**Notes from Inclusive Caltech Core Event and Meeting: April 10, 2018**

**Attendees:**

Students -Tim Liu, Kavya Sreedhar, Gabby Tender, Alejandro Lopez (Panel);   
Vibha Vijayakumar

Faculty -Eric Black, Claire Ralph, Cindy Weinstein, Chris Umans, Kim Border, Adam Wierman, Tom Miller, Kevin Gilmartin, Gil Raphael, Jeff Mendez, Melany Hunt, Dinakar Ramakrishnan, Paul Asimow, Steve Frautschi

Staff -Hanna Song, Meagan Heirwegh, Lesley Nye, Barbara Green, Jenn Weaver,

Cassandra Horii, Jennifer Howes

**Student Panel**

Question 1. Looking back on Core, what did you gain or what did it mean to you?

* Viewed as breadth / exposure to variety of topics to explore before she defined option
* opportunity to understand basics of other fields
* Caltech Core gives basic science foundation and opportunity to read papers
* used Core to determine major
* allows professors who are teaching more advanced topics in upper year classes to make assumptions about what students know about fundamentals before going into clas
* fundamental understanding of background principles
* more than for sake of breadth, but opportunity to see connections between the different disciplines and use skills learned in one course / discipline in another on
* opportunity to find out what you dislike as well (negative results are results too)

Question 2. Skills beyond Core?

* learned how to collaborate effectively (work yourself before working in a group)
* opportunity for failure because of pass/fail
* able to explore different study techniques
* social interaction and network beyond your house

Question 3. Split between Prac and Analytical in math?

* tendency for students to work on problems separately
* opportunity for silos for majors to work together (e.g. analytical physics)
* split between analytical and practical well-received by students
* students don’t always realize that you can get a lot out of the analytical physics/math track even if you’re not analytical major
* need to have more information about each and why you might take one or the other
* opportunity to take classes which align with how you think (analytical or practical – which is Caltech-leaning)

Question 4. Were there ways in which Core courses connected?

* math and physics tie together a lot
* math teaches multi-variable calc in third term but is already being used in another course in second term
* Ge1 / Bi1 are more survey courses and don’t tie in as well with the math / physics curriculum
* Bi1 connected in terms of quantitative skills with other courses
* Ch1B -huge effort to connect topics within the course and to other Ch1 courses
* appreciate the initiative by professors to make connections across courses within fields and across-disciplines
* nice to see when professors use examples from different fields
* Bi1 -last year, prof made a huge effort to incorporate other skills and concepts within Bi1 (e.g. coding, chemistry)
* math tends to lag physics in Core and Pseudo-Core in terms of what they’re learning
* students in Ma2 could understand what was happening in class more so than students in 1a (who just took formulae for granted)

Discussion:

Faculty:

* Professors who teach Core have not taken Core to know what the connections are and what’s missing from other classes / lags in teaching
* Ph1a and Ma1a worked back in the day because the faculty members had been teaching the same classes side by side “forever” -> also seen in Ph2a and Ma2a. There is now a large turnover in faculty teaching Core so they have lost community of knowledge and there is less continuity. Gives you foundational knowledge to switch fields before grad school.

Student:

* Ch3a and Ch1b and Ch41 -> everything made so much more sense after taking all of them -> realize that Ph1b now helps with understanding of Ch9 topics

Question 5. Importance of connections between Core for your options and later?

* ChemE is no longer requiring Ma3 because will teach own computation course, which meant that he lost attachment to Core
* can transfer math skills to different fields / courses
* Phillips’ Bi1 used skills from Ph1 and Ge1 and applied to concepts in Bio
* in EE, have opportunity to take menu class, but wanted to take a course that related to Core more
* Core is more focused on natural sciences
* learn skills in ways of thinking and how to approach problems

Q. Do professors make assumptions about what students have learned in Core?

* when taking grad classes, had greater math and physics skills more recently learned that helped
* would be helpful for students to know how / what can be used that is learned in Core that can be used in later courses
* fundamental tradeoff between breadth obtained in Core and depth obtained in option major

Comment from faculty:

* Grad students not always coming in with a strong background in math and physics -> Ma2 and Ma3 used as Ma102 and Ma103. Mechanics is a part of Math that was stolen by Physics.

Question 6. From faculty in attendance - What do you think of restricting / professing what sequence in which to take Core?

* students make tradeoff between taking CS courses and following sequence in Core because they want programming skills
* people are not putting off Ma1, Ph1, Ch1
* students don’t believe you’re missing out by putting humanities courses later or by taking Bi1 later
* what are the issues / harms that come with taking courses later?

Question 7. From faculty in attendance - What strategies can we use to increase appeal / attendance in the large classes? How do you place value in terms of classes vs. rec sections?

* lecture is more presentation / background knowledge that some students would rather receive from textbook
* lectures that students go to are the ones that are the most engaging
* liked flipped sections
* students appreciate being able to apply what you learned in lecture in rec section
* flipped classroom with videos beforehand (e.g. Yaser’s course)
* if rec sessions are the same material, students would choose rec sessions (especially since they’re later in the day)

Question 8. Anything missing from Core, or that you wish you’d known?

* wish I had known how to take skills / content from one course and applying it to another course
* would have liked to see more biology in Core
* took CS1 first year because it was very helpful / more prepared for major / SURF
* appreciates interdisciplinary nature of Core
* Ec11 -learn how to write, learn how to code, take something in economics, do research

Core Faculty Discussion (Comments from Faculty Only)

- gender biases / statistics are what you would expect stereotypically

- higher response rate on mid-quarter feedback than TQFRs

- house biases may exist for / against help seeking and general GPAs

- question: what is the threshold for students seeking help?

- distribute results to freshman advisors

- current class is weakest one person has seen in terms of advisees as freshmen advisor and wants to know how we’re going to be addressing this (institutional research, implications)

- priority for Institute to hire more people in institutional research?

- need to be looking at admissions and how to get feedback to admissions about who is failing out

- in pre-frosh weekend, we need more information about Core and what to expect from Core as a whole

- Mid-term progress reports

-what happens when they receive one?

-freshman advisor sends to Dean’s office

- academic issues, mental health issues and conduct issues for students need to be connected, but needs to be linked back to admissions

- has always been a problem with students not being prepared for Caltech

- early identification and targeted intervention is necessary for retention

- institutional research was mentioned again

- next steps -need focus groups to ask what students why

-could add more questions in which you ask why students don’t seek help

-tie questions to how often you attend class / hours spent on course

-could aggregate results overall than per course

-include some questions about transition into options in spring quarter mid-term surveys