



University at Buffalo
The State University of New York

CSE111
Registration #10637
Great Ideas in Computer Science
Spring 2017

COURSE INFORMATION

LECTURE: MWF 12:00-12:50P, NSC 225

4 credit hours (3 credits for lecture + 1 credit for lab)

LABS:

- (A1), MONDAY, 9:00A-10:50A
- (A2), TUESDAY, 3:00P-4:50P
- (A3), TUESDAY, 5:00P-6:50P
- (A4), FRIDAY, 8:00A-9:50A

All lab sections are held in Capen 201A.
Please attend the lab you are registered in.

INSTRUCTOR INFORMATION

Dr. Bina Ramamurthy

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- *Webpage:*
<https://www.cse.buffalo.edu/~bina/>
- *Office:* 345 Davis Hall
- *Office hours:* MWF 11.00-11.50AM

TA/UTA INFORMATION

ENSHU WANG

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All TA office hours will be held in Capen 201A
(same location as labs).

Please familiarize yourself with everyone involved with the course. We will strive to offer a large amount of availability for students to interact with us, the course staff. You should never hesitate to come ask questions in office hours, whether it be a simple/fundamental question, something more advanced that you are interested in, or simply to chat about the material/department/life in general. Remember that you are always welcome with any level of question and should not be shy to ask.

Note: If you need to email course staff, please include [**CSE 111**] at the beginning of the subject line so your email is not missed. Email without this subject or from non-UB accounts will be ignored.

COURSE DESCRIPTION

For the Course Catalog:

The Internet has revolutionized our lives and has impacted how we carry out daily tasks. This course will use web technologies as a tool to compute and convey solutions for data-rich problems. Basic algorithmic techniques will be used to perform quantitative analysis of data. Results will be presented using web technologies. The objectives of this course are to introduce the fundamentals of quantitative analysis of data and web application development. This course is designed to satisfy the Math and Quantitative Reasoning requirement of the UB Curriculum.

Upon completion of this course, a student in this course should be able to:

- (i) identify, analyze, and solve real-world problems that involve quantitative information,
- (ii) visually represent the outcome of quantitative analysis using charts and plots,
- (iii) interpret and communicate the results of analysis,
- (iv) use technology and Internet resources effectively and build skills working with data,
- (v) design a responsive web page for information dissemination
- (vi) structure, style and functionally represent the information for online presentation and communication.

This list provides a rough schedule of how the topics will be introduced throughout the semester:

Lecture	Topic
Week 1 (1/30)	Course overview, expectations, resources, etc., begin HTML. Lab 1 Out
Week 2 (2/6)	HTML and web development.
Week 3 (2/13)	QR Topic 1: Organizing Information Pictorially Using Charts and Graphs, Lab 1 Due
Week 4 (2/20)	QR Topic 2: Bivariate Data. Lab 2 Out
Week 5 (2/27)	Review, Exam 1, Multiple Variable Functions (QR Topic 4), Lab 2 Due
Week 6 (3/6)	Personal Finances, begin Personal Finance (QR Topic 9), Lab 3 Out
Week 7 (3/13)	Personal Finance (QR Topic 9), begin Javascript, Lab 3 Due, Lab 4 Out
Week 8 (3/20)	----- Spring Recess -----
Week 9 (3/27)	Review, Exam 2, continue Javascript
Week 10 (4/3)	Finish Javascript, QR Topic 16: Averages and Five-Number Summary, Lab 4 Due
Week 11 (4/10)	Continue Averages and Five-Number Summary, Begin Standard Deviations, z-Scores, and Distributions (QR Topic 17), Lab 5 Out

Week 12 (4/17)	Standard Deviations, z-Scores, and Distributions, Begin Angular JS, Lab 5 Due
Week 13 (4/24)	Angular JS, Lab 6 Out
Week 14 (5/1)	Applications of prior topics in Web.
Week 15 (5/8)	Wrap-up, Review, Exam 3, Lab 6 Due

All quizzes are on Wednesdays. See the **QUIZZES** section for more on this. Exam dates are also given in the **EXAMS** section

STUDENT LEARNING OUTCOMES

This course fulfills the UB Curriculum Foundations Math and Quantitative Reasoning. Having completed this course, you will be able to:

- Develop the mathematical and quantitative reasoning skills required to analyze and interpret data, graphs, and models as they apply in today's educated society.
- Synthesize quantitative information from different sources, to understand the accuracy of the information and the limitations of conclusions drawn from it.
- Interpret quantitative information and express inferences and conclusions in writing.

Additionally, you will gain computing skills from utilizing the following technologies:

- Microsoft Excel
- HTML – improving your web presence
- Javascript – basic computations via programming
- Exposure to the AngularJS framework

Each of these skills will be developed through the labs provided within the course, and will be reinforced with quiz and exam questions.

COURSE PRE-REQUISITES

There are no pre-requisites for this course.

COURSE WEBPAGE

You can find all course information and documents under the UB Learns page for this course, including this syllabus.

