Computer Science Department
College of Natural and Behavioral Sciences
California State University, Dominguez Hills

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Computer Science Advisory Council Meeting Minutes
Friday, November 3, 2017

Welcome, introductions

Dr. Beheshti welcomed all council members. Council members introduced themselves:

- Marek Suchenek- Computer Science since 1990
- Jack Han- Computer Science for 13 years
- Michael Cleary- IBM
- Mike Marin- IBM
- Karan Bavandi- Optimal Access
- Amlan Chatterjee- Computer Science, 2 years
- Garrett Poppe-
- Bin Tang- Computer Science Assistant Professor
- Liudong Zuo- Computer Science Assistant Professor
- Beri Eisenhardt- CSUDH, Director of Development
- Becker Polverini- PKC Security
- Peter Blankenship- Northrop Grumman
- Tina Johnson- Pacific Life Insurance Company

Overview of Programs
Programs:

A. BS in Computer Science- BSCS Accredited by CAC Computing Accreditation Commission of ABET since 1995. Next ABET visit will be in fall 2018. We have 300 majors.
We are having another accreditation visit in the fall.

B. Master of Science in Computer Science- MSCS Program started 2006.
MSCS offers two tracks: Software Engineering, Distributed System and Networking. Working on getting a new track, Data Analytics/Data Science in preparation for 2019/2020. Program is growing number of students has doubled. We have about 70 students in this program.

C. Bachelor of Arts in Computer Technology- BACT Program started in 2008
BACT offers three different tracks: Homeland Security, General, and Professional track. We have 250 majors.

D. BS in Information Technology- BSIT program started spring 2016.

E. **MS in Cyber Security- MSCY** Approval is pending. Hoping to have it by fall 2018. This program will be offer through College of Extended Education. The revenue coming in from this program will help support faculty, give faculty releases, and help bring faculty load down. We have over twenty students interested in this program.

F. **Computer Science Certificate for High School Teacher-** Starting fall 2018. Will consist of five courses to complete certificate.
Develop a certificate for high school teachers to teach computer science. Program will be a cohort of twenty with extended education offer fall, spring, and summer. We are working on this certificate with College of Education.

G. **Workforce Cybersecurity Certificate-** Working on developing three courses. Grant funded from LA Coalition.

Computer Science Department:

Programs in a glance- Information and pre-requisites for programs are listed at http://csc.csudh.edu/programs/
Enrollment/Graduation- http://csc.csudh.edu/student-enrollment-graduation/
Faculty- Our department has six faculty and fifteen part-timers. We will have three faculty positions available for next semester.
http://csc.csudh.edu/faculty/
Staff- We have two staff members: Mr. Ken Leyba, IT Support (working on bringing Ken full-time to Computer Science) and Ms. Violeta Diaz (another staff is needed for assistance in the office).
http://csc.csudh.edu/staff-2/
Student Clubs- Have four clubs and Dr. Amlan Chatterjee is the advisor for students' clubs.
1. IEEE Computer Society
2. ACM- Association for Computing Machinery
3. CAHSI- Computing Alliance of Hispanic- Serving Institutions
4. Cyber Security Club
http://csc.csudh.edu/student-organizations/

Computer Science Department goals:

Maintain Accreditation for the following- ABET/CAC, NSA/DoD, BSCS, BSIT (new), BACT-HLS
Increase interdisciplinary and multi-institutional research activities- We are actively working with other schools and different departments on campus.
Offer new programs/concentrations/courses- Master's in Cyber Security is pending. Once approved will start fall 2018 through College of Extended Education.
Maintain strong ties with industry partners- Continue building strong ties with our advisory council members and continue having internships, scholarships, and mentorships for our students. It is important to continue long-term relationships with companies.
Increase articulation with community colleges- Department is already working with seven to eight community colleges. Working with community colleges is essential to make sure students are taking all required courses before transferring to CSU, Dominguez Hills.

Increase research activities with our students- Our faculty has been very active working with students on research. Faculty are working on research and publishing papers. Students are becoming more involved in research.

Continue to graduate well-prepared students to continue their higher education studies and/or enter workforce- It is the student choice to start working or pursue higher education once they graduate.

