From the Classroom to the Lab to the Field
The CNAS Experience
Three Types of Science—One College

• **Life Sciences** — study of living organisms

• **Mathematical Sciences** — study of the language of science: Mathematics & Statistics

• **Physical Sciences** — study of structure and forces in atoms to molecules to planets & galaxies

Students may pick a major in any science field, or they may be undeclared for 1 or 2 years.
Physics and Astronomy

Chemistry

Environmental Sciences

Mathematics and Statistics

Earth Sciences
Chemistry

Physics and Astronomy research investigates nature, from the smallest sub-atomic particles, called quarks, to the largest objects over astronomical distances.

Chemistry is the science that studies matter at the atomic to the macromolecular scale, the reactions, transformations and aggregations of matter, as well as the energy and entropy released or absorbed during these processes.
The **Department of Mathematics** has a faculty whose research covers a broad range of specialties, including algebra, analysis, geometry, topology, mathematical physics and combinatorics.

The **Department of Statistics** has a reputation for outstanding teaching, research, and consulting services. The undergraduate program offers B.A. and B.S. degrees with two options in Statistical Computing and Quantitative Management.

Mathematics and Statistics
The Department of Earth Sciences programs place substantial emphasis on field work with field courses, field trips in all appropriate courses, and excursions between quarters.

Environmental Science has options in:
- Natural Science
- Social Science
- Soil Science
- Environmental Education
- Environmental Toxicology
Life Science Majors and Tracks

Organisms & Environment

Whole Organism

Cell or molecules
Organisms & Environment

Biology
Plant Biology
Entomology
Biological Sciences Tracks
Evolution & Ecology
Microbiology
Whole Organism Level

Biology
Plant Biology
Entomology
Neuroscience

Biological Sciences Tracks:
Evolution and Ecology
Medical Biology
Microbiology
Biochemistry

Biological Sciences Tracks:
  Cell, Development & Molecular Biology
  Bioinformatics and Genomics
  Microbiology

Cellular and Molecular level
Values Added at a Research University

• Teaching-Research provide mutual support
• Personal interaction with active scholars
• Most recent discoveries in undergraduate courses
• Specialized study available
• Research attracts best and brightest
• “State of the art” facilities
Award Winning Faculty

• **172 Fellows in the American Association for the Advancement of Sciences**

• **MacArthur Foundation Genius Award—2007**
  Prof. Cheryl Hayashi

• **National Research Initiative Discovery Award—2008**
  Prof. Julia Bailey-Serres

• **APS Prize for New Materials—2008**
  Prof. Robert Haddon
In CNAS we care about Teaching!

Recent CNAS Winners of UCR Distinguished Teaching Awards

Prof. Leah Haimo, Biology, 02-03
Prof. Timothy Paine, Entomology, 03-04
Prof. Chris Amrhein, Environmental Sciences, 06-07
Prof. Michael Marsella, Chemistry, 06-07
In CNAS we care about Teaching!

**Recent UCR Innovative Teaching Awards in CNAS:**

2006-07  Prof. Tom Perring, Entomology

2006-07  Prof. Bradley Hyman, Biology
          (Also Distinguished Teaching Award, 2000-01)

2007-08

Prof. Manuela Martins-Green, Cell Biology and Neuroscience

and

Prof. Eugene Nothnagel, Botany and Plant Science
          (Also Distinguished Teaching Award, 1999-2000)
Freshman Advising Seminars

- Limited to 24 students each
- Weekly meeting with faculty
- Academic advising
- Discuss career options
- Graduate/professional school preparation
- Learn of campus resources
- Seminar Professor could be your faculty mentor

Small group setting
More than 50% of UCR undergraduates engage in hands-on laboratory or field research as part of their training.

- Academic year research courses
- Summer research projects
- Off-campus internship courses
- Grants and scholarships
Some Funded Research Opportunities for UCR Undergraduates

- **CNAS Freshman Scholars Summer Research Program**
  [http://cnas.ucr.edu/ugrad/fresh_scholars.html](http://cnas.ucr.edu/ugrad/fresh_scholars.html)

- **Minority Access to Research Careers**
  [http://marcu.ucr.edu/Default.htm](http://marcu.ucr.edu/Default.htm)
Some Funded Research Opportunities for UCR Undergraduates

- **California Alliance for Minority Participation in Science, Math, and Engineering (CAMP)-UCR**
  
  http://camp.ucr.edu/

- **CNAS Dean's Fellow Summer Research Internship**
  
  http://cnasstudent.ucr.edu/Schlrshp.html
Research Institutes in the Physical Sciences

Center for Nanoscale Science and Engineering (CNSE)

Institute for Geophysics and Planetary Physics (IGPP)

Air Pollution Research Center (APRC)
Research Opportunities in the Life Sciences

- Animals & environment
- Vectors of Malaria
- Spider silk in plants
- Plant genomics & improvement
- Stem cell biology
Freshman Scholars Learning Communities

- Communities of 24 freshmen in same Advising Seminar, Math, and Science courses
- Special Science and Math Problem-solving and Academic Skills Workshops
- Opportunity for Summer Research with faculty after the Freshman year
- Earn higher grades in the freshman year!

Back for a 6th year!
Academic Advising

The CNAS Undergraduate Academic Advising Center, with the faculty, provides professional, academic advising each quarter to every student.

We monitor CNAS students’ academic progress each term.
The college has just finished an era of unprecedented growth in enrollment and in construction of new facilities.
High Achieving Alumni

Pedram Salimpour, M.D.
President, Plymouth Health and CareNex Health Services

Tina Nova, Ph.D.
President, CEO and Founder of Genoptix

Richard Schrock, Ph.D.
Professor of Chemistry at MIT, 2005 Nobel Laureate in Chemistry
Preparing for the Health Professions

At UCR You Choose YOUR major to prepare

- Medicine (MD or DO)
- Pharmacy
- Dentistry
- Optometry
- Veterinary Medicine
- Allied health professions
Preparation for Medical School

Undergraduates can maximize their chances for entrance into medical school by attending a university with programs designed for their career goals.
Medical and Health Careers Program

- Supportive Community
- Access to Information
- Weekly Newsletters
- Speakers and Events
- Study Center and Library
- Committee Evaluation Letter
Unique Pathway to Medical School for UCR graduates

- UCR graduates have exclusive access to 24 Medical School seats.
- The Thomas Haider Biomedical Sciences Program: Currently jointly with UCLA but starting with The UCR School of Medicine when it opens
- Students from any UCR major may apply for one of 24 seats!
CaTEACH: Science/Mathematics Initiative

CaTEACH facilitates completion of a science, mathematics or engineering Bachelors Degree plus:

an intern teaching credential… In FOUR years!