Starting a University CubeSat Program: A Top Ten List of Lessons Learned

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Lesson #10

There's No Substitute for Good Documentation

• It's good engineering practice
• Student turnover is inevitable
Lesson #9

Well...Maybe There Are Good Substitutes

- Wiki
- YouTube
Lesson #8

My Best-Kept Secret

• The faculty advisor only kick-starts the process
• The real success: students mentoring students
Lesson #7

CubeSat is Great for Turning Good Students Into Excellent Students

• 150 students trained since 2001
• 9 in PhD, > 20 in MS
• National awards
• Publications, Patents, Start-up Company
• > $0.5 million in student-written proposals
Lesson #6

But it’s Even Better at Motivating Students for Whom the Traditional Educational Paradigm Doesn’t Work
CubeSat is Re-Engineering Methods of Teaching Engineering

- Open-ended, project-based learning
- The abundance of professional “soft” skills
Lesson #4

Institutional and Industrial Backing is Key

- Design reviews
- Funding
- Mentoring, and then hiring, of our students
Lesson #3

The Two-Pizza Team Concept

- Keep the team size to a manageable limit
- Let everyone have a contributing role
Lesson #2

Let Them Have Fun...

Guinness…the only way to survive a crash
Lesson #1

The Future is in Good Hands

- Bryan Fewell - 8th Grader at Hanalani Schools
- Seven awards at the Hawaii State Science Fair
Bryan Fewell - 8th Grader
Mahalo!