RUTGERS
NEW BRUNSWICK

Rutgers School of Arts and Sciences
Core Curriculum

THE HOLLAND SOCIETY
OF NEW YORK
TO RUTGERS UNIVERSITY
MCMXXVIII

Preparation for Success

The new Core Curriculum of the School of Arts and Sciences (SAS) establishes common goals that, along with a major and minor specialization, prepare SAS graduates for successful lives and careers built on a critical understanding of the natural environment, human behavior, and the individual's role in diverse societies. Conversant with multiple intellectual traditions, modes of analysis, and schools of thought, and armed with well-developed communication and reasoning skills, SAS graduates are prepared to meet any challenge!

The innovative SAS Core Curriculum cultivates and nurtures curiosity by emphasizing the process of inquiry and the creation of knowledge through debate, research, and scholarship. The SAS Core Curriculum incorporates SAS students into the research mission of our great university and equips them with the intellectual resources required for excellence in meeting the rapidly transforming challenges of the 21st century.

Liberal Arts and Sciences for the 21st Century

The SAS Core Curriculum is based on the learning goals that form the core of a modern liberal arts and sciences education at a leading 21st century public research university *and* that are sought after by graduate programs and employers *across* occupations and professions. The goals derive from three main areas of focus: 21st Century Challenges, Areas of Inquiry, and Cognitive Skills and Processes.

The learning goals clearly articulate *what SAS students are able to do* upon completion of the Core, incorporating the reasons for these requirements right into the requirements themselves. These Core learning goals open the door to new worlds of intellectual adventure, to advanced study in majors, and to success in a wide variety of postgraduate programs and careers.

Achievement of these learning goals equips our students not just to get a first job, but to excel in that job, advance in that career, and change careers as the demands of the 21st century continue to evolve. These goals prepare students to face the public and private challenges of local and global citizenship in the 21st century and develop habits of questioning the known and exploring the unknown. At the same time, these goals push students to examine not just "what" they want to be, but more importantly, "who" they want to be by discovering their values, talents, and passions.
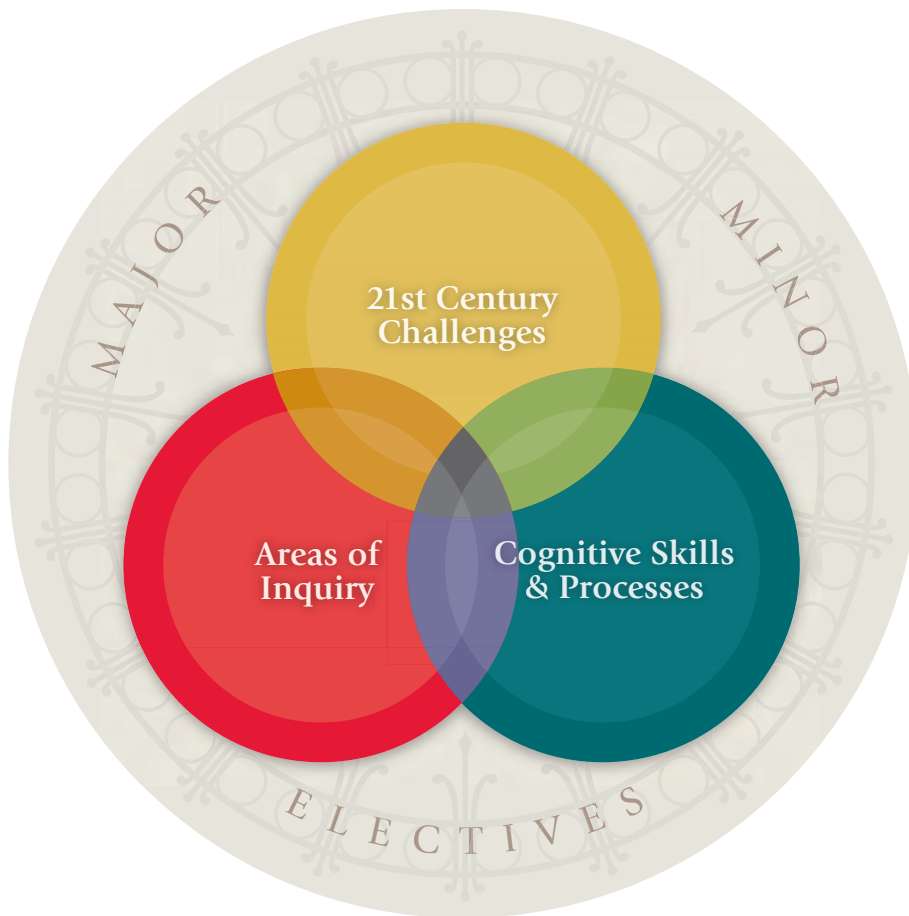
Flexibility to Adapt to Changing Workplace Demands

