Teaching Statement

Dr. Jordan Budhu, University of Michigan

My teaching philosophy has one overarching theme: teaching my students to understand rather than memorize. To understand the definitions of the terms and quantities, where they are derived from, and how they are used in first principles, helps one to amalgamate these concepts into an advanced understanding. The advanced topics are applications of the fundamentals, and the fundamentals are functions of the definitions of terms and concepts. In addition, one needs a firm imagination to understand concepts. I try to encourage students to imagine more, use their minds and mental laboratories to understand, and allow the mathematics of change and language of physics to unfold in their minds. For instance, the concept of a vector field is a difficult one to imagine when it is first encountered in undergraduate studies. I find it aids understanding to tell the students to imagine a room full of vectors, one at each imaginable location defined by x,y,z. Then to have them make the analogy of the "wave" in a baseball stadium and how each person does not change their x,y,z coordinates or location but simply oscillate in place. This choreographed oscillation gives rise to the propagation of a wave around the stadium. Well, once students understand this, they can apply it to the room full of vectors and how waves propagate within an electric field. From there, one can bring in the mathematics, and show how the mathematics support their imagination and intuition, to make the students feel more comfortable describing their understanding in mathematical language rather than English. Students have acknowledged that this is effective. One of the students in my undergraduate electromagnetics course wrote in his letter of recommendation for my nomination for the Excellence in Teaching Award:

> "I remember the first discussion I attended that was led by Jordan Budhu. I felt exhilarated upon leaving his discussion session due to his explanations and passion for electromagnetics. That day, Jordan has us close our eyes and encourage us to imagine a room full of vectors that represented a vector field. Jordan's ability to capture his listeners imagination using techniques similar to this while also clearly communicating the complex mathematics and physics of the field of electromagnetics is truly impressive."

My approach to teaching is to provide the students with enough tools to understand. For example, the first is a firm understanding of the mathematical background. I first spend time in the beginning of the quarter to review the mathematics behind the concepts taught during the quarter. After the math is well understood, the concepts come easier. The second is well-prepared notes. I have found that if the students have the notes prepared in front of them, then they can spend more time listening and being engaged in the material rather than hurrying to write down the formulations. Also, in the beginning of each class, we review the previous classes materials and allow the students to come to the board to answer questions to demonstrate their knowledge. The third tool is well-prepared homework problems. These problems emulate real world engineering design and analysis problems similar to the kind they would see in industry or research. Rather than "plug and chug" type problems, I assign problems that allow creative solutions and engineering analysis and design. Each problem would also ask the students to discuss their observations and draw conclusions, which is more important than the algebraic answer, itself. At the end of each derivation, it isn't simply enough to arrive at an answer. The final step is to provide reasoning why the student knows its correct. Supporting each problem assigned is the requirement to write computer codes to create plots or to solve parts of the problem. These are the same steps and skillsets one would need to solve engineering problems in research. In essence, the students

are being taught the concepts but more importantly, trained how to become engineers and researchers. This requires: 1) checking your own solutions, 2) proving to yourself that they are correct, 3) being sure in your mind to convince another, 4) formulating ways to check or prove this, 5) formulating an approach based on fundamentals and first principles, 6) and packaging the results in a way as to present the material as a solved engineering problem. Finally, the practice I feel really solidifies the understanding of concepts goes along with a saying my advisor used to tell us, "You don't understand something well unless you can teach it to another student." Thus, at the end of each quarter, the students prepare a small five-minute lecture about a topic and teach it on the board in front of the class.

To help students achieve this deep level of understanding, I make myself available during office hours, through email, and even outside of these hours as welcoming unscheduled office visits. Students recognize the importance of this:

> "Beyond the material, Jordan is real and genuine with his students. I am continually impressed by how inviting he is to his students come visit him in his laboratory with any questions. I remember thinking there was no way that he was serious that we could drop into his laboratory without notice with questions outside his office hours. Then one day, my classmates and I were debating about a nuance of a derivation we learned during lecture that morning. We decided on a whim to just walk to Jordan's laboratory and ask him to settle our dispute. Upon arrival, I could tell that Jordan was beyond excited that we came by and within minutes he had answered all of our questions eloquently."

My goal as a teacher is not only to prepare engineers for the workforce, but to inspire and motivate. Lectures, which are still the foundation of higher education, provide me with the opportunity to do this. I want to pass on my passion for engineering to my students. I feel that a lecture is in a sense, a show, to use the historical antecedent of Sir Humphrey Davy or Michael Faraday. I want my students to enjoy coming to my lecture presentations as much as to enjoy learning the material. This commitment to well-prepared lectures pervaded my teaching at UCLA.

> "Finally, Jordan is inspirational. Moments of silence within discussion sessions are far too common. Students become so worried that they might be embarrassed in front of their peers that they do not speak up. IN these moments of silence due to the students lack of confidence, Jordan always seemed to have a 'pep talk' in store. He would remind us that we are all brilliant, and that even in few are unsure it is better to speak up and assert your thoughts with confidence. In a world of educators trying to prove how superior they are to their students; Jordan's intentions are different. You can tell he truly cares about his students. I found myself gravitating to his office hours even if I did not have questions about the class, because I knew I would just learn from being around him."

Having the opportunity to teach as a graduate student has inspired me to be the best teaching-scholar I can be. I look forward to implementing these goals as a faculty member in a renowned research university.

UNIVERSITY OF CALIFORNIA
LOS ANGELES

The Henry Samueli Excellence in Teaching Award

is hereby presented to

Jordan Budhu

Recognized by the Department of Electrical & Computer Engineering for excellence in teaching and contributions to the Department and the School during the 2017-2018 academic year

June 8, 2018

Gregory Pottie
Department Chair

Abeer Alwan
Department Vice Chair

Samueli School of Engineering & Applied Science

INSTRUCTOR RECOMMENDATION

I would like to provide my strongest recommendation for Jordan Budhu to receive the outstanding teaching award. This was my first time teaching 101A, making it extremely important for me to have strong TAs. Jordan deserves a lot of credit for any success we had with the course. When you look at the student evaluations, you will find that Jordan has all the qualities you could hope for in a teacher, mastery of the material, enthusiasm for the subject matter, and dedication to teaching. Also, about half of his t-shirts have Maxwell's equations on them. If that isn't enthusiasm for the material, I don't know what it.

Supporting LOR – 1

Letter of Recommendation for Jordan Budhu

I remember the first discussion I attended that was led by Jordan Budhu. I felt exhilarated upon leaving his discussion session due to his explanations and passion for electromagnetics. That day, Jordan had us close our eyes and and encouraged us to imagine a room full of vectors that represented a vector field. Jordan's ability to capture his listeners imagination using techniques similar to this while also clearly communicating the complex mathematics and physics of the field of electromagnetics is truly impressive.

Beyond the material, Jordan is real and genuine with his students. I am continually impressed by how inviting he is to his students to come visit him in his laboratory with any questions. I remember thinking there was no way that he was serious that we could drop into his laboratory without notice with questions outside of his office hours. Then one day, my classmates and I were debating about a nuance of a derivation we learned during lecture that morning. We decided on a whim to just walk to Jordan's laboratory and ask him to settle our dispute. Upon arrival, I could tell that Jordan was beyond excited that we came by and within minutes he had answered all of our questions eloquently. Even after finishing the class that he was the teaching assistant for, running into him in the halls of Boelter, he would still offer to help my fellow classmates and myself in our upper division electromagnetics courses.

Finally, Jordan is inspirational. Moments of silence within discussion sessions are far too common. Students become so worried that they might be embarrassed in front of their peers that they do not speak up. In these moments of silence due to the students lack of confidence, Jordan always seemed to had a "pep talk" in store. He would remind us that we are all brilliant, and that even if we are unsure it is better to speak up and assert your thoughts with confidence. In a world of educators trying to prove how superior they are to their students, Jordan's intentions are different. You can tell he truly cares about his students. I found myself gravitating to his office hours even if I did not have questions about the class, because I knew I would just learn from being around him. Feeling discouraged by grades, I debated if graduate school was a viable option. I remember talking with Jordan and without hesitation Jordan did not tell me "if" I go to graduate school but "when" I go to

graduate school I will learn more about a particular topic. These simple statements of reassurance and encouragement that Jordan gifts his students dramatically changes our lives and makes him such an excellent educator.

In summary: Jordan's passionate explanations, genuine interactions, and inspirational talks have made a dramatic and invaluable impact on my time at UCLA, how I understand Electrical Engineering, and how I perceive learning.

Supporting LOR – 2

To whom it may concern:

In Winter quarter of 2018 I had Jordan Budhu as a TA for the ECE 101A course. I understand that the 2017-2018 Henry Samueli Excellence in Teaching Award is intended to be awarded to TAs who demonstrate excellence in teaching. Even amongst the best TAs within HSEAS, I firmly believe Jordan stands out as a TA who goes well beyond expectations in order to help students learn. I've had more than 30 TA's here at UCLA; none have shown as much dedication, passion, and enthusiasm for a course as Jordan. His enthusiasm was contagious and made covering the course material enjoyable.

In discussion sections, Jordan presented relevant material and focused on developing an intuitive understanding for each concept. At the beginning of the first few discussions, Jordan posted the room number of his lab and explained that everyone was free to drop by to talk about the course material. I was initially skeptical that a TA would truly be okay with students dropping by at odd hours; however, one week there was a conflict with office hours and I needed some homework help. When I knocked on his lab's door, Jordan immediately stopped what he was working on and stepped me through the problem for a half hour.

Jordan took the time to attend each class lecture. As a result, his discussions always directly related to the course material and were able to distill the information into core concepts. During lecture breaks, Jordan could always be seen fielding questions from students. I personally enjoyed going up to Jordan during breaks to converse about whichever topic we were discussing in lecture as Jordan always provided unique insight and relevant applications.

Since the conclusion of the class, I occasionally run into Jordan in the hallways. Jordan always takes the time to greet me and ask how my classes are going. It's clear that he is interested in building a mentor-mentee relationship with students that extends past the official conclusion of a course.

In summary, Jordan dedicated his time to making ECE 101A as enriching of a class as he could. During lecture and discussion sections, Jordan always kept students engaged. He is the type of TA that, regardless of a the difficulty or interest level of a course, can make any course your favorite

course for that quarter or year. If Jordan were interested in taking a position as a professor at a university, he would be hailed as one of those "legendary" professors who has the ability to ignite a passion in the students who were fortunate enough to enroll in his course. Jordan is an outstanding TA and truly deserves the 2017-2018 Henry Samueli Excellence in Teaching Award.

