# PhD Programs in School of Arts & Sciences - Natural Sciences

## PhD Admissions

**AY 2018-2020**

<table>
<thead>
<tr>
<th>3-year Avg</th>
<th>3-year Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicants</td>
<td>2,163</td>
</tr>
<tr>
<td>Admits</td>
<td>237</td>
</tr>
<tr>
<td>Acceptances</td>
<td>101</td>
</tr>
<tr>
<td>Matriculants</td>
<td>101</td>
</tr>
<tr>
<td>Adm Rate</td>
<td>11.0%</td>
</tr>
<tr>
<td>Yield</td>
<td>45.7%</td>
</tr>
</tbody>
</table>

## Applicants

- **% Int'l**: 45.7%
- **% US**: 54.3%
- **# of Countries**: 94
- **# of States**: 49

## Test Scores

<table>
<thead>
<tr>
<th>Test Scores</th>
<th>Average</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRE Verbal</td>
<td>158.3</td>
<td>159</td>
</tr>
<tr>
<td>GRE Quant</td>
<td>164.7</td>
<td>167</td>
</tr>
<tr>
<td>GRE Writing</td>
<td>4.1</td>
<td>4</td>
</tr>
<tr>
<td>TOEFL</td>
<td>105.2</td>
<td>105</td>
</tr>
</tbody>
</table>

## Top Countries

- **China**: 1,606 (Non-US)
- **Pennsylvania**: 506 (Non-US)

## Top States

- **China**: 132 (Non-US)
- **Pennsylvania**: 65 (Non-US)

## PhD Enrollment

**Fall 2019**

<table>
<thead>
<tr>
<th>Headcount</th>
<th>Median Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>534</td>
<td>25.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Women</th>
<th>% URM</th>
<th>% Int'l</th>
</tr>
</thead>
<tbody>
<tr>
<td>37.8%</td>
<td>4.5%</td>
<td>47.2%</td>
</tr>
</tbody>
</table>

## PhD Recipients

**Traditional PhD Students**

**AY 2017-2019**

- **Median Time to Degree**: 5.75

## Completion Rates

**Traditional PhD Cohorts**

- **Entering AY 2009-2011**
  - **Completion Rate**: 76.2%

## Demographic Details of PhD Recipients

**AY 2017-2019**

<table>
<thead>
<tr>
<th>Total</th>
<th>Have a spouse/partner</th>
<th>52%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Have children</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Identify as LGBTQ</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>Low-income or working-class</td>
<td>23%</td>
</tr>
</tbody>
</table>

## Academic Experience of PhD Recipients

**AY 2017-2019**

<table>
<thead>
<tr>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prob/def pursue a PhD at Penn again</td>
</tr>
<tr>
<td>One or more publications</td>
</tr>
<tr>
<td>Avg Advisor support (1-4)</td>
</tr>
<tr>
<td>Avg Program climate (1-5)</td>
</tr>
</tbody>
</table>

## Graduate Group Faculty

**Fall 2018**

<table>
<thead>
<tr>
<th>Total</th>
<th>Women</th>
<th>URM</th>
<th>Int'l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standing Faculty</td>
<td>244</td>
<td>64</td>
<td>8</td>
</tr>
<tr>
<td>Non-standing Faculty</td>
<td>23</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

## Faculty Headcount by Dept (Top 5)

- **Physics and Astronomy**: 41
- **Biology**: 32
- **Chemistry**: 32
- **Psychology**: 31
- **Mathematics**: 29

## Career Outcomes

**1 to 5 years after graduation**

- **AY 2014-2018 PhD Recipients**
  - **% w/ current job information**: 96.6%

**Career Outcomes**

**6 to 10 years after graduation**

- **AY 2009-2013 PhD Recipients**
  - **% w/ current job information**: 97.7%
Definitions

General

- Data source for race/ethnicity information on students, employees, and post-doctoral affiliates: Penn People. Penn People allows members of the community to enter/update information for Hispanic ethnicity and race; as a result, race/ethnicity data are subject to change over time.
- Academic Year (AY) is a 1-year unit encompassing Summer, Fall and Spring semesters, e.g.: AY 2019 = Summer 2018 (sessions I, II, and 12-week), Fall 2018, and Spring 2019 semesters.
- URM (Under-Represented Minority) includes U.S. Citizens and Permanent Residents who identify with one or more of the following race/ethnicities: Hispanic/Latino/a, African American/Black, Native American/Alaskan Native. All others are classified as Non-URM.

