

# TEACHING STATEMENT

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I have been fortunate to work with thousands of graduate, undergraduate, and high-school students throughout my career. I have contributed to their quality education as a primary instructor, teaching assistant, mentor, and by serving as chairman of an educational foundation. My aim is to inspire students to ‘think out of the box’ by motivating them to be proactive and engage in effective learning, while providing cutting edge information and relevant technical skills.

In this statement, I would like to outline my previous teaching and mentoring experience, illustrate my comprehensive teaching approach, and propose my potential course offerings.

## Teaching Experience as a Primary Instructor

I have worked as a primary independent instructor having full responsibility for teaching courses at the University of California Riverside (UCR) for three academic quarters (F17, W18, F19). I am also scheduled to teach another quarter (W20) in the same capacity prior to my graduation. In each quarter as a primary instructor, I have been responsible for giving lectures three days a week, designing several effective lab sections involving the supervision of TAs, holding office hours, as well as creating and grading weekly/bi-weekly quizzes, lab assignments, and exams.

I facilitated the learning of [CS006] *Effective Use of the World Wide Web* for a total of 248 students over two quarters. This was a specific introductory level course for non-CS majors to learn the fundamental concepts of the World Wide Web. The topics included but were not limited to web tools, e-communities, e-commerce, power searching, privacy, and other legal and societal issues. On the instructor evaluation rating for these courses (effective as a teacher overall), I received a median score of 4.07/5.00 based on responses from 128 students.

I also had the privilege to teach [CS100] Software Construction for 104 students over a full quarter. This was an upper-division course that emphasized the development of software systems. The topics included design and implementation strategies, mastery of programming languages, environment tools, development processes, and ethical responsibilities of software engineers. My instructor evaluation score for this course was 3.68/5.00 from 69 respondents.

Throughout my teaching courses at UCR, I received a rating of 4.20 out of 5.00 on a website called ‘Rate My Professors’ which is available at:

<https://www.ratemyprofessors.com/ShowRatings.jsp?tid=2353529>

In order to gain further insight into my evaluation beyond what is reflected by the mere scoring algorithm, I invite you to read the comments left by my students.

## Teaching Experience as a Teaching Assistant

I have always been enthusiastic about teaching and, therefore, pursued teaching opportunities during my master’s degree at the University of Alabama at Birmingham (UAB). I have worked four semesters as a teaching assistant for several graduate and undergraduate courses:

[CS636] Computer Security (S14)  
[CS501] Programming Language (S13)  
[CS250] Discrete Structures (F13, S13, S14)

I also had the opportunity to conduct a couple of lab sessions:

[CS202L] Object-Oriented Programming (F12, F13)  
[CS102L] Principles of Computer Science (F12)

Throughout these courses and lab sessions, my primary responsibilities were grading assignments, midterms and final, holding office hours, and responding to a wide range of questions from students.

## Mentoring Experience

Becoming a mentor is one of the most fulfilling roles that a professional can experience. I have mentored numerous projects during my undergraduate years at Bangladesh University of Engineering and Technology (BUET). One notable example is

a computer interfacing course project in which I led a team of five. We successfully developed a mechanical wireless crane that could be controlled remotely, with the ability to execute ten different movements. Our work was presented among 43 other projects at the 'Inter-University Project Show in CSE Day' organized by the Department of Computer Science of BUET, and my team was awarded third prize in the hardware category.

I volunteered to counsel and support four undergraduate students to help them finish their final year of design and thesis projects in Bangladesh as well as in the USA.

Encouraged by the positive impacts of volunteering, I joined hands with a handful of peers. I co-founded a non-profit organization called "Education Foundation" (<http://efcharity.org>) to aid less-advantaged students to accomplish their educational goals. As a chairman of this foundation (among other equally important duties and responsibilities), I inspire numerous volunteers to stay on their path, supervise hundreds of high school and university students. I help them get access to higher education and provide guidance and counseling in their career development.

