# LYLES SCHOOL OF CIVIL ENGINEERING

# INTERCONNECTED SOLUTIONS FOR A BETTER WORLD



Both the simplest of daily activities and the most complex global challenges can be connected to civil engineers.

At Purdue's Lyles School of Civil Engineering, you'll make your mark on a world that is constantly improving. With nine interconnected emphasis areas in our program to draw from, our students aren't just solving today's problems — they're creating pathways for a more sustainable tomorrow.



STRUCTURAL ENGINEERS create
lasting impact by analyzing and designing infrastructure, from buildings, bridges and dams to facilities that house new forms of power generation and more.



With knowledge of business practices, economics and human behavior,

CONSTRUCTION ENGINEERS manage operations and perform tasks that optimize construction procedures and improve our world.



TRANSPORTATION ENGINEERS take a coordinated approach to ensuring the safe and efficient movement of people and goods by planning, designing and operating roads, airports, railroads, and public transit.



While tackling global challenges,

GEOMATICS ENGINEERS design and
develop systems that collect and analyze
geospatial information about the earth,
environment and natural resources.



GEOTECHNICAL ENGINEERS add stability to each day by analyzing and designing foundations, slopes, and retaining structures that are made of, or supported by, soil or rock.



Preventing floods, simulating water movement, restoring rivers, conserving clean water and protecting coastlines are just a few ways HYDRAULIC & HYDROLOGIC ENGINEERS shape the world.



A day's work for **ENVIRONMENTAL ENGINEERS** involves applying science and engineering principles to improve the environment, water, air and land while protecting human health and our planet's resources.



MATERIALS ENGINEERS are at the forefront of future development, combining engineering with scientific principles to create improved and smart materials for the next generation of infrastructure.



By integrating design, construction, and operation of buildings and their systems, ARCHITECTURAL ENGINEERS work to improve sustainability and energy efficiency while enhancing human comfort and health.

The Lyles School of Civil Engineering knows that, as engineers, your interests often span several emphasis areas. With our flexible program, you are able to create a meaningful combination of these nine exciting fields, preparing you for a well-rounded and successful career.



Lyles School of Civil Engineering

# WE ENGINEER TOMORROW'S SOLUTIONS TODAY



#### LAND DEVELOPMENT

Plan and lay out the design of utilities, transportation and infrastructure systems for future development



#### SMART BUILDINGS

Design net-zero energy buildings, self-regulating building systems, and sensors to detect energy and human comfort needs



#### RESILIENT STRUCTURES

Shelter humans in the most extreme environments and design structures that safely respond to natural and man-made events



#### DISASTER RECOVERY

Collect data and analyze how communities can better recover from natural disasters



#### PRESERVING AND PROTECTING HUMAN HEALTH

Work to lessen the impact of pollutants on humans and design sustainable systems to improve air quality and provide clean water

INTELLIGENT TRANSPORTATION SYSTEMS

modes of transport as well as increase transport capacity

Create and integrate systems and sensors that safely manage multiple



#### CREATING LANDMARKS

Design and build iconic infrastructure that defines cities and countries

#### PROTECTING NATURAL ENVIRONMENTS

Manage, restore and protect natural systems for sustainable use of resources while mitigating effects of harmful contaminants

### IMPLEMENTING INFRASTRUCTURE

Optimize and manage various aspects of the construction process to achieve efficiency and sustainability



#### ALTERNATIVE/CLEANER ENERGY

Design and implement green technology systems such as wind and solar energy





## TOGETHER, WE BUILD











PERFORMANCE RESEARCH FACILITIES



#### **CONTACT US**

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