"Worker flexibility is key given the dynamic nature of the U.S. labor market and ongoing technological change. In 2003, for example, a quarter of American workers were in jobs that were not even listed among the Census Bureau's Occupation codes in 1967, and technological change has only accelerated since then."

Source: Council of Economic Advisors, Executive Office of the President, *Preparing the Workers of Today for the Jobs of Tomorrow,* July 2009, http://www.whitehouse.gov/assets/documents/Jobs_of_the_Future.pdf

62% of our 2010 graduates expect to attend a graduate program within the following five years.

Source: Rutgers Career Services, Senior Survey, 2010

21st Century Challenges [21C]

- Human Difference
- Multidisciplinarity
- Science and Technology
- Social Justice

Areas of Inquiry

- Natural Sciences [NS]
- Social [SCL] and Historical [HST] Analysis
- Arts and Humanities [AH]

Cognitive Skills & Processes

- Writing and Communication [WC]
- Quantitative and Formal Reasoning [Q]
- Information Technology and Research [ITR]

Three Areas of Focus: The SAS Core Curriculum

The goals for each focus area in the SAS Core Curriculum complement and reinforce each other and permeate all of the school's courses and fields of study. The Core Curriculum provides a solid catalyst for excellence in completing major, minor, and elective credits where the student will develop advanced skills in many of these Core goals. Progress in completing the Core is measured not by the number of courses taken, but by the range and number of goals achieved in courses specially designed to meet Core goals.

Defined in terms of learning goals, the innovative SAS Core Curriculum is different from the traditional model of general education distribution requirements that students at other schools fulfill by taking introductory courses in a range of majors. Each goal represents a particular type of critical thinking and problem solving employed in the arts and sciences.

How Do We Know the Core Works?

Our Commitment to a Culture of Evidence.

In the School of Arts and Sciences, we don't just require students to take courses and assume they achieve these goals. Only a special, limited group of courses are certified as meeting Core Curriculum goals. These courses put specific Core Curriculum goals front and center in their course design and regularly assess student achievement of these Core goals using state-of-the-art authentic assessment measures.

Our faculty members are constantly improving their Core courses to better meet these goals. Only courses that have committed to this process are certified as Core courses. This is why some particular courses are certified while other courses that may seem to have similar or analogous foci are not. This is your assurance that SAS students develop the capabilities the Core promises.

Which Courses Should I Take?

Only courses certified for the Core can be used to fulfill the Core. Many courses are certified for multiple goals and students may use them to satisfy multiple goals. For example, students may use any of our Signature Courses (see page 9) to meet 21st Century Challenges goals and some Areas of Inquiry goals, as well as, in some cases, Cognitive Skills and Processes goals.

Students can find an online list of certified courses by visiting the School of Arts and Sciences' Office of Academic Services page at sasundergrad.rutgers.edu/core.

As students make Core Curriculum choices from the three areas of focus, they should consider the following:

- A single course may meet multiple goals.

- Completion of the Core does not require a specific number of courses, but generally students will complete the Core in 10 to 14 courses.

- Courses used for the Core often will also count toward a student's major or minor, but the Core is also intentionally structured to ensure that students get a broader context and set of cognitive skills in which to situate their major.

