



# *Impact of COVID-19 on Science and Engineering (S&E) Statistics*

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**National Science Board Meeting**

December 3, 2020

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National Center for Science and Engineering Statistics (NCSES)

Social, Behavioral and Economic Sciences

National Science Foundation

# *Impact of COVID-19 on S&E Statistics*

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## Today's Discussion

- *About NCSES*
- *S&E Statistics to Inform the COVID-19 Impact*
  - Around The Globe
  - U.S. Federal Statistical System
  - NCSES

# About NCSES: Organizational Placement



National Science  
Foundation

Directorate for Social,  
Behavioral and Economic  
Sciences

National Center for  
Science and Engineering  
Statistics



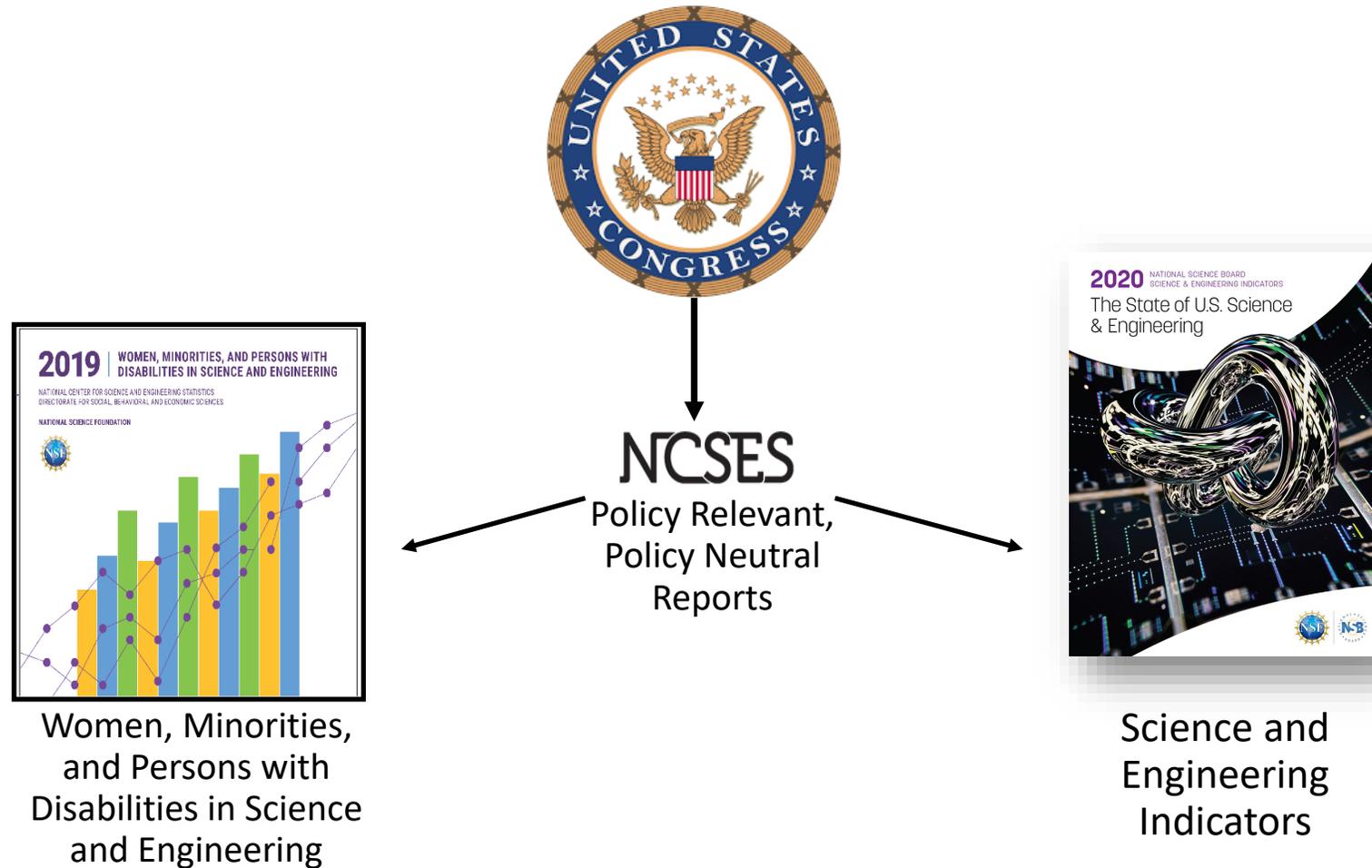
# About NCSES: NSF's Federal Statistical Agency

