# RESOURCES & ENVIRONMENT (R&E)

**USC/College of Arts and Sciences Basic “Boilerplate” Information for Sponsored Award Proposals**

*The following includes ‘boilerplate’ (basic) information about the University of South Carolina (USC) and the College of Arts and Sciences (CAS):*

* *Use only what you need*. *Include only the information that is pertinent to your proposal* (not the whole thing). Note that there is some information overlap between sections.
* Be sure to add specific department, lab, equipment, and collaboration information as needed for your proposal and edit out what is not relevant to it.
* Other USC units and external institutions/organizations should be able to supply you with their R&E information upon request.
* Overview and contact information about additional SOM centers and programs is at: <https://sc.edu/study/colleges_schools/medicine/index.php>

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# **The University of South Carolina (USC)**

**The University of South Carolina (USC)** was established in 1801 and is a full-service, state- assisted research university that includes the 358-acre Columbia campus and seven regional campuses, with a total full-time student body population of more than 35,000 in Columbia and 50,000 overall. Located in the capital city of Columbia in the geographic center of the state, USC's main campus is part of a thriving metropolitan area of more than 800,000 inhabitants. USC offers a broad spectrum of educational opportunities with 14 colleges and schools that encompass 324 undergraduate and graduate degree-granting programs. USC confers 25% of all bachelors, graduate, and professional degrees awarded at institutions of higher education in South Carolina.

**USC Research Capacity.** In fiscal year 2024, USC was awarded over $300 million in extramural sponsored award funding, 72% percent of which was for research. USC is listed in the Carnegie Classification of Institutions of Higher Education as a Very High Research Activity University.

The University provides researchers with a full range of grant and contract-related services through its Sponsored Awards Management and Grants and Funds Management offices. USC’s Office of Research Compliance oversees the institutional review processes for human and animal subjects as well as disclosure and management of financial conflicts of interest and assists with scientific misconduct regulation and export controls.

**The SC SmartState Centers of Economic Excellence program** was established by the state's General Assembly in 2002 with $180 million of non-tax revenue funds generated from the South Carolina Education Lottery. These funds, along with legislatively mandated dollar-for-dollar matching non-state funds, provide support for hiring world-class researchers who serve as the endowed chairs of the SmartState Centers. The 51 Centers are grouped into six industry- focused Smart Clusters to facilitate engagement with business, students, potential faculty, and the public. Each Center includes one or more endowed chair, research infrastructure, technical staff, and sustainable funding sources. USC is home to 27 SmartState Centers, including 18 that are headquartered at USC's Columbia campus and eight within which USC actively collaborates working with other SC research institutions.

**USC Libraries.** Thomas Cooper, the University’s main library, is centrally located on the Columbia campus, and the School of Medicine library is a 15-minute drive from central campus. Both libraries maintain an extensive collection of health-related resources, including books,

journals, and indices. Access to online databases and full-text journals is available through the Thomas Cooper Library Web page.

**USC’s Division of Information Technology (DoIT),** under the direction of the Vice President for Information Technology and Chief Information Officer, oversees centralized and distributed computing and telecommunications services for academic, research, and administrative use to meet the needs of USC faculty, staff, and students. DoIT provides the USC community with computing, voice, and data communications, networking, data security, video transport, information technology training, Web services, customer support, desktop and server support, installation and maintenance of IT infrastructure, policies and procedures assistance, PC labs, software licensing and distribution, IT planning, applications development and support, and operational systems. The Columbia campus is covered by wireless service. USC has a licensing agreement with Microsoft that includes 5TB of secure cloud storage space for every faculty and staff member on OneDrive. Microsoft has signed legal agreements with the University that hold them liable for the security and protection of data stored on OneDrive. OneDrive provides USC researchers with the capability to share data and results with external partners by emailing them a link to securely download the data.

# **The College of Arts and Sciences (CAS)**

**The College of Arts and Sciences (CAS)** The College of Arts and Sciences is a community of students, faculty and staff dedicated to the discovery, dissemination, and application of knowledge about the natural and human worlds as well as the places where they intersect. The college is committed to enriching the academic experiences of graduate and undergraduate students, and to excelling in faculty research, scholarship, and creative activity. As the heart of a major research university, the college is a catalyst for positive change in the local community, the state, the nation, and the world.

**CAS Academic Departments and Schools.** The College is the home of 21 academic departments and schools. CAS consists of: the Departments of African American Studies; Anthropology; Biological Sciences; Chemistry and Biochemistry; Criminology and Criminal Justice; English Language and Literature; Geography; History; Languages, Literatures, and Cultures; Mathematics; Philosophy; Physics and Astronomy; Political Science; Psychology; Religious Studies; Sociology; Statistics; Theatre and Dance; and Women and Gender Studies as well as the School of the Earth, Ocean and Environment and the School of Visual Art and Design.