- Fulfilling the Core early involves students in a variety of areas of study from which they may come to choose a major and a minor.

- Students use an online degree audit program called "Degree Navigator" to track their progress in the Core.

- Our staff of academic advisers is always available for individual guidance.

About 21st Century Challenges

The SAS Core Curriculum begins with four learning goals that bring the diverse
and rich intellectual heritage of the liberal arts and sciences to bear on the
21st Century Challenges our graduates will face as global citizens and leaders:
appreciating human difference, employing multiple disciplinary approaches,
understanding the role of science and technology, and grappling with questions
of social justice. Students meet these goals in courses that join multidisciplinary
scholarship with the most pressing issues of the day. Many of the new SAS
Signature Courses—specially designed courses of grand intellectual sweep focused
on questions of lasting importance and taught by leading SAS scholar-teachers—
meet these goals and bring students and faculty together in communities of
common interest and experience.

Goals: 21st Century Challenges

21st Century Challenges [21C]

Students take two courses (≥6 credits) that meet at least two of these four goals.

- Analyze the degree to which forms of human difference shape a person's experiences of and
  perspectives on the world.
- Analyze a contemporary global issue from a multidisciplinary perspective.
- Analyze the relationship that science and technology have to a contemporary social issue.
- Analyze issues of social justice across local and global contexts.

21st Century Challenges

Human Difference
Multidisciplinarity
Science and Technology
Social Justice

Areas of Inquiry

Areas of Inquiry

Natural Sciences
Social and Historical Analysis
Arts and Humanities

About Areas of Inquiry

By emphasizing the ability to critically examine the natural environment, human behavior, and the individual's role in society, the SAS Core learning goals prepare SAS students to be creative problem solvers, strong leaders, and reflective individuals in whatever life path they choose. The Core Curriculum's Areas of Inquiry learning goals engage students with critical analysis in the arts and sciences throughout history and in our faculty's cutting-edge research. These goals stretch the boundaries of traditional academic disciplines by leading students back to those questions that predate the artificial division of knowledge into distinct majors and minors.

Goals: Areas of Inquiry

Natural Sciences [NS], Social [SCL] and Historical [HST] Analysis, Arts and Humanities [AH]

Natural Sciences [NS]

Students take two courses (≥6 credits) meeting the first goal and the second and/or third.

- Understand and apply basic principles and concepts in the physical or biological sciences.
- Explain and be able to assess the relationship among assumptions, method, evidence, arguments, and theory in scientific analysis.
- Identify and critically assess ethical and societal issues in science.

Social [SCL] and Historical [HST] Analysis

Students will meet at least one of these goals in the process of taking the Historical Analysis and Social Analysis courses, all of which put at least one of these three goals front and center.

- Understand the bases and development of human and societal endeavors across time and place.
- Explain and be able to assess the relationship among assumptions, method, evidence, arguments, and theory in social and historical analysis.
- Identify and critically assess ethical issues in social science and history.

Historical Analysis [HST]

Students take one course (≥3 credits) meeting at least one of these two goals.

- Explain the development of some aspect of a society or culture over time, including the history of ideas or history of science.
- Employ historical reasoning to study human endeavors.

Social Analysis [SCL]

Students take one course (≥3 credits) meeting at least one of these two goals.

- Understand different theories about human culture, social identity, economic entities, political systems, and other forms of social organization.
- Apply concepts about human and social behavior to particular questions or situations.

Arts and Humanities [AH]

Students take two courses (≥6 credits) meeting at least two of these four goals.

- Examine critically philosophical and other theoretical issues concerning the nature of reality, human experience, knowledge, value, and/or cultural production.
- Analyze arts and/or literatures in themselves and in relation to specific histories, values, languages, cultures, and technologies.
- Understand the nature of human languages and their speakers.
- Engage critically in the process of creative expression.

From African, Middle Eastern, and South Asian Languages and Literatures to Women's and Gender Studies, there are courses in over 45 subject areas certified as meeting various Core Curriculum goals.