New courses-
- Discrete Structure- Programming application
- Software Development- Students need more programming
- Compiler and Finite Automata (course was under math department, will now be offered under Computer Science).
- Cloud Computing- MS
- Big Data- MS

Cyber Security track elective courses:
- Penetration Testing
- Enterprise Security
- Advanced Gaming

System Engineering (spring 2018)

IT Architecture (fall 2018) For BSIT

Area of Concentration

- Cyber Security

- Virtualization

- Sensor Networks

- Data Mining

- Big Data

- Data Analytics

- Data Science

- Curriculum Development

Research:

Publications- both faculty and students are publishing papers, doing posters, and presentations.

Grants

- **CAHSI – NSF**

- **LA Coalition- Cybersecurity Certificate**

- **CAHSI-INCLUDES- NSF** This includes California, New Mexico, Texas working with community colleges and Merced for all STEM
- **Ignite CS- Google-** Dr. Chatterjee is working with high school students.
- **S-STEM- NSF (scholarship/pending)** A four-year scholarship program for students.
- **SFS- NSF (scholarship for service/in preparation)** 30k scholarships for undergrad students and 40k for graduate students and will cover for textbooks.

Centers
- Center of Excellence in Knowledge Management and Computational Science and Cyber Defense (CECS).

Labs
Security Lab, Big Data Lab, Forensic Lab, and Portable Lab (50 laptops that we can move around from one room to another)
Multipurpose Lab (in preparation)- classroom with portable laptops and hardware components.

Student Advisement
- Faculty advise students at least once a semester. Advising holds are placed on our students' portal every semester for advising. We want to make sure students take courses in the right sequence and meet all required prerequisites.
  We are also making sure we provide opportunities for many of our working students to take classes in the evening and weekends. We will try to offer all courses every semester and on the weekends.
- A degree plan in maintained for each student.

Student Support Programs
- **PLTL- Peer Lead Team Learning (CAHSI Initiative)-** Dr. Han is the faculty coordinator for PLTL. We have PLTL leaders helping students in programming CSC 121 and CSC 123.
- **Employ senior students to help weaker students.**
- **AMP Program-** tutoring workshops
- **ACM work study group**
- **Scholarship-** STEM Advantage awards 15-20 students with 5K scholarships per year.
- **Internship-**
    a. STEM Advantage
    b. IT Practicum: Internal internship collaborated with IT department on campus. Have 30 students placed in various areas on campus. At the end of the semester, students are invited to attend a ceremony where they get a certificate of completion and letter of recommendation. Students received hands on experience and interview skills. We are the only CSU that has this program in place for students.
    c. JPL, Edison, Water District

    Mentorship-
    a. STEM Advantage
    b. CAHSI

Cybersecurity Conference 2017- This is a full day event. Students from surrounding community colleges and universities will participate. Join us at the next Cybersecurity Conference on April 7, 2018.

Review and Approve of CSAC Mission Statement

Organizing the next CSAC meeting- Next CSAC meeting to be held in Spring 2018.

CSAC Chair Election- Becker Polverini, selected as the new CSAC chair

Open Forum (CSAC members and CSC faculty)
- Dr. Suchenek: We need to ensure we cover all student outcomes. As a department, we can lose our accreditation.
- Karan Bavandi: How are student learning outcomes determined to in each classes?
- Dr. Beheshti: In total there are six Student Learning Outcomes. There is one SLO in each class students need to meet in order to move forward to the next course.
- Karan Bavandi: But how do we calculate results? How do we see students exceed apart from exam scores?
- Dr. Suchenek: Members from various committees know what students should be learning in courses; however, sometimes that goes against the accreditation. ABET has a very generic outcome.
- Karan Bavandi: What if students pick their own problems, set goals, analyze, and build on it by using complex theories. Basically start from scratch.
- Dr. Suchenek: It is different. Very narrow. We have to give our students specific problems. We do not tell our students to start from scratch.
- Becker Polverini: What if we add the word *better* to make students improve as time goes by. We can tell if we are meeting our goals at an accelerating rate through time. Another thing to add, are the instructors responsible for the student's outcome, or number four on the student learning outcomes?
- Dr. Suchenek: No, we are not.
- Mohsen Beheshti: That is unfair! If the entire class fails, then we can exam how can we improve, so this does not happen again next term.
- Becker Polverini: That will as well effect how the department functions as a whole.
- Dr. Suchenek: We need to keep our accreditation and meet specific tasks!
- Becker Polverini: The Student Learning Outcomes is a *department outcome* goal. I'll recommend removing a few courses if not met. Or alternate faculty in teaching courses throughout different terms and evaluate grades later.
- Dr. Suchenek: Statistical sample, one section of a course cannot say all students did not meet this outcome.

