

**National Science Foundation**  
**FY 2008 Budget Request to Congress**  
**Summary of Major Changes by Account**  
(Dollars in Millions)

<b>NSF FY 2007 Request</b>	<b>\$6,020</b>
<b>Research and Related Activities</b>	
<p>Biological Sciences <span style="float: right;"><b>+25</b></span></p> <p>Increases funding for research with emphases on informatics and theoretical biology; supports a new Plant Science Cyberinfrastructure Collaborative to enable new conceptual advances through integrative, computational thinking; supports a new Center for Research on the Environmental and Health Safety of Nanotechnology to examine interactions between nanoparticles and the living world; and supports an increased number of awards. Increases funding for the National Ecological Observatory Network (NEON) to support continued design and planning efforts and key infrastructure.</p>	
<p>Computer and Information Science and Engineering <span style="float: right;"><b>+47</b></span></p> <p>Supports new research in computing fundamentals and research to improve our understanding of computer and network systems, supporting larger, experimental projects that promise information technology (IT) systems that are more reliable and robust, have better and more predictable performance, provide useful new services, and exploit the potential of emerging technologies. New investments in software design and productivity are funded. CISE will initiate a new internationally focused program designed to contribute to the development of a competitive, globally aware workforce. In addition, CISE will support pre-construction planning activities for the Global Environment for Networking Innovations (GENI). Support is also provided for the new NSF-wide investment in Cyber-enabled Discovery and Innovation.</p>	
<p>Engineering <span style="float: right;"><b>+55</b></span></p> <p>Increases support significantly for core research projects in ENG's five priorities: Complex Engineered and Natural Systems, Energy and the Environment, Innovation, Manufacturing Frontiers, and Nanotechnology. Increased support is also provided for small business research programs, CAREER, and Nanoscale Science and Engineering Centers. Funding for Engineering Research Centers (ERCs) decreases as the number of centers supported drops by four to 15 ERCs as part of the transition to a new generation of ERCs. Support is also provided for the new NSF-wide investment in Cyber-enabled Discovery and Innovation.</p>	
<p>Geosciences <span style="float: right;"><b>+47</b></span></p> <p>Increases support for research across the geosciences, with emphases on understanding global environmental issues and natural disasters; support for the research priorities presented in the Ocean Research Priorities Plan; support for operations of a new Scientific Ocean Drilling Vessel; operational support for EarthScope; and operations support for the initial elements of the Ocean Observatories Initiative.</p>	
<p>Mathematical and Physical Sciences <span style="float: right;"><b>+103</b></span></p> <p>Increases funding for fundamental research in the MPS disciplines. Themes include cyberinfrastructure, complex systems and emergent behavior, physical sciences at the nanoscale, Physics of the Universe and Elementary Particle Physics, fundamental mathematical and statistical science, and sustainable use of energy and natural resources. Support is increased for facilities design, operation, and instrumentation development. Funds are also targeted for existing programs to strengthen education and broaden participation with an emphasis on discovery-based experiences for undergraduates. Support is also provided for the new NSF-wide investment in Cyber-enabled Discovery and Innovation.</p>	

**National Science Foundation**  
**FY 2008 Budget Request to Congress**  
**Summary of Major Changes by Account**  
(Dollars in Millions)