**CAS Interdisciplinary Institutes and Centers.** In addition to its academic departments, CAS houses multiple interdisciplinary institutes and centers. This centers and institutes include: The Ann Johnson Institute for Science, Technology and Society; Belle W. Baruch Institute for Marine and Coastal Sciences; Center for Bioethics; Institute for Clean Water; Colorectal Cancer Prevention Network; Research Center for Child Well-Being; Environmental Justice Thriving Communities Technical Assistance Center; Center of Excellence for Geographic Education; Center for Hierarchical Waste Form Materials; The Electron Microscopy Center; Hazards Vulnerability and Resilience Institute; Humanities Collaborative; Institute for African American Research; Institute for Mind and Brain; Institute for Southern Studies; McCausland Center for Brain Imaging; National Science Foundation Center for Polymers for a Circular Economy; Center for Science Education; South Carolina Institute of Archaeology and Anthropology; USC Autism and Neurodevelopmental Disorders Center of Excellence; and Walker Institute of International and Area Studies.

**CAS Research Capacity.** In fiscal year 2024, CAS received more than $53.8 million in funding from external sponsors in support of research, training projects and public service for the 2024 fiscal year. Of this, $42.7 million in funding, or 80%, was derived from federal funding. NSF provided $13.4 of the College’s federal grant funding, followed by funding from other federal agencies, including NIH, Department of Energy, Department of Commerce, Health and Human Services, US Department of Education, and Department of Defense.

**CAS SmartState Centers.** CAS is home to several SmartState endowed chairs who lead Centers of Economic Excellence within the College – the McCausland Center for Brain Imaging, Center for Childhood Neurotherapeutics, Experimental Nanoscale Physics, and Polymer Nanocomposites. These centers involve post-doctoral scholars as well as graduate and some undergraduate students in their innovative, cutting-edge research activities.

**CAS Faculty Offices.** Each faculty member has a private office with a printer and personal computer with Microsoft Office and additional software relevant to his or her teaching and research, Internet access, telephone, and general office support.

**CAS Research and Core Facilities.** The College contains research and core facilities which are equipped with state-of-the-art resources to aid students and principal investigators in processing, imaging, analysis, design, and translation for research projects. These facilities include: Electron Microscopy Center, Elemental Mass Spectrometry Center, Center for Geographic Information Science and Geospatial Big Data, Magnetic Measurement Facility, Mass Spectrometry Center, Mechanical Prototype Facility, Nuclear Magnetic Resonance Facility, Powder X-Ray Diffraction Facility, and Single Crystal X-Ray Diffraction Facility.

The Electron Microscopy Center is a core facility providing all levels of technical support and consultation in the area of light microscopy, electron microscopy, and elemental analysis. The center provides microscopy and specimen preparation services for biological and materials science research. In addition, the center offers necessary training and access to all microscopes and ancillary equipment to faculty, staff, and students of the USC System as well as external users.

The Elemental Mass Spectrometry Center is a core analytical facility and cost center with research focused on geochemistry and chemical oceanography in an effort to understand the physical and chemical processes that shape the solid earth, the world's oceans, and environment. This facility is primarily used by faculty and students in the School of the Earth, Ocean and Environment.

The Center for Geographic Information Science and Geospatial Big Data in the Department of Geography conducts interdisciplinary research and education on Geographic Information Science (GIScience) and Spatial Data Science including GIS, geospatial big data, remote sensing, spatial analysis, statistics, and modeling, geospatial artificial intelligence, spatial computing, geo-visualization, and cyberGIS in effort to advance knowledge discovery and decision making with innovative research for supporting domain applications including, but not limited to, disaster management, public health, human dynamics, and climate change.

The Magnetic Measurement Facility is a core facility in the department of Chemistry and Biochemistry which offers access to the Quantum Design MPMS 3 SQUID Magnetometer to measure bulk magnetic moment of samples at high sensitivity.

The Mass Spectrometry Center is a core facility in the department of Chemistry and Biochemistry which provides centralized access to high performance mass spectrometry resources and training for researchers at the USC, as well as to public and private institutions within the state of South Carolina.

The Mechanical Prototype Facility services researchers in need of need machining, welding, or fabricating service. This facility also provides mechanical design assistance, detailing, and computer-aided design drawings as needed. This facility is equipped with lathes, milling machines, welders, and other metal and wood working tools and can machine parts and construct assemblies from metals, plastics, some ceramics, and wood. This facility also works regularly with local vendors and to coordinate outsourcing of work when necessary.

The Nuclear Magnetic Resonance Facility is a core facility in the Department of Chemistry and Biochemistry which trains users for routine and advanced access, assists with experiment selection and execution, and consults and collaborates with internal and external researchers. This facility consists of four fully multinuclear Fourier transform Nuclear Magnetic Resonance Spectrometers.

The Powder X-Ray Diffraction Facility is a core facility in the department of Chemistry and Biochemistry which offers a collection of powder X-ray diffraction data for a wide variety of powdered samples including air sensitive materials and aids in analysis including peak identification, and phase identification using the PDF data base. Instruments under this core include Rigaku Ultima IV Powder X-ray diffraction system and Bruker D2 Phaser with LYNXEYE silicon strip detector.

