TEACHING AT A LIBERAL ARTS COLLEGE: INDEPENDENT MINDS WORKING TOGETHER

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WHAT ARE WE GOING TO DISCUSS TODAY?

- Some background on me and The College of Wooster (the school where I work)
- What does the job consist of?
  - Teaching
  - Research
- Can I still conduct research (or…do I have to conduct research?)
- A day in the life...
- Where do I look for jobs and what do you have to submit to be competitive?
MAIN POINTS FOR TODAY!

• Teaching is very much a mentor/mentee relationship, just on a larger scale

• Upends the normal teacher student relationship – teacher becomes the coach/facilitator rather than the source of knowledge
MAIN POINTS FOR TODAY!

• Most importantly – you have to enjoy helping and working with students!
MAIN POINTS FOR TODAY!

• Most importantly – you have to enjoy helping and working with students!
• Teaching is a learned skill...and so is doing research!
  • the more you practice (both formally and informally), read, and try things out, the better you can get (and the more you’ll grow!)
  • You can learn alot by watching...
• Teaching (and doing research at a small school) is not necessarily for someone who wants an “easy” academic route
  • it’s a ton of work, but has a more defined end point (finals!)
  • At smaller liberal arts colleges, both teaching and research matters
  • Impact a large number of students (similar to R1)!
SOME BACKGROUND ON ME...

- Completed my Ph.D. in Biochemistry, Cell, and Developmental Biology at Emory University in 2009
- Did a teaching postdoc through the IRACDA program ([https://www.nigms.nih.gov/Training/CareerDev/Pages/TWDInstRes.aspx](https://www.nigms.nih.gov/Training/CareerDev/Pages/TWDInstRes.aspx)) and map below
SOME BACKGROUND ON ME…

• Completed my Ph.D. in Biochemistry, Cell, and Developmental Biology at Emory University in 2009
• Did a “teaching” postdoc through the IRACDA program
• Started at The College of Wooster (in Ohio) in 2013-2014 school year
  • Background info on CoW…
    • Variety of science majors (Biology, BCMB, Neuroscience, Chem, Physics, etc.)
  • Capstone Independent Study (IS) research project completed by all students

About 1 hour South of Cleveland

About 1.5 hours north of Columbus
### What Types of Classes Do I Get to Teach and How Is the Curriculum Structured (Broadly Speaking)?

<table>
<thead>
<tr>
<th>Year 1-2</th>
<th>Year 2-4</th>
<th>Year 4</th>
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<tbody>
<tr>
<td>Foundations in Biology</td>
<td>Stats and Experimental Design</td>
<td>Upper Level Elective</td>
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<td>Gateway to Evolution and Organismal Biol</td>
<td>Gateway to Mol. &amp; Cell Biology</td>
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<td>First Year Seminar</td>
<td>“Learning Across The Disciplines”</td>
<td>Cultural Perspectives</td>
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<td>Foreign Language</td>
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<td>Quantitative Reasoning</td>
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<td>Electives outside the major</td>
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**Senior Year Independent Study (IS)**
MY TEACHING SCHEDULE FOR FALL SEMESTER OF 2017-2018

- **Foundations in Biology**
- **Gateway to Evolution and Organismal Biol**
- **Stats and Experimental Design**
- **Gateway to Mol. & Cell Biology**
- **Upper Level Elective**
- **Upper Level Elective**
- **Upper Level Elective**
- **First Year Seminar**

**Senior Year Independent Study (IS)**
- Coteaching with one other faculty (~35-45 students)
- Cellular Neuroscience (~40 students)
  +2 Lab sections (~20 each)
- 7 IS students + 1-2 others (sophomores/juniors)
FACULTY OFTEN HAVE TO BE BOTH GENERALISTS AND SPECIALISTS AT THE SAME TIME (IS THAT POSSIBLE?!)

• Our faculty...
  • Often you will be the only person working on a particular question or in that entire field...so keeping close contacts with those around you is key (to your own sanity)!
  • Truly interdisciplinary
  • Get to learn some really interesting biology
  • Teach a wide variety of topics
  • So...you need to be adaptable
WHAT ARE WE GOING TO DISCUSS TODAY?

• Some background on me and The College of Wooster (where I teach in the biology department and neuroscience program)

• What does the job consist of?
  • Teaching
  • Research

• Can I still conduct research (or…do I have to conduct research?)
  • Funding opportunities…

• A day in the life…

• Where do I look for jobs and what do you have to submit to be competitive?
DO I HAVE TO CONDUCT RESEARCH (OR CAN I JUST TEACH)?

• Depends on the school...some liberal arts college prioritize it more than others...but many will at least ask for a research statement and might ask you to do a little bit of research.

• These types of positions are usually perfect spots to conduct educational research on the Science of Teaching and Learning (SoTL):
  • What are the best ways to teach certain topics?
  • Design controlled studies to understand whether teaching a topic in a new way can be more effective.

