

Academic Job Market: STEM Research Statements

UCHICAGO GRAD

Helping you navigate your graduate and postdoctoral career



CAUTION

**THIS ADVICE
IS NOT
DISCIPLINE
SPECIFIC**



Note:

It is highly recommended that you work directly and in-depth with your advisor(s) on your Research Statement

This presentation highlights best practices and big picture goals

However, each discipline has different expectations and conventions for this document



Research Statements

Jim Austin suggests to,

“ Identify your goals, state why those goals are important, define your approach to achieving those goals, and indicate the kinds of evidence that will validate your approach. Oh, and do it clearly and succinctly. ”

*Jim Austin, *Writing a Research Plan*, ScienceCareers.org



What are they looking for?

“ I want to see 3 elements in the research proposal: what will get you your first grant, the body of work that will lead to tenure, and evidence of creative thinking, showing your capacity to hit one out of the park. ”

*Senior faculty member



Purpose of a RS

Helps hiring committees assess your:

1. Area of specialty
2. Potential to get funded
3. Academic ability
4. Compatibility with department



Plan and write effectively

- **Get feedback on your ideas first**, before investing time in writing a longer draft
- Tailor your statement for the institution type and department
- Keep it succinct & adhere to page limits
- Include an **intro/abstract/executive summary**
- Use white space and **explicit headings** and bullets
- Write carefully and use topic sentences
- Use clear figures
- Arrange it chronologically or topically



Past, present, and future

①

What you have been doing recently and currently

②

What direction you hope to go (demonstrate independence)

③

Your specific goals for a 3-5 year period (include possible funding avenues)

④

How your research contributes to but also sets you apart from your field



Past, present, and future

- Demonstrate your independence

“The best plans usually build on the prior experience of the applicant but are not direct extensions of their postdoctoral work.”

- Include preliminary data when possible
- Present more than one good idea and include redundant approaches
- Point out weaknesses – and what you’re going to do to address them

Alternative approaches

- Provide context: *“Why must this work be done?”*
- Credit others’ work



Discipline-specific norms

Biology: Present research aims (commonly 3-4) for the next five years. Include **much less detail than an R01**. Frame past experience as uniquely qualifying you to carry out your plans. Include longer-term vision and goals. Length varies, but 3-5 pages is common.

Chemistry: Present approximately three good ideas via: *Executive Summary* (1-2 page synopsis of your research plans w/ all three ideas, prioritized. Most of the committee will read it.) *Full Research Plan* (3-5+ pages, for specialists.)

Physics: Include research overview, current research accomplishments, and future plans. Length varies, but 3-5 pages is common.

Engineering: Present your motivation, current work, 3-4 future projects which are connected/related. Include relevant figures and tables. Length varies, from 4-9 pages depending on institute expectations of research capacity.



Common Pitfalls

- Too ambitious
- Too strong of a focus on “how” vs. “what” and “why”
- Too excessively narrow (didn’t incorporate the bigger picture)
- Poorly written
- Not referencing the faculty at the target institution (if relevant)

These are suggestions – check with your mentors for the conventions in your field



Make a to-do list

- Is it sufficiently different from your past work? Advisor's work?
- Is it sufficiently important? Is it sufficiently novel?
- Too ambitious? Too broad? Ambitious enough? Too narrow?
- Is it customized for the position? Can it realistically be carried out in the department/school? Does it synergize w/strengths & resources?
- Does it convince the reader that it is fundable?
- Detailed enough to be convincing? (Yet not boring?)
- Are backup approach(es) described?
- Does the overall document convince the reader that the writer can complete the strategy laid out in the Future Research section?
- Is the "attitude" right? (i.e., Not overly hyped language? Others credited? Focused on contributions/accomplishments, not experiences/skills?)



Questions?

Advising Appointments:
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