Discovery with Delivery Tiger Team
White Paper: College of Education Strategic Planning for Discovery with Delivery

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Committee: Nadine Dolby, Gillian Gates, Jennifer Jeffries, Nancy Pelaez, Sydney Zentall

I. Introduction
The Discovery with Delivery Tiger Team was charged with reviewing the 2003-2008 College of Education Strategic Plan and making recommendations for a new College strategic plan that would be aligned with Purdue University’s 2008-2014 New Synergies Strategic Plan.

The University’s Goal for Discovery (see II) reflects the mission of a Doctoral/Research university-extensive (formally called a Research I university). It involves unequivocally a focus on the faculty conducting preeminent, large-scale research and scholarship that generates national and international recognition, enhances reputation, and garners external funding.

In this paper we define research as the systematic and disciplined collection, analysis, and dissemination of new knowledge.

II. Goal Statement from the 2008-2014 Purdue Strategic Plan
Advance the frontiers of knowledge, and innovate technologies that address the grand challenges of society to serve humanity and improve the quality of life around the world.

Characterized by:

- Discipline-based research, scholarship, and creative activity of the highest excellence and significance.
- Multidisciplinary collaboration among researchers for breakthrough advancements in research programs, and outcomes of profound impact.
- Field-defining large-scale multidisciplinary research programs.
- National and international reputation for a culture of excellence, leadership, and impact of research.
- National and global recognition of faculty, staff, and students for their accomplishments.
- A successful model for discovery-to-delivery with research and development.
- Aggressive growth in sponsored funding for research programs.
- A superior research infrastructure.
- World class “best-of-the-best” research faculty, students, and staff.
- Growth of human and intellectual diversity in the research enterprise.
- Demonstration of the highest standards of ethics and integrity.

III. Background and Rationale
After thoughtful consideration of Purdue’s new Discovery goal, the committee identified the following points:

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Aligning the COE’s Discovery goal with that of the university would involve an unequivocal focus on faculty conducting high-impact, reputation-enhancing, fund-generating scholarship of the highest levels.

Administrators in Purdue’s College of Education have noted that, for at least the past five years, various metrics of research quality and impact show that the COE is lagging behind its benchmark peers, and does not indicate sufficiently the scholarly productivity expected of a Doctoral/Research university-extensive institution.

This concern is reflected in the marked drop for 2009 in the COE’s U.S. News & World Report ranking (from 44-49 between 2002 & 2008 to 68).

In order for Purdue’s COE to meet (or at least target meeting) the university’s Discovery Goal, its strategic plan will need to aggressively address central indicators of scholarship and discovery such as those used to establish the U.S. News & World Report rankings.

Thus, the committee sought to identify goals and strategies that would enable the COE’s Discovery activities to meet the university level objectives for Discovery.

IV. Procedures Used to Solicit Input

The committee sought input for its recommendations in the following ways:

- Considered the 14 Strategies specific to Discovery and the 23 Strategies common to all goals that are listed in Purdue’s strategic plan.
- Compared Purdue’s COE with 13 other Colleges of Education on metrics that contribute to the U.S. News & World Report rankings. These colleges are in university-identified benchmark institutions, including all public Big Ten peer institutions and those with land grant missions (Appendix A).
- Conducted semi-structured interviews with senior COE faculty members in 4 of the institutions that were referred to in the previous point. We also interviewed a COE Associate Dean of Research from an institution that considers Purdue as a peer institution, and that also increased its ranking 30 points in one year. The interview sought to identify what factors researchers in those other institutions believe is responsible for their college’s ranking.

  Interview questions included:
  - In what ways is your School/College supportive of research (e.g., people, resources, time, money, students)?
  - How are excellent research faculty recruited and retained?
  - In what ways does your School/College foster multi-disciplinary or inter-disciplinary research?

- Solicited faculty and staff members’ views:
  - What do you perceive to be the biggest issue facing the College of Education in terms of its national/ international reputation as a research-intensive college?
  - What new resources (not currently available) might assist you in your Discovery activities?

V. Information Gathered

- Research is the number one focus in all benchmark universities, including those that are land-grant institutions; research is not valued equally with teaching and engagement activities.
• Schools/Colleges of Education that were serious about increasing their ranking did so by taking bold action, such as hiring a critical mass of mid-career faculty members with already established reputations for publishing high quality research and gaining external funding. In the short term this action did create a financial squeeze, but paid off quickly.