Supporting LOR – 3

To whom it may concern:

My name is _____ and I am a second year undergraduate electrical engineering student. I had the pleasure of having Jordan Budhu as a TA for ECE 101A Engineering Electromagnetics for Winter 2018. I have had over 24 TAs at UCLA, and many of them have been excellent. However, Jordan was unequivately the best TA I've ever had and far exceeded both the TA's job requirements and my expectations.

First, Jordan's sections were incredibly useful and informative. Jordan would do a quick review of the difficult topics discussed in lectures and then complete example problems. Although for many classes I feel that discussions are merely supplements to the lectures, Jordan's discussions distinguished themselves as an integral part of the course with their unique perspective on the content. I am not alone in my assessment of Jordan's discussions. Discussions taught by other TAs tend to have a significant drop in their attendance as the quarter progresses; Jordan's discussion sections never decreased in popularity throughout the entire quarter.

One of Jordan's greatest strengths was his availability and eagerness to help students with the class. Every day of discussion he would write his office hours, his email, and his lab's room number. I remember on the first day of class I was astonished to learn that if one of us ever had a question we could come by his lab and he would help us one-on-one. I have never had another TA who literally invited the students to ask for help outside of office hours and discussion. Even if you couldn't come to his lab Jordan would still find a way to help you. Once I walked by Jordan in the hallway helping a student over Skype as the student couldn't make it to his lab. Jordan's flexibility was incredible.

Additionally, the amount of time and effort put into the class was tremendous. Outside of the drop-in hours outlined above, Jordan went to every lecture to know what was covered and also set up review sessions before the midterm and final. For ECE 101A Jordan taught two discussion sections per week, with a lecture taking place between them. Unlike most TAs, Jordan actually took the time to revise his lesson plan for each discussion so that they covered the new material and were thus more relevant.

One final way in which Jordan distinguishes himself from his peers his is attitude. I have never met someone as passionate as Jordan is about electromagnetics. When he teaches his sections, Jordan's love for EE is readily apparent and is naturally spread to the students. Jordan was even able to get me excited about multivariable calculus; anyone who has taken a multivariable calculus course knows

this is not an easy task. His passion for electromagnetic truly made the course more enjoyable and his perspective gave me a newfound appreciation for the topic.

In conclusion, Jordan was a phenomenal TA for ECE 101A Engineering Electromagnetics. His enthusiasm for the course and aptitude as an instructor made the course more engaging and enriching. I highly recommend Jordan Budhu for the Excellent TA for a Lecture Course Award.

Supporting LOR – 4

Letter of Recommendation for Jordan Budhu

If there were more teachers like Jordan in this world, the world would be a much better place. Now that may seem like an irrational, overexaggerated, impetuous statement, but let me explain.

Jordan carries more passion for the material he teaches, for his students, and for the pursuit of knowledge than all the teachers I have had in my whole life combined. If you sit in his lectures you cannot help but feel an excitement when he explains how four equations, Maxwell's equations, completely explain the electrical and magnetic world around us. It still gives me chills. His teaching is not only passionate, it is, clear, detailed, and explained in the most profound of ways. I have multiple times seen Jordan reading or watching different videos on topics in our class. It is this devotion that makes him such a good teacher. He has studied the art of teaching and can explain one topic in ten different ways such that one of the ways, the student will be able to understand.

Jordan tells all his students they can come by his lab any time if they have a question and need help. Jordan opened up his lab to me not only for class related questions, but for much more. Jordan showed me his Ph.D. work, then went above and beyond to relate his work to the stuff we were learning in class. He gave me advice for my degree, for my future career, but most importantly he inspired me. Jordan is all that most education systems are lacking. Because of Jordan, in a class of at least 200 people, I felt important. I felt like my education and learning was personally cared about. I felt excited to learn. I felt like I knew why I was in school. I felt a sense of purpose and a vision for my future. It takes a special person to affect his students in this way. I am not the only one. Jordan is not only better than all the TA's I have had here at UCLA, in my opinion he is better than all my teachers I have had here as well. I have gotten more from having Jordan as a TA then I could possibly explain on paper.

It is people like Jordan who pave the way for the next generation of world changers. If more teachers were like Jordan, students would wake up excited to go to school every day and leave school with a passion to learn more. Students would feel cared about, important, and then in turn,

would lead them to work hard and do better, as I did. I can say with full confidence that Jordan has impacted my life for the better, and I am forever grateful.

Supporting LOR – 5

To whom it may concern,

It is with great honor that I nominate Jordan Budhu for the Excellence in Teaching Award for a Lecture course for the 2017-2018 year. I had the pleasure of learning from Jordan in my ECE 101A class this past fall and because of his in-depth and descriptive explanations of overarching concepts, physical demonstrations, and incredibly passionate attitude towards the subject matter, I believe that I gained so much more than a deeper passion for the material, but a new way of thinking. Because of Jordan's teaching methodology, patience, and overall desire to have every student comprehend the subject material to the level that he does, I have decided to pursue antenna work and Jordan has been aiding me through this process by involving me in a patch antenna project in which we modeled, designed, and fabricated a patch antenna. In both my 101A class and in his lab, he goes through every detail and makes no assumptions, a trait that is very hard to find in both professors and other teaching assistants. Jordan went above and beyond my expectations for a discussion class because he explained the material from another perspective, as well as finding time for examples and problems. For example, at the beginning of the course we covered Maxwell's equations and in lecture, we went through brief explanations about each of the equations and their integral and derivative form. Because the lecture was mostly theoretically based, it was difficult for me to get a conceptual understanding, but during my first discussion with Jordan he explained the physical intuition behind the integral form of Gauss's law (using detailed diagrams and simulations) and despite having learned Gauss's Law in two other classes prior, it did not click until Jordan explained it. He continued to exceed my expectations of a discussion every week as he would explain that week's lecture with physical intuition, as well as finding time to go over practice problems and answer any questions. He would not move on until he felt as though the entire class had understood and instead of trying to rush through the problems like many other TAs do, he carefully explained each topic or problem, step-by-step at the perfect pace.

I believe Jordan is the most qualified person for this award because he has given so much back to his students and his passion for the material is so radiant and infectious that it makes the material so much more engrossing. With so much theory, it can get difficult to lose sight of the big plan at the end and what exactly we can do with all the theory, but Jordan put everything into perspective and made me excited for future applications and projects in both academia and industry. Jordan is always so excited to share everything he knows with his students and would many times offer for us to come to his lab to discuss the material. To have a TA available at practically any time of the day is unheard of and the fact that Jordan would make time for any student who wanted to learn more about the subject matter says a lot about how passionate he is to share the immense amount of knowledge he has. Outside of 101A, I wanted more experience with antennas and within hours after emailing Jordan, he responded saying that he would love to work on a project with me and another undergraduate. He broke down the parts of the patch antenna into smaller pieces to make it easier for us to understand and then thoroughly went through not just the theory, but also the software to model it and how to fabricate it in the lab. He made sure that we both understood everything and took as long as it needed for us to understand each component of the antenna.

Jordan has not only a passion for the subject, but also a passion for teaching and that really shines through every time he explains a concept or demonstrates applications of the material. I have learned so much from Jordan, not just material, but also how to develop a passion for learning, something that is easy to lose sight of with the monotony of classes. After two years of education at UCLA there is nobody whom I think is more deserving of this award than Jordan Budhu and that is why I strongly recommend him for the Excellence in Teaching Award.

Sincerely,

Supporting LOR – 6

Nomination: **Jordan Budhu** (Excellent TA for a Lecture course)
Course: **EE101A Winter 2018** (with professor Rob Candler)

Jordan is the best TA I've ever have since I joined UCLA. He is not only a good instructor for lecture and course material, but also a good person for being a friend. I also consider him as a helper during my academic life.

I meet him in the winter quarter during EE101A, I used to be in another TA's section, but after joining his discussion once, I changed my discussion section time to his section. The first thing I got from him is the enthusiasm to the material he talked. He was so passion about the electron-magnetic stuff, I was impressed by his lecture and I feel super good with the topic he talked about. Every student loves his lecture and find out the lecture is very helpful. I didn't miss any of his discussion section, and I often come to his office hour.

One of the bests part about Jordan as a TA is he is really helpful both in class andoutside of class. He is the only TA I've ever met that keep saying we can come by any time during the day to his lab, and he is willing to help us even though that is not his office hour time. I went to his lab many times, and he always take his time to explain the material I don't understand! He is also really helpful in class. He also stays with us during the professor's lecture and help professor to explain or share his experiences with us. I feel so support from him both during class-time or outside of the class.

Jordan is also a helper for the academic life. He is very friendly and helpful. I went to him several time not only for the questions from the course I'm taking, but also for the suggestion about doing research, doing project or internship information. He is also willing to share his experience with me, which is really helpful. He gave some suggestions from a student's perspective instead.

All in all, if Jordan gets the award, I have to say he deserves it. He is the best option for the TA award. I cannot find anything he can do better. He is helpful, friendly, and passionate. He is good at lecturing, communion, and he concerns about us. His being makes UCLA become a better place, and I would love to have more mates in the school just like Jordan, and then I think the community will be better and better.

