Xavier University of Louisiana

CAPABILITY STATEMENT

Xavier University of Louisiana is a non-profit, private, liberal arts, catholic, and historically black (HBCU) institution of Higher Education with diverse research portfolios in arts, humanities, social sciences, physical sciences, engineering, life, and health sciences. Capabilities include opportunity identification, talent management, resource allocations, product development, and market viability.

Research Capabilities

<u>Robotics & Mechatronics:</u> AI-based robotic and autonomous systems, collaborative learning control and manipulation, decision-making and cooperative learning for robotics.

<u>Cancer and Biomedical Research:</u> State-of-the-art capabilities in cell and molecular biologies such as bioassays, functional studies, cell culture, whole genome sequencing, gene expression, proteomics, molecular modeling, data analysis, vaccine research, and therapeutics.

<u>Drug Discovery & Delivery:</u> Design, develop, and deliver new chemical entities with core services in molecular modeling, synthesis, *In-vitro/In-vivo* evaluation, and pre-formulation. RNA-sequencing data analysis and eQTL analysis

<u>Data Science & Cybersecurity:</u> Prediction of vulnerabilities, cyber risks, statistical analysis, and adaptive modeling with AI/ML capabilities.

<u>Public Health Sciences:</u> Nutrition studies, Maternal Health, Behavioral Theories, Health Communication, Bioethics, Bioinformatics, Health Equity, Disparities, Social Determinants and Justice.

<u>Climate, Energy, and Sustainability:</u> Energy transition, Solar Photovoltaics, Clean Hydrogen, Gulf Offshore Wind, Grid Resilience, Environmental Health, Community Resilience Initiatives, LEED Certifications and Green Buildings.

<u>Materials Research</u>: Experimental and computational polymer chemistry, solid-state chemistry, electrochemistry, materials science, and engineering to understand materials interactions at the molecular and nanoscale level for sensors and energy storage devices

Research Centers and Institutes

- Ochsner-Xavier Institute for Health Equity and Research (OXIHER)
- Xavier Center for Equity, Justice, and the Human Spirit
- Center for Minority Health and Health Disparities Research Education
- Precision Medicine, Education, Data Informatics and Community Translation (PREDICT) Institute
- Xavier Entrepreneurship Institute
- Xavier Small Business Development Center (SBDC)
- Xavier Greenhouse Facility
- Xavier Animal Care Facility

Relevant Affiliations

Louisiana Biomedical Research Network, Louisiana Cancer Research Center, Louisiana Clinical & Translational Science Center, NIH-Pathways to Excellence & Innovation.



Mission: To contribute to the promotion of a more just and humane society.

<u>Location:</u> I Drexel Dr, New Orleans,

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Accreditations: SACSCOC, ACBSP, ACPE, CAEP, CACREP, ARC-PA, NASM.

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