• Schools/Colleges we interviewed had:
  o a strong emphasis on faculty members “having to pay for themselves” (i.e., bring in grant money to cover their salary),
  o “phenomenal infrastructure to support faculty research” (e.g., “boilerplates for everything”, grant writing assistance, liaison person for access to schools, staff who specialize in different funding agencies (e.g., NIH, IES, NSF), staff person to manage grant once it’s awarded),
  o generous start-up packages (up to $25K), merit pay tied to grant writing and research productivity,
  o a written policy on return of salary savings (e.g., 15-20%, choice of summer salary or S&E),
  o outstanding graduate students (e.g., strict GRE cut-offs for doctoral programs, focus on quality not quantity) who are offered guaranteed funding for 4-5 years.

• Comments from faculty submitted via the COE strategic plan website included many of the resources listed in the previous point.

• Publicity and promotion are very important in terms of rankings. A strategy that had a huge impact, according to the COE that increased its ranking 30 points, was to present a strong research orientation through the College/School magazine, particularly highlighting multi-million dollar grants. This magazine was sent to every COE Dean and Associate Dean of Research, and every Superintendent.

• The Discovery Tiger Team believes that the only way Purdue’s COE can attain funding, reputation, and ranking commensurate with our benchmark institutions is to, like them, focus whole-heartedly on research; half-hearted measures or those taken by only a modest proportion of faculty members will not be sufficient. Without that commitment the COE is not likely to address Purdue University’s Discovery goal satisfactorily, and the COE’s situation (e.g., external funding, ranking) is unlikely to improve appreciably.

VI. Suggested College of Education Strategies

Goal #1: Create a College-wide system in which all faculty members are research-focused

Strategies
• Develop a workload policy in which all faculty members are identified as research faculty.
• Align promotion and tenure policies and procedures to reflect research orientation of all faculty.
• Align merit policies and procedures to reflect research orientation of all faculty.

Action steps:
• Provide increased school and departmental support for discovery.
• Hire additional clinical faculty so that faculty teaching loads are reduced to 3 courses per year, and no faculty member teaches more than one undergraduate course per year.

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• Hire additional mid-career Associate and Full professors who have a proven research record.
• Departmental and college review of tenure and promotion and merit procedures.

Goal #2: Increase COE national and international reputation, so that national ranking is consistent with that of benchmark universities

Strategies:
• Increase infrastructure support for faculty research.
• Increase incentives and recognition for faculty to publish in journals with high impact indices in their areas.
• Increase incentives and recognition for faculty to present papers at leading educational conference.
• Increase incentive and recognition for faculty to apply for and receive high impact grants.
• Increase quality of accepted graduate applicants and have available funding for graduate students so as to be competitive with benchmark universities.

Action Steps:
• Establish an Office of Educational Research, under the Associate Dean for Research, to increase funding. This office will coordinate all grant submissions, promote faculty research, provide full-time networking with other schools and colleges, the state of Indiana, and national and international funding agencies (government, corporate, and foundation).
• Hire a full-time grant writer who has expertise with key funding agencies to work with faculty on grant development and submissions.
• Hire a grant administrator to manage all financial aspects of large grants ($500K +) once they are awarded.
• Provide increased support for graduate students, so as to attract and retain excellent students who can work with faculty and increase research productivity. For example, guarantee 4-years of funding for incoming full-time doctoral students.
• Establish a system of incentives and rewards for faculty who demonstrate excellence in research.
• College-wide review of quality (GREs, grades, etc.) of incoming accepted graduate students.
• Increase start-up funding for newly hired faculty to equal that provided by benchmark institutions.
• Provide research semesters for faculty in which they are released from teaching responsibilities: once every six semesters for assistant professors, once each 10 semesters for Associate and Full professors. Research semesters are distinct from sabbatical.

Goal #3: Create a culture that nurtures research excellence and opportunities for increased interdisciplinary research

Strategies:
• Reduce teaching loads for all faculty members to provide opportunities for research focus.
• Reduce time spent on administrative tasks (e.g., NCATE, SPA reviews, etc.) and in meetings.
- Increase time spent by faculty on internal conversations, presentations, etc. regarding research. For example, provide funds for holding weekly colloquia in which the COE invites prominent educational scholars from around the nation to present.