All former FIRST fellows with current faculty appts.
WHAT IT IS LIKE TO CONDUCT RESEARCH AT A SMALL LIBERAL ARTS COLLEGE

• **The project matters**
  • Approachable to multiple levels of student ability and broadly interesting to students (can they explain the main idea of their projects to their non-science friends and relatives?)
  • Can be broken into smaller ”pieces” (almost like rotation projects sometimes)
WHAT IT IS LIKE TO CONDUCT RESEARCH AT A SMALL LIBERAL ARTS COLLEGE

• The project matters
  • Approachable to multiple levels of student ability and broadly interesting to students for maximal interest
    • Examples from my own research
  • Can be broken into smaller ”pieces” (almost like rotation projects sometimes)
• Research as Teaching
  • Lab research is often the best place for students to actually learn science
  • The sooner students can get into the lab the better!
WHAT IT IS LIKE TO CONDUCT RESEARCH AT A SMALL LIBERAL ARTS COLLEGE

• (Somewhat) Smaller spaces –
  • Adaptability is key!

• Setting up a lab takes time and effort – so the more you learn now the better…
  • And you might have to move your lab a couple times – so you need to be adaptable
  • Maybe try helping out your advisor ordering for the lab
  • The more organized you can be the better – one example: Quartzy (https://www.quartzy.com/) And no…I don’t work for Quartzy 😊
WHAT MIGHT A 1-2 SEMESTER LONG “DOABLE” PROJECT LOOK LIKE?

• A doable project (@ a smaller college):
  • What’s your hypothesis?
  • What is your approach?
  • What do you need (equipment, reagents, etc.) to do that research?
  • How many students could work on that project?
HOW DO I GET FUNDING TO DO MY RESEARCH?

• **College/University funds**
  • During interview—ask the Provost and/or folks in the department about the availability of school funds for research
  • Start up funds - can vary widely (10K – 60K or more for small schools, lots more for R1)
    • Often will give you x years to use the funds, but this can be negotiated…see if you can extend it
    • It’s often more productive to negotiate startup than it is salary

• **National funding agencies**
  • NIH (R15, etc…)
  • NSF
    • Funding for research projects
    • Funding for lab equipment (MRI)

• **Private Foundations**
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• A day in the life...
• Where do I look for jobs and what do you have to submit to be competitive?
  • Are there other types of jobs I might be able to do that are associated with education but not necessarily as a teacher?
# A Day in the Life...

<table>
<thead>
<tr>
<th>Time</th>
<th>9 AM</th>
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<tr>
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<td>Cellular Neuroscience</td>
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<td>Office Hour</td>
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<td>BIOL201</td>
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<td>Cell Neuro Lab</td>
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<td>201 Q&amp;A session</td>
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<tbody>
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<td>IS group meeting</td>
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<td>IS Lab - Microscope?</td>
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<th>Time</th>
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<td></td>
<td>Happy Hour</td>
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A DAY IN THE LIFE…

**MWF**

6-8 am: Wake up, eat, get ready, get breakfast for kids…walk to school
8-9 am: Last minute review for class #1
9-10 am: Teach class #1
10-11 am: Review notes/slides for class #2
11-12pm: Teach class #2
12-1pm: Eat and Review for Lab (Monday)
1-4pm (Monday): Lab
1-5:30pm (WF): Student Research/Meetings and if I’m lucky some grading/class prep
6-9pm: Family time
9-11pm: Prep for class/grade…occasionally

**T/TH**

6-8 am: Wake up, run?, eat, get ready, get breakfast for kids…
8-9:30 am: Take kids to school and then walk to CoW
9:30-11 am: Student meetings/prep for class
11-12pm: Seminar/Dept. Faculty meeting
12-1pm: Eat and Review for Lab (Tuesday)
1-4pm (Tuesday): Lab
1-5:30pm (Thursday): Student Research/Meetings and if I’m lucky some grading/class prep
6-9pm: Family time
9-11pm: Prep for class/grade
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APPLYING TO JOBS AT SMALLER LIBERAL ARTS COLLEGES

• Most jobs posted in late summer/early fall, although some posted in spring

• Where to look (or at least where I looked):
  • Higher Ed Jobs: https://www.higheredjobs.com/ (use the advanced search option)
  • Science Jobs: http://www.sciencemag.org/careers ($$$, so not all schools advertise here - more R1 type positions)
  • More specific locations/listerservs (FUN, GSA, GCAT, etc.)
A COUPLE POINTERS ABOUT APPLYING TO JOBS AT SMALL COLLEGES

• Most important points to focus on…
  • Teaching experience/statement: Write out your philosophy and give specific concrete examples of how you have (or would) incorporate these ideas into the classroom
  • Incorporate some of these ideas (briefly) into your cover letter

• Do you have a research “program” that is translatable to the college/university?
  • Papers as currency
  • Does it require animals? Tissue culture? Big pieces of equipment?
  • If it is very specialized, can you alter it a little bit to make it fit into this new context? Or are there less-expensive ways to do some of these experiments? Could you work with collaborators nearby?
  • If you’re a post-doc, could you go back to work on something from grad school?
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QUESTIONS?

Also please feel free to contact me in the future if you have any questions!

Seth Kelly

skelly@wooster.edu