I wish I'll have him be my TA again in the future. If ask me to recommend a TA for the TA award, Jordan is definitely the only and the best choice for me!
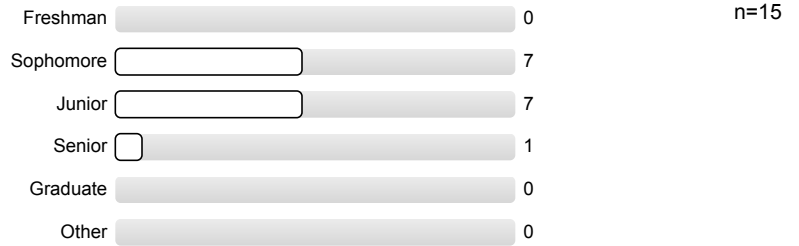
UCLA | EIP

J.F. BUDHU
Evaluation of Instruction Program Report
18W: EC ENGR 101A DIS 1C: ENGR
ELECTROMAGNTCS
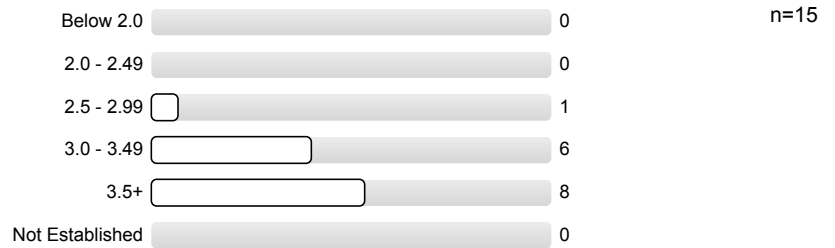No. of responses = 15
Enrollment = 21
Response Rate = 71.43%

Survey Results
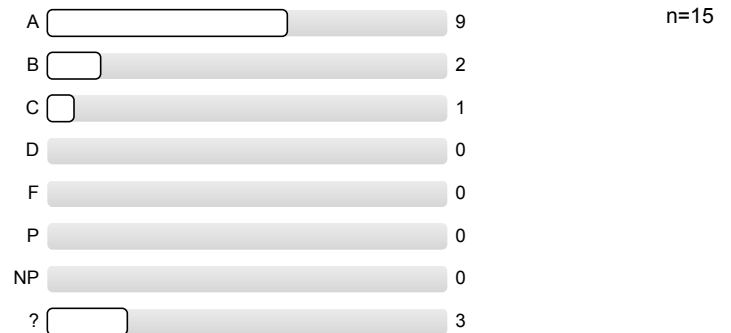
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1. Background Information:

1.1) Year in School:

		n=15
Freshman		0
Sophomore		7
Junior		7
Senior		1
Graduate		0
Other		0

1.2) UCLA GPA:

		n=15
Below 2.0		0
2.0 - 2.49		0
2.5 - 2.99		1
3.0 - 3.49		6
3.5+		8
Not Established		0

1.3) Expected Grade:

		n=15
A		9
B		2
C		1
D		0
F		0
P		0
NP		0
?		3

1.4) What requirements does this course fulfill?

		n=15
Major		15
Related Field		0
G.E.		0
None		0

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2. To What Extent Do You Feel That:

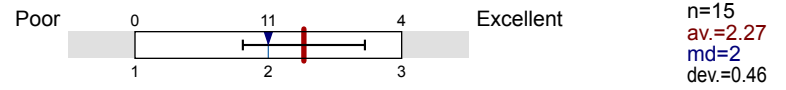**2.1)** Teaching Assistant Knowledge - The T.A. was knowledgeable about the material.

Very Low or Never | 0 0 0 0 0 0 1 1 13 | Very High or Always
1 2 3 4 5 6 7 8 9

n=15
av.=8.8
md=9
dev.=0.56

2.2) Teaching Assistant Concern - The T.A. was concerned about student learning.

Very Low or Never | 0 0 0 0 0 0 1 2 12 | Very High or Always
1 2 3 4 5 6 7 8 9

n=15
av.=8.73
md=9
dev.=0.59

2.3) Organization - Section presentations were well prepared and organized.

Very Low or Never | 0 0 0 0 1 2 1 2 9 | Very High or Always
1 2 3 4 5 6 7 8 9

n=15
av.=8.07
md=9
dev.=1.39

2.4) Scope - The teaching assistant expanded on course ideas.

Very Low or Never | 0 0 0 0 0 0 2 3 10 | Very High or Always
1 2 3 4 5 6 7 8 9

n=15
av.=8.53
md=9
dev.=0.74

2.5) Interaction - Students felt welcome in seeking help in or outside of the class.

Very Low or Never | 0 0 0 0 0 0 1 1 13 | Very High or Always
1 2 3 4 5 6 7 8 9

n=15
av.=8.8
md=9
dev.=0.56

2.6) Communication Skills - The teaching assistant had good communication skills.

Very Low or Never | 0 0 0 0 0 0 1 3 11 | Very High or Always
1 2 3 4 5 6 7 8 9

n=15
av.=8.67
md=9
dev.=0.62

2.7) Value - The overall value of the sections justified your time and effort.

Very Low or Never | 0 0 0 0 0 0 3 2 10 | Very High or Always
1 2 3 4 5 6 7 8 9

n=15
av.=8.47
md=9
dev.=0.83

2.8) Overall - What is your overall rating of the teaching assistant?

Very Low or Never | 0 0 0 0 0 1 1 2 11 | Very High or Always
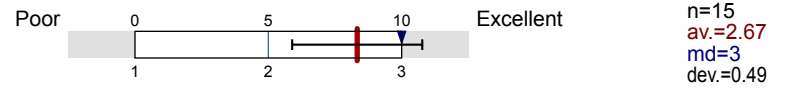1 2 3 4 5 6 7 8 9

n=15
av.=8.53
md=9
dev.=0.92

3. Your View of Section Characteristics:

3.1) Difficulty (relative to other courses)

Low | 0 8 7 | High
1 2 3

n=15
av.=2.47
md=2
dev.=0.52

3.2) Workload/pace was

Too Slow | 0 12 3 | Too Much
1 2 3

n=15
av.=2.2
md=2
dev.=0.41

3.3) Integration of section with course was

Poor | 0 8 7 | Excellent
1 2 3

n=15
av.=2.47
md=2
dev.=0.52

3.4) Texts, required readings

Poor | 0 11 4 | Excellent
1 2 3

n=15
av.=2.27
md=2
dev.=0.46

3.5) Homework assignments

Poor | 1 10 4 | Excellent
1 2 3

n=15
av.=2.2
md=2
dev.=0.56
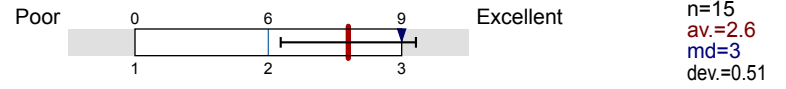
3.6) **Graded materials, examinations**

Poor — Excellent

n=15
av.=2.27
md=2
dev.=0.46

3.7) **Lecture presentations**

Poor — Excellent

n=15
av.=2.67
md=3
dev.=0.49

3.8) **Class discussions**

Poor — Excellent

n=15
av.=2.6
md=3
dev.=0.51

Profile

Subunit: EC ENGR

Name of the instructor: J.F. BUDHU

Name of the course: 18W: EC ENGR 101A DIS 1C: ENGR ELECTROMAGNTCS
(Name of the survey)

Values used in the profile line: Mean

2. To What Extent Do You Feel That:

2.1)	Teaching Assistant Knowledge - The T.A. was knowledgeable about the material.	Very Low or Never — Very High or Always	n=15 av.=8.80
2.2)	Teaching Assistant Concern - The T.A. was concerned about student learning.	Very Low or Never — Very High or Always	n=15 av.=8.73
2.3)	Organization - Section presentations were well prepared and organized.	Very Low or Never — Very High or Always	n=15 av.=8.07
2.4)	Scope - The teaching assistant expanded on course ideas.	Very Low or Never — Very High or Always	n=15 av.=8.53
2.5)	Interaction - Students felt welcome in seeking help in or outside of the class.	Very Low or Never — Very High or Always	n=15 av.=8.80
2.6)	Communication Skills - The teaching assistant had good communication skills.	Very Low or Never — Very High or Always	n=15 av.=8.67
2.7)	Value - The overall value of the sections justified your time and effort.	Very Low or Never — Very High or Always	n=15 av.=8.47
2.8)	Overall - What is your overall rating of the teaching assistant?	Very Low or Never — Very High or Always	n=15 av.=8.53

3. Your View of Section Characteristics:

3.1)	Difficulty (relative to other courses)	Low — High	n=15 av.=2.47
3.2)	Workload/pace was	Too Slow — Too Much	n=15 av.=2.20
3.3)	Integration of section with course was	Poor — Excellent	n=15 av.=2.47
3.4)	Texts, required readings	Poor — Excellent	n=15 av.=2.27
3.5)	Homework assignments	Poor — Excellent	n=15 av.=2.20
3.6)	Graded materials, examinations	Poor — Excellent	n=15 av.=2.27
3.7)	Lecture presentations	Poor — Excellent	n=15 av.=2.67
3.8)	Class discussions	Poor — Excellent	n=15 av.=2.60

Comments Report

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4. Comments:

4.1) Please identify what you perceive to be the real strengths and weaknesses of this teaching assistant and course.

- Jordan is great! I'm so inspired by passion in Electromagnetics and teaching. His discussions are clear and well-organized. He can explain concepts really well, and the examples he gave are really helpful. He really cares about his students.

- Jordan is very passionate about this subject, making him engaging. He cared about the students' education and discussions targeted subjects students were weak on.

- Jordon is the best TA i ever had. His explanation was 100% clear

- Passion about what he taught

- Sometimes talked a little fast. I find that the most useful discussions are ones where we go over a lot of example questions (esp. for physics).

- Strengths: Excellent communication skills. Very knowledgable. Not only approachable but inviting. Very passionate about his field (makes you excited to learn).
  Weakness: He can be slightly scattered when he's excited.

- The most passionate TA I've had so far. Very clearly cared about our learning and whether we were understanding the material, open to questions and encouraged us to go to office hours every discussion. Only point of improvement would be to organize and plan the discussions more in advance. We often ran out of time and couldn't get to all the topics we wanted to discuss. More preparation might help pace the class better.

