Leveraging Caltech Teaching to Propel Your Future in Industry, Academia & More

September 25, 2019

Dr. Peter Hung (BS ’08, MS, ’12, PhD ’16)
Project Leader, The Aerospace Corporation

Dr. Cassandra Horii
Founding Director, CTLO

Part 1: The Big Idea

• Make any teaching or mentoring opportunity worthwhile for your own career and personal development

Part 2: Career Components & Teaching Experiences

• Explore what and how to develop important professional and personal skills through teaching and mentoring

Part 3: Make a plan

• Set some career and/or personal development priorities and make a plan for achieving your goals.
Part 1: The Big Idea

Make the most of every opportunity

“Individual Development Plans”

1. Self-assessment
   Consider your skills, values, and interests.

2. Career exploration
   Learn about career options for PhD-level scientists, and compare your skills, interests, and values to each option.

3. Set goals
   Make a concrete plan for how you will improve your skills, build your network, and get the experience you need to prepare for your future career.

4. Implement plan
   Recruit mentors to help with various parts of your plan.

Submit

Your own IDP

Submit

Dave’s Daily Tip

YOU MUST HAVE A GAME PLAN.
IF YOU AIM AT NOTHING, YOU WILL HIT IT EVERY TIME.
What career/personal skills do you think are involved in teaching and mentoring?
Career/personal skills involved in teaching & mentoring:

- Communication
- Management
- Leadership
- Organization

Part 2: Career Components & Teaching Experiences
Activity: In Pairs

Most lab courses require lab reports and some classes provide the opportunity to go over the lab report, what went well and where they can improve on and to ask questions about anything they don’t understand. We’ll do a practice: half of the group will play the role of TA and the half as the student giving back a lab report.

1. Decide your roles – One “TA”, one “Student”
2. Read your role-specific instructions (half-sheet)
3. Follow instructions and play out the scenario
4. After a couple of minutes or when you feel finished with the scenario, share what you noted with your partner.

Debrief

What was that like for TAs? For Students?

Easy? Difficult? Awkward?

How were your perceptions similar or different?
Activity... On your own, write one boundary, expectation, or resource on each post-it. Come place it in the grid when you’re ready.

<table>
<thead>
<tr>
<th></th>
<th>Boundary</th>
<th>Expectation</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor or PI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Admin Staff</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fellow TAs or Lab-mates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Organization

Brainstorm: What does it take to effectively...

Lead a meeting
- Planning
- Time estimation/allocation
- Goal-setting
- Negotiating multiple viewpoints

Teach a recitation
- Planning
- Time estimation/allocation
- Goal-setting
- Addressing multiple learners
Brainstorm: What does it take to effectively...

Manage a project
• Long- and short-term planning
• Delegation
• Giving feedback
• Adapting to the unexpected

Mentor an Undergraduate Researcher
• Long- and short-term planning
• Delegation
• Giving feedback
• Adapting to the unexpected

Part 3: Make a plan
# Mini-IDP Worksheet

## Leveraging Caltech Teaching to Propel Your Future in Industry, Academia & More

### My Career Hope/Dream/Wish:

List one or more big-picture goals. Your hopes/dreams/wishes could be concrete (e.g., work as a ____ at ___) and/or more open-ended (have a career where I get to ____).

### Skills I most want to develop:

#### Communication:

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

#### Management & Leadership:

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

#### Organization:

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

### As a TA or Mentor, I will...

What are some opportunities you’d like to seek out, ways you could develop and get feedback on specific skills above, or other actions that come to mind? Check off the skills above as you practice these skills in your TA or Mentor role.