"Teaching: An Essential Element of Broad Spectrum Career Development for Graduate Students"

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Career Portal Project

• Introduction to PhD graduate placement by broad-field category
• Expanding career outcome categories
• Identifying cross-field, cross-career competencies
• Challenges in implementing career competency programming
## Career Outcomes for PhD Students

### Overall, PhD Graduates
First Placement Category by Graduation Year, Ten Year Trend

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Academic</th>
<th>Post Doc/Add'l Training</th>
<th>Industry</th>
<th>Gov't/Non-Profit</th>
<th>Other</th>
<th>Number of Grads with Placement Info</th>
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</thead>
<tbody>
<tr>
<td>2004 - 2005</td>
<td>36%</td>
<td>33%</td>
<td>23%</td>
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<td>3%</td>
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<tr>
<td>2005 - 2006</td>
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<tr>
<td>2006 - 2007</td>
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<td>3%</td>
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</tr>
<tr>
<td>2007 - 2008</td>
<td>28%</td>
<td>38%</td>
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<td>3%</td>
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<tr>
<td>2009 - 2010</td>
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<td>21%</td>
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<tr>
<td>2010 - 2011</td>
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<td>38%</td>
<td>22%</td>
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<td>3%</td>
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<td>2011 - 2012</td>
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<tr>
<td>2013 - 2014</td>
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<td>30%</td>
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<tr>
<td>10-Year Total</td>
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<td>38%</td>
<td>24%</td>
<td>4%</td>
<td>3%</td>
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</table>
Physical Sciences, Mathematics, and Engineering, PhD Graduates
First Placement Category by Graduation Year, Ten Year Trend

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Academic</th>
<th>Post Doc/Add'l Training</th>
<th>Industry</th>
<th>Gov't/Non-Profit</th>
<th>Other</th>
<th>Number of Grads with Placement Info</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004 - 2005</td>
<td>28%</td>
<td>32%</td>
<td>35%</td>
<td>5%</td>
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<td>166</td>
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<td>2007 - 2008</td>
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<td>34%</td>
<td>35%</td>
<td>3%</td>
<td></td>
<td>154</td>
</tr>
<tr>
<td>2013 - 2014</td>
<td>23%</td>
<td>30%</td>
<td>45%</td>
<td>4%</td>
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<td>167</td>
</tr>
<tr>
<td>10-Year Total</td>
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<td>33%</td>
<td>37%</td>
<td>4%</td>
<td></td>
<td>1793</td>
</tr>
</tbody>
</table>
Utility of Longitudinal Placement Data

<table>
<thead>
<tr>
<th>Ph.D. Placement Data</th>
<th>Position type first year after graduation, 2010 - 2014 cohorts</th>
<th>Position type five years after graduation, 2006 - 2010 cohorts</th>
<th>Position type ten years after graduation, 2002 - 2005 cohorts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenure-track faculty</td>
<td>0%</td>
<td>10%</td>
<td>34%</td>
</tr>
<tr>
<td>Postdoctoral / Traineeship / Fellowship</td>
<td>78%</td>
<td>41%</td>
<td>6%</td>
</tr>
<tr>
<td>Non-Tenure Track Faculty / University Researcher / University Administrator</td>
<td>8%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Business / Industry</td>
<td>3%</td>
<td>15%</td>
<td>31%</td>
</tr>
<tr>
<td>Other professional employment / Government / Non-Profit</td>
<td>0%</td>
<td>10%</td>
<td>13%</td>
</tr>
<tr>
<td>Not employed</td>
<td>11%</td>
<td>8%</td>
<td>0%</td>
</tr>
<tr>
<td>No data available</td>
<td>0%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Total Ph.D.s awarded</td>
<td>36</td>
<td>39</td>
<td>32</td>
</tr>
</tbody>
</table>
Mapping Core Competencies to Career Paths

Core Competencies

Leadership and Management
- Management for Scientists and Engineers Certificate Program
- Fellowship in Leadership
- Counseling and Consultations through the Center for Leadership
- Brady Scholars Program Graduate Fellowship
- RSG Research Communication Program
- CLMB Communication Resources for Scientists
- Advanced Professional and Presentation Skills Seminar
- STEM Reach for the Stars GK-12

Speaking and Presenting
- Fellowship Proposal Writing Workshops
- Dissertation Bootcamp
- The Writing Place Consultations and Workshops
- Kaplan Institute Affiliates Program
- Kaplan Institute Research Workshops
- GEO Community Practicum
- Interdisciplinary Graduate Assistantships
- Northwestern Externship Program
- 1:1 Appointments through Northwestern Career Advancement
- New Teaching Assistantship (TA) Conference
- Searle Consultations, Observations and Workshops
- New TA Conference Workshop Leader
- Searle Teaching Certificate Program