- While Jordans passion for the subject and care for students is clearly evident, the discussion were a bit disorganized. It would benefit everyone if perhaps the problem and materials were fully fleshed out before the discussion as we often ran out of time. However, Jordan is great for answering questions and really has a deep mastery of the material as well as a strong desire to help his students

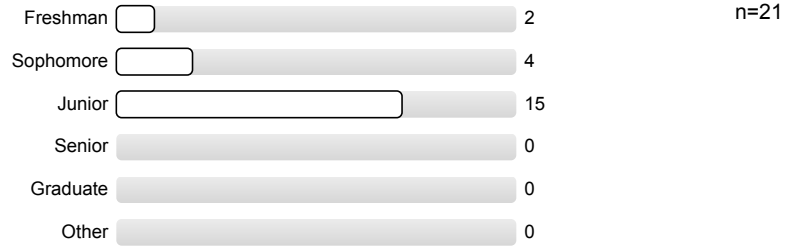- super enthusiastic - talks too fast

J.F. BUDHU
Evaluation of Instruction Program Report
18W: EC ENGR 101A DIS 1B: ENGR
ELECTROMAGNTCS
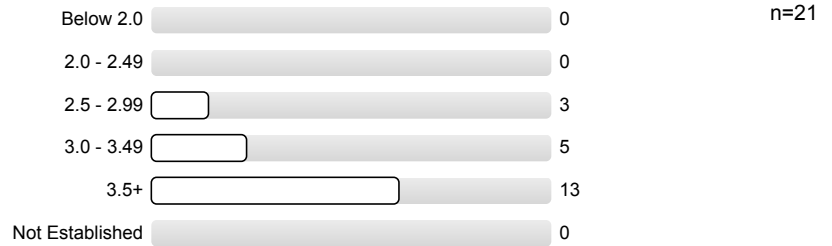No. of responses = 21
Enrollment = 28
Response Rate = 75%

Survey Results

1. Background Information:
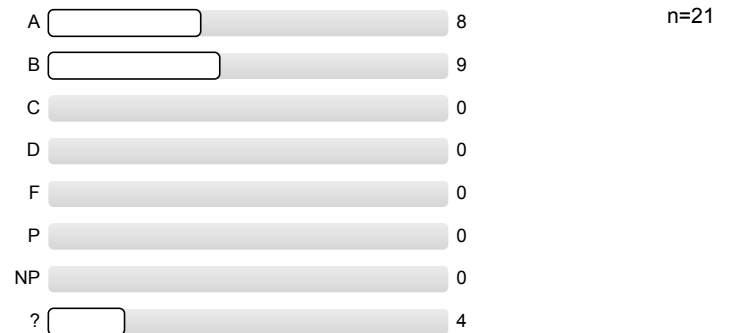
1.1) Year in School:

		n=21
Freshman		2
Sophomore		4
Junior		15
Senior		0
Graduate		0
Other		0

1.2) UCLA GPA:

		n=21
Below 2.0		0
2.0 - 2.49		0
2.5 - 2.99		3
3.0 - 3.49		5
3.5+		13
Not Established		0

1.3) Expected Grade:

		n=21
A		8
B		9
C		0
D		0
F		0
P		0
NP		0
?		4

1.4) What requirements does this course fulfill?

		n=21
Major		21
Related Field		0
G.E.		0
None		0

2. To What Extent Do You Feel That:
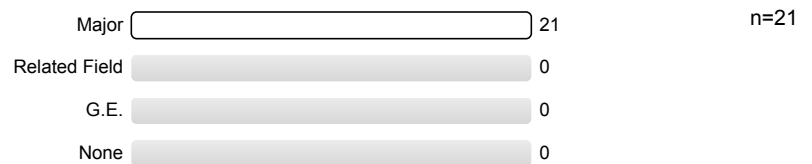
2.1) Teaching Assistant Knowledge - The T.A. was knowledgeable about the material.

Very Low or Never | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 4 | 12 | Very High or Always
positions: 1 2 3 4 5 6 7 8 9

n=21
av.=8
md=9
dev.=1.61

**2.2) Teaching Assistant Concern - The T.A. was concerned about student learning.**

Very Low or Never | 0 | 0 | 0 | 0 | 1 | 1 | 4 | 4 | 11 | Very High or Always
positions: 1 2 3 4 5 6 7 8 9

n=21
av.=8.1
md=9
dev.=1.18

2.3) Organization - Section presentations were well prepared and organized.

Very Low or Never | 0 | 0 | 1 | 0 | 3 | 1 | 3 | 4 | 9 | Very High or Always
positions: 1 2 3 4 5 6 7 8 9

n=21
av.=7.52
md=8
dev.=1.78

2.4) Scope - The teaching assistant expanded on course ideas.

Very Low or Never | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 5 | 11 | Very High or Always
positions: 1 2 3 4 5 6 7 8 9

n=21
av.=8
md=9
dev.=1.45

2.5) Interaction - Students felt welcome in seeking help in or outside of the class.

Very Low or Never | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 6 | 11 | Very High or Always
positions: 1 2 3 4 5 6 7 8 9

n=21
av.=7.95
md=9
dev.=1.75

2.6) Communication Skills - The teaching assistant had good communication skills.

Very Low or Never | 0 | 1 | 0 | 1 | 2 | 0 | 2 | 3 | 12 | Very High or Always
positions: 1 2 3 4 5 6 7 8 9

n=21
av.=7.71
md=9
dev.=2.03

2.7) Value - The overall value of the sections justified your time and effort.

Very Low or Never | 1 | 1 | 0 | 0 | 1 | 1 | 3 | 4 | 10 | Very High or Always
positions: 1 2 3 4 5 6 7 8 9

n=21
av.=7.48
md=8
dev.=2.29

2.8) Overall - What is your overall rating of the teaching assistant?

Very Low or Never | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 5 | 10 | Very High or Always
positions: 1 2 3 4 5 6 7 8 9

n=21
av.=7.71
md=8
dev.=1.79

3. Your View of Section Characteristics:

3.1) Difficulty (relative to other courses)

Low | 0 | 10 | 10 | High
positions: 1 2 3

n=20
av.=2.5
md=2.5
dev.=0.51
ab.=1

3.2) Workload/pace was

Too Slow | 0 | 15 | 5 | Too Much
positions: 1 2 3

n=20
av.=2.25
md=2
dev.=0.44
ab.=1

3.3) Integration of section with course was

Poor | 2 | 9 | 9 | Excellent
positions: 1 2 3

n=20
av.=2.35
md=2
dev.=0.67
ab.=1

3.4) Texts, required readings

Poor | 0 | 15 | 3 | Excellent
positions: 1 2 3

n=18
av.=2.17
md=2
dev.=0.38
ab.=3

3.5) Homework assignments

Poor | 1 | 12 | 5 | Excellent
positions: 1 2 3

n=18
av.=2.22
md=2
dev.=0.55
ab.=3

3.6) **Graded materials, examinations**

Poor   Excellent
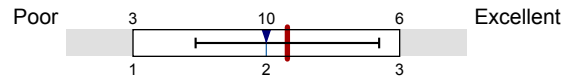
n=19
av.=2.16
md=2
dev.=0.69
ab.=2

3.7) **Lecture presentations**

Poor   Excellent

n=20
av.=2.45
md=3
dev.=0.69
ab.=1

3.8) **Class discussions**

Poor   Excellent
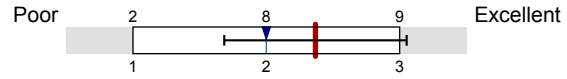
n=19
av.=2.37
md=2
dev.=0.68
ab.=2

Profile

Subunit: **EC ENGR**

Name of the instructor: **J.F. BUDHU**

Name of the course: **18W: EC ENGR 101A DIS 1B: ENGR ELECTROMAGNTCS**
(Name of the survey)

Values used in the profile line: Mean

2. To What Extent Do You Feel That:

2.1)	Teaching Assistant Knowledge - The T.A. was knowledgeable about the material.	Very Low or Never — Very High or Always	n=21	av.=8.00
2.2)	Teaching Assistant Concern - The T.A. was concerned about student learning.	Very Low or Never — Very High or Always	n=21	av.=8.10
2.3)	Organization - Section presentations were well prepared and organized.	Very Low or Never — Very High or Always	n=21	av.=7.52
2.4)	Scope - The teaching assistant expanded on course ideas.	Very Low or Never — Very High or Always	n=21	av.=8.00
2.5)	Interaction - Students felt welcome in seeking help in or outside of the class.	Very Low or Never — Very High or Always	n=21	av.=7.95
2.6)	Communication Skills - The teaching assistant had good communication skills.	Very Low or Never — Very High or Always	n=21	av.=7.71
2.7)	Value - The overall value of the sections justified your time and effort.	Very Low or Never — Very High or Always	n=21	av.=7.48
2.8)	Overall - What is your overall rating of the teaching assistant?	Very Low or Never — Very High or Always	n=21	av.=7.71

3. Your View of Section Characteristics:

3.1)	Difficulty (relative to other courses)	Low — High	n=20	av.=2.50
3.2)	Workload/pace was	Too Slow — Too Much	n=20	av.=2.25
3.3)	Integration of section with course was	Poor — Excellent	n=20	av.=2.35
3.4)	Texts, required readings	Poor — Excellent	n=18	av.=2.17
3.5)	Homework assignments	Poor — Excellent	n=18	av.=2.22
3.6)	Graded materials, examinations	Poor — Excellent	n=19	av.=2.16
3.7)	Lecture presentations	Poor — Excellent	n=20	av.=2.45
3.8)	Class discussions	Poor — Excellent	n=19	av.=2.37

Comments Report

- -

4. Comments:

4.1) Please identify what you perceive to be the real strengths and weaknesses of this teaching assistant and course.

- I've had many great TAs at UCLA, but I would have to say that Jordan is the best.

  The enthusiasm that Jordan has for EE is astonishing - it's quite apparent he loves it. The passion he has for EE translates to how much effort and time he puts into TAing the class. It's obvious that his discussions are well thought out and they helped improve my understanding. Jordan also has a policy where you can stop by his lab and ask him questions if you have any. The first time I heard this I couldn't believe that a TA would let us do that; I ended up doing it myself and it was very helpful. Additionally, Jordan and the other TA put on review sessions for the midterm and final. I really hope I get Jordan as a TA in the future again.

- Jordan clearly has great passion and knowledge in the subject and is great at explaining concepts. However, I never felt like his examples in discussion were helpful since most of the time was spend on tangents unrelated to the relatively simple problems. Conceptually Jordan really helped me understand the course which in the end is more valuable.

- Jordan is great TA. He can explain the class materials very clear!

- Jordan tried very hard and you could tell that he cared but to some extent he made way too many mistakes that really hurt my engagement with the discussion section so I stopped going I'm sure he's a very nice guy but it was hard to sit and try to learn from him because sometimes he rambles or is incoherent and especially the review session he gave was not useful for us.

- Jordan very clearly cares about student learning. He loves the material and is very excited to teach it and to help us understand. However, he has three main problems that severely inhibit his ability to effectively teach:

  He has a similar problem as Candler, where he assumes we understand a lot of material that we actually do not.
  He tries to fit too much material in a single hour of discussion.
  He moves too quickly, goes on too many tangents, and brushes over a lot of material.

  Jordan will usually plan for too much material than he actually has time for; often he will take a simple "plug and chug" problem and go way too in-depth about it and literally spend 20-30 minutes on a single, simple problem. It would be much more helpful if he didn't even bother to go so in-depth on something so simple, and instead to go over a more complicated problem, and explain questions that we may have along the way. He also goes on tangents quite often, which, while very interesting, we don't have time to go over. He has a habit of talking too quickly and asking questions that he has already decided are answered (e.g., he will explain something very quickly, and say "does that make sense?" and before allowing us to answer, he will say "right, it's super simple, very good", even though it might not be simple, and we just havent had time to formulate a question.) Jordan would benefit a great deal from figuring out what material is actually helpful to go over, and needs to better understand the students depth of knowledge.

