

# Grants & Fellowships for ACMS Graduates

---

AUGUST 29, 2016



UNIVERSITY OF  
NOTRE DAME

# Overview

---

- How we help
- Finding extra funding
- Major ACMS awards
- Grant writing skills
- Supporting information
- Upcoming events
- Reminders



# How We Help

---



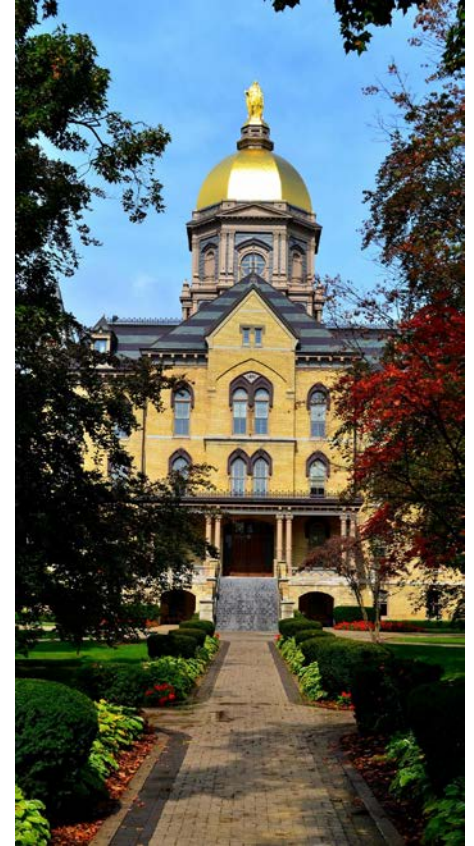
# Office of Grants and Fellowships

---

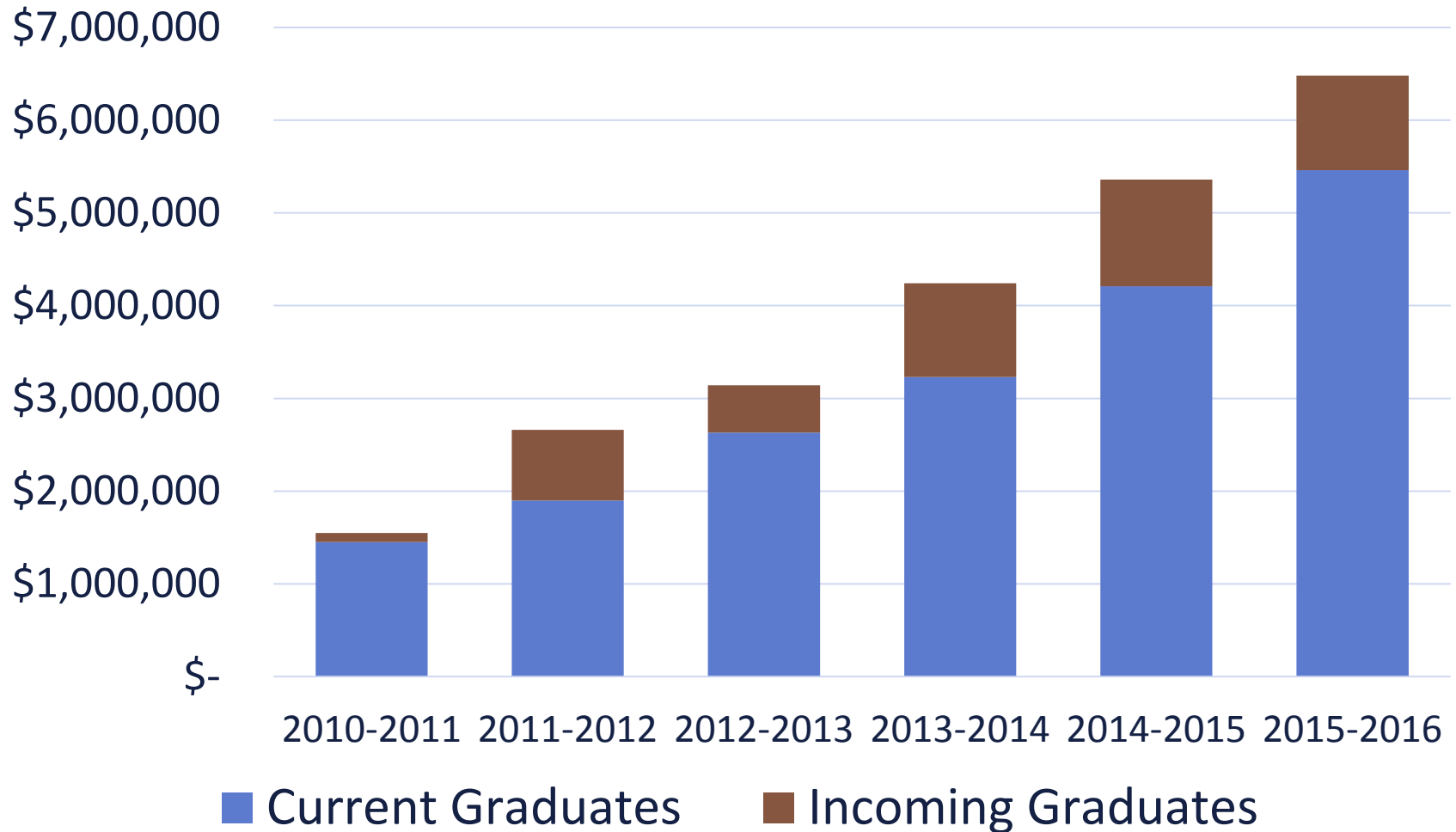
## We help you:

