UW-Madison NRC FAQs

1. **What is the NRC?**

The National Research Council (NRC) functions under the auspices of the National Academy of Sciences (NAS), the National Academy of Engineering (NAE), and the Institute of Medicine (IOM). The four organizations are collectively referred to as the National Academies.

The mission of the NRC (which is not a governmental body) is to improve government decision making and public policy, increase public education and understanding, and promote the acquisition and dissemination of knowledge in matters involving science, engineering, technology, and health. Individual projects are funded by federal agencies, foundations, other governmental and private sources, and the institution’s endowment. The core services involve collecting, analyzing, and sharing information and knowledge. The independence of the institution, combined with its unique ability to convene experts, allows it to be responsive to a host of requests.

2. **What exactly is the NRC’s Assessment of Research Doctorate Programs?**

It is a survey of graduate program quality of research doctorate degrees conducted about every 10 years. It is intended to be comprehensive and reflect the scope of graduate education.

3. **When was the last NRC study completed and how is it the same/different this time?**

The previous NRC study was completed in 1995 and is quite different from this most recent study. While one change is that more academic fields were included in the 2006 study, the biggest differences are with the change in the criteria and methodology used. In turn, this led to a change in using ranges for the rankings instead of a single number (read more below). Thus, for all these reasons, it is extremely difficult to make comparisons with one study to the other.

4. **The data were collected in 2006. Why the delay to release the results? Is the study still useful?**

The NRC completed a series of continuous data checks and validations. They also were developing and revising the model and methodology for the review and when there were changes it required significant re-calculations. Finally, they were working with an enormous database. The NRC indicates this is the largest, most comprehensive national review of research doctoral programs to date. In addition, the NRC argues that most programs remain relatively constant within a period of five years since most faculty remain at the same university for 8 to 20 years.

5. **What is the purpose of this most recent study?**

The NRC intends this new study to provide data to programs that will permit them to compare themselves with other similar programs and to provide data that can be used improve their program quality. It also seeks to provide potential students and the public with accessible, readily available information on doctoral programs nationwide. There will be an interactive resource at [www.phds.org](http://www.phds.org) for anyone to query research doctoral programs based on whatever criteria they deem most important using the data collected from this study.

6. **How should departments use the data from this study?**

The NRC ratings are just one of a number of ratings of program quality. The results can provide comparative information with other programs in your field/discipline. Departments/programs can use the results for diagnostic purposes – these data provide an opportunity for internal program evaluation and identification of areas of improvement. In addition,
these data can serve as a component of program review which the campus requires departments/programs to conduct every ten years (or after five years for new programs).

7. How will UW-Madison use the data from this study?

The Graduate School will find the data useful in a program review context (see above). Overall campus trends will likely be analyzed to determine our strengths and weaknesses as an institution.

8. Which UW-Madison programs were included?

UW-Madison has 108 Ph.D.-issuing programs. However, only 78 were rated by the NRC. To view the list of participating programs, check here: http://www.grad.wisc.edu/projects/nrc/NRC2010programlist1.xls School of Business and School of Education programs were not programs the NRC included. NRC did not exclude Biological Systems Engineering despite the program’s/Graduate School’s request. Programs classified by NRC as emerging fields were not rated, but data were collected (this included Urban and Regional Planning and Nuclear Engineering Physics). Programs that did not meet NRC criterion for # PhDs granted were not rated (this included Geophysics). NRC did not rate the NRC field/category titled “Languages, Societies and Cultures” which included the following UW-Madison programs: African Languages and Literature, Chinese, Hebrew and Semitic Studies, Italian, Languages and Cultures of Asia, and Slavic Languages and Literatures. This NRC field (Languages, Societies, and Cultures) was not rated due to great variability within the field/category making comparisons difficult.

Also of note are these program changes: Biochemistry and Biomolecular Chem merged 2006/07, Land resources renamed Environment and Resources, and Metallurgical Engineering renamed Materials Engineering.

9. Where did the data come from?

The NRC collected data from universities (such as questionnaires from programs and faculty) to collect data for enrollment, number of PhDs, student financing, time to degree, etc. as well as from external sources (such as the Institute of Scientific Information and national professional organizations/societies) to collect data for grants, publications, honors/awards, citations, etc.

