

STRATEGIC



The mission of Johns Hopkins University's Whiting School of Engineering (WSE) is to:

- Conduct innovative research and generate technologies that lead to fundamental new approaches in the engineering disciplines, translate them to improved quality of life, and enhance the safety and security of future generations;
- Provide an education grounded in fundamental scientific principles that prepares students to solve the complex, technology-based problems of the 21st century; and
- Educate the next generation of leaders through creative curricula and programs that instill ethical values and social awareness, an appreciation for the importance of diversity, an entrepreneurial spirit, and a love of learning.



Educating for Leadership

We will provide an engineering education of the highest caliber in an environment that encourages and supports collaboration, innovation, and entrepreneurship to best prepare students to flourish in a global environment.

The global challenges of the 21st century require engineers who are well versed in core scientific theories and principles, who think creatively, work collaboratively and across multiple disciplines, and who know how to put their knowledge to use.

At the Whiting School of Engineering, a rigorous academic program is complemented by a myriad of research, professional, enrichment, and entrepreneurial opportunities. The study of engineering intersects with health care, the humanities, social sciences, and the arts. We prepare our graduates to be leaders, global citizens, and lifelong learners who possess the skills and knowledge necessary to make a lasting impact on the world.



Engineering Human Health

We will lead collaborations among the Johns Hopkins Institutions, industry, and government agencies, leveraging the Whiting School's strengths in bioengineering, information science, data analytics, and systems engineering in order to unleash new technologies aimed at solving today's most pressing health care challenges.

Medicine today is an information- and technology-driven discipline. The Whiting School of Engineering's strength in bioengineering, computer science, and applied mathematics has enabled the School to lead productive collaborations in this area. This foundation provides the Whiting School with tremendous opportunities to impact human health on a global scale. In areas including cancer research, medical imaging, surgical robotics, and drug delivery, the Whiting School will lead interdisciplinary advances that unleash the promise of wholly new paradigms and technologies in health care.

Using our strengths in areas including computational medicine, nanobiotechnology, and medical robotics, we will lead partnerships to realize the potential of individualized health, improve our understanding of diseases and treatments, advance patient safety, and make hospital operations more effective and affordable.





Improving Global Well-Being and Security



We will lead multidisciplinary research and educational initiatives in critical areas that will improve the well-being and security of our planet and its inhabitants.

The Whiting School of Engineering is defining new approaches and solutions to the complicated, interdependent challenges that threaten the health, safety, and security of humankind and our natural world.

Johns Hopkins engineers possess an extraordinary breadth and depth of expertise, are collaborative and interdisciplinary in their approach to problems, and are committed to tackling complex global challenges. As a result, we are uniquely positioned to provide international leadership and make a significant impact on growing global challenges in areas as diverse as the health of our natural and built environments, climate change, global water availability, pandemics, alternative energy, national defense, and data security.

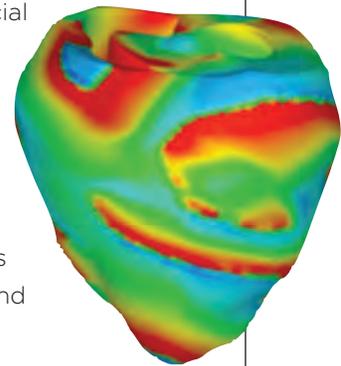
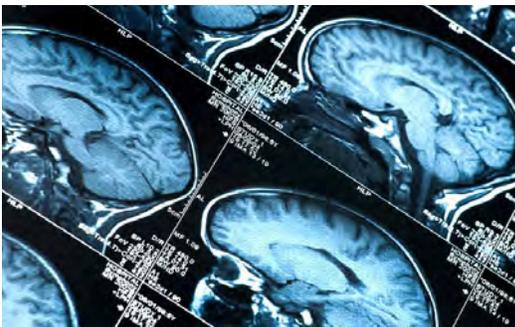
Leveraging Data to Knowledge

We will advance scientific inquiry, the creation of knowledge, and our understanding of the world by conceiving of, developing, and deploying new approaches to the acquisition, management, and analysis of vast data sets.

The scope of data generated every day—from cell phones, medical imaging devices, financial transactions, environmental sensors, and social media—provides an unprecedented resource for analysis and decision making, and for tackling global problems.

The Whiting School will apply its strengths in data mining, statistics, and pattern recognition to data being generated across the university and beyond, to advance scientific inquiry and knowledge and to inform national and international priorities in areas including global health, energy, and environmental regulation.

We will create and expand partnerships with other Johns Hopkins University divisions in order to harness the potential of data analytics, drive progress in contemporary research, and enable breakthroughs in wholly new areas of study.



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