- Get money
- Build your CV
- Spin your story
- Sell your research

**Strategy, examples, editing**



# ND Graduate Students WIN Fellowships





**Cesar**  
English  
Literature



**Claire**  
ACMS



**Warren**  
Biology



**Emily**  
Peace Studies  
& Poli Sci



**James**  
English



**Ian C**  
Psychology



**Hannah**  
Chemistry



**Ian G**  
Theology



**Mauna**  
Biology



**Ryne**  
Peace Studies  
& History

# gradgrants@nd.edu

---

Email **gradgrants@nd.edu** to book an appointment.

- 1-on-1 or bring a friend!
- 502 Main Building
- Skype
- Draft review by email
- Other locations



# box.nd.edu

---

- Email **gradgrants@nd.edu** for access
- **200+ examples** of winning applications
- Research proposals
- Personal statements
- Presentations
- Handouts for budgets, letters of recommendation, etc





# How to Use Box

---

- If you have handouts and still don't know where to start, start with Box
- Look at examples for your **major** or the same **funding source**
- Meet with a Grants & Fellowships consultant!



# Box Troubleshooting

---

- Click “accept” on invite
- Login to **box.nd.edu** with short email (netid)

## If it doesn't work:

- Try incognito window
- Email **gradgrants@nd.edu**
- Email **oithelp@nd.edu**



# Finding Extra Funding

---



# Why Grants?

---

- Department recognition
- Extra stipend money
- If you win enough, no TAing
- Travel to conferences, research overseas
- Adapt essays for papers, reports, and classes
- Important business skill – persuasive writing!
- **Add it to your CV**



# Internal vs External Grants

---

## INTERNAL

- From the university
- GSU Conference Presentation Grant, teaching awards, Nanovic grants, etc
- Usually small awards
- Short applications

## EXTERNAL

- From elsewhere
- US government, other countries, private foundations, conferences
- Small or large awards
- Short or long applications

Applying for **external** grants helps you get **internal** grants!

# Major Grant/Fellowship Types

---

- Pre-dissertation – most common in STEM
- Exploratory research
- Library residence
- Dissertation – most common in humanities
- Dissertation completion
- Travel
  - Conferences
  - Study abroad
- Language grants



# Major Grant Components

---

- Personal statement
- Research statement
- Letters of reference
- CV
- Transcripts
- Occasionally, test scores or “exhibits”

There are **stated requirements**, but also **hints**.