  In his office hours as well, he has this issue. I'll often have a quick question that really only needs a one or two sentence answer that will launch him into an in-depth explanation that takes about 5-10 minutes, that really offers me no additional insight. He needs to learn how to listen and how to have a dialogue with a student to address what they do or do not know, rather than talk about what he THINKS we do or do not know. (Jimmy is very good at this, for example. He lets the student address what the misunderstanding is, and asks good leading questions that give him an idea of where the

misunderstanding is coming from before he goes into an explanation, in my opinion)

Let me be clear; if discussion was 3 hours long instead of 1 hour long, Jordan would be the greatest teaching assistant of all time, probably. He just needs to learn how to use an hour of time effectively.

Another small thing that every professor/TA has a problem with: when you ask "Are there any questions" or "Does that make sense", I can personally guarantee you that whatever amount of time you spend waiting for a response to that, is never enough time. Again, not unique to Jordan, as almost every professor has this problem. 5 seconds feels like a lot of time in the moment, but it takes a lot of time to formulate a thought and to make sure it's actually a concern that deserves asking about.

- Jordan was my favorite TA that I have had at UCLA so far. His discussions were exactly what I expected from a discussion in the sense that they really supplemented what we didn't have time to do in class, in terms of the theory. As a person who typically needs a lot of background knowledge to understand where things are coming from and the theory behind them, this discussion was exactly what I needed. Jordan provided a good conceptual understanding of the equations as well as doing examples. You could really tell that he was very passionate about the subject and he wanted us all to succeed, which is something that is quite difficult to find in a TA. I wish that this discussion was two hours because I really felt that it covered any holes that I had in lecture. He was always ready to help us and said every week that we could come to his lab to get help. Although I never took advantage of that, it was really nice to know that he was available whenever to help. He also described the things that he did in his lab and I really appreciated that external application side. The combination of Professor Candler and Jordan have really made me consider a career in EM. Absolutely wonderful discussion and I hope I get Jordan as a TA again!

- Jordan was the BEST TA I've had here at UCLA. If Jordan has any interest in becoming a professor, then UCLA should do everything possible to hire him if the university cares about student education at all. His genuine passion and enthusiasm about the course material was contagious. On the first day (and every discussion afterwards), Jordan wrote his OH and the room number of his lab on the board and said to stop by anytime. I took him up on this offer a few times, and every time he dropped what he was doing and immediately helped me. I've never had any teacher, professor, or TA do this. This shows just how much Jordan cares about the students. When I asked him questions about the material that didn't necessarily pertain to what we were covering in the course, Jordan would answer every single question and add his insight to the topic. His discussions were always relevant to the material and he provided a unique view on the subject. I want to emphasize this again: Jordan was amazing!

- One of the Best TA I ever have. Very exciting and useful lecture, it will be better if more discussion about the homework and testing related problems

  It is nice that TAs have multiple office hours through out the week!

- Thank for your help. I hope you could include more example in your discussion.

- The TA has the passion for this course, he told us some true principle for the knowledge. However, I hope he can teach us more fundamental things.

- The pace is a little fast, but it's OK. He needs to improve his writing.

UCLA Engineering

HENRY SAMUELI SCHOOL OF ENGINEERING AND APPLIED SCIENCE

Department of Bioengineering

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May 22, 2017

To: The 2016-2017 Henry Samueli Excellence in Teaching Award Selection Committee,

It is my great pleasure to recommend I am nominating Jordan Budhu for the 2016-2017 Henry Samueli Excellence in Teaching Awards. Jordan served as my teaching assistant for EE 101B: Electromagnetic Waves (winter 2017) and was integral to the success of the course.

I recently received a joint appointment in Electrical Engineering and, in turn, agreed to teach EE 101B. This class is the revised version of EE 161; a class I completed and excelled in as an undergraduate student at UCLA. Assuming that the revised curriculum was similar to EE 161 I put off preparing for the course until the beginning of the quarter this winter and was, in retrospect predictably, surprised to see the revised syllabus contained numerous topics I had learned outside of EE 161, but had not revisited for the better part of a decade. I immediately met with Jordan and expressed my concerns. He suggested we meet a couple times a week throughout the quarter and discuss the class concepts together. Further, he offered to prepare miniature lectures for me to help reintroduce some of the concepts I felt less confident teaching and we stayed with this schedule/plan for the duration of the quarter. This experience was immensely helpful for me in two ways. (1) Jordan's lectures, particularly on vector potentials and rectangular waveguide modes, were beautifully constructed, concise, and informative. I'll admit, that I probably did not receive this quality of instruction from my electromagnetic classes when I was a student. (2) I was able to observe Jordan's teaching style and would routinely stop him in the middle of an explanation to ask why he had presented or communicated a concept in a particular way. This insight helped me present complex material to students whose general understanding of EE concepts at the undergraduate level I feel are so often lost on Professors.

Jordan's execution of teaching assistant logistics was also top notch. He identified/conceived weekly homework problems that were challenging and fair, created solutions manuals for the grader for non-book problems, held review sessions for the students outside of normal working hours, and made himself available, in his advisor's lab, nearly all day, every day. Further, when our grader left for a muti-week, out of town trip, at the end of tenth week, Jordan stepped up and graded the final homework problem as well as every question on the final exam.

All of these details strongly support Jordan's nomination for this award and, in my mind, exceed the criteria for what makes a great TA. However, I think the most admirably part of Jordan's tenure is that he doesn't need to be a TA. I know his adviser (Prof. Yahya Rahmat-Samii) well and know that Jordan's work is well funded by multiple grants. In fact, I'm certain that serving as a TA is a significant distraction from Jordan's millimeter wave optics research and likely resulted in some delays during the quarter (although he would never admit this). After chatting with him countless times throughout winter quarter I ascertained that he applied for a TA position because he loves electromagnetic theory and loves teaching it. He didn't need the position for the money nor did he need it for his CV. He taught for the love of teaching.

I've interacted with many TAs at UCLA both as a student and as a professor and I can confidently say, with great enthusiasm, that Jordan Budhu is the best and most passionate teaching assistant I have ever had the pleasure of working with on campus. When Jordan defends his thesis, and graduates it will be a great gain for the department considering the completion of his novel millimeter wave optical work. However, it will be a great loss to the department as they will have truly lost a one-of-a-kind teaching asset. It will be a great loss for me and any of my upcoming EE teaching duties.

Sincerely,

Zachary D. Taylor, PhD
Adjunct Assistant Professor, Dept. of Bioengineering
Adjunct Assistant Professor, Dept. of Electrical Engineering
The Henry Samueli School of Engineering & Applied Science
Adjunct Assistant Professor, Dept. of Surgery
David Geffen School of Medicine
NeuroImaging Training Program Faculty
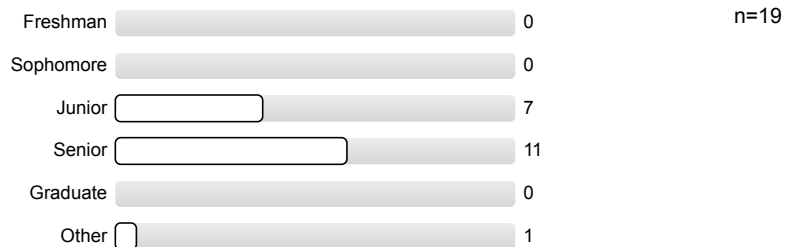School of Letters and Sciences
UCLA

UCLA | EIP

J.F. BUDHU
Evaluation of Instruction Program Report
17W: EL ENGR 101B DIS 1A: ELECTROMAGNTC
WAVES
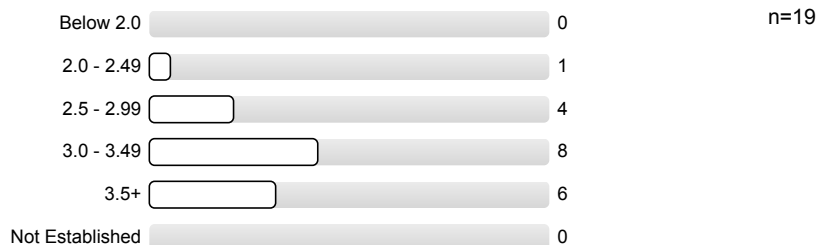No. of responses = 19
Enrollment = 29
Response Rate = 65.52%

Survey Results
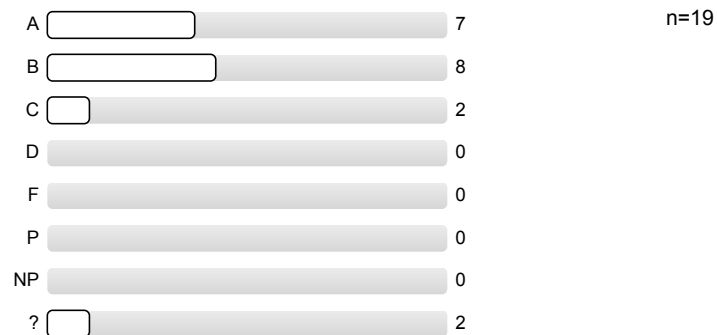
1. Background Information:

1.1) Year in School:

		n=19
Freshman		0
Sophomore		0
Junior		7
Senior		11
Graduate		0
Other		1

1.2) UCLA GPA:

		n=19
Below 2.0		0
2.0 - 2.49		1
2.5 - 2.99		4
3.0 - 3.49		8
3.5+		6
Not Established		0

1.3) Expected Grade:

		n=19
A		7
B		8
C		2
D		0
F		0
P		0
NP		0
?		2

1.4) What requirements does this course fulfill?

		n=19
Major		19
Related Field		0
G.E.		0
None		0

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2. To What Extent Do You Feel That:

2.1) Teaching Assistant Knowledge - The T.A. was knowledgeable about the material.

Very Low or Never | 1 1 0 0 0 0 3 3 11 | Very High or Always
(scale 1–9)
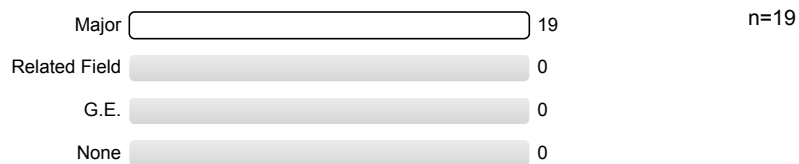
n=19
av.=7.74
md=9
dev.=2.33

2.2) Teaching Assistant Concern - The T.A. was concerned about student learning.

