



# Program Review and Assessment

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**PURDUE**  

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**THE GRADUATE SCHOOL**

**Purdue University**

**Land-grant  
University**

**Five campuses**

**100+ degree  
programs**

**10,000+ students**

# Academic Program Assessment: Key Points

- Reviews can improve programs
- Many metrics and measures to consider
- Interpret measures wisely e.g. funding
- Recognize program differences and disciplinary culture e.g. journal vs conf pubs
- Popular model: self-study report, team review, evaluation, response and action plan, follow up, communication to constituents

At Purdue: Multi-campus implementation  
Centralized data collection



# Additional Assessment Related Highlights

External rankings  
Accreditation organizations  
Non-traditional programs



# External Rankings

- US News and World Report
- QS World University (peer,S/F,citations,recruiters, int'l)
- Times Higher Education
- Academic Rankings of World Universities (Shanghai Jiao Tong) Nobel,citations, Nature
- National Research Council

# NRC Rankings

## 20 variables

Publications/fac

Citations/pub

Percent fac with grants

Percent fac interdisc

Percent URM fac

Percent female

Awards/fac

6yr completion rate

Time to degree

% Graduates in academia

Etc.

## 3 Dimensions

Research

Research

Research

Research

Diversity/environment

Diversity/environment

Research

Student support

Student support

Student support

Etc.

## **Three components to the NRC Assessment:**

- Data for more than 5,000 programs
- Ranges of rankings for programs within each discipline based on twenty program characteristics
- Ranges of rankings based separately on three dimensions of educational quality

# Value of Rankings

- Provides a *neutral* assessment of stature within a discipline.
- Can impact the quality of students who apply and enroll
- Can influence faculty recruiting
- Can shape perceptions among legislators, alumni, parents, international students, ...
- May impact philanthropic giving
- Possibly useful for setting goals (e.g. NRC data)

Note: Rankings are the subject of criticism



# Accreditation Agencies

Reviews by accreditation agencies can be helpful in the assessment process.

Examples:

- ABET (primarily undergrad)
- Accreditation Council for Business Schools and Programs
- Higher Learning Commission (North Central Association of Colleges and Schools)

# Accreditation Board for Engineering and Technology

## ABET Criteria

1. Student
2. Program Educational Objectives
3. Student Outcomes
4. Continuous Improvement
5. Curriculum
6. Faculty
7. Facilities
8. Institutional Support

# Accreditation Board for Engineering and Technology

## ABET Student Outcomes

1. an ability to apply knowledge of mathematics, science and engineering
2. an ability to design and conduct experiments, as well as to analyze and interpret data
3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. an ability to function on multidisciplinary teams
5. an ability to identify, formulate, and solve engineering problems
6. an understanding of professional and ethical responsibility
7. an ability to communicate effectively (3g1 orally, 3g2 written)
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
9. a recognition of the need for, and an ability to engage in life-long learning
10. a knowledge of contemporary issues
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.



ELECTRICAL AND COMPUTER ENGINEERING  
DEPARTMENT HEADS ASSOCIATION

## Electrical and Computer Engineering Department Heads Association

Dear ECEDHA member,

Welcome to the ECEDHA Survey portal and our new Interactive Data System (IDS). The portal will be open for data entry until mid November. Please answer all questions; some are optional; some are required (denoted by the asterisk). To assist as you enter your data, we provide your numerical information from last year (or the latest information we have) next to the entry box. There are preset bounds in place to help detect accidental entry errors. For example, if you are asked to enter an academic year salary and you enter a monthly salary by mistake, you will receive a message that says your entry is outside of the expected bounds. The message is just a courtesy alert to allow you to correct errors. Your data entry will still be saved. Non-numeric entries (such as \$ , %) are not saved and will generate an error message to that effect. For example, 50,000 should be entered as 50000 and \$20k should be entered as 20000.

In accordance with longstanding ECEDHA practice, we have taken great care to construct the interactive data system in a way the preserves confidentiality. After the data collection period ends and we open the system for interactive customized query, ECEDHA users will be able to view individual responses from peer cohorts in graphical form. All names will be replaced by a letter designation (A, B, C, ...) and the designated letters that are assigned will be randomized as a privacy safeguard every time a plot is generated. As an

### Login

User name:

Password:

**Sign in**

[Forgot your password?](#)

averages.

Subpart D, titled "New Assistant Professors" refers to the subset of Assistant Professors counted in subpart C who were hired in the last 12 months.