Cognitive Skills & Processes

Cognitive Skills & Processes
_____

Writing and Communication
Quantitative and
Formal Reasoning
Information Technology
and Research

About Cognitive Skills and Processes

The Core Curriculum equips SAS students with the Cognitive Skills and Processes that are central to lifelong learning and participation in the world of ideas and the corridors of power. Through the Core, SAS students hone their writing and communication skills and develop their quantitative and formal reasoning skills. And, SAS students delve behind facile assumptions to assess the many conduits of information (and misinformation) and their relationship to knowledge in the 21st century information economy.

Goals: Cognitive Skills & Processes

Writing and Communication [WC], Quantitative and Formal Reasoning [Q], Information Technology and Research [ITR]

Writing and Communication [WC]

Students take three courses (≥9 credits) meeting all goals.

- Communicate complex ideas effectively, in standard written English, to a general audience.
- Respond effectively to editorial feedback from peers, instructors, and/or supervisors through successive drafts and revision.
- Communicate effectively in modes appropriate to a discipline or area of inquiry.
- Evaluate and critically assess sources and use the conventions of attribution and citation correctly.
- Analyze and synthesize information and ideas from multiple sources to generate new insights.

Quantitative and Formal Reasoning [Q]

Students take two courses (≥6 credits) meeting both goals.

- Formulate, evaluate, and communicate conclusions and inferences from quantitative information.
- Apply effective and efficient mathematical or other formal processes to reason and to solve problems.

Information Technology and Research [ITR]

Students take one course (≥3 credits) meeting at least one of these three goals.

- Employ current technologies to access information, to conduct research, and to communicate findings.
- Analyze and critically assess information from traditional and emergent technologies.
- Understand the principles that underlie information systems.

How Courses Meet Multiple Goals

The Signature Courses Example

School of Arts and Sciences Signature Courses—foundational courses covering engaging topics of grand intellectual sweep and enduring importance—exemplify how courses can fulfill multiple SAS Core Curriculum goals. Signature Courses are designed and taught by our renowned scholars and scientists who are not only recognized for their specialized research but are also eloquent and demanding award-winning teachers. Each course is made up of a combination of capacious lectures by faculty and small discussion sections led by graduate students from our nationally ranked graduate programs. They establish a common basis for intellectual exchange and define us as the School of Arts and Sciences community of students and scholars working together. Learn more at sas.rutgers.edu/signature.

A Sampling of Signature Courses

The courses listed here represent just a sampling of the dozen different Signature Courses SAS offers in the fall and spring semesters.

Energy and Climate Change   Core: 21C, NS

Wondering what the "energy" problem is all about? Here is your chance to learn what energy is, where it comes from, how we make it, how we use it, and how we will have to change the way we make it in the coming decades. "Energy and Climate Change" introduces non-science majors to science and the scientific method in the context of one of the most critical challenges facing us today. The course surveys climatology, physics, chemistry, biology, engineering, economics, and public policy as they relate to energy and sustainability considered from a global perspective. It can be used to meet the new SAS Core Curriculum goals in 21st Century Challenges [21C] and Natural Sciences [NS].

**Politics and Social Policy: Lessons from Europe**   Core: 21C, SCL

Welcome to citizenship in the 21st century! You're inheriting an unaffordable health care system that leaves millions uninsured, a mounting climate crisis, failing schools, a fractured social safety net, an aging population, high unemployment, and growing deficits. What can we learn from studying the approaches to these problems taken by the economically advanced democracies of the European Union? What's fact and what's fiction? And, what are the lessons for the United States in the 21st century? The course carries credit toward the major or minor in political science and European studies. It can be used to meet the new SAS Core Curriculum goals in 21st Century Challenges [21C] and Social Analysis [SCL].