# Major ACMS Awards

---





# Fulbright & GRFP

---

- Many Box examples are for these programs
- Notre Dame is in Top 20 for both
- Very high success rate
- International students look at Chateaubriand & NASA NESSF as similar programs



# NSF GRFP Numbers

---

- Due **October 25** (CSE), **October 28** (math)
- This year: 2000 winners, 2000 honorable mention
- You have a **much** higher chance of winning this than getting into Notre Dame
- US citizen or permanent resident
- Current 2<sup>nd</sup> years: **apply!**
- Current 1<sup>st</sup> years: apply year 1 or 2



# More NSF GRFP Numbers

---

- **24** ND winners last year vs 29 prior **3** years
- 5 year award
- \$138,000 total
- **\$34,000** stipend for 3 years
- GRIP (lucrative internship) & GROW (research abroad)
- XSEDE supercomputer access, even if honorable mention



# Fulbright

---

- Campus deadline August 31
- US citizen
- Research, study, or teach English for 1 year
- Almost every country
- High acceptance rate
- **Alternatives:** DAAD, Chateaubriand



# Boren Fellowship

---

- Campus deadline December 12
- \$24,000 - \$30,000
- Research abroad
  - Excludes Western Europe, Canada, Australia, NZ
- Language & area studies or other
- National security service requirement
  - Work for at least 1 year for a federal agency
  - Includes Peace Corps, EPA, etc – not just CIA



# Liebmann Fellowship

---

- Department nomination, then university
- \$197,000
- US citizen
- Demonstrated financial need
- Any topic or field



# EPA STAR

---

- Anything related to the environment
- Master's or PhD level
- US citizen or permanent resident
- Up to \$272,000
- Usually due in **May**



# NSF DDRIG

---

- DDRIG = Doctoral Dissertation Research Improvement Grant
- 10-12 pages
- Anyone at a US institution can apply
- Depends on exact division your project falls under
  - “ACMS” isn’t a separate category
  - Some divisions (like chemistry) don’t have awards





# DOE CSGF

---

- First-year only
- Data analysis & supercomputing
- Very interested in interdisciplinary topics
- Internship component
- Looking for future employees at national labs



# Microsoft PhD Fellowship

---

- Nomination required
- 3 nominations per department
- Second or third year
- Any citizenship
- Full tuition + \$28k stipend + \$4000 travel



# Other Fellowships

---

- Almost every major company has fellowships
- Look for big names in your field
- Usually no citizenship requirement for companies

## **Data science:**

- Google (Anita Borg)
- IBM – nomination required
- Facebook



# Plan Ahead!

---

- Research fellowships that fit you
- Check deadlines
- Add fake deadlines to your calendar
- Set aside work time during “slow” season
- Recycle your writing – introduction sections, ARP papers, OCE papers...



# pivot.cos.com

---

- Make an account with your **nd.edu** email
- Search for grants and fellowships
- Change your **keywords**
- Filters need work
- After graduation, **alumni.nd.edu** email works
- Our office can help you search!





## Search Funding Results

Your Search: ((chemistry AND germany))

[Advanced Search](#)[Save Search](#)[Refine Search](#)

## Top funding types

Research:	20
Training or Scholarshi...:	13
Collaboration or Coope...:	10
Postdoctoral Award:	5
Prize or Award:	5

## Top sponsor types

Multinational Organiza...:	13
Other Nonprofit:	12
Private Foundation:	8
National Government, N...:	5
Commercial:	3

## Top applicant types

New Faculty or New Inv...:	32
PhD or MD or Other Pro...:	20
Graduate Student:	13
Academic Institution:	6
Undergraduate Student:	5