Very Low or Never | 1 1 0 0 0 0 3 1 13 | Very High or Always
(scale 1–9)

n=19
av.=7.84
md=9
dev.=2.36

2.3) Organization - Section presentations were well prepared and organized.

Very Low or Never | 1 1 0 0 1 1 5 2 8 | Very High or Always
(scale 1–9)

n=19
av.=7.21
md=8
dev.=2.35

2.4) Scope - The teaching assistant expanded on course ideas.

Very Low or Never | 1 1 0 0 0 0 4 2 11 | Very High or Always
(scale 1–9)

n=19
av.=7.68
md=9
dev.=2.33

2.5) Interaction - Students felt welcome in seeking help in or outside of the class.

Very Low or Never | 1 1 0 0 1 0 2 3 11 | Very High or Always
(scale 1–9)

n=19
av.=7.63
md=9
dev.=2.41

2.6) Communication Skills - The teaching assistant had good communication skills.

Very Low or Never | 1 1 0 0 1 1 2 2 11 | Very High or Always
(scale 1–9)

n=19
av.=7.53
md=9
dev.=2.44

2.7) Value - The overall value of the sections justified your time and effort.

Very Low or Never | 1 1 0 0 0 0 4 4 9 | Very High or Always
(scale 1–9)

n=19
av.=7.58
md=8
dev.=2.29

2.8) Overall - What is your overall rating of the teaching assistant?

Very Low or Never | 1 1 0 0 0 0 4 3 10 | Very High or Always
(scale 1–9)

n=19
av.=7.63
md=9
dev.=2.31

3. Your View of Section Characteristics:

3.1) Difficulty (relative to other courses)

Low | 1 16 1 | High
(scale 1–3)

n=18
av.=2
md=2
dev.=0.34
ab.=1

3.2) Workload/pace was

Too Slow | 0 16 2 | Too Much
(scale 1–3)

n=18
av.=2.11
md=2
dev.=0.32
ab.=1

3.3) Integration of section with course was

Poor | 1 9 8 | Excellent
(scale 1–3)

n=18
av.=2.39
md=2
dev.=0.61
ab.=1

3.4) Texts, required readings

Poor | 1 9 7 | Excellent
(scale 1–3)

n=17
av.=2.35
md=2
dev.=0.61
ab.=2

3.5) Homework assignments

Poor | 1 9 7 | Excellent
(scale 1–3)

n=17
av.=2.35
md=2
dev.=0.61
ab.=2

3.6) **Graded materials, examinations**

Poor | | | Excellent
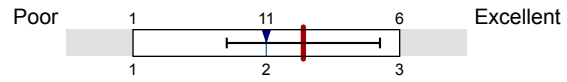
n=18
av.=2.28
md=2
dev.=0.57
ab.=1

3.7) **Lecture presentations**

Poor | | | Excellent
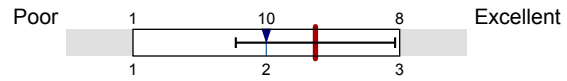
n=19
av.=2.37
md=2
dev.=0.6

3.8) **Class discussions**

Poor | | | Excellent

n=19
av.=2.53
md=3
dev.=0.61

n=18
av.=2.28
md=2
dev.=0.57
ab.=1

Profile

Subunit: EL ENGR

Name of the instructor: J.F. BUDHU

Name of the course: 17W: EL ENGR 101B DIS 1A: ELECTROMAGNTC WAVES
(Name of the survey)

Values used in the profile line: Mean

2. To What Extent Do You Feel That:

2.1)	Teaching Assistant Knowledge - The T.A. was knowledgeable about the material.	Very Low or Never → Very High or Always	n=19	av.=7.74
2.2)	Teaching Assistant Concern - The T.A. was concerned about student learning.	Very Low or Never → Very High or Always	n=19	av.=7.84
2.3)	Organization - Section presentations were well prepared and organized.	Very Low or Never → Very High or Always	n=19	av.=7.21
2.4)	Scope - The teaching assistant expanded on course ideas.	Very Low or Never → Very High or Always	n=19	av.=7.68
2.5)	Interaction - Students felt welcome in seeking help in or outside of the class.	Very Low or Never → Very High or Always	n=19	av.=7.63
2.6)	Communication Skills - The teaching assistant had good communication skills.	Very Low or Never → Very High or Always	n=19	av.=7.53
2.7)	Value - The overall value of the sections justified your time and effort.	Very Low or Never → Very High or Always	n=19	av.=7.58
2.8)	Overall - What is your overall rating of the teaching assistant?	Very Low or Never → Very High or Always	n=19	av.=7.63

3. Your View of Section Characteristics:

3.1)	Difficulty (relative to other courses)	Low → High	n=18	av.=2.00
3.2)	Workload/pace was	Too Slow → Too Much	n=18	av.=2.11
3.3)	Integration of section with course was	Poor → Excellent	n=18	av.=2.39
3.4)	Texts, required readings	Poor → Excellent	n=17	av.=2.35
3.5)	Homework assignments	Poor → Excellent	n=17	av.=2.35
3.6)	Graded materials, examinations	Poor → Excellent	n=18	av.=2.28
3.7)	Lecture presentations	Poor → Excellent	n=19	av.=2.37
3.8)	Class discussions	Poor → Excellent	n=19	av.=2.53

Comments Report

- -

4. Comments:

4.1) Please identify what you perceive to be the real strengths and weaknesses of this teaching assistant and course.

- He is a very enthusiastic TA with a lot of passion for the subject. Great guy too.

- He is very excited about the material and it is inspiring. However, sometimes he gets lost in tangents which take entire discussion sections and we don't get through all the material. However, seeing so passionate about the subject makes the class enjoyable.

- I dont think I have ever had a more enthusiastic TA than Jordan. Literally his discussions were always full and he absolutely loved teaching. His grasp on the material was crazy (I dont know how he learned so much so quickly), and he was so accomodating with his office hours and talking with people. He would go on crazy tangents during discussion, however these tangents were never irrelevant and always lead to some deeper knowledge of the material that I do not think I could have gotten anywhere else. I hope that I can be as enthusiastic and caring as Jordan was when I get to TA a class as a grad student, definitely took notes on how to properly lead a TA section from him.

- Jordan is the most passionate TA I have ever met. His energy and excitement about EM waves helps enlighten the students and perhaps continue their studies in this area. The discussion sessions were also focused on looking deeper into the concepts and understanding the mechanics behind everything. However, his discussion sections can improve by doing more example problems to help students with the homework. These problems can even be application-based, which will help the students appreciate the subject more. The homework solutions should also be posted right after that homework assignment was due, rather than weeks later. Otherwise, great TA and would recommend. Best of luck, Jordan!

- TA was super passionate about the course and material which in turn made me more interested. TA would often get off track during discussion but some of the tangents were worth the trouble. Examples in discussion was good preparation for the midterm. TA was knowledgeable and welcoming.

- Ta is very knowledgeable and very enthusiastic about the subject. It's a fun learning environment

- Very good TA. Great communication skills and very passionate about the material.

- Wow. Up there with the best TA's ever.

- toward the end of quarter, just not posting the solutions for the homework that we needed to study for midterm/final, even though we asked them to post them so many times
  end up not having the solutions for 3 of the 6 hw's posted before the midterm, and these solutions are still not posted now (end of wk 10), and the final is on Monday of the finals' wk
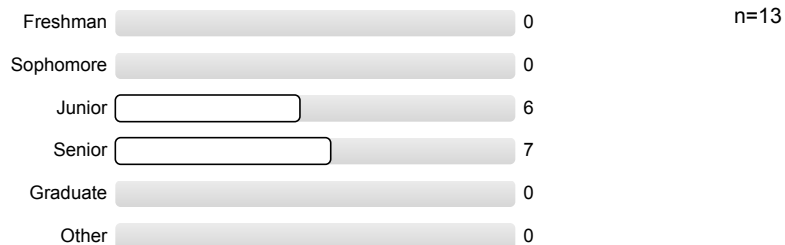
J.F. BUDHU
Evaluation of Instruction Program Report
17W: EL ENGR 101B DIS 1B: ELECTROMAGNTC
WAVES
No. of responses = 13
Enrollment = 25
Response Rate = 52%

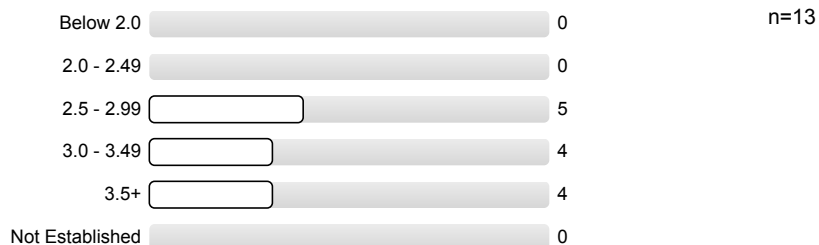UCLA | EIP
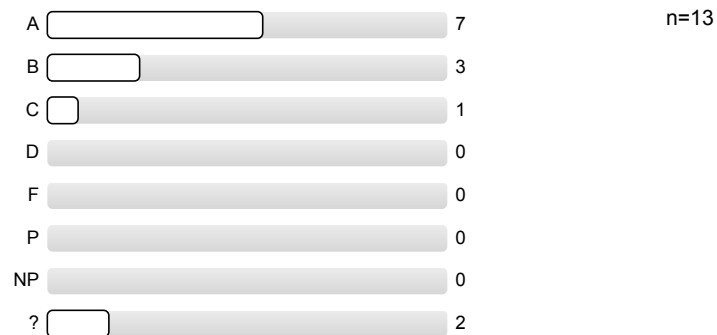

Survey Results

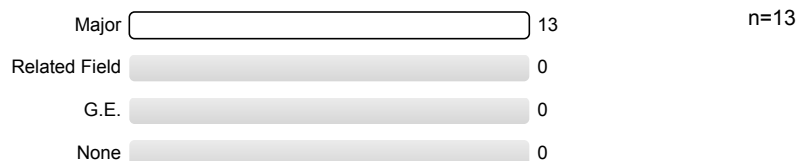1. Background Information:

1.1) Year in School:

		n=13
Freshman	0	
Sophomore	0	
Junior	6	
Senior	7	
Graduate	0	
Other	0	

1.2) UCLA GPA:

		n=13
Below 2.0	0	
2.0 - 2.49	0	
2.5 - 2.99	5	
3.0 - 3.49	4	
3.5+	4	
Not Established	0	

1.3) Expected Grade:

		n=13
A	7	
B	3	
C	1	
D	0	
F	0	
P	0	
NP	0	
?	2	

1.4) What requirements does this course fulfill?