Eating Right: The Ethics of Food Choices and Food Policy   Core: 21C, AHo, WC
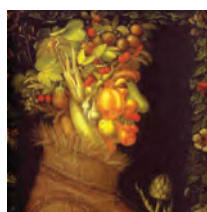
Eating can be mundane or sublime, but either way it is a site for moral decision making within cultures that have a range of traditions and structures surrounding human nourishment. How are our individual and societal decisions about what to eat expressive of aesthetic, moral, cultural, and religious values? What choices should we as individuals make and what actions should we as a society take to influence how our food is grown, processed, marketed, sold, and consumed? The course carries credit towards the major or minor in philosophy. It can be used to meet the new SAS Core Curriculum goals in 21st Century Challenges [21C], Arts and Humanities [AHo], and Writing and Communication [WC].

An Education You Will Use

A recent study found that employers believe that universities should place more emphasis on many of the goals SAS has identified in its Core Curriculum.

- The ability to analyze and solve complex problems (75%)

- Critical thinking and analytical reasoning skills (81%)

- Concepts and new developments in science and technology (70%)

- The ability to understand the global context of situations and decisions (67%)

- Global issues and developments and their implications for the future (65%)

- Cultural diversity in America and other countries (57%)

- Teamwork skills and the ability to collaborate with others in diverse group settings (71%)

- The ability to communicate effectively, orally and in writing (89%)

- The ability to work with numbers and understand statistics (63%)

- The ability to innovate and be creative (70%)

- The ability to locate, organize, and evaluate information from multiple sources (68%)

Source: Hart Research Associates for Association of American Colleges and Universities, *Raising the Bar: Employers' Views on College Learning in the Wake of the Economic Downturn,* January 2010, http://www.aacu.org/leap/documents/2009_EmployerSurvey.pdf

Another survey of a wide range of employers reported that many of the skills and qualities SAS students will develop through the Core Curriculum are very important or extremely important in hiring decisions.

- Communication skills (verbal and written)

- Analytical skills

- Problem-solving skills

- Flexibility/adaptability

Source: National Association of Colleges and Employers, *Job Outlook 2011,* http://www.naceweb.org

Learn More: careerservices.rutgers.edu

Checklist: SAS Core Curriculum

Students use an online degree audit program called "Degree Navigator" to track their progress in the Core. Our staff of academic advisers is always available for individual guidance. Upon completion of the SAS Core Curriculum, students will have developed competencies in the goals below.

Degree Navigator is a flexible, easy-to-use academic advising system for undergraduates is designed to assist you and your advisor managing your general education, major

21ST CENTURY CHALLENGES

(≥6 credits) Students will meet two goals. [21C]

- ☐ • Analyze the degree to which forms of human difference shape a person's experiences of and perspectives on the world.
- ☐ • Analyze a contemporary global issue from a multidisciplinary perspective.
- • Analyze the relationship that science and technology have to a contemporary social issue.
- • Analyze issues of social justice across local and global contexts.

AREAS OF INQUIRY

Natural Sciences (≥6 credits) All courses meet the first goal and at least one other. Students must meet two goals. [NS]

- ☐ • Understand and apply basic principles and concepts in the physical or biological sciences.
- ☐ • Explain and be able to assess the relationship among assumptions, method, evidence, arguments, and theory in scientific analysis.
- • Identify and critically assess ethical and societal issues in science.

Social [SCL] and Historical [HST] Analysis All SCL and HST courses meet at least one of the first three goals.

- • Understand the bases and development of human and societal endeavors across time and place.
- • Explain and be able to assess the relationship among assumptions, method, evidence, arguments, and theory in social and historical analysis.
- • Identify and critically assess ethical issues in social science and history.

Historical Analysis (≥3 credits) Students must meet one goal. [HST]

- ☐ • Explain the development of some aspect of a society or culture over time, including the history of ideas or history of science.
- • Employ historical reasoning to study human endeavors.

Social Analysis (≥3 credits) Students must meet one goal. [SCL]

- ☐ • Understand different theories about human culture, social identity, economic entities, political systems, and other forms of social organization.
- • Apply concepts about human and social behavior to particular questions or situations.

Arts and Humanities (≥6 credits) Students must meet two goals. [AH]

- ☐
- ☐ • Examine critically philosophical and other theoretical issues concerning the nature of reality, human experience, knowledge, value, and/or cultural production.
- • Analyze arts and/or literatures in themselves and in relation to specific histories, values, languages, cultures, and technologies.
- • Understand the nature of human languages and their speakers.
- • Engage critically in the process of creative expression.