REFERENCES

REQUIRED TEXT

1. Sevilla, Quantitative Reasoning, Second Edition, with Wiley Plus

Important note: There are multiple ways of purchasing the book:

- www.wileyplus.com and enter the course code: **560760** (directly from publisher) \$92.50 (refer to the posted memo for more detailed instructions on purchasing from their site)
- UB Bookstore WileyPlus Student eBook PKG: \$115.00
- UB Bookstore Looseleaf w/ WileyPlus Access \$159.00

Please choose the option you prefer. Be aware that there are two sections of CSE111 and you need to purchase the **correct section** from the bookstore, if you choose that route.

We will also provide online resources through UBLearns to cover web aspects of this course, such as HTML, Javascript, and AngularJS.

COURSE FEES

There are no additional course fees aside from the course textbook.

GRADING POLICY

Here is the split of grades:

- Lab Assignments (40%)
- Quizzes (15%)
- Exams (45%)

Here is a rough estimate (rough, as in you won't get lower than this if that is your final average) of the course grades required for the different letter grades:

Percentage score	Letter Grade	Quality Points
90.0% -100.00%	A	4.0
85.0% - 89.9%	A-	3.67
80.0% - 84.9%	B+	3.33
75.0% - 79.9%	B	3.00
70.0% - 74.9%	B-	2.67
65.0% - 69.9%	C+	2.33
60.0% - 64.9%	C	2.00
55.0% - 59.9%	C-	1.67
50.0% - 54.9%	D+	1.33
45.0% - 49.9%	D	1.00
44.9% or below	F	0

Students will also receive a **grade of F** if they are found in violation of the [academic integrity policy](#). Please make sure to thoroughly read and understand the policy for this course.

Incompletes (the grade of "I") will not in general be given. This is reserved for the rare circumstance that prevents a student from completing the work in the course. University and Department policy dictates that an "I" can be given only if both of the following conditions are met: (i) only a small amount of work remains, such as the final exam and one or two assignments, and (ii) the student has a passing average in the work completed. In such a circumstance, the student will be given instructions and a deadline for completing the work, which is usually no more than 30 days past the end of the semester.

Incompletes cannot be given as a shelter for poor grades. It is the student's responsibility to resign from the course in a timely manner if doing poorly. The last day to resign with a grade of R is Friday, November 11 (before 11:59:59pm).

ACCESSIBILITY RESOURCES

If you have any disability which requires reasonable accommodations to enable you to participate in this course, such as recruiting note-takers, readers, or extended time on exams or assignments, please contact the Office of Accessibility Resources (60 Capen Hall, Tel: 645-2608, <http://www.buffalo.edu/accessibility/>) and also the instructor of this course. The office will provide you with information and review appropriate arrangements for reasonable accommodations.

LAB ASSIGNMENTS

Labs will be released on Monday of the prescribed weeks on the course schedule. The labs will be due Sunday at 23:59:59 (that is 11:59:59pm) on the respective due date. The lab assignments will be covering course material that we are currently covering. As such, it is important to complete the labs alongside coverage of the material to gain the full benefit from each assignment. **Lab 1 and Lab 6 are mandatory.** Of the remaining labs, the lowest lab grade will be dropped (the dropped lab assignment grade may only come from lab 2-lab 5). This means that each lab will count for 8% of your course grade.

LAB SECTIONS

We will be meeting in lab sections to provide guidance and scheduled time to work on lab assignments. It is important that you attend the lab/recitation and complete the labs. It is during the lab/recitation sections that TAs will review your work and assign you grades for the labs.

QUIZZES

Quizzes will be given at the start of lecture on the days that they are scheduled. The quiz dates are as follows:

- Quiz 1: Wednesday, February 22
- Quiz 2: Wednesday, March 15
- Quiz 3: April 19
- Quiz 4: May 3

Quizzes will be based off of previous suggested readings and other important material from lecture. Repetition is most important for learning this material so this will encourage you to complete the practice problems in the book to help better prepare you for the quizzes and exams. There will be **4 quizzes** during the semester, **with the lowest score being dropped**. This means that the 3 highest quizzes will each count as 5% of your overall grade.

EXAMS

There will be three 50 minute in-class exams held during lecture. Each exam is worth 15% of your grade. No makeup exams will be given except in *provably extreme circumstances*. Please note the following additional policies/suggestions with respect to makeup exams:

- Notify your instructor 24 hours prior to the exam via e-mail or telephone (voice mail) if you are going to miss an exam. If it is medically impossible for you to give prior notice, please obtain a note from a physician detailing the period (and the reason) you were medically incapable of communicating with the instructor.
- If you miss an examination because of sickness or similar reasons, visit a physician and obtain a note detailing the period and the reason you were medically incapable of taking the exam.
- The exam dates are scheduled as follows:
 - Exam 1: Wednesday, March 1
 - Exam 2: Wednesday, March 29
 - Exam 3: Friday, May 12

Please plan your travel and other activities accordingly.