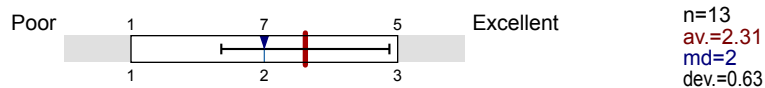|		n=13
Major	13	
Related Field	0	
G.E.	0	
None	0	

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2. To What Extent Do You Feel That:

2.1) Teaching Assistant Knowledge - The T.A. was knowledgeable about the material.

Very Low or Never — 0 0 0 0 2 1 1 2 7 — Very High or Always
(scale 1–9)

n=13
av.=7.85
md=9
dev.=1.57

2.2) Teaching Assistant Concern - The T.A. was concerned about student learning.

Very Low or Never — 0 0 0 0 2 0 2 2 7 — Very High or Always
(scale 1–9)

n=13
av.=7.92
md=9
dev.=1.5

2.3) Organization - Section presentations were well prepared and organized.

Very Low or Never — 0 0 0 1 2 0 1 5 4 — Very High or Always
(scale 1–9)

n=13
av.=7.46
md=8
dev.=1.71

2.4) Scope - The teaching assistant expanded on course ideas.

Very Low or Never — 0 0 0 0 2 1 1 2 7 — Very High or Always
(scale 1–9)

n=13
av.=7.85
md=9
dev.=1.57

2.5) Interaction - Students felt welcome in seeking help in or outside of the class.

Very Low or Never — 0 0 0 0 2 1 1 2 7 — Very High or Always
(scale 1–9)

n=13
av.=7.85
md=9
dev.=1.57

2.6) Communication Skills - The teaching assistant had good communication skills.

Very Low or Never — 0 0 0 0 2 0 2 2 7 — Very High or Always
(scale 1–9)

n=13
av.=7.92
md=9
dev.=1.5

2.7) Value - The overall value of the sections justified your time and effort.

Very Low or Never — 0 0 0 1 2 0 1 2 7 — Very High or Always
(scale 1–9)

n=13
av.=7.69
md=9
dev.=1.84

2.8) Overall - What is your overall rating of the teaching assistant?

Very Low or Never — 0 0 0 0 3 0 1 2 7 — Very High or Always
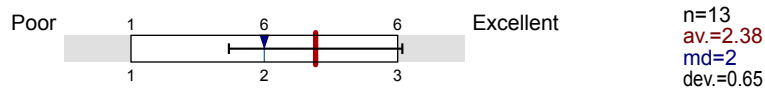(scale 1–9)

n=13
av.=7.77
md=9
dev.=1.69

3. Your View of Section Characteristics:

3.1) Difficulty (relative to other courses)

Low — 1 10 2 — High
(scale 1–3)

n=13
av.=2.08
md=2
dev.=0.49

3.2) Workload/pace was

Too Slow — 0 12 1 — Too Much
(scale 1–3)

n=13
av.=2.08
md=2
dev.=0.28

3.3) Integration of section with course was

Poor — 0 6 7 — Excellent
(scale 1–3)

n=13
av.=2.54
md=3
dev.=0.52

3.4) Texts, required readings

Poor — 0 8 5 — Excellent
(scale 1–3)

n=13
av.=2.38
md=2
dev.=0.51

3.5) Homework assignments

Poor — 0 7 6 — Excellent
(scale 1–3)

n=13
av.=2.46
md=2
dev.=0.52

3.6) **Graded materials, examinations**

Poor | 1 ... 7 ... 5 | Excellent

n=13
av.=2.31
md=2
dev.=0.63

3.7) **Lecture presentations**

Poor | 1 ... 6 ... 6 | Excellent

n=13
av.=2.38
md=2
dev.=0.65

3.8) **Class discussions**

Poor | 1 ... 4 ... 8 | Excellent

n=13
av.=2.54
md=3
dev.=0.66

Profile

Subunit: EL ENGR

Name of the instructor: J.F. BUDHU

Name of the course: 17W: EL ENGR 101B DIS 1B: ELECTROMAGNTC WAVES
(Name of the survey)

Values used in the profile line: Mean

2. To What Extent Do You Feel That:

2.1)	Teaching Assistant Knowledge - The T.A. was knowledgeable about the material.	Very Low or Never — Very High or Always	n=13	av.=7.85
2.2)	Teaching Assistant Concern - The T.A. was concerned about student learning.	Very Low or Never — Very High or Always	n=13	av.=7.92
2.3)	Organization - Section presentations were well prepared and organized.	Very Low or Never — Very High or Always	n=13	av.=7.46
2.4)	Scope - The teaching assistant expanded on course ideas.	Very Low or Never — Very High or Always	n=13	av.=7.85
2.5)	Interaction - Students felt welcome in seeking help in or outside of the class.	Very Low or Never — Very High or Always	n=13	av.=7.85
2.6)	Communication Skills - The teaching assistant had good communication skills.	Very Low or Never — Very High or Always	n=13	av.=7.92
2.7)	Value - The overall value of the sections justified your time and effort.	Very Low or Never — Very High or Always	n=13	av.=7.69
2.8)	Overall - What is your overall rating of the teaching assistant?	Very Low or Never — Very High or Always	n=13	av.=7.77

3. Your View of Section Characteristics:

3.1)	Difficulty (relative to other courses)	Low — High	n=13	av.=2.08
3.2)	Workload/pace was	Too Slow — Too Much	n=13	av.=2.08
3.3)	Integration of section with course was	Poor — Excellent	n=13	av.=2.54
3.4)	Texts, required readings	Poor — Excellent	n=13	av.=2.38
3.5)	Homework assignments	Poor — Excellent	n=13	av.=2.46
3.6)	Graded materials, examinations	Poor — Excellent	n=13	av.=2.31
3.7)	Lecture presentations	Poor — Excellent	n=13	av.=2.38
3.8)	Class discussions	Poor — Excellent	n=13	av.=2.54

Comments Report

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4. Comments:

4.1) Please identify what you perceive to be the real strengths and weaknesses of this teaching assistant and course.

- I thought the TA was very knowledgeable about the course material, had excellent communication skills, and was able to convey the concepts in an intuitive, easy-to-grasp way. He was also very approachable outside of the classroom for assistance. My only recommendation would be to offer more example problems that are akin to those we might encounter on the midterm, so that students have a better idea of the types of problems to expect.

- Jordan is a terrific TA. He is highly involved and dedicated to teaching. I learned a lot of the course material from him, and highly value his knowledge.

- Jordan's a great guy, talks very fast but has a lot to say. Knows his shit, knows how to communicate it, and I felt comfortable asking him anything related to the course or relevant material. Always something to learn in discussion sections. Would occasionally go to the other discussion section as well to reabsorb material. He's a great guy, very concerned with our learning.

  I'll have him again next quarter for 162A and I'm excited to take a class more in his field of expertise.

- Strengths: excellent expansion on course, very engaging and welcoming to students for help, inspiring Weaknesses: n/a

EE162A Wireless Communication Links and Antennas
Students' Comments on Teaching Assistant Performance

Spring Quarter 2012

Instructor
H. Rajagopalan

Teaching Assistant
Jordan Budhu

Course Information

These scores measure the overall course and instructor rating by the students. The first column lists the scores on a scale from 1 (poor) to 5 (excellent), while the second column translates the same scores to a scale from 1 (poor) to 9 (excellent).

	1 (poor) to 5 (excellent)	1 (poor) to 9 (excellent)
Number of students registered in the course	36	
Number and Percentage of students responding to the survey	(36)100%	
Overall Course Outcome Score	**3.9**	**7.9**
Rating of Teaching Assistant Jordan Budhu by Students	**4.3**	**8.3**
Rating of Teaching Assistant Jordan Budhu by Instructor	**NA**	**NA**
Teaching Assistant's Knowledge of Course Materials	4.5	
Teaching Assistant's Communication Skills	4.3	
Teaching Assistant's Effectiveness and Organization	4.2	
Teaching Assistant's Concern about Student Learning	4.4	
Percentage of students who felt they put the required effort into this class	86%	

Scale (1-5): 1=Poor, 2=Fair, 3=Good, 4=Very Good, 5=Excellent, NA Not Available
Scale (1-9): 1=Poor, 4=Fair, 7=Good, 8=Very Good, 9=Excellent, NA Not Available
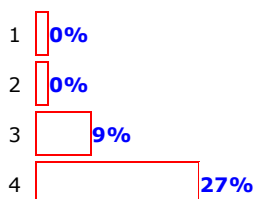
All scores shown are on the scale **1-5** unless otherwise specified.