Over a dozen students have gained admission to public universities in Bangladesh through my direct mentorship, and they are now working as mentors themselves for future generations. In this regard, I can humbly say that I have "paid it forward" and planted the seed by becoming a mentor of mentors.

## Teaching Approach

I choose active, evidence and project-based teaching strategies to enrich student learning [2]. I design lecture content carefully and present it in a way that piques student interest. Once in a while I add a popular "meme" relevant to the topic, which not only makes the lecture more enjoyable but helps students better grasp the main idea. I actively promote in-class discussions and make sure students feel comfortable asking questions. I find that some students are reluctant to engage in class due to several reasons, such as introversion, shyness, bad past experiences, lack of specific knowledge, or fear of failure [1]. As a result, I continuously motivate students intrinsically by setting up real-world examples on specific content, and extrinsically by rewarding them with edible treats for great questions and add class participation marks. I use interactive classroom tools (e.g., piazza), where students can interact with their peers and with me. This technique allows me to bridge any gap between my lecture and the students' understanding.

Taking and completing a three-credit TA training course (*GRD 715 – Preparing TAs to be Effective Teachers*) at UAB was an excellent opportunity. I gained knowledge on preparation for teaching, presenting material effectively, handling questions, handling challenging students and situations, leading laboratory sections, and ethical issues related to teaching. I applied a few teaching methodologies to my teaching that I learned from this class.

I divide my 50-minute lecture into the following way: I spend the first seven minutes summarizing the previous lecture as well as discuss any outstanding issues students have regarding lecture materials, homework, assignments, and exams. Then, I have three slots of thirteen minutes each for lecturing main topics for that day. In the 13-minute slot, I lecture for around ten minutes and then take a two-to-three minute pause as the most motivated students' concentration declines after ten to fifteen minutes [4] of lecture. In the next three minutes, students have a chance to ask questions for more clarification. I send out lecture slides/specific pages in the textbook before the class so that students get the opportunity to learn basics before coming to class. I also proactively ask a few thoughtful questions to students so that they can retain information discussed during the prior mini-lecture and can think out of the box to answer those questions. Sometimes, I give exercises to work on as a group in the middle slot so that students can discuss topics with their peers. In this peer instruction [3] method, students construct their understanding through a structured approach featuring questions with peer discussions. I spend the last three minutes of the lecture summarizing the whole class and discussing the main takeaways. Students provide feedback after each quarter and I use this feedback to adjust my teaching style.

## Course offerings

I have completed a wide range of courses in computer science and engineering during my undergraduate and graduate degrees. My enthusiasm and experience in teaching and research qualify me to teach a wide range of undergraduate and graduate-level courses. I am passionate in teaching introductory courses on the fundamentals of CS (e.g., *Introduction to Programming, Data Structures, Discrete Structures, Algorithms, Software Engineering, Design Pattern*), and advanced courses (e.g., *Fundamentals on Computer Security, Web Security and Privacy, Usable Security, Binary Analysis*). I can also teach data analysis, particularly *Time Series Data Analysis*. I am also keenly interested in teaching advanced research seminar courses on special topics of *Cybersecurity and Brain-Computer Interface (BCI)*. This course will be based on recently published papers in top conferences in security and BCI areas and will be designed in a way that can lead to

publications. I believe that this form of course effectively broadens the outlook on research, builds up research capacity, and develops critical scientific thinking. Given the opportunity, I would be willing to develop new courses aligned with my university's educational mission and improve students' learning experience. I will include updated topics related to research/engineering/technological breakthroughs, which helps students embrace emerging technologies. For undergraduate courses, I focus more on the skills-oriented syllabus. I teach the basic concepts in the classroom and assign homework and class projects to solve a practical problem based on those concepts. I will focus on the advanced concepts with contemporary research for graduate-level courses, and will design class projects in a way that can eventually contribute towards a worthy publication for graduate students.