**Faculty:** (select one or more)

- ☒ A. Professor  
☒ B. Associate Professor  
☒ C. Assistant Professor  
☒ D. New Asst Profs hired within 1 yr

**Measures:** (select one)

- ☒ Number of faculty members  
☐ Average Salary  
☐ Number of African-American, Hispanic-American, and Native American faculty (FTE)  
☐ Number of women faculty

- 02. Orange State University
- 03. Mellon State University
- 04. Lower State University
- 05. Out-of-State University
- 06. In-State University
- 07. Private University
- 08. Eastern Canada University
- 09. Western Canada University
- 10. Richie Rich University
- 11. Sunshine Institute of Technology

**Charting options:**

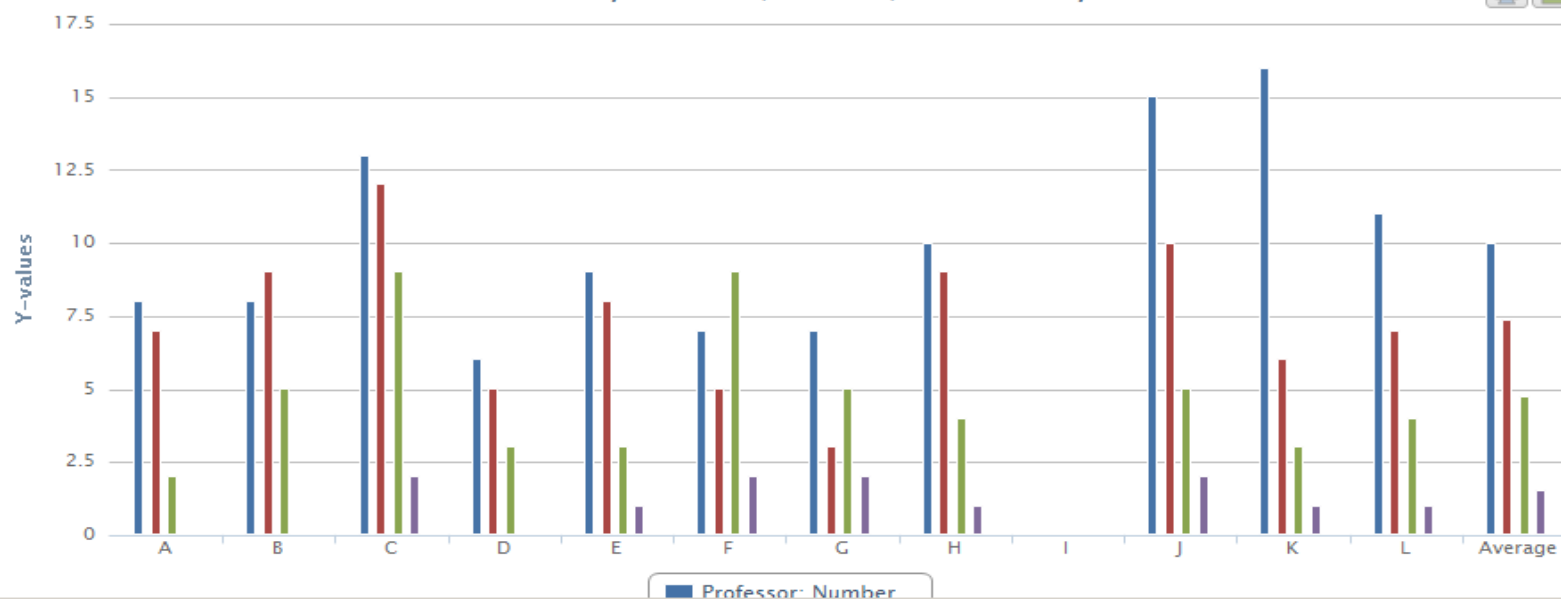
- ☐ Include explicit zero responses in average calculations  
☐ Normalize applicable values per faculty

**Update Chart**

The chart below shows data from your peer group. To assure anonymity, peers are assigned a random letter on each chart generation. The most recent data from each peer data shown. If data were collected before the most recent survey session, it is noted.

**Zoom** in on a portion of the chart by clicking and dragging your mouse to select a region of the chart. **Print** or **download** the chart using the icons in the upper right corner of the chart.

## II. Faculty Numbers, Salaries, and Diversity



# Assessing Non Traditional Programs

Interdisciplinary programs (benchmarking)

International programs (metrics)

Online programs (equivalent learning)

Blended programs

Modular online programs



# Benefits of Program Reviews

- Discover where the problems lie
- Identify opportunities for improvement
- Obtain input to make resource allocations
- Encourage departments to focus on relevant quality issues

Let's talk. We have an opportunity to learn from each other.

# Discussion Time