Writing and Research

Career Exploration

Teaching

Career Paths

Academic Teaching and Research Positions
- Consulting
- Entrepreneurial Careers
- Higher Education Administration
- Public Humanities, Arts, and NGO Admin

Advertising, Marketing, and Public Relations
- E-learning and Instructional Design
- Finance
- Intellectual Property Work and Technology Transfer
- Industry Research and Engineering
- Teaching and Education (K-12)
- Communications and Publishing
New Teaching Assistant Conference

• The New TA Conference (NTAC) is an all-day training for new teaching assistants conducted every September before classes begin. Participants explore evidence-based practices in workshops led by experienced graduate students.

• All new TAs are encouraged to attend.
New TA Workshop Leader

• NTAC Workshop Leaders are a dedicated group of graduate students who represent their department in the implementation of New TA Conference workshops.

• Applicants must be in the second year of their program or beyond, and must be available for training sessions.

• "The Workshop Leader program showed me how to translate the skills I use as an instructor to the unique context of a peer workshop, and it prepared me to support new TAs in my department as they start teaching. As an added bonus, it was also a great way to meet graduate students from other departments who share my enthusiasm for teaching. "
Teaching Certificate Program

• The Teaching Certificate Program combines seminars, workshops, mentoring, and discipline-specific discussions to prepare participants for future college teaching responsibilities.

• Participants will attend a series of seminars, workshops, and small group discussions and reflect on their teaching practice.
Graduate Teaching Fellows

• The Graduate Teaching Fellow (GTF) Program provides an opportunity for graduate students at Northwestern to advance their teaching and leadership skills while contributing to the pedagogical development of their peers.

• Appointed for a full academic year, GTFs work to address specific learning and teaching needs in their department and assist with the facilitation of grad and postdoc programming at Searle.
Graduate Teaching Mentors

• The Graduate Teaching Mentors (GTM) gain a unique peer mentoring opportunity to further their pedagogical development through discussing and applying discipline-specific teaching and learning techniques and literature with their mentees in the Teaching Certificate Program.

• Mentors oversee three or four discipline-specific groups of Teaching Certificate Program (TCP) participants, facilitating one small group meeting per quarter.

• "Being a Graduate Teaching Mentor allows me to continue to learn about pedagogy while developing my skills as a mentor. It is very rewarding for me to be a part of the Teaching Certificate Program participant's growth and development as instructors."
Supporting Teaching Development

Number of Participants

Time of Participation

KEY:
- Grad/Postdoc Professional Development
- Entry-Level Training
- Advanced Mentoring and Training
- Senior Mentoring and Training

New TA Conference
Graduate Workshops
Discipline-Specific Projects
CIRTL at Northwestern
Small Group Analysis
Teaching Certificate Program
Graduate Teaching Mentors
Graduate Teaching Fellows
Searle Graduate Assistants

Early Career
Mid-Grad Career
Advanced
Teaching as Research

- Searle Teaching-As-Research (STAR) is a new classroom-based research initiative designed to improve learning and teaching in STEM+ disciplines.

- STAR participants will need to identify a classroom-based research question focused on improving student learning prior to applying to the program or soon thereafter.
Teaching as a Core Competency

LEADERSHIP & MANAGEMENT
- Management for Scientists and Engineers Certificate Program
- Fellowship in Leadership
- Counseling and Consultations through the Center for Leadership
- Bracy Scholars Program Graduate Fellowship

SPEAKING & PRESENTING
- RSG: Research Communication Program
- CLIMB Communication Resources for Scientists
- Advanced Professional and Presentation Skills Seminar
- STEM Reach for the Stars GK-12

WRITING & RESEARCH
- Fellowship Proposal Writing Workshops
- Dissertation Bootcamp
- The Writing Place Consultations and Workshops
- Kaplan Institute Affiliates Program
- Kaplan Institute Research Workshops

TEACHING
- New Teaching Assistantship (TA) Conference
- Searle Consultations, Observations and Workshops
- New TA Conference Workshop Leader
- Searle Teaching Certificate Program
- WCAS/TGS Teaching Fellowship
- Searle Graduate Teaching Fellows Program

CAREER EXPLORATION
- SEO Community Practicum
- Interdisciplinary Graduate Assistantships
- Northwestern Externship Program
- 1:1 Appointments through Northwestern Career Advancement
Teaching as THE Core Competency

- Leadership & Management
- Speaking & Presenting
- Career Exploration
- Writing
Acknowledgements

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