I believe that my experience in teaching three quarters as a primary instructor, four semesters as a TA, holding a leading position in a non-profit educational foundation for nearly a decade, mentoring numerous students, and my extensive research throughout my career shall serve as proof that I am qualified to teach undergraduate and graduate-level courses at your University.

## **More than classroom teaching:**

In my opinion, being a teacher is not only a profession that impacts students in the classroom but also a vocation that plays a bigger role in students' futures. I am convinced that a university is not only a place for achieving a degree, but it is where the foundation is laid for students to become better human beings and be successful for their entire life. I sincerely believe that the success of a teacher can only be measured in the ultimate success of its students. I always make myself available outside of the traditional classroom settings to listen and talk to my students, and if needed, I offer them helpful advice for their career and their life.

Teaching is an exhilarating and incredibly fulfilling experience because the possibilities are endless, and the impact is enormous. It gives me immense pleasure to help my students evolve and succeed in life. I am dedicated and very passionate about educating and training a new generation of computer scientists.

## **References**

- [1] <https://www.scholarlyteacher.com/post/students-who-dont-participate-in-class-discussions>, author=Todd, Zakrajsek.
- [2] S. Freeman, S. L. Eddy, M. McDonough, M. K. Smith, N. Okoroafor, H. Jordt, and M. P. Wenderoth. Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences*, 111(23):8410–8415, 2014.
- [3] L. Porter, C. Bailey Lee, and B. Simon. Halving fail rates using peer instruction: a study of four computer science courses. In *Proceeding of the 44th ACM technical symposium on Computer science education*, pages 177–182. ACM, 2013.
- [4] J. Stuart and R. D. Rutherford. Medical student concentration during lectures. *The lancet*, 312(8088):514–516, 1978.



# UC RIVERSIDE - Faculty Instruction Evaluation (iEval)

## Fall 2017

Course: CS 006 Section: 001 - EFFECTIVE USE OF WRLD WIDE WEB  
Instructor: Md Lutfor Rahman

**Question # 20:** Please comment on how the instructor's teaching helped your learning of the material in this course. Please give serious thought to your comments. Your comments will be studied by the professor after the grade and performance evaluation of your work have been submitted and may be used in changing future offerings of the course. In addition, these comments are placed in the instructor's file and may be used for purposes of evaluating the instructor's teaching. The information collected will remain anonymous.

- He is a great teacher and makes the class entertaining with his personality
- Great teacher! Very nice.
- Best Professor Ever!!!!
- The professor is overqualified for the job. He really expresses his deep connection and care for his students. I would definitely take another class with him. Gives many chances for every student to do well in the class. Entertaining and definitely one of my favorite professors at UCR thus far.
- Super interesting and very smart, a great professor.
- Professor took the time to engage the students to participate during lectures. Quizzes were fairly easy do to the comprehensive power point slides.
- He was the best instructor!
- You were a great professor and I am sorry that the students did not take the class seriously as they should. One thing I would like to suggest is do not drag class on if not necessary because we have tight schedules unless it is something meaningful and quick its good. The last day in class I do not understand why you dragged on because we would leave right after. But you should have made it optional.
- This was such an interesting course and I learned so much from it that I'm gonna use outside the classroom. Very organized and enjoyable!
- There were moments in class where it is very difficult to understand a certain term or example he is trying to define or use. Usually there will be very few students after the quizzes because they know that he will post the slides on iLearn, which is very helpful. We as students suggested he keep track of attendance in lecture and I hope he continues to do so. For his first time instructing, I think he is doing a wonderful job and though there are some mistakes and awkwardness along the quarter, I hope he continues to be an instructor with that level of enthusiasm.
- He was a very nice teacher. Enjoyed his class. Do not have anything bad to say about his class.
- The professor was a bit hard to understand, at times. Overall, though, I really enjoyed taking the class. He provided us with lots of resources to succeed on his weekly quizzes, which most of class utilized.
- Slides were easy to understand and related back to our daily lives making the class easier to understand
- Professor was enthusiastic about material and made the class very enjoyable. Professor also helped students grasp concepts that were not well-known which helped me connect concepts to real life applications. The professor was very kind and the class was made easy with his syllabus. Though there was low attendance rates in lecture, professor did his best to reach out to students and make the class interesting. Professor made funny jokes as well. Overall, a great professor who was passionate about the subject material.
- For being his first class, this professor performed well. He was approachable and his slides were easy to gain material off of. His tests reflected the material well and were not hard unless you did not look at the material. Some critiques would be to be understanding of peoples' situations. The course was structured in a way that did not require us to be in class after our quizzes, so , understandably, many would not stay in class. Making it required to sign in before and after would curb many people's desire to leave, but not always. Also, the spacing of your slides in terms