<input type="checkbox"/> <b>43 Results</b> Sort ▾	Deadline	Amount
<input type="checkbox"/> <input type="checkbox"/> <b>Thieme-IUPAC Prize in Synthetic Organic Chemistry</b> Thieme Medical Publishers, Inc.	11 Dec 2016 <a href="#">Nomination</a> <a href="#">Anticipated</a>	€5,000 EUR
<input type="checkbox"/> <input type="checkbox"/> <b>Friedmund Neumann Prize</b> Ernst Schering Stiftung / Schering Foundation, Ernst	15 Dec 2016 <a href="#">Nomination</a> <a href="#">Anticipated</a>	€10,000 EUR
<input type="checkbox"/> <input type="checkbox"/> <b>Junge Wissenschaft: Hochschulpraktika / Young Science: University Student Internships</b> Bundesministerium für Wirtschaft und Energie (BMWi) / Federal Ministry of Economic Affairs and Energy BAM Bundesanstalt für Materialforschung und -prüfung / BAM Federal Institute for Materials Research and Testing	Continuous <a href="#">Application</a> <a href="#">Confirmed</a>	see record
<input type="checkbox"/> <input type="checkbox"/> <b>Heinrich Wieland Prize</b> Boehringer Ingelheim Fonds, Stiftung für Medizinische Grundlagenforschung (BIF)	01 Jun 2016 <a href="#">Nomination</a> <a href="#">Confirmed</a>	€100,000 EUR
<input type="checkbox"/> <input type="checkbox"/> <b>RISE (Research Internships in Science and Engineering)</b> Deutscher Akademischer Austausch Dienst (DAAD) / German Academic Exchange Service	15 Jan 2017 <a href="#">Application</a> <a href="#">Anticipated</a>	€1,950 EUR

# Grant Writing Skills

---



# Persuasive Writing in Applications

---

- Persuade them to give you money – they want proof of certain things
  - How well do **your** goals fit **their** goals?
- Style varies depending on audience
  - **Pre-dissertation:** cross between journal article & grad school application
  - **Dissertation:** thesis chapters





# Persuasive Writing in Applications

---

- All government agencies evaluate based on **intellectual merit** and **broader impact**
- Phrases mean different things in different contexts
- Foundations look at similar criteria, but they might use different words

**Look at the agency's mission & website for additional hints**



# Example: NSF GRFP

---

- National Science Foundation Graduate Research Fellowship Program
- 3 pages for personal statement and 2 pages for research statement
- Most grants have parts for research & personal, but also **additional** info about **you**

What does this **imply** they care about?



# You.

---

- The research**ER**, not the research
- They care about **you** and your potential
- Specifically, your potential to match **their** goals

**Example:** DOE CSGF wants interdisciplinary scientists to work on computational projects in national labs.

- Have you been taking classes outside your field?
- Do you choose projects that use supercomputers?
- Do you express interested in LANL/Oak Ridge/etc?



# Meeting Fellowship Expectations

---

**Example:** Boren funds research and language training overseas. The focus is area studies, but they also want scientists.

If you are working on a health statistics project...

- How is this language necessary for your work?
- Can you explain the connections between your research and national security?
- Do you express interest working outside academia?