Short student clubs and orgs presentation
ACM- Association of Computing Machinery

- **Alvaro Tzul**: AMC President. 28 members so far, and continually growing. Current project that is being brainstormed is building a drone. In addition, we participate in conferences such as HENNAC. Last semester was primarily focused on Android; however, as a club, we voted and we're more or less leaning on building drones. Some of the challenges we face with our prospective project will primarily be funding.
    - Dr. Han: Maybe the department can help with anywhere from $200 to $500. But, what is that point of this project?

Alvaro Tzul: The point of this project is to learn how to build devices such as drones' hands on, but most importantly to have fun.

Becker: How much funding will you need from us?
Alvaro: Maybe $20?

Becker: You need to itemize and we will talk numbers when you come up with a solid amount.

Gained two sponsors for drone project

Cyber Security Club
  o **Jobert Nombrado**: I managed and ran the Toro hackathon as well as helped with ACM, Cyber Security, CAHSI, and STEM. Last conference we attended we had 130 attendees from Dominguez Hills. In our lab, there are always students there ranging from ten to twenty. The lab is small, however, despite the size situation, students are constantly there using their personal laptops and programs as well as the university's.
     Becker: Why don't students use google since it is free for student's academics?

ABET
Dr. Suchenek:
Proposed Program Education Objectives (PEO's)- To make sure our Program Education Objectives provide full sense of direction to our program constituencies, computer science faculty members in consultation with our Computer Science Advisory Council established the following three PEO's. These are also posted on our web site as presented by the link below:
Existing: Alumnus will be able to pursue leadership roles in professional careers
Alumnus will be able to pursue graduate education or other professional degrees.
Alumnus will be able to engage in research, scholarly actitivies, and team work

http://csc.csudh.edu/program-education-objectives/

PROPOSED: Alumni will be able to further their professional careers.
Alumni will be able to pursue graduate education.

New ABET Student Outcomes:
1. Analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions. [CSC 401- Analysis of Algorithms]
2. Design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline. [CSC 123- Intro to Programming]
3. Communicate effectively in a variety of professional contexts. [CSC 492 Senior Design]
4. Recognize professional responsibilities and make informed judgements in computing practice based on legal and ethical principles. [CSC 301- Computers and Society]
5. Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline. [CSC 481- Software Engineering]
6. Apply computer science theory and software development fundamentals to produce computing-based solutions. [CSC 311- Data Structures]

The computing topics must include:

1. Techniques, skills, and tools necessary for computing practice. [Entire core, except CSC 301]
2. Principles and practices for secure computing. [CSC 481]
3. Local and global impacts of computing solutions on individuals, organizations, and society. [CSC 301]

Regards to our PLO's does everyone agree?

everyone agrees

Dr. Suchenek: I am part of a teaching club. CSUDH has been a teaching institution since approximately 1980. Our goal is to be accredited. TRW and Northrop Grumman have the funding for faculty to go to conferences. Faculty teaching 4-9 classes along with doing research can become overwhelming. Since 1992 we have had our accreditation and we intend to keep it. About two years ago, Northrop Grumman cancelled their contract with Dominguez Hills. Weaknesses, or deficiencies, that's comes along with losing the accreditation lessens the teaching and learning as well as it adds more loads for full time faculty to be advising.

Summary:
Dr. Suchenek: Faculty should be teaching 9 units to be at a good pace. This pace will also help allocate more for the department. We are asking council members for support on reducing load from 12 WTU down to 9 WTU per semester.

Peter Blankenship: Does the university have the funding to hire additional faculty?

Becker: When does the university budget discussion happen?

Mike Marin: In support of writing, the letter due to awareness of the importance of the department remaining accredited.

Dr. Beheshti: BSIT will also be an accredited program in the mere future.