10. What criteria were used to evaluate programs? Which factors were most important?

There were 20 variables used to evaluate programs:

1a. Publications per allocated faculty (non-humanities)
1b. Published books and articles per allocated faculty (humanities)
2. Average citations per publication (non-humanities)
3. Percent of faculty with grants
4. Percent interdisciplinary
5. Percent of non-Asian minority faculty
6. Percent of female faculty
7. Honors & awards per allocated faculty
8. Average GRE score (humanities – verbal; non-humanities – quantitative)
9. Percent of students with full support in first year of study
10. Percent of first-year students with external funding
11. Percent of non-Asian minority students
12. Percent of female students
13. Percent of international students
14. Average annual PhDs graduated
15. Average percent of a cohort completing in eight years (humanities), six years (non-humanities)
16. Median time-to-degree for full- and part-time students
17. Percent of PhDs with definite plans for an academic position
18. Individual workspace for students
19. Provision of health insurance
20. Provision of student support activities

You can find a further description of each variable at http://www.grad.wisc.edu/projects/nrc/variablesdefined.pdf

The short answer of which factors were most important is “it depends” since the variables were uniquely weighted for each field/category. However, faculty or research productivity was generally rated/weighted the highest.

11. It sounds like there are multiple ratings for each program. What are they and why?

Each participating program has two overall ratings (one called s and one called r) and three dimensional ratings (research activity, student support and outcomes, and diversity of the academic environment). The three dimensional ratings are new and address the point that quality of doctoral programs is not just about scholarly productivity and scholarly recognition. These dimensional ratings can provide a more complete picture of doctoral programs.

12. Tell me more about these overall ratings (s and r). What are the differences between them?

Both ratings use the same 20 variables to evaluate program quality, but with different weights assigned to each variable. The s (or survey-based) ratings/weights are quality are based upon faculty judgments of what is most important in a quality doctoral program whereas the r (or regression-based) ratings/weights based upon faculty perceptions of program. The analogy has been given that you can say what you like to eat (“s” in this example) versus what you actually eat (“r” in this example).

13. Why are there ranges for the rankings instead of single number? For example, one of my program’s overall ratings has a ranking range of 9-35; why didn’t they pick a single number within that range?

The ranges imply the variety of factors that constitute program quality and an attempt to account for the uncertainty and variability that occurs within the data, the raters, and statistical estimation. There by illustrating the inappropriateness of narrowing a ranking to a single number. For this reason, the NRC stresses these are illustrative rankings.

14. How do I access the data? Where do I go for help?

On their website, the NRC provides an Excel spreadsheet that contains data on the programs evaluated. A range of rankings will be offered for the five types of illustrative rankings: two overall and three dimensional (read more above). Users will have the ability to “click through” to get detail of ranking calculations as well as to filter by NRC field/category. Please note that the NRC recommends that users use a PC instead of a Mac since full functionality of the spreadsheet may not be possible on a Mac.

On the NRC website (http://www.nap.edu/rdp) you can find these resources:

- 4-page NRC Report in Brief (recommended reading)
- NRC FAQ (recommended reading)
- Online tutorials how to manipulate the spreadsheet
• NRC Methodology (very long and detailed)
• Full-length NRC Report (very long and detailed)

In addition, you may also want to explore these resources:

• The Graduate School will hold two informational sessions for programs following the data release:
  o Monday, October 4, 2:30-3:30 pm, Biotechnology Center Auditorium, 425 Henry Mall
  o Tuesday, October 5, 1:00 – 2:00 pm, Tong Auditorium (room 1003), Engineering Centers Building
• Internal IT staff in your department/unit or the DoIT Help Desk to troubleshoot opening Excel spreadsheet
• UW-Madison Press Release:  http://www.news.wisc.edu/18462
• Visit www.phds.org to query programs based on your own selected criteria

15. How did UW-Madison do as a whole?

Due to the use of ranges versus single numbers, it is difficult to answer this question in an exact way. However, taken as a whole, UW-Madison ranks in the upper tier of institutions offering highly ranked research PhD programs.