CT 3130 3(3-0-3)
Telecommunications and Computer
Winter Semester 2002

Instructor:	**George Ding**
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Office Phone:	**780 539 2031**
Office Hours:	**9:30 a.m. – 12:00 p.m., Monday, Wednesday & Friday, other time by appointment**
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Contents, Goals & Objective
This course will focus on learning about inter-process communication (IPC) mechanisms and how they can be used to write network applications. We will focus primarily on those available in the Windows family of operating systems. The C language will be the primary coding language. Win32 advanced features including Error Handling, Structured Exception handling, Dynamic Linked Library, Threads, Inter-process & Intra-process Synchronization, Memory mapped file I/O, Asynchronous I/O, Remote Procedure Call, and COM (component Object Model) will be discussed in this course. In the process of learning about these IPC mechanisms, we will take a more in-depth look at some of the most popular protocols in use in LANS and WANS.

Textbooks
- Win 32 System Programming Second Edition by Johnson Hart
- Overheads and sources used in the class are available through WebCT

Lectures
The lectures are given in B208 from 16:00 to 17:20 on Monday & Wednesday. All students are required to attend the lectures on time.

Laboratories
You will need at least two (2) 3.5" HD or DD diskettes. The Lab is in J131 from 10:00 a.m. – 12:50 p.m. on Tuesday. Students should finish all the labs in order to pass the course.

Last Day to Drop: Monday, March 4, 2002

Examination Policy
All examinations except for the Final will be in class. The time and place of the final will be announced later. I will post them on WebCT.

Make-Up Exam Policy
Make-up examinations will be given only in case of serious need and only when the instructor is notified prior to the examination time. Otherwise, the grade is automatically 0 for that exam. It

is the responsibility of the student to contact the instructor for arranging a make-up time. Written verification for the student's inability to take an exam will be required.

Homework/Assignment Policy
All homework and assignments are due in class on the specified date. All assignments must be individually and independently completed and must represent the effort of the student turning in the assignment. Should two or more students turn in substantially the same solution or program, in the judgment of the instructor, the solution will be considered a group effort. Both or all involved in a group effort homework will receive a zero grade for that homework/assignment. A student turning in a group effort homework/assignment more than once will automatically receive an "F" grade for the course.

Assignment Pages: All assignments must include

1. Cover page with assignment number, date due, date handed in, and explanation if late penalty was waived by prior arrangement.
2. Listing of all files.
3. Output of all test runs.
4. Typed report containing discussion of your design, discussion of each result, discussion of any part of the assignment not implemented or not correct; report may refer to highlighted section of the syntax.

Late Assignment
An assignment turned in later than the due date will be penalized 10% of the total possible points for the assignment for each day late (excluding weekends and University holidays). No late assignment will be accepted after the assignment is graded and returned.

Course Grade: The relative weights for the final grade are distributed among the following:

	Date	**Weight**
Quiz #1	**Jan. 28, 2001**	**5% (50 minutes)**
Midterm	**Feb. 20, 2001**	**25% (1.5 hours)**
Quiz #2	**Mar. 18, 2001**	**5% (50 minutes)**
Final	**TBA**	**35% (2 hours)**
Programs and Assignments (6 – 10)	**TBA**	**30%**

Course Schedule
The schedule of topics and their order of coverage is given below. Every effort will be made to follow this table, however, it will vary to some extent depending on the progress made. Reference column in the schedule includes names of power point files. These files will be used in the class. Other power point files names will be added to the reference list as and when they are ready and this addition will be announced in the class. Students are encouraged to download them and bring copies to the class.

TENTATIVE SCHEDULES

DATE	DESCRIPTION	REFERENCES/NOTES
1/3/02 – 1/12/02	Introduction & Using Win32 File System	Chapters 1 & 2
1/13/02 – 1/18/02	Character I/O & File Processing	Chapters 2 & 3
1/19/02 – 2/28/02	SHE	Chapter 4
1/28/02	Quiz #1	
1/2902 – 2/11/02	Securing Win32 Objects, Memory Management, Memory-Mapped Files & DLLs	Chapters 5 & 6
2/12/02 – 2/20/02	Process Management & threads	Chapters 7 & 8
2/20/02	Mid Term Examination	
2/29/02 – 3/9/02	Thread Synchronization	Chapters 9 & 10
3/11/01 – 3/18/02	Inter-process Communication	Chapter 11
3/18/02	Quiz #2	
3/18/02 – 3/31/02	Windows Sockets & NT services	Chapters 12 & 13
4/1/02 – 4/15/02	Asynchronous I/O, RPC & COM	Chapters 14 & 15
TBA	Final examination	