Admissions

- Data source for Graduate applicants, admits, and matriculants: College Net
- Applicants are counts of applicants to PhD programs, for any term (Summer, Fall, Spring) within a given AY.
- Admitted are counts of applicants admitted for any term within a given AY, regardless of planned matriculation semester.
- Acceptances are those admitted for a given AY who indicate they will enroll in that AY, including those who defer-out to a subsequent AY. Excludes admitted applicants who defer-in from prior years.
- Matriculants are those admitted for a given AY who indicate they will enroll in that AY, plus those who defer-in from a prior year. Excludes admitted applicants who defer-out to subsequent years.
- TOEFL scores reported by PhD Applicants are converted to Internet-based (iBT) scale (0-120).
- GRE scores reported by PhD applicants consist of Verbal Reasoning, Quantitative Reasoning (both scales of 130-170, 1pt increments. Prior to Aug-2011, scale of 200-800, 10pt increments -- these are converted to the new scale), and Analytical Writing (scale of 0-6, half-pt increments).

Enrollment

- Data source for Enrollment: Fall enrollment Census, 5th week of Fall classes
- A PhD student is a student enrolled in a PhD program, or pursuing a PhD as part of a dual degree.
- Data source for Fellowship and Teaching/Research Assistantships: snapshot from Human Resource Information System/HRIS (stored the Data Warehouse).
- Education Fellowship Recipients are PhD students with at least one appointment title of ‘Education Fellowship Recipients’.
- Teaching or Research Assistant/Fellows are PhD Students with at least one appointment title of: Research Assistant (A or B), Research Fellow, Teaching Assistant, and Teaching Fellow.
- Data source for State of Origin for Enrolled Students: College Net

Completion Rates

- Traditional PhD Cohort is a group of PhD students tracked by entry year. Cohorts include only those students who begin their doctoral study at Penn as 1st-time PhD students; excludes Dual Degree and those who do not begin as 1st-time PhD Students.
- Completion Rate for a Traditional PhD Cohort is calculated as the percentage of the cohort receiving PhDs within a designated time period.
- Time to degree is suppressed for groups less than 3.

Degree Recipients

- Degree Recipients are headcounts of those who entered as Traditional PhD students, and who earned only PhD Degrees, i.e.: excludes those who earned PhDs as part of Dual Degree programs.
- Time-To-Degree for PhD recipients is calculated as the time elapsed between a student’s Entry Term to a PhD program and the Exit Term from a PhD program, and is not adjusted for leaves of absence. i.e.: Time to Degree = (Exit Term date - Entry Term date) ÷ 365.25.
- Time to degree and completion rates are suppressed for groups less than 3.

Career Outcomes

- Data Sources for Career Outcomes: Academic Analytics and Career Tracker
- Sector categories: Academia, For-profit; Government; Non-Profit; Other.
- Position categories: Education--Tenured & Tenure Track; Postdoc; Other Educational Occupations. Non-Education--Architecture & Engineering Occupations; Arts, Design, & Media Occupations; Computer & Math Occupations; Finance Professional; Healthcare Practitioners; Legal Occupations; Management Occupations; Scientists & Research Occupations; Other Occupations.

Graduate Group Faculty

- Data source for Graduate Group Faculty: snapshot from Human Resource Information System/HRIS stored the Data Warehouse
- Graduate programs leading to the Ph.D. and their related research master’s degrees are carried out by associations of faculty members called “graduate groups.” Many are based in single departments, in which all members of the department’s Standing Faculty are members of the grad group, but the group may also include faculty from other departments/schools. There are also grad groups not based in a single department, and composed of faculty from several departments or schools, e.g., Immunology. Faculty members are counted within grad groups according to their departmental appointment, and/or their active grad group membership as indicated in FIS (Faculty Information System).
- Standing faculty are faculty members with a tenure-track or clinician educator appointment.
- Non-Standing Faculty are Associated Faculty, and also may include others such as Emeriti.

PhD Exit Survey

- Average Advisor Support is the average advisor rating across the following 6 items from the PhD Exit Survey: selection of a dissertation topic; dissertation research; advice writing & revising the dissertation; selection of academic career options; selection of nonacademic career options; search for employment or training. Item scores range from 1-4, with 4 being most positive.
- Average Program Climate is the average program climate rating across the following 4 items from the PhD Exit Survey: Students in my program are treated with respect by faculty; the intellectual climate of my program is positive; the social climate of my program is positive; students in my program are collegial. Item scores range from 1-5, with 5 being most positive.
- Responses are suppressed for groups less than 5.