Action Items:
- Review departmental and college meeting and retreat agenda; eliminate announcements, updates, and other items that can be distributed via e-mail.
- Institute regular presentations of research and conversations about research in departmental and college meetings.
- Hire additional administrative staff to work on necessary reviews (e.g. NCATE, SPA, etc.). Prioritize faculty time for research.
- Create monthly research off-campus lunches for small groups of faculty (8-10) across departments to share research interests and develop collaboration.
- Invite faculty from other colleges at Purdue and from other universities to present research at weekly research seminars to foster collaboration.
### VII. Linkages with the 2008-2014 Purdue Plan & the 2003-2008 COE Plan

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>G1:</strong> Create a College-wide system in which all faculty members are research-focused.</td>
<td><strong>G1S1:</strong> Develop a workload policy in which all faculty members are identified as research faculty.</td>
<td><strong>G1A4:</strong> Undertake initiatives to increase faculty time committed to research.</td>
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<tr>
<td><strong>G1S2:</strong> Align promotion and tenure policies and procedures to reflect research orientation of all faculty.</td>
<td><strong>G1S3:</strong> Align merit policies and procedures to reflect research orientation of all faculty.</td>
<td><strong>G1A5:</strong> Continue a promotion and tenure process that reflects the fact that the highest value is placed on scholarship in all areas (discovery, learning and engagement).</td>
</tr>
<tr>
<td><strong>G1A1:</strong> Provide increased school &amp; departmental support for discovery.</td>
<td><strong>G1A2:</strong> Hire additional clinical faculty so that faculty teaching loads are reduced to 3 courses per year, &amp; no faculty member teaches more than one undergraduate course per year.</td>
<td><strong>G1A5:</strong> Continue a promotion and tenure process that reflects the fact that the highest value is placed on scholarship in all areas (discovery, learning and engagement).</td>
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<tr>
<td><strong>G1A3:</strong> Hire additional mid-career Associate and Full professors who have a proven research record.</td>
<td><strong>G1A4:</strong> Departmental and college review of tenure and promotion and merit procedures.</td>
<td><strong>G1A6:</strong> Reward excellence in discovery through the merit pay process.</td>
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<tr>
<td><strong>G2:</strong> Increase COE national and international reputation, so that national ranking is consistent with that of benchmark universities</td>
<td><strong>G2S1:</strong> Increase infrastructure support for faculty research.</td>
<td><strong>G1A2:</strong> Develop an infrastructure associated with the Associate Dean for Discovery &amp; Faculty Development office to assist faculty in the pursuit of sponsored research through the promotion of funding sources, identification of collaborators &amp; mentoring of faculty, &amp; to provide leadership to graduate education programs.</td>
</tr>
<tr>
<td><strong>G2S2:</strong> Focus on breakthrough multidisciplinary research with signature approaches for addressing societal grand challenges involving core strengths in life sciences, physical sciences, &amp; engineering, while developing synergies with Liberal Arts, Business, Education.</td>
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<tr>
<td>G2S2</td>
<td>Increase incentives &amp; recognition for faculty to publish in journals with high impact indices.</td>
<td>D. Enhance research and scientific leadership.</td>
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<tr>
<td>G2S3</td>
<td>Increase incentives and recognition for faculty to present papers at leading educational conference.</td>
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<tr>
<td>G2S4</td>
<td>Increase incentive and recognition for faculty to apply for &amp; receive high impact grants.</td>
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<tr>
<td>G2S5</td>
<td>Increase quality of accepted graduate applicants and have available funding for graduate students so as to be competitive with benchmark universities.</td>
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<tr>
<td>G2A1</td>
<td>Establish Office of Educational Research, under the Associate Dean for Research, that will coordinate all grant submissions, promote faculty research, provide full-time networking with other schools and colleges, the state of Indiana, &amp; national and international funding agencies (government, corporate, and foundation) to increase funding.</td>
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<tr>
<td>G2A2</td>
<td>Hire a full-time grant writer who has expertise with key funding agencies to work with faculty on grant development and submissions.</td>
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<tr>
<td>G2A3</td>
<td>Hire a grant administrator who manages all financial aspects of large grants ($500K +) once they are awarded.</td>
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<tr>
<td>G2A4</td>
<td>Provide increased support for graduate students, so as to attract and retain excellent students who can work with faculty and increase research productivity. For example, guarantee a 4-year assistantship for incoming full-time doctoral students.</td>
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<tr>
<td>G1A1</td>
<td>Provide school and departmental support for discovery, including research assistantships, seed funding, start-up support for new faculty, and technical support.</td>
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<tr>
<td>G2A5: Establish a system of incentives and rewards for faculty who demonstrate excellence in research.</td>
<td>start-up support for new faculty, and technical support. G4A4: Increase support for graduate student involvement in faculty research.</td>
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<td><strong>G3: Create a culture which nurtures research excellence and opportunities for increased interdisciplinary research</strong></td>
<td>G1A7: Develop internal awards to recognize success in discovery and promote faculty and students who received national research awards.</td>
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<tr>
<td><strong>G3S1: Reduce teaching loads for all faculty members to provide opportunities for research focus.</strong></td>
<td>C. Proactively develop mutually beneficial relationships with research funding agencies. G1A4: Undertake initiatives to increase faculty time committed to research.</td>
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<td><strong>G3S2: Reduce time spent on administrative tasks (e.g., NCATE, SPA reviews, etc.) and in meetings.</strong></td>
<td>F. Increase the number of endowed professorships, support high profile faculty teams, &amp; increase graduate student fellowships. G1A4: Undertake initiatives to increase faculty time committed to research.</td>
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<tr>
<td><strong>G3S3: Increase time spent by faculty on internal conversations, presentations, etc. regarding research. For example, provide funds for holding weekly colloquia in which COE invites prominent educational scholars from around the nation to present.</strong></td>
<td>M. Encompass inquiry &amp; discovery by broadened participation of diverse members of the academic community, &amp; pluralism of intellectual pursuits &amp; outcomes. G3A1: Promote internal awareness among graduate students and faculty of research activities within the SOE and associated programs.</td>
<td></td>
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<tr>
<td><strong>G3A1: Review departmental and college meeting and retreat agendas: eliminate announcements, updates, and other items which can be distributed via e-mail.</strong></td>
<td>N. Guide the evolution of the large-scale research enterprise by conducting rigorous, periodic, external &amp; internal reviews of the research portfolio, &amp; provide seed support to new initiatives in selected strategic areas. G1A4: Undertake initiatives to increase faculty time committed to research.</td>
<td></td>
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<tr>
<td><strong>G3A2: Institute regular presentations of research and conversations about research in departmental and college meetings.</strong></td>
<td>G3A1: Promote internal awareness among graduate students and faculty of research activities within the SOE and associated programs.</td>
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</tr>
<tr>
<td><strong>G3A3: Hire additional administrative staff to work on necessary reviews (e.g. NCATE, SPA, etc.). Prioritize faculty time for research.</strong></td>
<td>G1A4: Undertake initiatives to increase faculty time committed to research.</td>
<td></td>
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<tr>
<td><strong>G3A4: Create monthly research off-campus dinners for small groups of faculty (8-10) across departments to share research interests and develop collaboration.</strong></td>
<td>G3A1: Promote internal awareness among graduate students and faculty of research activities within the SOE and associated programs.</td>
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<tr>
<td><strong>G3A5: Invite faculty from other colleges at Purdue to present research at weekly research seminars to foster collaboration.</strong></td>
<td>G3A3: Seek partners across the University to promote “centers of excellence”</td>
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</tbody>
</table>