of time would be beneficial. However, despite All of this, you did a good job and can be an amazing professor.

- Next time if you want student to come to class, do not send the lectures through email. Also, the lab assignment instructions were sometimes not clear so maybe go over in lecture what is expected. But overall you were a great professor and I learned a lot in this course.
- He was always helpful and energetic
- Great and compassionate instructor. Cares very much for his students and their progress.
- Overall, this class was alright. However, I feel as if the labs had little to do with the actual lecture and I would've appreciated learning more about html in class instead of just labs. Class overall was rather awkward, but considering the fact that a lot of people didn't come to lecture, it's pretty understandable. Speaking of which, the powerpoints reflected the lecture fairly well, so even if you didn't go, you would still understand what happened that day. Am I better off having taken this class? Sure. Would I take this class again? Maybe. Would I attend lecture that time around? Probably not.
- Professor Lutfor Rahman was amazing! He was so kind and definitely tries to adjust his course to the students. I loved taking his class and wish i was a CS major so i could have him again. My only advice would be to have quizzes at the end of the class so it prompts students to stay and not leave after they've taken the quiz.
- He was very kind to students, had great energy while teaching. I would recommend others to take this class.
- He's nice and he keeps class entertaining.
- The instructors teaching was overall great. I enjoyed going to this class, and like the enthusiasm the instructor had for the subject. The weekly quizzes helped to my learning, and so did the power points including the videos.
- The instructor had an effective way of teaching and provided many resources for course assignments. The professor was clear about the course syllabus.
- This course was very great i loved the way it was taught.
- Very fair and effective.
- very simple and fun class
- The syllabus didn't necessarily explain all of the course requirements. The instructions for labs were not always accurate or clear. Other than that, he really tried his best and I appreciate him.
- I enjoyed the class and when he taught, but there was never any need to attend lecture more than once a week. I think there should be more exams, less labs that have little to do with the course.
- The professor was hard to understand at times. There was a language barrier most definitely. The labs had nothing to do with what was covered in lectures or on the exams, AT ALL. He was very lenient with people cheating on the quizzes and sometimes went on unnecessary tangents that didn't relate to the course in any way.
- The professor had a good handle of the course, and a clear knowledge of the materials. He took time to properly explain the concepts. Although, he was sometime hard to follow, his lectures perfectly reflected the quizzes required by the class. Additionally, the concepts presented in class, I believe, have enriched my knowledge, as the ideas were foreign to me. I have high respects for the professor and the class as a whole.
- This instructor came to class everyday ready to teach. His enthusiasm made the course fun and made me want to come to class.
- Great professor and taught important topics in CS. Should give quizzes at the end of class to avoid so many people leaving. Very obvious that the professor is well knowledgeable. Would take him again.
- Try to use the White board more effectively, use the board to write down examples. Also use the board to write words that you find hard to pronounce.