Social, Behavioral and Economic Sciences		<b>+8</b>
	Increases funding for Science of Science and Innovation Policy (SciSIP); for core disciplinary and interdisciplinary research; for physical systems, brains and human intelligence research that links behavioral and cognitive processes to related advances in neuroscience; and for the new NSF-wide investment in Cyber-enabled Discovery and Innovation to fund SciSIP's interdisciplinary collaboratories and data extraction research.	
Office of Cyberinfrastructure		<b>+18</b>
	Supports the development and provision of software and services that facilitate complex science and engineering research with an emphasis on enhancing the utility and impact of NSF's parallel investments in high-performance computing and advanced network control and transport mechanisms. Increased funding is also provided for operations and maintenance in support of high-performance computing (HPC) systems in university supercomputing centers. Such centers provide access to HPC resources, coupled with sophisticated user support and training, to a diverse mix of researchers and educators in the academic community. Support is also provided for the new NSF-wide investment in Cyber-enabled Discovery and Innovation.	
Office of International Science and Engineering		<b>+4</b>
	Increases funding for programs that support the Preparing the Workforce of the 21 <sup>st</sup> Century budget priority, such as International Research Experiences for Students, the International Research Fellowship Program, the East Asia and Pacific Summer Institutes program, and international research experiences for K-12 teachers and students. OISE will fund cyber- and computer-related research and education activities through the new NSF-wide investment in Cyber-enabled Discovery and Innovation.	
Office of Polar Programs		<b>+27</b>
	Increases support for development of remote sensing instrumentation and the initial operations of the IceCube Neutrino Observatory. OPP will continue to support education and outreach with a focus on International Polar Year (IPY) activities. Support is increased for efforts to diversify resupply of the U.S. Antarctic Program (USAP), support infrastructure improvements at South Pole Station, and to replace USAP software systems. Support increases for safety and health measures. The final components of the South Pole telescope will be delivered and installed. As part of IPY, support will increase for Climate Change research.	
Integrative Activities		<b>+32</b>
	Increases funding for the Major Research Instrumentation (MRI) program, allowing for growth in the number of awards and an increase in the award cap from \$2.0 million to \$4.0 million. Funding also provides for an increase in the EPSCoR program.	
U.S. Arctic Research Commission		<b>+0</b>
	Increases funding by \$40,000 to support Commissioners' salaries as well as travel and administrative costs.	
<b>Subtotal, R&amp;RA</b>		<b>+366</b>

**National Science Foundation**  
**FY 2008 Budget Request to Congress**  
**Summary of Major Changes by Account**

(Dollars in Millions)

<b>Education and Human Resources</b>	<b>+34</b>
<p>EHR will increase funding for Advanced Technological Education (ATE), the STEM Talent Expansion Program (STEP) and the Centers of Research Excellence in Science and Technology (CREST). These efforts are aimed at further strengthening NSF's emphasis on the education of technicians for high-technology fields driving the U.S. economy as well as broadening participation in the science and engineering enterprise. Support will also increase for Graduate Research Fellowships (GRF); Course, Curriculum and Laboratory Improvement (CCLI); Scholarship for Service (SfS); and the National STEM Education Digital Library (NSDL). EHR will add a new Project and Program Evaluation line in the budget to reflect the formal recognition of evaluation efforts across the directorate. Within funding for its portfolio, EHR will provide support for the new NSF-wide Cyber-enabled Discovery and Innovation investment.</p>	
<b>Major Research Equipment and Facilities Construction</b>	<b>+4</b>
<p>NSF requests funding for one new start in FY 2008: the Advanced Laser Interferometer Gravitational Wave Observatory. The FY 2008 Budget Request also provides funding for six ongoing projects: the Alaska Region Research Vessel; the Atacama Large Millimeter Array; the IceCube Neutrino Detector Observatory; the National Ecological Observatory Network; the Ocean Observatories Initiative and the South Pole Station Modernization Project.</p>	
<b>Agency Operations and Award Management (formerly Salaries and Expenses)</b>	<b>+4</b>
<p>Requests usage of full FY 2007 FTE allocation to address the new Stewardship strategic goal. Continued emphasis will be placed on award oversight and management, particularly for large facilities.</p>	
<b>National Science Board</b>	<b>+0</b>
<p>A funding increase of \$120,000 will be used for personnel compensation and general operating expenses.</p>	
<b>Office of Inspector General</b>	<b>+0</b>
<p>Increases funding by \$490,000 to support higher personnel costs, the escalating costs of audits conducted by CPA firms under contract to OIG, and costs associated with moving contract procurement to the Department of the Treasury.</p>	
<b>Total Change, FY 2007 Request to FY 2008 Request</b>	<b>+409</b>
<b>NSF FY 2008 Request</b>	<b>\$6,429</b>

Totals may not add due to rounding.