reveal in-depth information with solutions. May use for your paper.*

Literature A + B = Total Table (See Rubric)

Literature/Internet Research B: Also, research (a) international projects, (b) multicultural teams, and (c) international project leadership with a multicultural team; identify 15 (5 for each topic) Internet and/or literature sources that discuss (1.) problems, issues and (2.) best practices, benefits, successes of multicultural/international projects, teams, and project or team leadership. Summarize the information learned by organizing it into a **Table** identifying the source author, title, main points on problems, issues, and benefits and your comments. *See Rubric. Individual/Group Process-Be prepared to discuss; thus, your if no hardcopies available for your reference, you need to know the material well. **Create tables that are categorized, numbered and reveal in-depth information with solutions. May use for paper.*

Industrial Case Study: Identify a company that will allow you to visit and interview an industrial project team. Interview a **project leader or manager** and **at least three project team members** or *2 project leaders and 2 project team members*. (1.) Ask them to identify all problems, issues, concerns, (PICs) or difficulties encountered on the project, about the project, team, and project leadership. Have them explain in detail; (2.) then, also ask them what strategies are successful for projects, teams, and project leaders. Create a table of questions and responses and present what was learned as “real-time” research. *See Rubric and Format. Individual and Group Process. Incorporate the results into your paper.*

Formal Paper: Meet with WC tutor to organize paper. Develop a paper about projects, teams and project leadership; develop the issues and solutions in greater depth; draw conclusions and describe effective project management, effective project teams, and effective project leadership. What strategies, techniques, processes should be used to have a more successful project, team, or leader/leadership process? End with very specific recommendations to guide your project team on each of the 3 primary topics. Then include a section on how international projects and multi-cultural teams differ, what additional concerns, problems, and issues occur when operating internationally with diverse cultures. Make recommendations for successful international projects and on how to be a more effective leader of multicultural teams. Sixty (60) sources required (45 + 15). These 60 sources **may or may not** be the same ones that you identified for the literature review table. ****Incorporate the results of industrial case study** into your paper as well. Use the **APA** writing style manual. Identify all sources **in the paper’s text** and in References Cited using the APA style format. Writing skills are seriously graded on this product. *See Writing Rubric, Paper Outline & Rubric. Individual and Group Process.*

Project Planning - Midterm Exam

MS Project Software Workshops/Test: Participate in the software workshop(s). Complete **Test**. MS Project documents required in PLANS.
Midterm - Individual Project Plan: Use the outline & rubric provided as a guide, develop a detailed project plan. The plan will not be accepted unless every category is complete. Reference the text, other sources in the library or through the Internet, or sources listed on the course syllabus. All members of a team must have their plan in and graded before they will be approved to work on the “team” plan. This is another product where writing will be graded seriously. This is technical writing which is different than the narrative or prose approach used in the above assignments. *See Plan Outline/Rubric. I/GP*

Employment

Career Project: a) Interview Mr. Norwood, the CEET Career Planning & Placement specialist, on the assigned topic; engage in group process. Document findings as assigned (TBD); b) Research jobs/positions/career in project management; Bring in copies of 10 position announcements which review expectations, required knowledge, skills, background for those seeking to become project managers, team leaders, or project team members; c) Design and develop a resume to use to seek such a position, but also make it applicable for other industrial technology, management, engineering, etc. positions. Have it reviewed and approved by Mr. Norwood for inclusion into personal 496 portfolio. Mr. Norwood will grade this project.

Individual Portfolio: This portfolio has a somewhat different focus. Although it may contain everything in the team portfolio for job-seeking purposes, it must also include all individual work, including Writing Center Reviews and multiple iterations of particular products. Use Course Requirements list on Course Syllabus (above) and Team Portfolio Rubric to determine what is to be included. You will participate in assessment activities throughout the semester, including analysis and reflections about what your strengths and weaknesses are and what you **can do to improve or continue well**. The portfolio must be professionally presented, e.g. typed tabs, etc. **Final Reflections at end of semester/questions to answer.**

Team Requirements:

Community Service Project: Each team has to research, determine, plan and execute an 8 hour service project. Research one article per team member on the benefits of community service and leadership by local industrial personnel. Generate a brief team plan of what, who, when and where. It should include a goal, operational objectives, expected outcomes and benefit to group served. Prepare an **informal presentation** about what you learned, how you felt and your potential future in community service. *See Rubric.*

Individual/ Group Process

Team Process

Team Manual: The team manual includes all team operational policies and procedures, the team problem-solving process, communication strategy and procedures, decision-making process, authority linear charts, team roles and responsibilities, etc. The team is to provide evidence that it operated using the team manual as its structure, process and guiding document. *See Outline/Rubric. Group Process.*

Included in the Team Manual are the following critical components, plus others: See Team Manual Outline/Rubric. Group Process.

