Annual Report of Graduate Education and Research Activity
Office of the Associate Dean for Graduate Education and Research
Fiscal Year 2022
Dear EMS community,

Happy Thanksgiving! I appreciate all your contributions in making the College of Earth and Mineral Sciences an exciting and stimulating place to belong.

In the next few slides, I summarize some key indicators of graduate education and research activities in the EMS. These indicators correspond with fiscal year 2022, except graduate enrollment which includes Fall 2022 data to date.

We have 943 talented graduate students, trained and mentored by world-class faculty and researchers working on a broad range of technical and societal challenges. We are experiencing a decline in graduate enrollment and proposals submitted, but those are contrasted with a big increase in research awards, as well as gains in expenditures and degrees conferred. Following a busy year writing and submitting proposals in 2021, our researchers our now turning their attention to $55.6 million (+35.4%) in research awards. Direct faculty expenditures by assignment of credit sum $44.1 million (+8.9%) and our total EMS research expenditures reached $68.4 million (+6.6%). Congratulations on a very good year!

Wishing you a pleasant break and a successful end of semester,

Zuleima Karpyn
Associate Dean for Graduate Education and Research
EMS Graduate Education and Research at-a-glance, 2022

- **Graduate Students Enrolled**: 943
- **PhD Degrees Conferred**: 69
- **MS Degrees Conferred**: 144
- **Proposals Total**: $141.8M (-23.0%)
- **Awards Total**: $55.6M (+35.4%)
- **Direct Faculty Expenditures**: $44.1M (+8.9%)

Proposal, Awards and Expenditures follow assignment of credit by faculty home unit for all research activities across the university.
Graduate Student Enrollment, 2013-2022

URG: Underrepresented Gender
URM: Underrepresented Minority
WC: World Campus (Online)

* Fall 2022 data to date/in progress
Graduate Enrollment by Academic Department

943 GRADUATE STUDENTS IN 2022 *

- MATSE 22%
- GEOSC 9%
- GEOG 7%
- GEOG-WC 28%
- METEO 9%
- EME 10%
- EME-WC 15%

WC: online graduate degree programs offered through Penn State World Campus

* Fall 2022 data to date/in progress
Graduate Degrees Conferred, 2013-2022

213 GRADUATE DEGREES IN 2022
Total Research Proposals and Awards

In millions of dollars

Proposals

<table>
<thead>
<tr>
<th>Year</th>
<th>Proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>$200</td>
</tr>
<tr>
<td>2022</td>
<td>$150</td>
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Awards

<table>
<thead>
<tr>
<th>Year</th>
<th>Awards</th>
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<tbody>
<tr>
<td>2021</td>
<td>$40</td>
</tr>
<tr>
<td>2022</td>
<td>$60</td>
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</tbody>
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-23.0% decrease in proposals from 2021 to 2022
35.4% increase in awards from 2021 to 2022
Total Research Expenditures, 2013-2022

In millions of dollars

- Direct EMS Faculty Participation
- Other central

PennState
College of Earth and Mineral Sciences
Research Expenditures by Funding Source, FY2022

In millions of dollars

$44.1M

Direct faculty EXPENDITURES IN 2022

Industry Sector classification follows Global Industry Classification Standard (GICS)