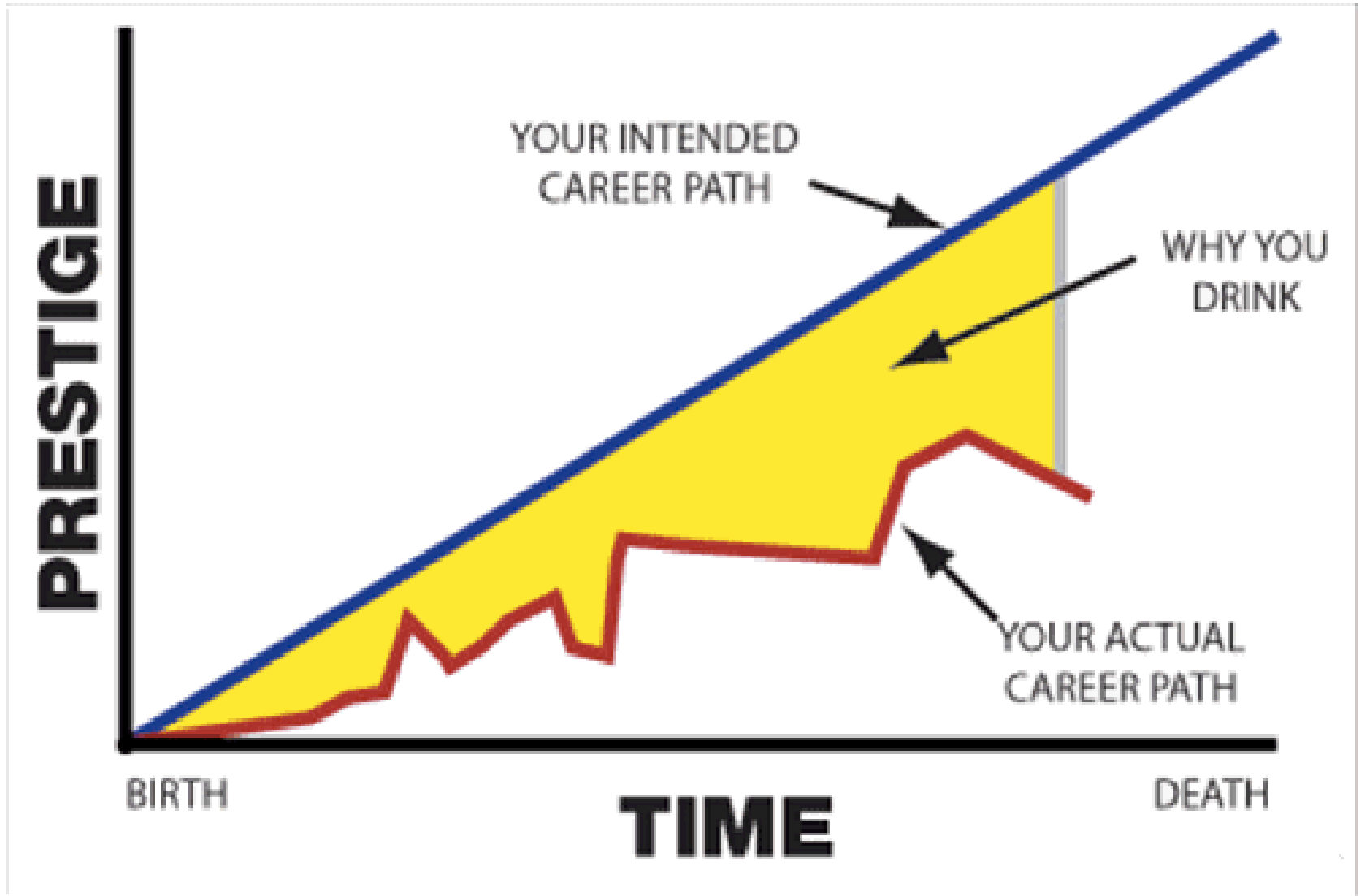


# SuperYou

---

- Present the **best** version of yourself and your research for that grant
- Be specific
- Be realistic
- Be concise
- Point out grant goals
- **Assume** project will work





# Hints, AKA Audience Analysis

---

- Look at the agency's materials for hints
- We can help with audience analysis

## **In addition to mission & website:**

- Winning essays
- Reviewers' comments
- Program statistics & outcomes
- Instructions to reviewers



# Research Statements

---

## INTELLECTUAL MERIT

- Do you know the subject?
- Are you doing something new?

## BROADER IMPACT

- Is it useful?
- Why should people care?

**All** grants want you to show these two things!



# Personal Statements

---

## INTELLECTUAL MERIT

- How did you prepare to do this research?
- Do you know the subject?
- How **awesome** are you?

## BROADER IMPACT

- What **outreach** do you do?
- What will you do in the future?
- How will funding **you** help?

Personal statements **also** use intellectual merit and broader impact, but they mean different things.

# Broad Impact Ideas

---

- STEM education & development
  - Teaching experiences
  - Creating classroom materials for K-12
- Science literacy & public engagement
  - Community education
  - Chem Demo Team, ScienceAlive!, etc
- Improved well-being of society
  - Other volunteer work
  - Warm & fuzzy stuff
  - Church activities count if it's open to everyone



# Broad Impact Ideas

---

- Diverse, globally competitive workforce
  - Languages
  - Study abroad
- Industry-academia partnerships
  - Internship
  - Public-private partnership
- National security
  - Interested in government lab?
  - Government job?