Team Skills Bank: Each team will prepare a team skills bank that identifies all individual talent, skills, knowledge that each team member brings to the project. This bank will be used to organize the team, project, work packages and deliverables. **Group Process.**

Team/Project Charter, Logo, Company & Project Organizational Chart: Each team will create an official charter, identify a team logo, and design an organizational chart for their company and their team/project. **Group Process.**

Team Assessment Inventory(ies): Each team will design and develop a peer and team status inventory to use to monitor team process; they will also adapt a conflict management inventory to use to monitor the team conflict resolution process. The information gained from using these inventories will be used to build and strengthen the team and to identify and solve team issues or problems. Growth and development should be an outcome of using these instruments. Each team must produce a report of results from using these instruments and assessment process twice during the project period.

Team Project Plan: Each team must write/develop a team plan; however, the team may not begin on the team plan until all individual plans are graded and returned. The plan outline is the same as the individual plan. Each team must produce a plan for the technical project assigned and use the plan as a compliance document to monitor, assess, control and evaluate the project. *See Outline/Rubric. Group Proc.*

Logs: Periodically you will be asked to complete a log about how you feel the team and project are progressing. Completed and turn in.

Individual Component of Team Presentation: Speaking, non-verbal communication, presentation skills, content, grammar/wording visuals, style, organization, use of technology, humor, etc. graded individually during team presentation. Remember that each team member must demonstrate speaking and presentation skills. Teams could acquire the full point value, but individuals will be assessed on their individual performance as well. Professional dress required. *See Presentation Outline/Rubric.*

Team Participation Points Awarded by Team: Each team member will be allocated points for team participation. Teams will award points to team members for quality of work and participation. Points will serve to "grade" participation. Dr. Scarborough validates that the distribution is appropriate for participation observed. Full participation is expected of each team member. Tardiness or absences from team meetings, class, labs are not acceptable behaviors. You will be asked to explain to the class openly why you are late or absent and points will be deducted. *See Rubric. Individual/ Group Process*

Final Exam

Team Project: Each team will be responsible for designing and developing a technical project. You will generate technical standards to achieve and the metrics to use to measure the standards achievement level. The project must “function” or “work” to be accepted for a grade. It must meet the standards at the level described in the team plan using the metrics predetermined. Every team member must have major project role and responsibilities. The team must complete the project by the deadline on the syllabus. The project is the “vehicle” providing evidence of high performance teaming and project management as well as the knowledge, skills, and abilities from academic career and work experience.

Team derived/Professor approved- predetermined -Standards/metrics = grading Rubric. Group Process.

Team Portfolio: The portfolio is the culminating documentation of all project and team work. It must include information on every topic listed in the outline/rubric. It should include pictures, mechanical drawings, etc. and be professionally produced in hard-copy form. An operator’s and maintenance manual must be developed and included for the technical project (product). **See Rubric. Group Process.**

Team Website: Each team is to design and produce a team web-site which will serve as an electronic portfolio. This website/ portfolio must be presented during the team presentation. The outline is the same as the hard-copy portfolio. A CD must be included in the hard copy of the team portfolio. **See Rubric. Group Process.**

Final Team Presentation: Each team is to professionally present their project, portfolio/website and information for each category on the presentation outline. This is a formal presentation where communication skills, presentation skills, etc. will be graded. Professional dress required. An industrial panel will observe the presentations. **Presentation CD must be in Portfolio. See Outline/Rubric.**

VIII. Cheating:

Cheating is unacceptable; refer to the NIU Judicial Code; any students cheating will be dismissed from the course immediately.

IX. Academic Misconduct: Refer to the NIU Judicial Code; Immediate and appropriate actions will occur for any students behaving inappropriately, e.g. cheating, will be dismissed from the course immediately.

X. Professor’s Role: This course involves the professor and graduate assistant in a variety of roles; the professor will provide a scenario, objectives, and standards and then guide, coach, and direct most of the time, however, there will be some lectures. This course is performance based, thus, there are usually no traditional objective tests. There are subjective tests in the form of the 5-10 minute learning papers, essays and the text project to determine concept attainment. Students will construct knowledge/skills while engaged in learning & performances. Assessment will occur as learning occurs.

XI. Professor’s Notes:

1. Unexcused absences could result in one letter grade reduction each (7pts). Class/lab/ team meetings/work sessions attendance mandatory.

Tardiness unacceptable. Door may close when class begins; late admittance may not be permitted according to prof.’s prerogative.

Unexcused class/team tardies, **1 point per 30 minutes IF you are allowed in and door is open; don’t count on door being open.**

2. The professor reserves the right to determine the final grade in the case of a student who does not perform on the team.

3. Unexcused late projects/assignments will result in point reduction, **2 points per day late.**

4. Dress code: no hats in lab **ever!** Professional dress **required** for final presentation.

5. Monitor language in class/lab at all times; good grammar and communication skills expected at all times; professional language expected.

