Program Outcomes Assessment

PHD in Biology

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General Information (Program Outcomes Assessment)
Standing Requirements

Mission Statement

The mission of the Department of Biology at Indiana State University is to nurture the academic potential of every student, advance knowledge through quality research, and serve the university and broader communities. Through experiential learning both within and outside the classroom, we motivate our students to become critically thinking, informed citizens with a heightened interest in science. Through one-on-one mentoring, we engage both undergraduate and graduate students in the excitement and challenge of original research. Through research and outreach education, we make valuable contributions at both local and national scales to the scientific community and the well-being of the general public.

Outcomes Library

PHD in Biology

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Mapping</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Professional communication proficiencies</td>
<td>No Mapping</td>
</tr>
<tr>
<td>Students demonstrate professional communication proficiencies</td>
<td>No Mapping</td>
</tr>
<tr>
<td>2: Contribute to diverse and complex communities</td>
<td>No Mapping</td>
</tr>
<tr>
<td>Students engage in and meaningfully contribute to diverse and complex communities and professional environments</td>
<td>No Mapping</td>
</tr>
<tr>
<td>3: Professional and ethical challenges</td>
<td>No Mapping</td>
</tr>
<tr>
<td>Students recognize and act on professional and ethical challenges that arise in their field or discipline</td>
<td>No Mapping</td>
</tr>
<tr>
<td>4: Mastery of Knowledge</td>
<td>No Mapping</td>
</tr>
<tr>
<td>Students achieve mastery of the knowledge required in their discipline or profession.</td>
<td>No Mapping</td>
</tr>
<tr>
<td>5: Mastery of Skills</td>
<td>No Mapping</td>
</tr>
<tr>
<td>Students achieve mastery of the skills (including using appropriate tools) required in their discipline or profession</td>
<td>No Mapping</td>
</tr>
</tbody>
</table>

Curriculum Map

Active Curriculum Maps 📇

PHD in Biology (See appendix)

Alignment Set: PHD in Biology
Created: 05/24/2012 12:58:25 pm CST
Last Modified: 05/29/2012 9:13:04 am CST
Communication of Outcomes

We will publish the outcomes on our web site.
Archive (This area is to be used for archiving pre-TaskStream assessment data and for current documents.)
Assessment Plan

Outcomes and Measures

PHD in Biology

5: Mastery of Skills
Students achieve mastery of the skills (including using appropriate tools) required in their discipline or profession

Measure: Publication in peer-reviewed journals
Indirect - Other

Details/Description: Publish research in peer-reviewed national and international journals.

We will assess this outcome using self-reports from students and their advisors and searching literature databases for current and former students.

Target: We will collect baseline date this cycle which will be used to set targets for future cycles.

Implementation Plan (timeline): Spring 2012

Responsible Individual(s): Department Chair

Assessment Findings

Finding per Measure

PHD in Biology

5: Mastery of Skills
Students achieve mastery of the skills (including using appropriate tools) required in their discipline or profession

Measure: Publication in peer-reviewed journals
Indirect - Other

Details/Description: Publish research in peer-reviewed national and international journals.

We will assess this outcome using self-reports from students and their advisors and searching literature databases for current and former students.

Target: We will collect baseline date this cycle which will be used to set targets for future cycles.

Implementation Plan (timeline): Spring 2012

Responsible Individual(s): Department Chair

Findings for Publication in peer-reviewed journals

Summary of Findings: Students included in the assessment were students who graduated from Summer 2009 to Fall 2011.

Of the four Ph.D. students, three (75%) had published a median of 2.5 papers.

Results: Target Achievement: Met

Recommendations:
Reflections/Notes: The publication rates of recent graduates of the Biology M.S. and Ph.D. programs seem quite good.

Substantiating Evidence:


These Findings are associated with the following Actions:

**Cotinue to monitor**

(Action Plan; 2011-2012 Assessment Cycle)

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Overall Recommendations

*No text specified*

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Overall Reflection

*No text specified*

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Action Plan

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Actions

PHD in Biology

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5: Mastery of Skills

Students achieve mastery of the skills (including using appropriate tools) required in their discipline or profession

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**Action**: Cotinue to monitor

---

**This Action is associated with the following Findings**

**Findings for Publication in peer-reviewed journals**

(Assessment Plan and Assessment Findings; 2011-2012 Assessment Cycle)

**Summary of Findings**: Students included in the assessment were students who graduated from Summer 2009 to Fall 2011.

Of the four Ph.D. students, three (75%) had published a median of 2.5 papers.