COGNITIVE SKILLS AND PROCESSES

Writing and Communication (≥9 credits: 01:355:101; one WCr; and one WCd) Students will meet all goals. [WC]

- ☐ • Communicate complex ideas effectively, in standard written English, to a general audience.
- ☐ • Respond effectively to editorial feedback from peers, instructors, and/or supervisors through successive drafts and revision. [WCr]
- ☐ • Communicate effectively in modes appropriate to a discipline or area of inquiry. [WCd]
- • Evaluate and critically assess sources and use the conventions of attribution and citation correctly.
- • Analyze and synthesize information and ideas from multiple sources to generate new insights.

Quantitative and Formal Reasoning (≥6 credits or ≥3 plus placement out of ≥3) Students must meet two goals. [Q]

- ☐ • Formulate, evaluate, and communicate conclusions and inferences from quantitative information.[QQ]
- ☐ • Apply effective and efficient mathematical or other formal processes to reason and to solve problems. [QR]

Information Technology and Research (≥3 credits) Students must meet one goal. [ITR]

- ☐ • Employ current technologies to access information, to conduct research, and to communicate findings.
- • Analyze and critically assess information from traditional and emergent technologies.
- • Understand the principles that underlie information systems.

A SINGLE COURSE MAY BE USED TO MEET MULTIPLE GOALS. ALL COURSES MUST BE CREDIT-BEARING, GRADED COURSES CERTIFIED BY THE SAS FACULTY AS MEETING CORE GOALS (e.g., E credit courses cannot be used to meet goals, nor can pass/no credit courses). Generally, students will need to take 10–14 courses to complete the Core, some of which may also fulfill major or minor requirements.