- Great Teacher! Lots of enthusiasm
- You were a very nice professor thank you for being informative and kind. You were also funny which helps in class. Maybe you could have students pick up papers in your office hours instead of in class? It takes away from our class time. Because it is an intro class you're going to get a lot of freshman who don't care for the class but know that those who choose to learn, learn a lot and your labs are very insightful.
- The Powerpoint slides at times were unorganized and unclear. Sometimes noise from the mic would go off during testing which made it hard to concentrate. Instructor should not talk during testing, too, and should give a time limit rather than collecting tests whenever HE felt like it was ready to collect them. It made me feel pressured to finish. Other than that, he was passionate and tried to teach effectively.
- There was nothing of huge concern. Even if sometimes the instructor was hard to understand the lecture slides helped perfectly understand the material. We didn't need a textbook to succeed, thank goodness for that. The professor was a bit funny and nice too. The only saving Grace was he was 100x better than my TA who I believe is the worst teacher ever, and I try to give mostly positive feedback, but I just couldn't.
- He was great and so sweet. Made this class a breeze and his humor always made my day. I would definitely take another course with him. Cared about students needs; would postpone quizzes if we weren't prepared for them.
- Although this professor was extremely enthusiastic and amiable, I couldn't understand him at all. This impeded my learning ability although I do appreciate what he teaches during class.
- Sometimes it was difficult to understand his accent but thats not his fault. He was really nice but I did not like the labs he gave us.
- Overall, you show a lot of enthusiasm for the subject you teach. There aren't any main issues with the class. The biggest issue was turning in the last project. If anything, make sure that's clear next time. Other than that, you're doing a fair job. Sorry that many of the students skip out on class. That's usually how computer classes that fill basic requirements go. Don't take it personally.
- Lol I hope I get an A. Honestly you need to reward the students who come to class. It feels unfair to attend way more than other students and receive the same grade. Make attendance necessary for an A. So many people took advantage over how nice you are. You're too nice. College kids are lazy. You have to get us to work even when we don't like it. Nothing comes easy.
- I didn't attend class regularly because the slides were posted online and the quizzes were based on the slides not really the lecture. The quizzes reflected on the slides and they were quite simple. The labs weren't written too well and the projects were fairly easy. Overall the course was very simple.
- The course was somewhat understandable and the professor was difficult to understand only because of his accent.
- Make sure you make your words as clear as possible. Harder to understand when in the back of class
- Very friendly and helpful, not a class that I was enthusiastic about but he made the class enjoyable
- Had a great enthusiasm for the subject, sometimes did go off on little tangents but they did connect to what he was trying to explain. Even though the labs weren't always crystal clear on step by step process they did make you think about how to work coding websites and use google apps. I loved the labs and the professor was always trying to find ways to get the class more involved and comfortable.
- Highly unorganized class, professor just reads from slides word for word, lectures are not engaging nor are they interesting at all, English is hard to understand
- Try not to read off the powerpoint too much or rely on YouTube videos to teach the course. Lectures are supposed to be done by talking most of the time. Students also do not particularly want to answer questions in class. But, when you do ask questions, make sure the answer is not on the slide that is being shown. To fix the problem of attendance and students leaving after the quizzes, enforce attendance and participation by making it 10% of the grade for this course or use clicker questions as attendance takers in the beginning and end of each lectures or do not post the lecture slides online or simply make attendance mandatory and only allow students to not attend twice in the quarter. I know that these options are bit harsh but if you want students to attend and stay for the lecture, something like these options needs to be in place. Also, if it is possible to replace the mic for the class because there is a lot of feedback and it hurts our ears. As for the complaints against the projects and labs that I overheard the other day, the labs and projects are doable even if you are not a computer science major and can be finished within the time allotted. For the powerpoint slides, complete sentences should be there or simply only put the outline on them and lecture on the details. All in all, the powerpoint need to go through some editing before class. Then again, I do realize that you have other classes to teach, this was your first time teaching, and you have your work for your masters. Do not worry too much about the poor attendance. It is not entirely your fault.



