

January 7, 2011

CGT 456 Advanced Web Programming, Development, & Data Integration<http://www2.tech.purdue.edu/cgt/courses/cgt456>**Spring 2011****Course Syllabus****CGT 456 Advanced Web Programming, Development, & Data Integration.** Class 2, lab. 2, cr. 3.

This course presents the most advanced technologies available for use on the World Wide Web and within corporate intranet environments. Emphasis and discussion is focused on the advantages and disadvantages of these technologies as well as on implementation to create unique solutions for business and industry. Strategies for planning, development, and implementation will be discussed and demonstrated. Significant time is spent on advanced programming and scripting as well as manipulation and visualization of data from various sources, including robust database management systems. Students are required to plan, design and implement a major project.

It focuses on the use of authoring programs to create interactive multimedia products as well as data manipulation, reformulation, interpretation, and representation. Much of this course focuses on mobile applications using ASP.NET and SQL Server. Part of this course focuses on e-commerce activities including the research and development of sites that support the buying, selling, and marketing of goods and/or services.

Professor Glotzbach's description of the course is located at:

<http://www.tech.purdue.edu/cgt/courses/cgt456/ProfGlotzbach456Description.asp>

Prerequisites: **CGT 356.** Authorized equivalent courses or consent of instructor may be used in satisfying course pre- and co-requisites.

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Course Learning Outcomes

Upon completion of CGT 456, students will be able to:

1. Demonstrate understanding of ASP.NET, C#, and the .NET Framework.
2. Create and compile advanced dynamic web projects using ASP.NET technology.
3. Demonstrate understanding of advanced database applications and SQL.
4. Show understanding of the logic behind advanced web applications.
5. Use ASP.NET Mobile Forms to create dynamic applications for handheld devices.
6. Demonstrate an understanding of Content Management Systems, personalized content, and e-commerce principles.

Weekly Topics

(The weekly topics are subject to change at any time by the course administrator. For the most up to date weekly topics, see the course website. There is typically one week of vacation time during the year that is not listed here. For this reason, a 15-week schedule is listed.)

Week	Lecture	Demonstration	Lab
Week 1	Introduction to the Course Overview server-side technologies Get Visual Studio 2003 Assignment 1 (due next lecture)	Computers, Internet, C# Visual Studio .NET IDE Visual Programming Assignment 2 (due next lecture)	Create Accounts Lab 1
Week 2	C# Programming Variables, Memory Concepts	ASP.NET Concepts VBScript to C# Comparison Inventory App, Textboxes, Buttons, Programming	Lab 2
Week 3	Bitwise OR, AND, XOR Logical AND, OR	Arithmetic, Algorithms, Pseudocode, Program Control <i>Introduction to Project 1</i> <i>Assignment 3 (due next lecture):</i>	Lab 3
Week 4	Checkboxes, Message Dialogs	while repetition control structure	Lab 4 Project 1
Week 5	do...while, for, switch	e-Commerce introduction	Lab 5 Project 1
Week 6	HTML elements vs. HTML Controls Submitting &PostBack	More SELECT, INSERT, UPDATE, DELETE, DataGrid, ExecuteNonQuery, Parameters	Lab 6 Project 1
Week 7	Encryption I: An Introduction	Encryption II	Project 1 Due End Of Period
Week 8	<i>Introduction to Project 2</i>	WML, WAP, Mobile Forms <i>Assignment 4 (due next lecture)</i>	Lab 7 Project 2
Week 9	Mobile Forms	Midterm Exam - In class	Lab 8 Project 2
Week 10	<i>Exam Review</i>	Mobile Forms	Lab 9 Project 2
Week 11	State Management	Finder Application	Project 2 Due End Of Period
Week 12	<i>Introduction to Project 3</i>	Discuss Mobile Applications <i>Assignment 5 (due next lecture)</i>	Lab10 Project 3
Week 13	Database architecture for mobile applications	Comparing .NET to other mobile technologies	Lab 11 Project 3
Week 14	Bioinformatics for mobile devices	Usability studies / issues for mobile technologies / devices	Lab 12 Project 3
Week 15	Project 3 Issues Other related topics	Course Wrap-up Instructor Evaluations Project 3 Review for Final Exam	Lab 13 Project 3

Texts (required):

- Wigley, A., & Roxburgh, P. (2003). *Building Microsoft ASP.NET applications for mobile devices* (2nd ed.). Microsoft Press. ISBN 0-7356-1914-X.
- Esposito, D. (2002). *Building web solutions with ASP.NET and ADO.NET (CD included)*. Microsoft Press. ISBN 0-7356-1578-0.
- A SQL Reference, your choice. (reference may be online or printed)
 - Recommendation for SQL reference: <http://www.w3schools.com>
- Silberschatz, A., Korth, H., Sudarshan, S. (2006). *Database System Concepts* (5th ed.). McGraw Hill. ISBN 0-07-295886-3

Supplies

- Media (CD-R). You will need at least 6 CD-R disks for project submission.
- CD Label kit
- Self-adhesive CD holders (for project submission)
- Three-ring binder (or other personal management aid)
- Sketch paper (printer paper is acceptable) for storyboarding and sketching ideas
- 1 Package of 3" x 5" notecards (for attendance and questions)

EVALUATION

Activity	Percentages*
Project 1	10%
Project 2	10%
Project 3	15%
Labs & Quizzes	20%
Midterm Exam	20%
Final Exam	25%
 Total	 100%

*Regardless of the above percentages, any student who completes less than 80% of the assignments will receive an F for the course.

Grading Scale

This course assigns grades as A, B, C, D, F. The +/- system is not used in this course.