GPA Scale above 3.5 = **5** , 3.0-3.5 = **4** , 2.5-3.0 = **3** , 2.0-2.5 = **2** , below 2.0 = **1**

Teaching Assistant Rating (Scale 1-5)	Students' Comments on Teaching Assistant Performance	Student GPA Scale (Scale 1-5)	Student Expected Grade

5	Hard working, informative, provides the best solutions to material that span beyond the scope of just the class for the student to gain the insight of how and why, a particular problem works. He definitely put in a lot of time TA the course that involved extra office hours and detailed material.	4	A
5	Jordan was a great TA, his solutions to the HW assignments not only answered the HW problems but whent beyond the problem to clarify each and every step and its overreaching application. His discussions were well organized and his diction and speech is excellent which is essential for being a good TA-something that many TA's in the EE department lack.	3	B
5	I can't believe how much work Jordan is putting into this. The nicest, most responsible and approachable TA I've ever had in UCLA.	5	A
5	Very good TA. he's very responsible to the students. he's always available, answers every questions that I have, and reply his email very fast.	4	A
5	He is very good. He spends so much time to help students with the HW, and material of the class.	4	A
5	TA is quite helpful in finishing the homework problems. Since the problem usually not that easy to solve, the TA gave feedbacks, and us a lot hints.	3	B
5	Jordan was probably the most dedicated TA I have had at UCLA. He was always willing to go over time on his office hours in order to make sure all questions were answered and he was very patient while explaining things. Overall, he was an incredible TA.	3	B
4	Pretty good job! Maybe writing on a white paper instead of a line papers for next year.	1	A
4	Jordan explained concepts well and was very willing to answer questions about the homework without giving too much away. Furthermore, he was very helpful when I encountered difficulties with MATLAB coding.	5	A
4	Jordan was a very good TA. He worked hard and provided resources that no other TA could have. He probably was the most committed TA I've had at UCLA in terms of preparation. He seems a little nervous and shy when lecturing. He was very knowledgeable and I appreciated that he filled in a lot of gaps that Harish left in his lectures. Jordan seemed to understand the students' struggles much better than the instructor did and taught in a manner much more suited for undergraduate students. Those homework solutions he provided (after they were due, of course) were the most complete and instructive solutions I've ever encountered. They are very much appreciated from all the students. Thank you. I can't imagine Jordan doing any better as a TA, given his situation. He had a instructor who limited what he could do with his discussion sections and was instructive in many ways.	5	A
3	-Always very helpful and attentive to students; solution guide is very detailed and informative Overall a great TA	4	B

Rating Histogram

1		0%
2		0%
3		9%
4		27%

TA Rating Scale

1	Poor
2	Fair
3	Good
4	Very Good
5	Excellent
NA	Not Available

5   **64%**

J.F. BUDHU
Evaluation of Instruction Program Report

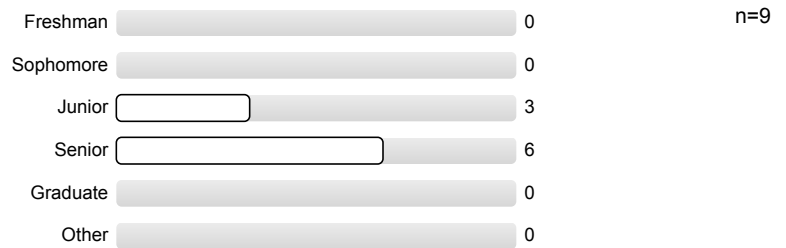### 17S: EL ENGR 162A DIS 1A: WIRELESS COMMUNICTN
No. of responses = 9
Enrollment = 20
Response Rate = 45%

Survey Results

1. Background Information:
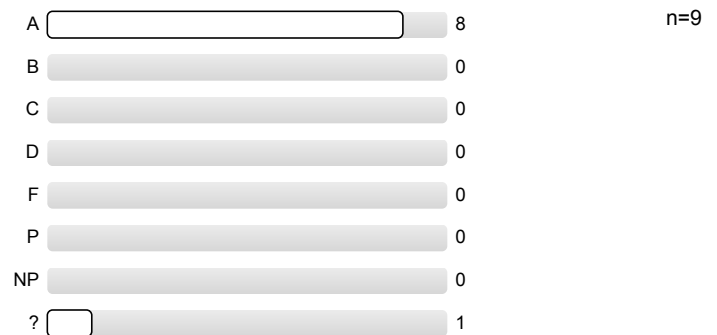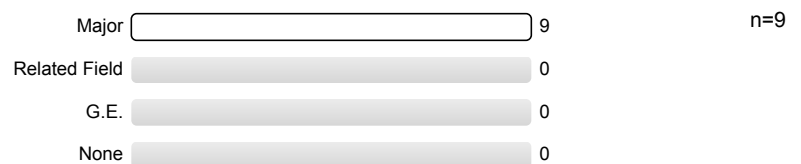
1.1) **Year in School:**

		n=9
Freshman		0
Sophomore		0
Junior		3
Senior		6
Graduate		0
Other		0

1.2) **UCLA GPA:**

		n=9
Below 2.0		0
2.0 - 2.49		0
2.5 - 2.99		3
3.0 - 3.49		3
3.5+		3
Not Established		0

1.3) **Expected Grade:**

		n=9
A		8
B		0
C		0
D		0
F		0
P		0
NP		0
?		1

1.4) **What requirements does this course fulfill?**

|		n=9
Major		9
Related Field		0
G.E.		0
None		0

2. To What Extent Do You Feel That:

2.1) **Teaching Assistant Knowledge** - The T.A. was knowledgeable about the material.

Very Low or Never | 0 0 0 0 0 0 2 2 5 | Very High or Always
1 2 3 4 5 6 7 8 9

n=9
av.=8.33
md=9
dev.=0.87

2.2) **Teaching Assistant Concern** - The T.A. was concerned about student learning.

Very Low or Never | 0 0 0 1 1 0 2 1 4 | Very High or Always
1 2 3 4 5 6 7 8 9

n=9
av.=7.44
md=8
dev.=1.88

2.3) **Organization** - Section presentations were well prepared and organized.

Very Low or Never | 0 0 0 1 1 1 0 2 4 | Very High or Always
1 2 3 4 5 6 7 8 9

n=9
av.=7.44
md=8
dev.=1.94

2.4) **Scope** - The teaching assistant expanded on course ideas.

Very Low or Never | 0 0 0 1 1 1 1 1 4 | Very High or Always
1 2 3 4 5 6 7 8 9

n=9
av.=7.33
md=8
dev.=1.94

2.5) **Interaction** - Students felt welcome in seeking help in or outside of the class.

Very Low or Never | 1 0 0 1 0 1 1 1 4 | Very High or Always
1 2 3 4 5 6 7 8 9

n=9
av.=6.89
md=8
dev.=2.8

2.6) **Communication Skills** - The teaching assistant had good communication skills.

Very Low or Never | 0 0 0 1 0 2 0 2 4 | Very High or Always
1 2 3 4 5 6 7 8 9

n=9
av.=7.56
md=8
dev.=1.81

2.7) **Value** - The overall value of the sections justified your time and effort.

Very Low or Never | 0 0 0 1 1 1 0 2 4 | Very High or Always
1 2 3 4 5 6 7 8 9

n=9
av.=7.44
md=8
dev.=1.94

2.8) **Overall** - What is your overall rating of the teaching assistant?

Very Low or Never | 0 0 1 0 0 2 0 2 4 | Very High or Always
1 2 3 4 5 6 7 8 9

n=9
av.=7.44
md=8
dev.=2.07

## 3. Your View of Section Characteristics:

3.1) **Difficulty (relative to other courses)**

Low | 1 6 2 | High
1 2 3

n=9
av.=2.11
md=2
dev.=0.6

3.2) **Workload/pace was**

Too Slow | 1 6 2 | Too Much
1 2 3

n=9
av.=2.11
md=2
dev.=0.6

3.3) **Integration of section with course was**

Poor | 0 4 5 | Excellent
1 2 3

n=9
av.=2.56
md=3
dev.=0.53

3.4) **Texts, required readings**

Poor | 1 4 4 | Excellent
1 2 3

n=9
av.=2.33
md=2
dev.=0.71

3.5) **Homework assignments**

Poor | 1 4 4 | Excellent
1 2 3

n=9
av.=2.33
md=2
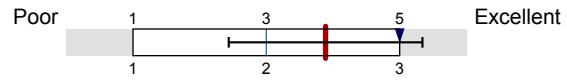dev.=0.71

3.6) Graded materials, examinations

Poor   Excellent
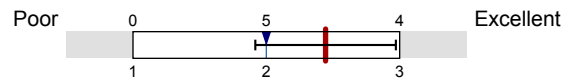
n=9
av.=2.44
md=2
dev.=0.53

3.7) Lecture presentations

Poor   Excellent
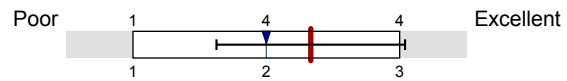
n=9
av.=2.33
md=2
dev.=0.71

3.8) Class discussions

Poor   Excellent

n=9
av.=2.44
md=3
dev.=0.73

Profile

2. To What Extent Do You Feel That:

2.1)	Teaching Assistant Knowledge - The T.A. was knowledgeable about the material.	Very Low or Never — Very High or Always	n=9	av.=8.33
2.2)	Teaching Assistant Concern - The T.A. was concerned about student learning.	Very Low or Never — Very High or Always	n=9	av.=7.44
2.3)	Organization - Section presentations were well prepared and organized.	Very Low or Never — Very High or Always	n=9	av.=7.44
2.4)	Scope - The teaching assistant expanded on course ideas.	Very Low or Never — Very High or Always	n=9	av.=7.33
2.5)	Interaction - Students felt welcome in seeking help in or outside of the class.	Very Low or Never — Very High or Always	n=9	av.=6.89
2.6)	Communication Skills - The teaching assistant had good communication skills.	Very Low or Never — Very High or Always	n=9	av.=7.56
2.7)	Value - The overall value of the sections justified your time and effort.	Very Low or Never — Very High or Always	n=9	av.=7.44
2.8)	Overall - What is your overall rating of the teaching assistant?	Very Low or Never — Very High or Always	n=9	av.=7.44

3. Your View of Section Characteristics:

3.1)	Difficulty (relative to other courses)	Low — High	n=9	av.=2.11
3.2)	Workload/pace was	Too Slow — Too Much	n=9	av.=2.11
3.3)	Integration of section with course was	Poor — Excellent	n=9	av.=2.56
3.4)	Texts, required readings	Poor — Excellent	n=9	av.=2.33
3.5)	Homework assignments	Poor — Excellent	n=9	av.=2.33
3.6)	Graded materials, examinations	Poor — Excellent	n=9	av.=2.44
3.7)	Lecture presentations	Poor — Excellent	n=9	av.=2.33
3.8)	Class discussions	Poor — Excellent	n=9	av.=2.44

Comments Report

4. Comments:

4.1) Please identify what you perceive to be the real strengths and weaknesses of this teaching assistant and course.

- Jordan Budhu is hands down one of the best TA's in the department. I've had him for another electromagnetics course before and he was and has been always willing to help with any question related to research, electromagnetics, or academics. His discussion sections were always worth attending, because he usually had practice problems worked out and prepared or solutions worked through for old homework problems.

  When the final project came around this year, he was very knowledgable and held numerous tutorial sessions for us to learn how to use the program. He answered questions, stayed past time, and walked us through sections that would trouble us.

  He is the sole reason I did not drop this course.

  Contender for the department's TA excellence award.

- Jordan was an incredible TA, and really excited me for the field of antenna design. It's obvious that teaching this subject is something he is passionate about and I'm thankful for the opportunity to learn from him. He was always readily available for help inside and out of office hours, and dove into any question that was asked about the material. I can't think of any ways he could improve, as he is probably the best TA I've had during my time at UCLA.