Majors and Minors Open to SAS Students

Find further information at **sasundergrad.rutgers.edu/majors**

M = Major   m = minor

African Area Studies m

African, Middle Eastern, and South Asian Languages and Literatures M, m

Africana Studies M, m

Aging m

Agroecology m

American Studies M, m

Animal Science m

Anthropology–Cultural M, m

Anthropology–Evolutionary M, m

Anthropology–General M, m

Art History M, m

Asian Studies m

Astronomy m

Astrophysics M

Biochemistry m

Biological Sciences M, m

Biomathematics M

Business and Technical Writing m

Cell Biology and Neuroscience M

Chemistry m

Chemistry–Business/Law M

Chemistry–Chemical Biology M

Chemistry–Chemical Physics M

Chemistry–Core M

Chemistry–Environmental M

Chemistry–General ACS M

Chinese M, m

Cinema Studies m

Classics–Classical Humanities M, m

Classics–Greek M, m

Classics–Greek and Latin M

Classics–Latin M, m

Cognitive Science m

Communication M

Comparative and Critical Race and Ethnic Studies m

Comparative Literature m

Comparative Literature–Advanced Studies in Comparative Literature M

Comparative Literature–Colonial and Postcolonial Studies M

Comparative Literature–Comparative Literary Studies M

Comparative Literature–Cultural Theories and Practices M

Computer Science m

Computer Science–B.A. M

Computer Science–B.S. M

Criminal Justice M

Criminology m

Dance–B.A. M, m

Digital Communication, Information, and Media m

East Asian Languages and Area Studies M

Ecology, Evolution, and Natural Resources M, m

Economics M, m

Education (5-year Teacher Certification program at GSE) m

Education as a Social Science m

English M, m

Entomology m

Entrepreneurship m

Environmental and Business Economics m

Environmental Policy, Institutions, and Behavior m

Environmental Sciences m

Equine Science m

European Studies M, m

Exercise Science and Sport Studies–Applied Kinesiology M

Exercise Science and Sport Studies–Exercise Physiology M

Exercise Science and Sport Studies–Exercise Science M

Exercise Science and Sport Studies–Sport Management M

Food Science m

French m

French–Cultural Studies M

French–Linguistics M

French–Literary Studies M

Genetics M

Geography M, m

Geological Sciences M, m

German–German Studies M, m

German–Language and Literature M, m

Greek–Ancient m

Greek–Modern m

Hebrew–Modern m

History M, m

History–Ancient History and Classics M

History/French M

History/Political Science M

Human Ecology m

Human Resource Management M, m

Hungarian m

Individualized Major M

Information Technology and Informatics M

Italian M, m

Italian Studies M, m

Japanese m

Jewish Studies M, m

Journalism and Media Studies M

Korean m

Labor Studies and Employment Relations M, m

Labor Studies and Employment Relations–Diversity in the Workplace m

Labor Studies and Employment Relations–Labor Unions and Social Movements m

Labor Studies and Employment Relations–Law and the Workplace m

Labor Studies and Employment Relations–Work, Globalization, and Migration m

Labor Studies and Employment Relations–Work Organization and Management m

Language and Culture of Ancient Israel m

Latin m

Latin American Studies M, m

Latino and Hispanic Caribbean Studies M, m

Linguistics M, m

Marine Sciences m

Marine Sciences–Marine Biology/Biological Oceanography M

Marine Sciences–Marine Chemistry M

Marine Sciences–Marine Geology M

Marine Sciences–Physical Oceanography M

Mathematics M, m

Medical Technology M

Medieval Studies M, m

Meteorology m

Microbiology M

Middle Eastern Studies M, m

Molecular Biology and Biochemistry M

Music–B.A. M, m

Nutrition m

Operations Research m

Organizational Leadership m

Philosophy M, m

Physics m

Physics–Applied M

Physics–Engineering Dual Degree M

Physics–General M

Physics–Ocean Physics M

Physics–Professional M

Planning and Public Policy M, m

Plant Science m

Political Science M, m

Portuguese M, m

Professional Outreach and Development m

Psychology M, m

Public Health M, m

Public Policy m

Religion M, m

Russian M, m

Science Learning m

Science, Technology, and Society m

Sexualities Studies m

Social Justice m

Social Work M

Sociology M, m

South Asian Studies m

Spanish M, m

Spanish–Intensive M

Statistics M, m

Statistics/Mathematics M

Theater Arts–B.A. M, m

Visual Arts–B.A. M

Women's and Gender Studies M, m

About the School of Arts and Sciences

The School of Arts and Sciences is the academic heart and soul of Rutgers, The State University of New Jersey, and provides the only comprehensive undergraduate liberal arts and sciences experience at the New Brunswick Campus. Students engage with an education of uncommon breadth and depth, acquiring the tools and knowledge necessary to pursue a wide variety of career and life paths and equipping them with the intellectual and practical skills to successfully meet the rapidly changing demands of the 21st century. The School of Arts and Sciences combines superb teaching with world-class research in an environment of remarkable cultural diversity.

Students fashion an undergraduate course of study that combines our bold new Core Curriculum with deeper explorations of particular areas of interest through study in a major, a minor, and other elective courses. The School of Arts and Sciences is home to more than 30 academic departments ranging from the biological and physical sciences to the humanities, mathematics, and the social and behavioral sciences. Our departments, centers, and interdisciplinary programs offer more than 70 majors and more than 80 minors, providing multiple opportunities for students to explore and understand our increasingly diverse world. Students study and actively join with our world-class research faculty in following their curiosity to the creation of new knowledge and understandings of the natural world and human behavior, belief, culture, and society.

The School of Arts and Sciences' exciting new Core Curriculum embodies our belief in and aspirations for our diverse and growing student body and reflects the mission of Rutgers University as a comprehensive public research university for the 21st century.

School of Arts and Sciences
Office of Undergraduate Education
Rutgers, The State University of New Jersey
35 College Avenue
New Brunswick, New Jersey 08901
Email: info@sas.rutgers.edu
Web: sasundergrad.rutgers.edu

RUTGERS

School of Arts and Sciences

Learn more about the School of Arts and Sciences
sas.rutgers.edu
admissions.rutgers.edu