

Fall 2015

## CSCI 5311

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*University of New Orleans*

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# UNIVERSITY of NEW ORLEANS

DEPARTMENT OF COMPUTER SCIENCE

## CSCI 5311 Computer Networks and Telecommunications

Fall 2015

Tue/Thu 12<sup>30</sup>-1<sup>45</sup> MATH 122

## Syllabus

**INSTRUCTOR:** **DR. VASSIL ROUSSEV**  
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 Office: MATH 332  
 Phone: 504-280-2405 (**no** voicemail)  
 Office Hours: Tue/Thu 10<sup>45</sup>-12<sup>15</sup>, Wed 10<sup>00</sup>-12<sup>00</sup>, by appointment  
 Gitlab: vroussev/csci4311-f15

**PREREQUISITES:**  
 CSCI 2125, CSCI 2450, *Java* programming experience—required

### TEXTBOOK(S)

- **Required:** *Computer Networking A Top-Down Approach*, 6<sup>th</sup> Ed. by Kurose & Ross. ISBN: 978-0132856201.
- **Recommended:** *Computer Networks*, 5<sup>th</sup> Ed. by Tanenbaum. ISBN: 978-0132126953.
- **Reference:** *Internetworking with TCP/IP: Principles, Protocols, and Architectures*, vol.1, 4<sup>th</sup> Ed. by Comer. ISBN: 0-13-018380-6
- **Reference:** *TCP/IP Illustrated*, vol. 1-2, by Stevens.

### FINAL EXAM

12:30-2:30pm, Dec 10, 2015 (Thu)

### OBJECTIVES

The primary goal of the course is to introduce students to computer networking concepts as they exist on the Internet. Specifically, students who have successfully completed the course will gain fundamental understanding of the following concepts:

- The overall architecture of the Internet;
- Essential reliability and congestion control mechanisms;
- Internet addressing and routing;
- Common LAN technologies;
- Network security basics.
- Time permitting: quality-of-service guarantees and software-defined networking.

In addition, they will have demonstrated

- Basic practical skills in socket programming and public protocol implementation.
- *Intermediate* practical skills in socket programming and public protocol implementation, as well as demonstrated ability to combine them with multi-threaded network programming.

## TOPICS

The class will cover chapters 1-5 and select topics from 6 and 7. The basic approach will be a top-down one—we will start with the practical use of the network API and will gradually explain the underlying design and implementation concepts. ***By default, you should expect all topics covered in class will show up at midterm/final exams.***

## GRADING

All work will be graded based on 100 pt scale and will count towards your final grade with the following weights:

Midterm Exam	→	25%
Final Exam	→	25% (comprehensive)
Programming Assignments	→	35%
Written Homeworks	→	15%
Bonus Factor	→	5% (class participation etc.)

CSCI 5311 students must complete at least 20% in extra points on the programming project. In other words, a perfect **A** score for the project is 100 for undergrads and 120 for graduate students.

**Grading scale:** A = 90+, B = 80-89, C = 70-79, D = 60-69, F = 0-59.

**In order to get a passing grade in the class you must get a passing grade on the exam part (midterms and final).**

The “bonus factor” will be applied to determine border cases but *only* in student’s favor (e.g., you will *not* fail with a total of 60 but may get an A with a score of 89).

## TEST

All tests are closed book/notes. Bring a few pens/pencils, calculator (optional) and a fresh brain ***only***—you will need nothing else and you will be allowed to use nothing else.

## ASSIGNMENTS

*Course projects* are an integral part of the course; it is assumed that you have a regular access to computer with *Java* installed.

Expect to be busy with assignments—most of the time there will be an outstanding assignment of some kind so plan accordingly. You will have 1-3 weeks to complete each assignment and (save for hurricanes & other emergencies) you should consider the due date to be a ***hard deadline***.

***No late assignments will be accepted.*** If you believe that you have some extenuating circumstances talk to me early and as much in advance *before* a deadline as possible—last minute requests are strongly discouraged.

*Programming assignment submissions must **strictly** adhere to the requirements of the assignment. Those that do not, will not be graded.*

## ACADEMIC INTEGRITY

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available at <http://www.studentaffairs.uno.edu>

## STUDENTS WITH DISABILITIES

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information: <http://www.ods.uno.edu>

## CLASS PARTICIPATION & ETIQUETTE

- As per university policy, all students are expected to attend all class meetings. Experience & statistics show a strong correlation between high grades and regular attendance. However, *attendance by itself, is not a part of your grade.*
- If you do miss a class, it is entirely **your responsibility** to find out about the covered material and catch up on your own.
- If you miss a test due to a medical (or other) emergency be prepared to show some proof in order to get a makeup opportunity.
- Come to class on time—lectures will start on time, even with minimal attendance. Please, plan your commute accordingly.
- If you do come late, quietly find a seat and take it with as little disturbance as possible. If you must leave the room—do so quietly.

***As you walk into class, kindly silence all mobile phones and do your level best to stay away from them for the duration of the class.***

## SPECIAL CASES

If you have any special circumstances (disabilities, active/reserve member of the armed forces, sports team member, family matters etc.) come and talk to me privately **this week**. If circumstances arise during the semester inform me ASAP.

## PRIVACY

The general university policy is that, your grades and personal information are confidential—I will discuss them with you **only** in person.

If you are asking for makeup test or late submission due to a medical condition you should get a note from a doctor. The note does **not** need to give the exact diagnosis but only state how it affects your ability to participate in the course.

## HOW TO SUCCEED IN THIS CLASS

- Read the assigned topic from the book *before and after* the class. This is a requirement and your response to questions will affect the “bonus factor” of your grade.
- Start work on assignments/homeworks **early**.
- Take advantage of the PDF slides to save effort in taking notes.
- Start work on assignments/homeworks **early**.
- Pay attention and participate in the class discussions. If you plan on snoozing in class you should consider taking rest in bed instead.
- If you don’t understand something get help **early**.
- Start work on assignments/homeworks **early**.
- Come to office hours prepared with **specific** questions.
- Start work on assignments/homeworks **early**.
- Be honest with yourself and study at home – the university expects you to put in about **9 hours** of preparation per week for this class for a C grade.
- **Start work on assignments/homeworks early.**