The Single Crystal X-Ray Diffraction Facility is a core facility in the department of Chemistry and Biochemistry operates a Bruker D8 Quest diffractometer and aids in single crystal structure determination of a wide range of small molecule and extended inorganic compounds including: organic and inorganic crystals, organometallic compounds, coordination polymers, high-temperature solid-state materials and also problem structures including: disordered and twinned crystals, superstructures, and unstable crystals (oxygen and moisture sensitivity, rapid loss of solvent from crystal).

**CAS Computing Center** The Computer Center provides students, faculty, and staff with access to reliable computing resources and common software applications. The center, located in the lower level of Gambrell Hall, is equipped with computers running the latest versions of productivity, design, and statistical software.

{See the USC Office of Information Technology (DoIT) section above for additional information about USC-level computing security and capacity}

**CAS Degree Programs.** CAS offers programs of study at the undergraduate, masters, and doctoral levels. There are 38 **Undergraduate degrees** and 67 undergraduate degree minors. About 20% of CAS undergraduate students double major. CAS offers over 70 **Graduate degrees** includingMaster degrees, Doctoral degrees, dual degrees and certificates of graduate study. These degree programs are extremely diverse, encompassing a wide variety of disciplines including language, sciences, art, and history.

*Undergraduate Degree Programs:* Undergraduate degrees include Bachelor of Arts (BA) in the following disciplines: African American Studies; Anthropology; Art History; Art Studio; Criminology and Criminal Justice; Cyber Policy and Ethics; Dance; Economics; English; Environmental Studies; Film and Media Studies; Geography; Global Studies; History; International Studies; Languages, Literature and Culture; Media Arts; Philosophy; Political Science; Psychology; Religious Studies; Sociology; Theater; and Women’s and Gender Studies. CAS offers Bachelor of Fine Arts (BFA) degrees in the following disciplines: Art Education and Art Studio. Undergraduate degrees also include Bachelor of Science (BS) in the following disciplines: Biochemistry and Molecular Biology; Biological Sciences; Cardiovascular Technology; Chemistry; Cyber Policy and Ethics; Data Analytics; Data Science; Economics; Environmental Science; Geography; Geological Sciences; Marine Science; Mathematics; Neuroscience; Physics; Psychology; Sociology; and Statistics. CAS Minors are offered in the following disciplines: African American Studies; African Studies; Ancient Greek Literature; Art History; Art Studio; Asian Studies; Astronomy; Biological Sciences; Chinese Studies; Classics; Climate and Society; Comparative Literature; Criminology and Criminal Justice; Dance; Economics; English; European Studies; Film and Media Studies; Forensics; French; Geography; German; International Studies; Islamic Studies; Italian; Japanese; Jewish Studies; Latin; Latin American Studies; Law and Society; Leadership Studies; Linguistics; Marine Science; Mathematical Biology; Mathematics; Media Arts; Medical Anthropology; Medical Humanities and Culture; Neuroscience; Physics; Political Science; Portuguese; Professional Writing and Communication; Psychology; Religious Studies; Russian; Russian and Eurasian Studies; Sociology; Southern Studies; Spanish; Speech Communication; Statistics; Theater; and Women’s and Gender Studies.

*Graduate Degree:* CAS offers four Certificates of Graduate Study in the following disciplines: Historical Archaeology and Cultural Resource Management; Museum Management; Psychiatric Rehabilitation; and Women’s and Gender Studies. CAS Graduate degrees include Master of Fine Arts (MFA) in Acting; Art Studio; Costume Design and Technology; Creative Writing; Lighting Design; Scenic Design; and Theater. Master of Arts (MA) degrees include: Anthropology; Art Education; Art Studio; Comparative Literature; Criminology and Criminal Justice; English; French; Geography; German; History; International Studies; Linguistics; Mathematics; Media Arts; Philosophy; Political Science; Sociology; Spanish; and Theater. Master of Art in Teaching (MAT) degrees are offered in the following disciplines: Art Education; Biological Sciences; English; Foreign Language; Mathematics; and Theater. CAS Master of Science (MS) degrees include: Biological Sciences; Chemistry; Geography; Geological Sciences; Marine Science; Mathematics; Physics; and Statistics. Other Master Programs include: Master of Earth and Environment Resources Management and Master of Public Health. Accelerated Master programs are offered in the following disciplines: Biological Sciences and Environmental Science/Environmental Studies. Doctor of Philosophy (PhD) degrees offered include: Anthropology; Biological Sciences; Chemistry; Comparative Literature; Criminology and Criminal Justice; English; Geography; Geological Sciences; History; Linguistics; Marine Science; Mathematics; Philosophy; Physics; Political Science; Psychology; Sociology; Spanish; and Statistics. CAS offers six Dual degrees in Criminology and Criminal Justice (MA/PhD), English and Library Information Science (MA/MLIS), Earth and Environmental Resources Management and Law (MEERM/JD), Public History and Library and Information Science (MA/MLIS), Public Administration and Law (MPA/JD), and Public Administration and Social Work (MPS/MSW).