# Broad Impact Ideas

---

- Economic competitiveness of US
  - Industry?
  - Industry-academia partnerships
  - Entrepreneurship
  - Patents
- Enhanced infrastructure for STEM education
  - Streamlining processes
  - Start a new program (certificate, new minor, K-12/university links)



# Organization Helps

---

- Writing style matters less than the humanities, but it still helps
- Most important is **readability**
- Use subheadings, images, tables to full advantage
- Proofread!
- Use precise language
- Avoid passive, weak verbs



# Proposal Elements

---

**Hook/broader  
impact**

**Your approach is  
different  
because...**

**State specific  
objectives and/or  
goals.**

**Describe methods.**

**Give specific  
details about your  
timeline,  
resources, etc.**



# Funnel Method

---

## First paragraph:

- First sentence (hook) starts broad and catchy
- More specific connection to the problem
- My project fixes this by \_\_\_\_\_

## Next paragraph: details



# Be Specific

---

- Details, examples, and anecdotes are powerful
- Don't say "I am     [positive adjective]    "

~~"I am passionate about anthropology."~~

"I hiked perilous game trails for five days to reach my research site."





# Be Realistic

---

- Things that make newspaper headlines might sound stupid to a scientist.

~~“This will cure cancer.”~~

~~“I will develop a new treatment for pancreatic cancer.”~~

“My research on the CDKN2A locus will map new signaling pathways which may provide novel treatment targets for cancer.”



# Be Concise

---

- There are unbreakable page limits
- Write long when you are drafting
- Cut out sentences that are repetitive.
- It's OK to remind your reader of prior information
- BUT, you have to **balance** connections with **all** relevant info that fits



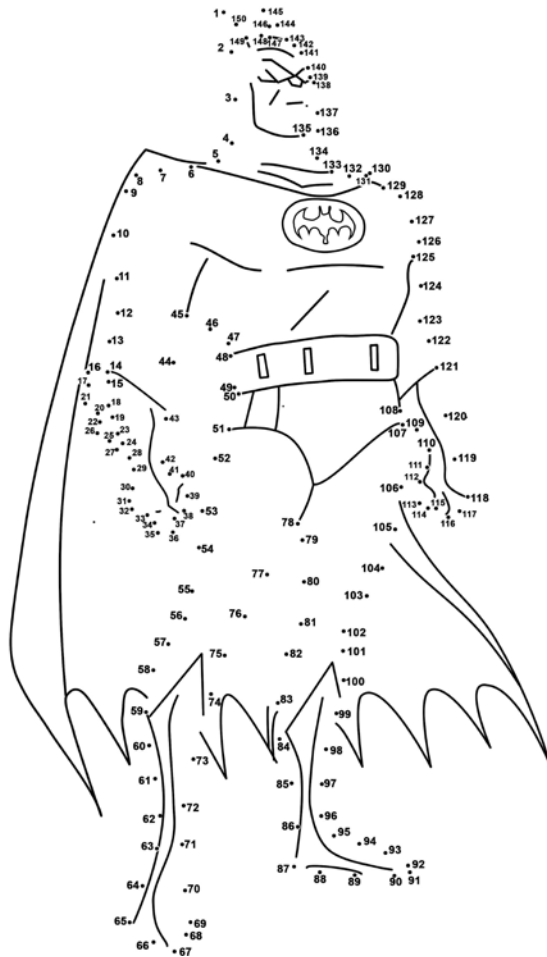
# Why Repetition?

---

- Your reader might be skimming
- The more times you say it, the more likely they are to notice/remember it
- Don't repeat yourself **exactly**, but make **connections** between the different things you do



# Connect the Dots



- Make each point support the next
- Logical flow
- The “overall picture” makes sense if you connect each topic

**Show your preparation →  
your research → your goals  
→ your future**

# “Show, don’t tell”

---

- Give examples of things you have done
- Specific results give the reviewer more info

~~“I am a strong leader.”~~

**“When the library program for adult literacy shut down, I organized a fundraising and advocacy campaign that secured private funding partners for three years.”**



# Decisive, Definitive Language

---

## NEVER Use:

- hope
- wish to
- pray that
- (explore)
- (investigate)

## Use Instead:

- WILL
- intend to
- anticipate
- employ
- establish



# Precise Language

---

## Analysis:

- analyze
- define
- categorize
- classify
- compare
- contrast
- systematize

## Application:

- apply
- argue
- articulate
- conclude
- defend
- demonstrate
- differentiate
- employ
- establish
- extend
- hypothesize
- illustrate
- implement
- propose
- theorize

## Synthesis:

- combine
- construct
- create
- design
- formulate
- frame
- integrate
- merge
- project
- solve
- synthesize
- unite

## Evaluation:

- critique
- defend
- evaluate
- interpret
- justify
- reassess
- re-envision



# Supporting Information

---





# CVs & Resumes

---

**“Show, don’t tell.”**

- 2 page resume **or** complete CV **or** fill-in-the-blanks
- Formatted perfectly
- Anyone can list “attention to detail” and “proficient with MS Office” on a CV, but does the formatting **show** that?