90 - 100%	A
80 - 89%	B
70 - 79%	C
60 - 69%	D
0 - 59%	F

Grading Philosophy

Superior work, professional	A
Above average student work	B
Average student work	C
Below average student work	D
Failure	F

Course Administration

- *Lecture and Demonstration*
Lectures will concern the body of knowledge surrounding hypermedia production. The demonstrations will cover specific operations and techniques. You are expected to be at both of these (see Excused Absences below). If you have to miss a lecture or a demonstration, permission for an excused absence must be granted by the professor before the lecture or demo. It is your responsibility to secure all materials and information presented in lecture or demo, even with an excused absence. Lectures and demonstrations will not be repeated. Lectures or demonstrations may be tape recorded with the professor's permission.
- *Excused Absences*
You must clear any absence beforehand with the instructor and the instructor will require documentation before the absence is excused. Absences due to illness or other circumstances beyond your control will be handled on a case-by-case basis and will require documentation.
Note:
 - Attendance will be taken using unannounced quizzes throughout the semester.
 - A class is defined as one (1) lecture, one (1) demonstration or one (1) lab.
 - Quizzes will be used for attendances. The number of quizzes missed indicates the number of absences.
 - You may have 3 absences (excused or unexcused) from class without affecting your semester grade (no questions asked).
 - Upon the 4th absence from class your final semester letter grade will be reduced by one letter grade.
 - Upon the 5th absence you will automatically fail the course.
 - Extenuating circumstances will be handled on a case-by-case basis. A case will only be considered "extenuating" if the student has contacted the Office of the Dean of Students and requested an explanation of absence be sent to Professor Glotzbach.
- *Philosophy*
As a student in a college course you will often be expected to do original analyses of your work and that of others - your peers and recognized professionals. Your ability to plan, evaluate, and critically analyze project goals, guidelines, and problems to create a unique, self-generated solution is a central activity of this course. You will be expected to attend class and laboratory sessions and to turn in assigned work on time. Late work will not be accepted. Failure to do so demonstrates a lack of readiness to handle independent work and may call for individual counseling, loss of course points, or failure.
- *Outside Work*
Outside work will be necessary. Preparatory sketches should be done outside of class. You will not be able to complete the assignments if you work only in class. Files can be passed back and forth between Mac and PC as long as (a) you use a PC disk, and (b) use correct PC 8.3 (ISO 9660 Level 1) file extensions
- *File Security & Disks*
You are responsible for the security of your files. Period. You should have multiple copies on multiple sources (disks, Zip, TCN server, ITaP server) at all times. Given a faulty diskette or other media, the instructor will assist you in attempting to recover lost files. However, ultimately you are responsible for maintaining your digital data. Loss of data, files, or other associated items needed for a project will require that you recreate your work, with no exceptions.

Intellectual Property

For concerns about intellectual property (IP), including IP resulting from student participation in course assignments, see Purdue University's [Policy VIII.4.1, Intellectual Property](#)

Student Conduct and Policies

- The Purdue University Student Conduct Code must be followed.
- No swearing, or derogatory comments about, or towards, any member of the class will be tolerated in any class period.
- Where any type of assignment for this course is concerned, no sexual or sexually suggestive content will be tolerated. No alcohol or drug related sites will be tolerated. No scantily clad or nude people will be tolerated. In general, no inappropriate content will be tolerated. Any of these violations will result in a zero(0) on that exercise, lab, project, exam, or other assignment. Serious violations could result in the student being sent to the Dean of Students. Your work should be something you would be happy to show to your Department Head or the Dean of the School.
- No food or drinks of any kind will be allowed in any lab sessions.
- Students are expected to arrive on time for all class and lab sessions.
- Standards set by Purdue University as outlined in the Student Handbook and the University Regulations (1996-1997) will be observed in this course. Students are expected to be present at each and every meeting of the class. In the event that a student must miss a class period, they must inform the supervising instructor of the course of their absence and NOT a teaching assistant (TA). Should the student not be able to reach the instructor they are to leave a message for him/her at their office with the secretary. Should circumstances not allow this, the student may contact the Dean of Students Office and explain their emergency. The Dean's office will then pass the word along to each of the student's professors for them. Upon your return to Purdue, contact the supervising instructor as soon as possible in order to make arrangements for work, handouts, quizzes, or tests that they may have missed. The supervising instructor has the final word on what work, etc. students may be allowed to make up. Every student has the right to appeal to the university any decision made by their supervising instructor.
- Late assignments will not be accepted unless prior arrangements have been made with the Instructor and because of extreme circumstances. (Not coming to lab, or forgetting, doesn't rate as an extreme circumstance.)
- No student will be allowed to make up any written exam, lab practical, exam, or quiz unless they have an official or medical excuse.
- Standards set by Purdue University as outlined in the Student Handbook and the University Regulations (1996-1997) will be observed in this course. Any student found participating in cheating, plagiarism, copying material from another person's disk, using illegal cribs or other materials during a written examination, lying to course instructors and lab assistants about his or her own work, stealing tests, quizzes, or answer keys, using past students' work from a previous semester, and any such activities will be considered in conflict with the printed academic honesty guidelines as set out by Purdue University and the School of Technology. In such cases the matter will be reported to the Office of the Dean and the appropriate Purdue University administration officers for consideration and possible disciplinary action.
- Students who have special needs, i.e. hearing or visually challenged, etc., or in need of tutoring, etc., may contact the Dean of Students Office located in Schleman Hall, Room 207, 494-1747 for further assistance.

Campus Emergencies

In the even of a major campus emergency, course requirements, deadlines, and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances. The following are ways to get information about changes in this course:

- Course Web Page
- Course RSS Feed
- My email address: rjglotzbach@purdue.edu
- My office phone: 496-2953
- Preparing for a campus emergency: <http://www.itap.purdue.edu/tlt/faculty/>