G= Goal
S=Strategy
A=Action Step
VIII. Relevant Synergies, Partnerships, and Collaborations

- P-12 schools and school districts.
- Other educational contexts.
- Other colleges within Purdue University.
- Centers, within and outside of Purdue University.
- Other national and international universities.

IX. Metrics

Goal #1: Create a College-wide system in which all faculty members are research-focused
- Number of faculty who seek promotion and tenure based on discovery.
- Number of clinical faculty hired.
- Number of research productive faculty.
- Number of additional Associate and Full hires to increase research productivity.
- Alignment of department and college tenure and promotion and merit procedures with research focus.

Goal #2: Increase COE national and international reputation, so that national ranking is consistent with that of benchmark universities
- Ranking, as reported in selected national publications and organizations, for a given year (22)*.
- For a given publication year, the program rankings as reported in the Faculty Scholarly Productivity Index (30B).
- Number of faculty members who receive national or international awards (30A).
- The average citation index for faculty members.
- Number of peer-reviewed publications, with an emphasis on peer-reviewed articles.
- Number of publications in field-specific high impact journals.
- Total amount of extramural grants awarded for a fiscal year (33).
- Total amount of extramural grants submitted for a fiscal year.
- The appearance of noteworthy COE accomplishments and expertise in national and international media (44).
- GRE/grades of accepted graduate students.
- Number of graduate students funded.
- Number, average, and minimum monthly salary of Purdue-sponsored fellowships (19A).
- Number of students who received national and international prestigious awards/scholarships (3).
- Proportion of COE magazine that addresses faculty research.