# CV Components

---

- Education
  - Degree, institution, date
  - Minor, concentration, exams
  - Dissertation abstract
- Honors & Awards
  - Remember the feedback loop?
  - Include descriptions if needed
- Publications
- Presentations



# CV Components

---

- Teaching
  - Courses, dates, descriptions
- Service
  - Academic leadership positions
  - Conference organization
  - Official outreach
- Languages & Certifications
  - Use official numbers where possible
- Professional Memberships



# Teaching Portfolio

---

- 1-2 page teaching philosophy
- Summary of teaching evaluations
- Syllabi
- Sample assignments & grading rubrics
- Student reflections
- Lesson plans
- Example narrative



# Letters of Recommendation

---

“50% of what we know about an applicant comes from letters of recommendation.”

- Have a PhD & like you
- Choose a variety of referees to give a complete picture:
  - Your PI
  - Faculty familiar with past performance
  - PhD familiar with your outreach work
- Ask early for a **strong** letter of recommendation



# Asking

---

- Make it easy on your letter writers
- Initial request two+ months in advance
- Provide drafts, CV, & list of relevant points 3-4 weeks in advance
- Provide a brief strategic analysis of the opportunity
- Provide a list of things to highlight/outline



# The Best Letters

---

## Address:

- The student's intellectual merit and strength of character
- The significance of the project within the student's field and beyond
- The student's preparedness to undertake the project
- The feasibility of the project



# Supporting Document Resources

---

- **CV – Career Services**
  - Find 3-5 examples from your field
  - Some examples on [box.nd.edu](http://box.nd.edu)
- **Teaching Portfolio – Kaneb Center**
- **Recommendation Letters – handouts**
- **Writing Sample – Writing Center**
  - Dissertation chapter, etc
  - Proofread!





# Upcoming Events

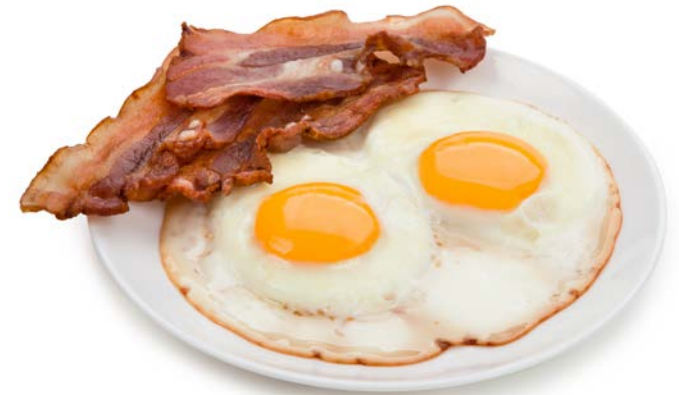
---



# Fall Break Boot Camp

---

- **October 17-21**
- Dedicated workspace while the undergrads are gone
- Breakfast
- Snacks
- Unlimited draft review



# Workshops

---

- Wed, August 24, 4:30 pm, Jordan 105: Reviewer Q&A Panel
- Thurs, September 1, 5 pm, Jordan 101: Drop-in consults
- Friday, September 9, 1 pm: Letters of Recommendation
- Monday, September 12, 1:30 pm, 2<sup>nd</sup> floor LaFortune: USAID
- Monday, September 12, 3 pm, DeBartolo 101: Summer workshop repeats starting this Monday
- Monday, October 3, 2 pm, DeBartolo 101: Boren Fellowships
- Wed, October 5, 7 pm: Ford & GEM



# Reminders

---



# Remember This

---

- **gradgrants@nd.edu**
  - Email any questions
  - Draft review
- **box.nd.edu**
  - Email for access
- **pivot.cos.com**
  - Sign up with ND email



# QUESTIONS?

---

