Graduate Programs in (Bio)Statistics

eUSR 2020

Goals for talk

- About me (my context/perspective)
- Overall scheme for graduate studies and application
    - Why go to grad school: learning, research, jobs
    - Where to apply:
        - PhD vs Masters Thesis vs Masters Capstone: length, funding, jobs, training
        - Statistics vs Biostatistics (vs Data Science) (vs Math) (vs Epidemiology): length, funding, jobs, training, application area, requirements, diversity
        - Funding, size, location, reputation, dept culture, research opps
    - Application process
        - Application timeline
        - Application components (application form, transcript, GRE, letters of rec, personal statement/statement of purpose, CV, TOEFL, fee)
        - Application requirements
        - What are they looking for? (math background,
    - What does it look like once I get to grad school
        - Coursework
        - Qualifying exams
        - RA/TA
        - Dissertation
        - Seminars, journal clubs, committees, conferences, etc.
    - Tips for succeeding in graduate school?
- Timing: 15 minutes

Some context...

ST. OLAF COLLEGE

2010–2014
- math major + stats minor
- two research programs
- some teaching experience

W BIOSTATISTICS
SCHOOL OF PUBLIC HEALTH

2014–2019
- statistical genetics
- more teaching experience

MACALESTER

2019–present
- MSCS department
- postdoc → tenure track

An overview of (bio)stat grad programs...

Deciding *WHETHER* to apply

- Do you want to learn more about (bio)statistics?
- Do you enjoy doing research/independent projects?
- What type of job do you want?

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Disclaimers:

- grad school is not for everyone!
- the best time to go to grad school is not the same for everyone!

Deciding *WHERE* to apply

PhD   vs   **Thesis Masters**   vs   **Capstone/Coursework Masters**

Differences to consider:

- Length
- Type of training
- Cost/funding
- Jobs

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Deciding *WHERE* to apply

Statistics   vs   **Biostatistics**   vs   **Data Science**   vs   **Other**

Differences to consider:

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Deciding *WHERE* to apply

Statistics vs **Biostatistics** vs **Data Science** vs **Other**

Differences to consider:

- Length
- Type of training
- Cost/funding
- Jobs

Also: research opportunities, size, demographics, reputation (rankings + dept culture), admission reqs, location, …

The application process...

Application components

- Online application
- Transcript
- GRE scores
- TOEFL scores
- CV/Resume
- Statement of purpose/personal statement
- Reference letters
- Interview

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Mostly basic "about you" questions

Maybe some short essay questions

Application fee

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Overall GPA

Grades in relevant courses

Number of, and which (requirements, rigor), relevant courses

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"Great" quantitative

"Good" verbal and writing

Math subject test: depends on program

Many schools are waiving the GRE req this year

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Varies by program/university

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Research/work experience

Teaching experience

Programming skills

Optional: relevant coursework

Optional: volunteering, extracurriculars

Can we hire you as RA/TA?

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- **Statement of purpose/personal statement**
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Why this field?

Why this program at this school?

Writing skills

Some programs (e.g., UW Biostat) have more than one statement

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- **Reference letters**
- Interview

Typically 3 academic reference letters

Math/stat profs

Research/internship supervisor

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- Reference letters
- **Interview**

"Soft" skills

Can you have a conversation about stats (esp. your work)?

Do your interests align with our program?

Not all schools have an interview

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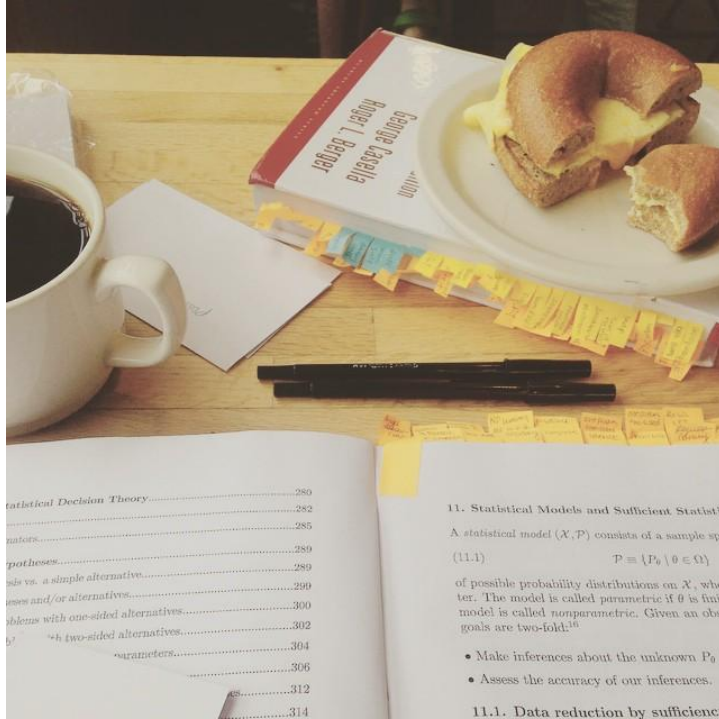- Reference letters
- Interview

Can you pass our classes & exams?

Can you write a dissertation/thesis?

Do you actually want to come here?

Life as a PhD student...

Years 1–2

courses + qualifying exams + RA/TA

Years 3+

electives + dissertation + RA/TA + conferences + …

Questions?

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