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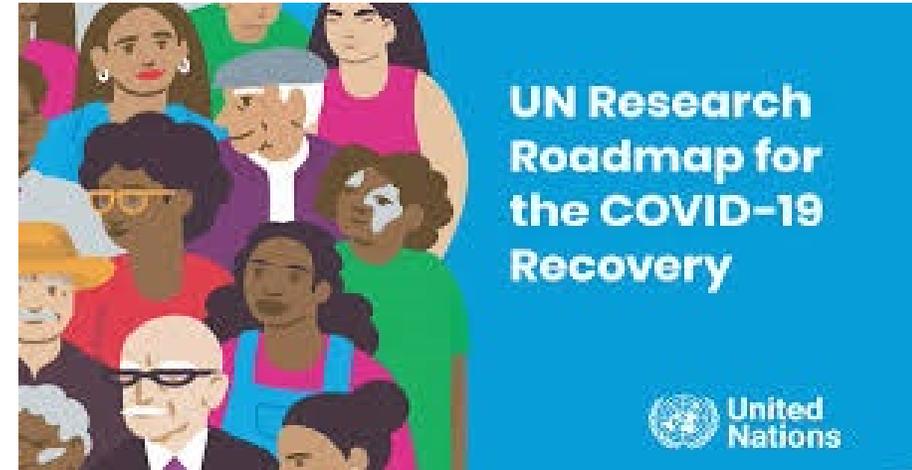
- Mission: policy-neutral policy-relevant statistical data on the U.S. science and engineering enterprise often in a global context
- Federal clearinghouse for data that provides key insights on the American economy, responsibility for data on:
  - Research and development
  - Science and engineering workforce
  - US competitiveness in science, engineering, technology, and R&D
  - Condition and progress of STEM education



# About NCSES: Policy Relevant, Policy Neutral Congressionally Mandated Reports



# Impact of COVID-19 on S&E Statistics: Around The Globe



## Tackling coronavirus (COVID-19)

### Contributing to a global effort

What are the impacts and consequences of the coronavirus pandemic on our lives and our societies? And what are some of the solutions we can find to boost our healthcare systems, secure our businesses, maintain our jobs and education, and stabilise financial markets and economies? The OECD is compiling data, analysis and recommendations on a range of topics to address the emerging health, economic and societal crisis, facilitate co-ordination, and contribute to the necessary global action when confronting this enormous collective challenge.

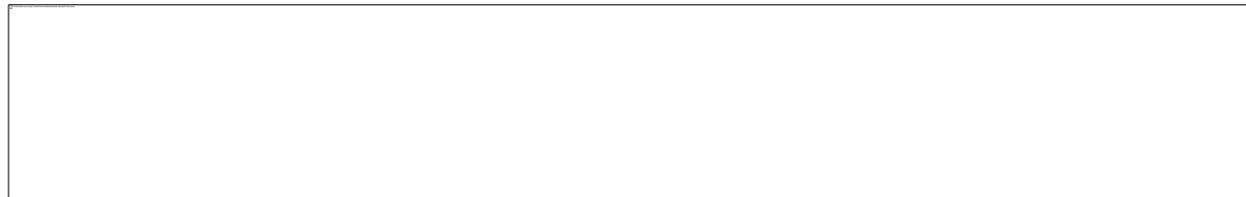


# *Impact of COVID-19 on S&E Statistics: U.S. Federal Statistical System*

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## **COVID-19 Workshop Series: Changes to Qualitative Research**

COVID-19 Workshop Series to examine how the pandemic has - and continues to - affect our profession.

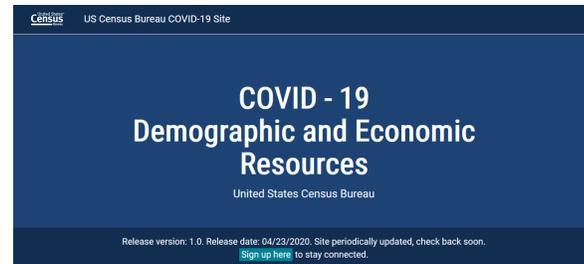


- Reduced response rates for National-Level Surveys
- Alternative data sources and modeling being considered to supplement traditional methods

# Impact of COVID-19 on S&E Statistics: U.S. Federal Statistical System

## Adding COVID-19 related questions to national-level surveys

- U.S. Census Bureau
- Bureau of Labor Statistics
- NCSES
- Etc.