- There is no final exam for this class during exam week.
- Exam times are stressful and one could forget about the exam time. Please make sure you arrange for multiple reminders so that you do not forget about the exam(s). This is another reason to religiously

follow the course webpage as there will be numerous reminders about the exam when it gets close to the actual exam date.

STUDY TIME

I urge you to read the appropriate sections in the book before class and then to reread the section after class. The quality of reading is important – reading mathematics requires going very slowly and carefully. I find that I need to write the material as I read it in order to force me to think it through.

Similarly, take notes in class and then recopy your notes after class. All of this takes time, and doing the homework takes much more time. This type of material is new to students and should not be taken lightly. The concepts and ideas of proofs are not something you can simply memorize and regurgitate. You must understand them in order to be able to apply them to different problems.

Reading the textbook before class ideally will be completed by every student as you will be required to complete exercises before lecture. Unfortunately, some of you may try to skirt this by finding ways around completing the tasks honestly. You will find that if you read the material and complete the problems honestly prior to lecture, you will gain much more than the small percentage of your grade.

MISCELLANEOUS NOTES

Here are some other policies/suggestions to keep in mind:

1. Your grade will solely depend on your performance in this semester: you will not get any opportunity to do extra work to improve your grade. It is your duty to make sure you understand what is expected of you. This course will require a fair bit of work so if you are busy this semester, please plan accordingly.
2. If there is a genuine reason for re-grading, please contact the instructor within a week of when the graded material is handed out in class/completed in the grader. In particular, if you do not pick up/view your graded material on time, you may lose the opportunity to get back to us within the stipulated time period.
3. Feel free to make up a group of students to work on practice problems and to discuss the course material. In a course like this it is very helpful to discuss problems and concepts with one another to better study.

ACADEMIC INTEGRITY

Academic integrity is a fundamental university value. Through the honest completion of academic work, students sustain the integrity of the university while facilitating the university's imperative for the transmission of knowledge and culture based upon the generation of new and innovative ideas.

- Reference to the university Undergraduate Academic Integrity policy (<http://undergrad-catalog.buffalo.edu/policies/course/integrity.shtml>).

The academic degrees and the research findings produced by our Department are worth no more than the integrity of the process by which they are gained. If we do not maintain reliably high standards of ethics and integrity in our work and our relationships, we have nothing of value to offer one another or to offer the larger community outside this Department, whether potential employers or fellow scholars. For this reason, the principles of Academic Integrity have priority over every other consideration in every aspect of our departmental life, and we will defend these principles vigorously. It is essential that every student be fully aware of these principles, what the procedures are by which possible violations are investigated and adjudicated, and what the punishments for these violations are. Wherever they are suspected, potential violations will be investigated and determinations of fact sought. In short, breaches of Academic Integrity will not be tolerated.

DEPARTMENTAL STATEMENT ON ACADEMIC INTEGRITY IN HOMEWORK ASSIGNMENTS

The following statement further describes the specific application of these general principles to a common context in the CSE Department environment, the production of source code for project and homework

assignments. It should be thoroughly understood before undertaking any cooperative activities or using any other sources in such contexts.

All academic work must be your own. Plagiarism, defined as copying or receiving materials from a source or sources and submitting this material as one's own without acknowledging the particular debts to the source (quotations, paraphrases, basic ideas), or otherwise representing the work of another as one's own, is never allowed. Collaboration, usually evidenced by unjustifiable similarity, is never permitted in individual assignments. Any submitted academic work may be subject to screening by software programs designed to detect evidence of plagiarism or collaboration.

*It is your responsibility to maintain the security of your computer accounts and your written work. Do not share passwords with anyone, nor write your password down where it may be seen by others. Do not change permissions to allow others to read your course directories and files. Do not walk away from a workstation without logging out. These are your responsibilities. **In groups that collaborate inappropriately**, it may be impossible to determine who has offered work to others in the group, who has received work, and who may have inadvertently made their work available to the others by failure to maintain adequate personal security. In such cases, **all will be held equally liable**.*

These policies and interpretations may be augmented by individual instructors for their courses. Always check the handouts and web pages of your course and section for additional guidelines.

DEPARTMENTAL POLICY ON VIOLATIONS OF ACADEMIC INTEGRITY

The CSE Department has a zero-tolerance policy regarding academic integrity (AI) violations.

When there is a potential violation of academic integrity in a course, the course director shall first notify the concerned students. This notification begins the review and appeals process defined in the University's Academic Integrity statement:

<http://catalog.buffalo.edu/policies/course/integrity.html>

Upon conclusion of the review and appeals process, if the department, school, and university have determined that the student has committed a violation, the following sanctions will be imposed upon the student:

§ 1. Documentation. The department, school, and university will record the student's name in departmental, decanal, and university-level academic integrity violations databases.

§ 2. Penalty Assessment. The standing policy of the Department is that all students involved in an academic integrity violation will receive an F grade for the course. The course director may recommend a lesser penalty for the first instance of academic integrity violation, and the adjudication committees that hear the appeal at the department, decanal and provost level may recommend a lesser or greater penalty.