**Action Details**: The Biology Department should continue the mentoring strategies it uses, which seem to be training students well to publish papers in peer-reviewed journals. There does not seem to be a need to modify the curriculum or practices, given the rate of success of students in publishing.

**Implementation Plan (timeline):**

**Key/Responsible Personnel:**

**Measures:**

**Resource Allocations:**

**Priority:**
### Action Statuses

**PHD in Biology**

<table>
<thead>
<tr>
<th>Action Statuses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHD in Biology</strong></td>
</tr>
<tr>
<td><strong>5: Mastery of Skills</strong></td>
</tr>
<tr>
<td>Students achieve mastery of the skills (including using appropriate tools) required in their discipline or profession</td>
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</tbody>
</table>

#### Action: Cotinue to monitor

**Action Details:** The Biology Department should continue the mentoring strategies it uses, which seem to be training students well to publish papers in peer-reviewed journals. There does not seem to be a need to modify the curriculum or practices, given the rate of success of students in publishing.

**Implementation Plan (timeline):**

**Key/Responsible Personnel:**

**Measures:**

**Resource Allocations:**

**Priority:**

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**Status** for Cotinue to monitor

*No Status Added*

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### Status Summary

*No text specified*

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### Summary of Next Steps

*No text specified*
Assessment Plan

Outcomes and Measures

PHD in Biology

5: Mastery of Skills
Students achieve mastery of the skills (including using appropriate tools) required in their discipline or profession

Measure: Number of presentations
Indirect - Other

Details/Description: Determine the number of presentations made by graduate students at professional meetings each year for the last three years.

Target:
Implementation Plan (timeline): Spring 2013
Responsible Individual(s): Department chair

Measure: Student performance on oral presentations
Direct - Student Artifact

Details/Description: Evaluate student presentations in BIO 640 – Seminar: Graduate Student Research.

Develop a rubric to evaluate student performance on oral and poster presentations produced in these classes.

Have faculty teaching the course apply the rubric to student artifacts.

Analyze scores generated by application of rubric to student artifacts.

Target:
Implementation Plan (timeline): 2012-13
Responsible Individual(s): faculty teaching BIO 640 and department chair

Assessment Findings

Finding per Measure

PHD in Biology

5: Mastery of Skills
Students achieve mastery of the skills (including using appropriate tools) required in their discipline or profession

Measure: Number of presentations
Indirect - Other

Details/Description: Determine the number of presentations made by graduate students at professional meetings each year for the last three years.

Target:
Implementation Plan (timeline): Spring 2013
Responsible Individual(s): Department chair

Findings for Number of presentations
No Findings Added

Measure: Student performance on oral presentations
Direct - Student Artifact

Details/Description: Evaluate student presentations in BIO 640 – Seminar: Graduate Student Research.

Develop a rubric to evaluate student performance on oral and poster presentations produced in these classes.

Have faculty teaching the course apply the rubric to student artifacts.

Analyze scores generated by application of rubric to student artifacts.

Target:
Implementation Plan (timeline): 2012-13
Responsible Individual(s): faculty teaching BIO 640 and department chair

Findings for Student performance on oral presentations
No Findings Added

Overall Recommendations
No text specified

Overall Reflection
No text specified

Action Plan

Status Report
2013-2014 Assessment Cycle

- Assessment Plan
- Assessment Findings
- Action Plan
- Status Report
2014-2015 Assessment Cycle

- Assessment Plan
- Assessment Findings
- Action Plan
- Status Report
2015-2016 Assessment Cycle

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- Assessment Findings
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- Assessment Plan
- Assessment Findings
- Action Plan
- Status Report
2018-2019 Assessment Cycle

- Assessment Plan
- Assessment Findings
- Action Plan
- Status Report
2019-2020 Assessment Cycle

- Assessment Plan
- Assessment Findings
- Action Plan
- Status Report
Appendix

A. PHD in Biology (Curriculum Map)