### US Demographic and Economic Data At A Glance

Population Aged 65 Years and Older	Total Uninsured Population	Total Employer Establishments
49,238,581	29,752,767	7,912,745
<small>American Community Survey (ACS) 2014-2018</small>	<small>American Community Survey (ACS) 2014-2018</small>	<small>County Business Patterns (CBP) 2017</small>

Census COVID-19 Impact Report    Select State: New York    Select County: All

**BUREAU OF LABOR STATISTICS**  
U.S. Business Response Survey

Logout

**Main Business Activity**  
Please review the description of your main business activities, goods, products, or services in this State. This is a general description of your main business activity and may not be an exact match. There may be activities listed in which you do not participate. If the information displayed below is correct for a majority of your business, please check "YES". If it is incorrect for a majority of your business, please check "NO" and click the "Save and Continue" button.

Company Name: SOPS INC  
Survey ID: 555555555  
State: Arizona

Support Activities for Forestry

This industry comprises establishments primarily engaged in performing particular support activities related to timber production, wood technology, forestry economics and marketing, and forest protection. These establishments may provide support activities for forestry, such as estimating timber, forest firefighting, forest pest control, and consulting on wood attributes and reforestation.

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\*While your business may not be engaged in all of the economic activities listed above, does the description above accurately include your main business activity during the coronavirus pandemic?  
 YES, the Main Business Activity selected above accurately represents my business.  
 NO, I am unable to find an applicable Main Business Activity description.

If you answer 'NO' you will be able to choose your correct economic activity on the next page.

Previous Save and Continue

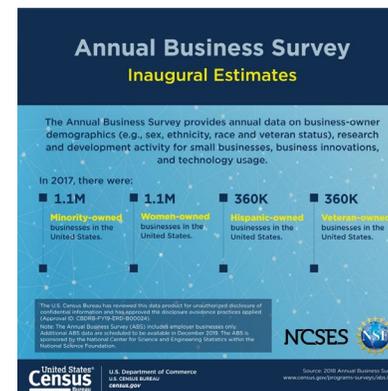
If you have questions or comments, please send e-mail to: [COVID-19Survey@bls.gov](mailto:COVID-19Survey@bls.gov) Version: 3.2

# Impact of COVID-19 on S&E Statistics: NCSES

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NCSES adding questions to the:

- Survey of Earned Doctorates (SED)
  - Impact of COVID-19 on degree completion, employment opportunities, and postgraduation decisions and plans
- Higher Education Research and Development (HERD) Survey
  - Impact on R&D expenditures
- Annual Business Survey
  - Financial impact of COVID-19



# *COVID-19 Impact on NCSES Operations: The data we collect and analyze come from a variety of establishments and people*

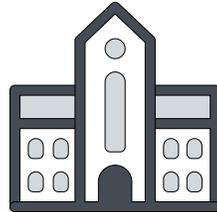
## Establishments



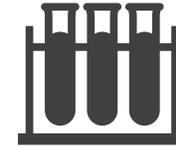
Businesses



Universities



Nonprofits

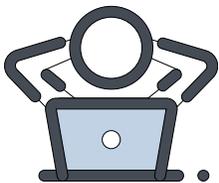


Federally funded research  
& development centers



Federal & state  
government

## People



S&E graduate  
students



S&E college  
graduates



Doctorate  
recipients



Early-career  
doctorates

# *Impact of COVID-19 on S&E Statistics: NCSES*

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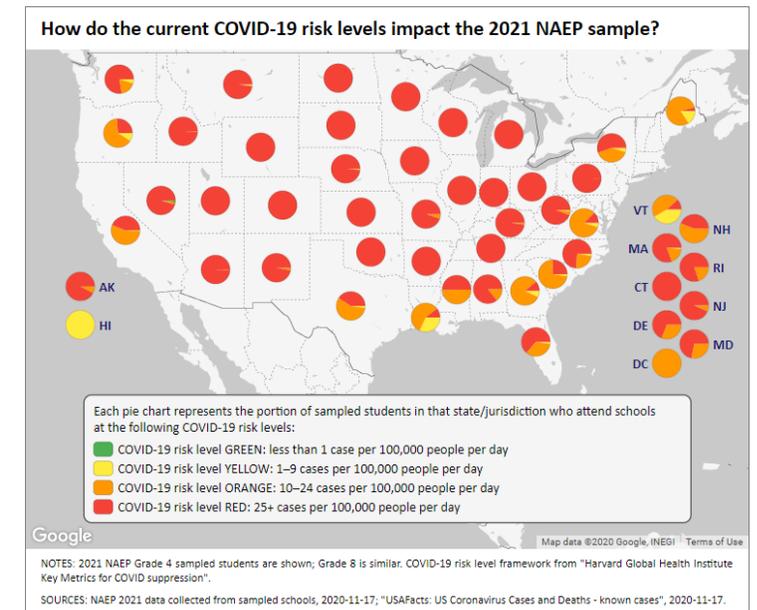
## *Science and Engineering Indicator's (SEI) Report*