Goal #3: Create a culture that nurtures research excellence and opportunities for increased interdisciplinary research
- For a given fall semester, the number and percent of research-productive faculty leaving the COE annually (29B).
- Faculty salary differential, taking into consideration rank and research quality.
- Amount of time in COE and department meetings spent on administrative tasks versus sharing and discussing research.
- Number of faculty administrative assignments related to reviews (e.g., NCATE, SPA).
- Number of research presentations and meetings held.
- Number of research presentations given by scholars outside Purdue's COE.
- Number of faculty members who have presented at research colloquia from (a) outside the COE, and (b) outside Purdue.
- Number, and dollar amount, of intramural grants awarded to faculty by the COE.

* indicates the numbered metric from Purdue University's New Synergies Strategic Plan.
## Appendix. U. S. News and World Report, 2009 Rankings of Purdue University College of Education and Peer Institutions’ Colleges of Education

<table>
<thead>
<tr>
<th>Institution</th>
<th>Weight</th>
<th>Rank</th>
<th>Mean GRE Scores - verbal&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Mean GRE Scores - quantitative&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Doctoral Acceptance Rate</th>
<th>Doctoral Student/Faculty</th>
<th>Doctorals Granted/Faculty</th>
<th>Funded Research (millions)</th>
<th>Funded Research/Faculty Member (thousands)</th>
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<tbody>
<tr>
<td>Purdue University ✦</td>
<td></td>
<td>68</td>
<td>480</td>
<td>627</td>
<td>67.9%</td>
<td>2.1</td>
<td>5.2</td>
<td>$4.5</td>
<td>$63.6</td>
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<tr>
<td>University of California, Berkeley ✦</td>
<td>7</td>
<td>578</td>
<td>618</td>
<td>22.4%</td>
<td>8.6</td>
<td>1.1</td>
<td>$14.9</td>
<td>$480.3</td>
<td></td>
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<tr>
<td>University of Michigan</td>
<td>9</td>
<td>585</td>
<td>693</td>
<td>19.9%</td>
<td>5.4</td>
<td>0.9</td>
<td>$15.3</td>
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<tr>
<td>University of Texas, Austin</td>
<td>10</td>
<td>526</td>
<td>599</td>
<td>41.0%</td>
<td>4.6</td>
<td>1.1</td>
<td>$41.6</td>
<td>$340.9</td>
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<tr>
<td>University of Wisconsin, Madison ✦</td>
<td>12</td>
<td>535</td>
<td>610</td>
<td>42.8%</td>
<td>3.2</td>
<td>0.5</td>
<td>$22.6</td>
<td>$145.1</td>
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<tr>
<td>Michigan State University ✦</td>
<td>14</td>
<td>526</td>
<td>599</td>
<td>46.6%</td>
<td>4.4</td>
<td>0.6</td>
<td>$22.8</td>
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<td>Ohio State University ✦</td>
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<td>0.7</td>
<td>$27.8</td>
<td>$192.9</td>
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<tr>
<td>University of Minnesota ✦</td>
<td>17</td>
<td>547</td>
<td>628</td>
<td>46.5%</td>
<td>4.0</td>
<td>0.7</td>
<td>$28.9</td>
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<tr>
<td>Indiana University</td>
<td>19</td>
<td>548</td>
<td>646</td>
<td>41.0%</td>
<td>5.4</td>
<td>0.8</td>
<td>$17.9</td>
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<tr>
<td>University of Illinois, Urbana-Champaign ✦</td>
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<td>567</td>
<td>705</td>
<td>44.2%</td>
<td>4.1</td>
<td>0.9</td>
<td>$6.9</td>
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<tr>
<td>University of Maryland ✦</td>
<td>25</td>
<td>539</td>
<td>626</td>
<td>32.9%</td>
<td>5.6</td>
<td>0.7</td>
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<tr>
<td>Pennsylvania State University ✦</td>
<td>30</td>
<td>535</td>
<td>642</td>
<td>27.8%</td>
<td>4.5</td>
<td>1.2</td>
<td>$12.0</td>
<td>$115.6</td>
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<tr>
<td>University of Iowa</td>
<td>31</td>
<td>508</td>
<td>614</td>
<td>49.5%</td>
<td>4.3</td>
<td>0.6</td>
<td>$15.0</td>
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<tr>
<td>Texas A&amp;M University ✦</td>
<td>40</td>
<td>482</td>
<td>545</td>
<td>61.9%</td>
<td>3.2</td>
<td>0.9</td>
<td>$16.0</td>
<td>$134.7</td>
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<sup>1</sup>GRE scores are for doctoral students only.

*Land grant university*