6. Students are required to see the Writing Center tutor for all written assignments until approved otherwise, at least 2 visits per assignment; 3 visits required for paper. (1) Meet once to design paper, then meet with draft in hand (2-3) twice and rewrite. An appointment to plan the written assignment with no draft for review would still require 2 other visits for all other assignments.

7. Unannounced individual portfolio checks throughout course; 5 point penalties for portfolios not up to date each time.

8. No cell phone ringers in the class or lab at any time; **5 points deducted for in-class interruptions.** See professor exception approval.

9. Students can not pass class without ALL assignments turned in. Student will receive an I (incomplete) until all assignments are turned in. Penalties may occur for grades of Incomplete.

XII. Support Services Available for Students: The NIU writing center provides tutoring for writing. Students in this class are required to use that service for all written assignments; each writing assignment requires two visits/critiques and rewrites before assignment can be handed in to professor. Tutor signatures and forms are required to be turned in with written products. Math and science tutors available in College. NIU accommodations for any student with special needs. See professor individually.

XIII. References on reference in Founders Library on NIU main campus: Kerzner, Smith. Project Management & Teamwork. McGrawHill. Angus, Gundersen, Culinane. Planning, Performing and Control- ling Projects. Prentice Hall. 2000; Dinsmore. Human Factors in Project Management. Dinsmore. Project Management. Thomsett. The Little Black Book of Project Management. AMACOM; Kerzner, Thamhain. Project Management Operating Guidelines. VNR.; Rosenau. Successful Project Management. VNR.; Weiss, Wysocki. 5-Phase Project Management. Addison Wesley; Cleland, Gareis. Global Project Management Handbook. McGrawHill.; Miller. Visual Project Planning & Scheduling; Barkley, Saylor. Customer Driven Project Management. McGrawHill; Lewis. Mastering Project Management. McGrawHill; Forseberg, Mooz, Goterman. Visualizing Project Management. Wiley; Dinsmore. Winning in Business With Enterprise Project Management. AMACOM; Graham, Englund. Creating an Environment for Successful Projects. JoseyBass; Gray, Larson. Project Management. McGraw Hill. 2000.; Cleland. Project Management. McGrawHill; Meredith, Mantel. Project Management. Wiley. 2000; Lewis. Team-based Project Management. AMACOM; Kliem, Ludin. Project Management Practitioner’s Handbook. AMACOM; Kerzner. In Search of Excellence in Project Management. ITP VNR; Ruskin, Estes. What Every Engineer Should Know About Project Management. Dekker; Buttrick. The Project Workout. FT Pitman; Rowenau. Project Management for Engineers. Ran Nostrand Reinhold; Cleland. Field Guide to Project Management. ITP VNR; Briner, Geddings, Hastings. Project Leadership. Van Nostrand Reinhold; Rosenau. Successful Project Mgmt. Wi.

XIV. Course Requirements Check Off

Individual Contributions: **Benchmark=98-100 (This means that you set the standard for others.)**

- _____ (7) Text Project **A=93-100 points**
- _____ (5) Project Research **B=92.9-85 points**
- _____ (5) Project Design **C=84.9-77 points**
- _____ (7) Literature/Internet Research Tables A & B **D=76.9-70 points**
- _____ (5) Career Project **F=Below 70 points**
- _____ (5) Industrial Case Study
- _____ (7) Paper
- _____ (7) Midterm: Individual Project Plan
- _____ A).
- _____ (5) Software Workshop/Test
- _____ (1) Project Feedback Logs
- _____ (5) Professor's Overall Assessment
- _____ **(65) Total Individual Points Possible**

Note: To keep track of your progress, add the possible points of work to date; then figure the percentage, e.g.
Text (7)+P.Research(5)+P.Design(5)=17
.93 x 17 = 15.81 = lowest possible score or point value to maintain an A(lowest

IF your goal is to be a **Benchmark Student**, where your work best exemplifies the(confirmed by Professor) course's highest standards ...where you set the standard, then you must maintain no lower than 98% or ultimately 98 points for the course.

Team Contributions:

- _____ (5) Team Manual
- _____ (3) Community/Leadership Service Project/Articles
- _____ (5) Team Project Plan
- _____ (7) Team Project & Assessment (Final Exam)
- _____ (5) *Peer Assessment Process/Team Success
- _____ (5) *Team Member Participation
- _____ (5) Team Presentation & Success (Final Exam)
 *Individual Presentation (in Team Final Presentation)
- _____ (5) Team Project Portfolio & Website
- _____ **(35) Total Team Points Possible**

IF a team's goal is to be a **Benchmark Team**, where the team best exemplifies the course's highest standards for teams... where the team sets the standard for other teams, then **every team Member** in that team **must** maintain **98%** or ultimately 98 points each for the course.