# UC RIVERSIDE - Faculty Instruction Evaluation (iEval)

## Fall 2017

Course: CS 006 Section: 001 - EFFECTVE USE OF WRLD  
 WIDE WEB  
 Instructor: Md Lutfor Rahman  
 Home Dept.: Computer Science & Engineering

Enrollment: 120  
 Respondents: 77  
 Response Rate: 64%

Enrollment: 3861  
 Respondents: 2333  
 Response Rate: 60%

Enrollment: 78633  
 Respondents: 50737  
 Response Rate: 65%

Questions	Course							Department				Campus					
	5 High	4	3	2	1 Low	N/A	Mean	Med	SD	% tile	Mean	Med	SD	% tile	Mean	Med	SD
1 I had a strong desire to take this course	18	29	19	8	2	-	3.70	4.0	1.0	28.18	3.95	4.0	1.1	37.40	3.87	4.0	1.1
2 I attended class regularly	35	27	7	4	3	-	4.14	4.0	1.1	25.47	4.23	5.0	1.0	16.06	4.47	5.0	0.8
3 I put considerable effort into this course	32	33	9	2	-	-	4.25	4.0	0.8	35.00	4.22	4.0	0.9	43.09	4.31	4.0	0.8
4 I gained a good understanding of the course content	29	42	4	1	-	-	4.30	4.0	0.6	67.59	4.13	4.0	0.9	63.90	4.17	4.0	0.9
5 I normally spent at least two hours preparing for each hour of class	11	21	24	17	4	-	3.23	3.0	1.1	17.27	3.68	4.0	1.2	20.61	3.76	4.0	1.1
6 Instructor was prepared and organized	42	29	2	3	1	-	4.40	5.0	0.8	49.07	4.35	5.0	0.8	50.19	4.39	5.0	0.8
7 Instructor used class time effectively	31	37	3	2	3	-	4.20	4.0	0.9	39.09	4.28	4.0	0.9	36.86	4.34	5.0	0.9
8 Instructor was clear and understandable	17	28	15	13	4	-	3.53	4.0	1.2	8.65	4.26	4.0	0.9	14.32	4.23	5.0	1.0
9 Instructor exhibited enthusiasm for subject and teaching	47	27	3	-	-	-	4.57	5.0	0.6	58.65	4.44	5.0	0.8	61.62	4.47	5.0	0.8
10 Instructor respected students; sensitive to and concerned with their progress	47	28	1	-	1	-	4.56	5.0	0.7	59.82	4.42	5.0	0.8	65.45	4.43	5.0	0.8
11 Instructor was available and helpful	41	30	5	1	-	-	4.44	5.0	0.7	55.66	4.34	5.0	0.8	57.73	4.36	5.0	0.8
12 Instructor was fair in evaluating students	43	30	3	-	1	-	4.48	5.0	0.7	57.84	4.37	5.0	0.8	66.63	4.34	5.0	0.8
13 Instructor was effective as a teacher overall	38	27	6	4	1	-	4.28	4.5	0.9	38.68	4.30	5.0	0.9	45.24	4.31	5.0	0.9
14 The syllabus clearly explained the structure of the courses	35	35	6	-	1	-	4.34	4.0	0.7	44.55	4.32	5.0	0.8	43.67	4.40	5.0	0.8
15 The examinations reflected the materials covered during the course	41	31	3	1	1	-	4.43	5.0	0.8	57.84	4.31	4.0	0.8	62.50	4.30	5.0	0.9
16 The required readings contributed to my learning	28	27	21	-	1	-	4.05	4.0	0.9	29.25	4.20	4.0	0.9	41.08	4.16	4.0	0.9
17 The assignments contributed to my learning	28	40	6	-	3	-	4.17	4.0	0.9	36.61	4.29	4.0	0.9	39.68	4.27	4.0	0.9
18 Supplementary materials were informative (e.g. films, slides, videos, demonstrations, guest lectures, iLearn, web pages, etc)	30	41	4	-	1	-	4.30	4.0	0.7	62.04	4.24	4.0	0.9	57.05	4.26	4.0	0.9
19 The course overall as a learning experience was excellent	30	33	12	-	1	-	4.20	4.0	0.8	44.55	4.20	4.0	0.9	48.25	4.21	4.0	1.0

\* The number of N/A is not included in the Mean, Median, and S.D. calculation.