Agenda

• Introduction to Research Expenditures
• The Official Rules
  • What is included?
  • Research Unit/Center?
• Questions and Guidance
• Validation Process
• Further Resources and Discussion
Research Expenditures

• Collected for graduate programs. We are collecting values in US dollars for research expenditures (i.e. what is spent for research purposes).

• Used by US News and World Report to rank graduate engineering programs: https://www.usnews.com/education/best-graduate-schools/articles/engineering-schools-methodology

  • Research Activity (weighted by 0.25)
    • Total research expenditures (0.15): This is the total of externally funded engineering research expenditures. These expenditures refer to separately funded research, public and private, that the school conducted and are averaged over fiscal years 2017 and 2018. U.S. News' statistical surveys use the American Society for Engineering Education's, or ASEE, definition of research expenditures. In many of cases, U.S. News cross-checks reported research expenditure data with research expenditure data engineering schools submitted to the ASEE for the same time period.
    • Average research expenditures per faculty member (0.10): This is the average amount of externally funded engineering research expenditures per full-time faculty member, averaged over fiscal years 2017 and 2018.
Disclaimer # 1

• These rules were crafted in the mid 2000s and have been modified from time to time by our governing bodies. These rules were written with guidance from the Engineering Deans’ Council Data Committee. As of 2019, modifications to the official rules require discussion and approval from the ASEE Board of Directors’ Data Committee and the EDC Data Committee. A disclaimer: Guidance provided by my office, including the discussion and examples online, do not override the written rules or the oversight function of the two ASEE data committees.
Disclaimer # 2

• All links to USNWR methodology are provided for informational purposes only. The ASEE is not involved in ranking institutions and only compares submitted data to the USNWR in order to validate data. Questions about USNWR methodology and rankings should be directed to US News & World Report.
The Official Rules

• Include all expenditures associated with grants and contracts specifically budgeted for externally sponsored research and associated programs and expenditures associated with all gifts auditably used for research. Include expended funds provided by the following external sources for the FY 2019 year (i.e. the fiscal year that ends in 2019):
  • 1. Federal Government
  • 2. State Government
  • 3. Foreign Government
  • 4. Industry
  • 5. Non-Profit Organizations (e.g. foundations)
  • 6. Individuals
  • 7. Local Government
The Official Rules (cont.)

• Any portion of academic year and/or summer salary for any researcher that is not derived from external research grants or contracts should not be counted.
• Report total number of individual grants, not the total dollar amount of the expenditures.
• Report actual expenditures (as opposed to authorization amounts or awards) in U.S. dollars.
• Time frame for expenditures: Report expenditures for your 2019 fiscal year (the fiscal year that ended in 2019).
The Official Rules (cont.)

- The expenditures reported should be only those funds provided by organizations, agencies, and individuals external to the institution.
- Do not include any research that is funded from an endowment or a general fund.
- Cost sharing/matching funds should be included only if provided from sources external to the institution.
- Only State government funds that were obtained competitively or as matching funds associated with other externally funded programs should be included.
The official rules (cont.)

• State funds that are part of the normal operating budget should not be included regardless of purpose.
• For all joint or contracted projects or sub-projects, only the portion of the center research performed by faculty, staff, and students of the affiliated engineering school should be credited to that school.
• Expenditures for capital costs of research laboratory building construction should not be included.
• Expenditures for research laboratory renovations should not be included unless the renovation funds expended came from grants and contracts expressly intended for the direct support of engineering research.
ASEE has adopted the definition of a research unit developed by Dr. Robert S. Friedman and Dr. Renee C. Friedman at Pennsylvania State University. In a report on organized research units, they use the following criteria to define a research unit. A research unit should:

1. Receive budgetary support from internal and/or external sources independent of department allocation;
2. Occupy temporary or permanently assigned space with access to university-operated physical facilities and support services;
3. Be directed by an administrator drawn from faculty or equivalent ranks;
4. Participate in the university's broad-gauged educational functions, but not be degree-granting;
5. Be more than a facilitator of research (such as a computer center or nuclear reactor), a diagnostic testing and/or evaluation unit servicing internal or external clients, or an institutional research and/or co-ordinating office.
Questions from 2018-19

• For questions that are complicated, I tend to have a legalistic reading of the rules, so that usually drives my initial response.

• My past practice has been to talk to ASEE HQ staff and the chair of the Engineering Deans’ Council data committee. I would now, with the committee’s creation in June 2019, also consult the chair of the Board of Directors’ Data Committee to get their input and make sure my response is in line with past practice/expectations of the community. I generally prefer to put initial responses in writing, and I invite discussion by phone or email.

• We have added some questions that I have received over the last year about research expenditures online: https://ira.asee.org/profiles-of-engineering-and-engineering-technology-instructions/research-expenditures/

• We will update this site over the 2019 survey cycle. Please note that this guidance is not meant to substitute for or modify the instructions. If there is a conflict (real or perceived) between the guidance and the official rules. The official rules control.
Validation

• We compare numbers with US News & World Report for the data that has been submitted in early January.
  • This is before the close of the survey season. We follow up in February with another round of comparison. Our survey cycle is not aligned with USNWR.
  • We ask institutions to justify discrepancies or large year to year jumps.

• Last year we reached out to 47 institutions about research expenditures.
  • 5 instances resulted in revision of submitted numbers to ASEE.

• **This is a routine process and meant to protect institutions.** Variances between our data and USNWR along with large year-to-year jumps can create doubt about the validity of the reported data.

• Institutions have revised data after the print publication in prior years. We are working to make this more transparent in the new system.
Further Resources and Discussion


The NRC report (specifically, Chapter 6 and 7) provides some historical context that underlies the philosophy of the ASEE rules on research expenditures. Chapter 6 focuses on research expenditures in academia while chapter 7 maps out some of the discrepancies between different sources of data at the time.
Differences between ASEE and NSF HERD

- 9-month delay for reporting FY 2018
  - ASEE: March 2019
  - NSF-HERD: November 2019
- The NSF HERD survey collects a larger amount of research expenditures
  - For example, ASEE excludes the following
    - Unrecovered Indirect Costs
    - University research (institutional funds that are separately budgeted for individual R&D projects)
    - Startup, bridge, or seed funding provided to researchers within your institution not from competitive grants.
Questions?

• For questions about the rules around research expenditures, please email me directly, j.roy@asee.org

• With detailed questions we will update this page:

• https://ira.asee.org/profiles-of-engineering-and-engineering-technology-instructions/research-expenditures/