- SEI data helps show the impact of COVID-19
  - **The New Yorker** published an article on the death toll of COVID-19, citing SEI 2020 when stating that the U.S. spends the most in the world on scientific research
  - **The Guardian** published an article on whether to trust COVID-19 research coming out of China, citing SEI in describing China's publication output

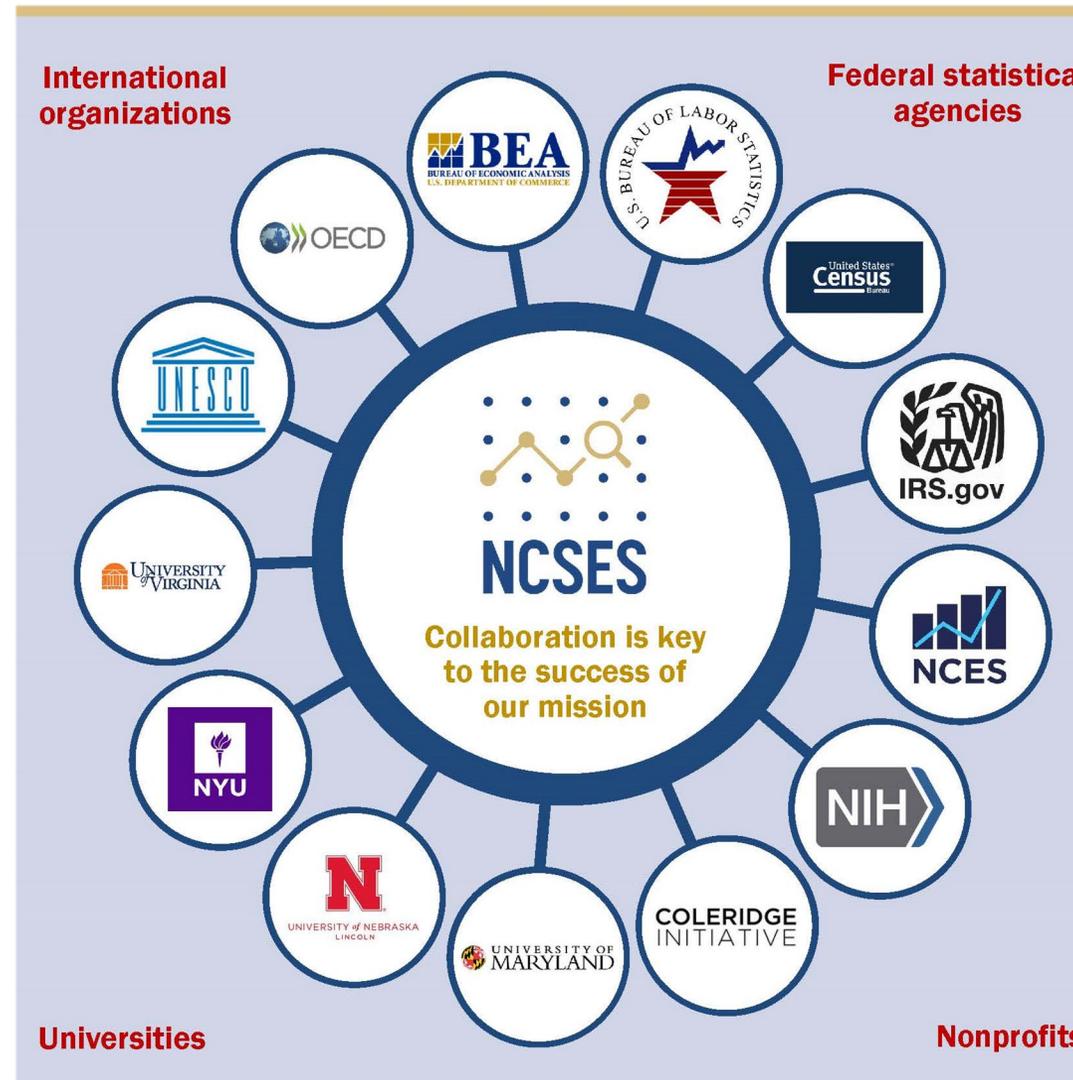
# Impact of COVID-19 on S&E Statistics: NCSES

## Science and Engineering Indicator's (SEI) Report

- Potential risks to SEI due to COVID-19
  - Scheduled data/report releases, mainly on track
  - The National Assessment of Education Progress (NAEP) assessments, which are a key indicator of educational progress in the United States, are delayed



# Partners Informing the Impact of COVID-19 on S&E Statistics



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