The University of Southern Mississippi (USM) School of Ocean Science and Engineering (SOSE) focuses on academic and research enterprises of ocean science at USM, the state's flagship university for marine science. Located at NASA's Stennis Space Center (SSC) adjacent to U.S. Naval Oceanographic Office and its superior Commander, Naval Meteorology and Oceanography Command (CNMOC), as well as the Naval Research Laboratory, SOSE harnesses elements from USM's Division of Marine Science (DMS), the Gulf Coast Research Laboratory (GCRL), and the University's fleet of five research vessels, to create a regionally, nationally and internationally recognized leader in marine science and technology. The SOSE offers graduate and undergraduate degrees, as well as certificates, serving a variety of private and public civilian and military personnel, as well as conducts research in physical and biological oceanography, ocean engineering, unmanned maritime systems, hydrography, coastal science, fisheries development, and aquaculture.

The USM School of Ocean Science and Engineering (SOSE) covers a broad spectrum of marine sub-disciplines ranging from physical oceanography and data assimilation to ocean optics, marine coastal sedimentary processes, and micropaleontology, ocean productivity, geochemistry and trace chemical analysis, hydrographic science, coupled physical-biogeochemical modeling, development/application of ecosystem models, and remote sensing. Recent examples include deep ocean sensing for heat content for tropical storm forecasting, improved ocean physics for internal tides prediction in numerical models, underwater optics for turbulence measurement, use of autonomous underwater and surface vehicles for shallow and deep ocean bottom measurement and monitoring, and remote sensing for sea surface temperature and salinity measurements. The USM Hydrographic Science Research Center (HSRC) provides research support to address needs of governmental and commercial clients for information related to ocean navigation, the ocean floor and ocean processes. Additionally, the SOSE partners with the USM School of Polymer Science and Engineering for common challenges with materials in the ocean environment.

The SOSE has tenure-track faculty in addition to numerous scientists and post-doctoral scholars whose expertise enables cutting edge research and education. In research, the core expertise themes focus on marine instrumentation and autonomous vehicles; remote sensing; seafloor mapping and bathymetry; bio-geochemistry, global change and climate variability; coastal hazards and sea level change; coastal hypoxia and its ecological impacts; coastal, estuarine, and global ocean circulation; and mapping and distribution patterns of marine organisms. In education, SOSE scientists and engineers offer a first-ever curriculum to provide Unmanned Maritime System (UMS) operators with a holistic training course to enable safe and efficient operations of these systems, and USM delivers one of only two U.S. internationally certified hydrographic science education programs that provide classroom instruction and hands-on training on virtually any aspect of hydrographic data collection, data processing, data management, and product generation.