



EFFECTIVE TEACHING

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TEACHING LOAD

- ◉ What is my teaching load?
 - 12 credit hours (4 classes)
 - ◉ A large section is 6 credit hours
 - ◉ No TA unless there is a large section
 - Typically larger than in other institution
- ◉ What if I work extra? (more pay, semesters off, etc.)
 - No reward system
 - ◉ Planning one as we speak
 - No semester off

CLASSES

◉ Courses I teach

- Computer Architecture
- Capstone in Computer Engineering
 - ◉ 13 groups
 - ◉ 4 interdisciplinary
 - ◉ Team teaching
- Manage Interdisciplinary Cycles - Humanities
 - ◉ Inter college collaboration

◉ Do I get a choice?

- Yes
 - ◉ I have to give 5 options to my chairman, he will select from those
- No
 - ◉ If needed by dept, they will change courses



AUDIENCE

⦿ Audience

- Computer and Electrical Engineering Student
 - 4th and 5th year in 5 year program
- Highest scores in College Board exam
 - Puerto Rico

⦿ Do they want to be there?

- Computer Architecture
 - Yes
- Capstone
 - No



CURRICULUM DEVELOPMENT

- ◉ What curriculum development have you done?
 - Currently directing Computer Engineering Curriculum revision.
- ◉ How did that go?
 - Hard / currently working on it
- ◉ What did I learn?
 - Lack of knowledge I had on education
 - CAP Model from Pellegrino's work [1]
(Content/Curriculum, Assessment, Pedagogy/Delivery)
 - ◉ Outcome-Based education
 - ◉ Constructivist approach
 - ACM/IEEE computing curricula
 - Creativity

BALANCE

- ◉ How to balance (and connect) research and teaching?
 - Balance? Find synergy.
 - Prioritize
 - ◉ Eisenhower Method
 - Is it important? Is it urgent?
 - ◉ Important and urgent - do
 - ◉ Important and not urgent - plan
 - ◉ Urgent but not important - Delegate
 - ◉ Not urgent, not important - Drop

BALANCE

- ◉ Boise method [2]: Nihil Nimus (nothing in excess)
 - Writing
 - ◉ Successful young professors: Avg: 1.8 papers/year
 - ◉ Unsuccessful young professors: Avg: 0.2 papers/year
 - Difference?
 - ◉ Moderation
 - ◉ Write in short periods instead of big chunks. Write and write (when in the mood and when not in the mood)
 - ◉ Balance work and fun
 - ◉ Save time for people and relationships
- ◉ Becoming pumpkin at 5:00pm

PROFESSIONAL DEVELOPMENT

- ◉ What professional development have you had directly connected with teaching?
 - Capstone Trainings:
 - High Performance Teams
 - Creativity
 - Project Management
 - Time Management
 - Intellectual Property
 - Effective Meetings
 - The Four Disciplines of Execution
 - Entrepreneurship- Babson
 - Crucial Conversations
 - General Education - AACU
 - ARG - Affinity Research Group

TEACHING TIPS

- ◉ Crucial “Teaching Tips” have you found valuable?
 - Do not be afraid to try new things. - F. Vega
 - Do not be static. You cannot teach a course the same way every semester. - G. Love
 - ◉ Listen to the students.
 - Keep learning.
 - ◉ Stages of competence - E. Villa
 - ◉ Krugger and Dunning Effect - R. Veguilla
 - ◉ Inverted classroom - C. Papadopolous
 - Critical Thinking skills is a fundamental learning outcome. - AACU
 - ◉ High Impact Practices - LEAP project
 - Writing-Intensive experiences
 - Undergrad Research
 - Collaborative Experiences
 - Capstone

REFERENCES

1. Pellegrino, J. W. (2006). Rethinking and redesigning curriculum, instruction and assessment: What contemporary research and theory suggests. National Center on Education and the Economy. <http://www.skillscommission.org/commissioned.htm>
2. Robert Boice. Advice for New Faculty Members: Nihil Nimus. Pearson, 2000.