Iowa State University has more than 100 majors that provide virtually unlimited academic opportunities. In this brochure you'll find information about your specific area of interest and a family of related majors that you may want to explore during your adventure here at Iowa State. Please use the contact information listed inside and let us help you discover your passions, unlock your potential, and enjoy the adventure.

Preparing for a biotechnology career
An Iowa State undergraduate degree with a biotechnology emphasis is a solid foundation on which to build a career. If you decide to enter the workplace after earning your Iowa State degree, you'll find that an emphasis in biotechnology attracts employers in industry, government, and public health. You might be part of a team researching and developing new and beneficial industrial products. You may help find a cure for a devastating disease. You could work to modify the genetic code of plants or animals to improve crop varieties and livestock breeds. You might work in a forensics laboratory to help solve crimes. Or you might provide the scientific or ethical expertise that government agencies and legislative bodies need to help them guide the direction of biotechnology research.

Selecting the academic department for you
When you choose to prepare for a biotechnology-related career at Iowa State, you have many options. Iowa State University does not have a major called biotechnology because many different kinds of careers involve biotechnology. Instead, you will select a major within an academic department, and then structure your degree program to emphasize biotechnology. Your major is the specialized area in which you will apply your biotechnology training.

Working with the best faculty
More than 300 faculty members at Iowa State University are involved in some aspect of biotechnology teaching and research. Their academic homes are in the colleges of Agriculture and Life Sciences, Engineering, Human Sciences, Liberal Arts and Sciences, or Veterinary Medicine.

In the classroom, Iowa State's biotechnology faculty provide quality teaching supported by the latest in instructional technology. You will learn from internationally recognized experts who are skilled in helping students like you achieve their academic goals. Many academic departments sponsor student clubs where you can enjoy academic, career, and social opportunities with other students and faculty who share your interests.

In the laboratory, you can obtain practical, hands-on experience to build your scientific expertise, increase your value to prospective employers, and help finance your education. Many biotechnology faculty welcome undergraduate students as members of their interdisciplinary research teams. Paid positions are available year-round.

Working in the best facilities
Iowa State's 235 general classrooms and 500 teaching laboratories are among the best in the world. The university's information technology services have permanently equipped more than 130 general classrooms to display output from computers, videos, laser discs, and document cameras, as well as traditional media. Computer labs and wireless networking are available to students throughout the campus. A distributed computing environment will provide you with electronic mail and other Internet services.

In addition to hands-on experience in well-equipped teaching laboratories, you can learn how to operate state-of-the-art scientific instruments in more than a dozen instrumentation facilities. You’ll access the latest equipment available for research in cells, proteins, nucleic acids, fermentation, microscopy, image analysis, nuclear magnetic resonance, animal gene transfer, and plant transformation. Many of the instrumentation facilities that support biotechnology research offer free instruction to students.
One of the options available to agricultural engineering majors is biosystems engineering. Students in biosystems engineering learn how to integrate the biological and physical sciences with engineering science and design. Graduates may work for companies involved with biofuels, biotechnology, bioprocessing, bioenvironmental engineering, food engineering, and related areas. There are opportunities for agricultural and biosystems engineers who design systems for biological and chemical processing and production of biomaterials. The expanding bioeconomy is creating opportunities for agricultural and biosystems engineers in biofuels and biorenewables. Career opportunities are in the areas of enzyme processing, bioreactor design, product separation, and bacterial treatment of agricultural and industrial products. Improving the quality of surface and groundwater by chemical and biological treatment has created new challenges. Agricultural engineers trained in biosystems are needed for biological product research and development, processing and production operations, plant management, and systems design.

Students who choose the biosystems option take courses in organic chemistry, biochemistry, and microbiology. They also are trained in engineering design and analysis focusing on living systems.

Students who major in either agricultural business or economics learn how to evaluate the business and economic aspects of biotechnology alternatives and issues from the perspectives of consumers, business firms, and governmental agencies. Students also learn how to assess market impacts of biotechnology alternatives and related policies, including such things as prices, costs, and benefits. This knowledge is useful in developing business strategies and in formulating governmental policies involving biotechnology.

The Department of Economics offers a B.S. degree program in agricultural business through the College of Agriculture and Life Sciences and a B.S. degree program in economics through the College of Liberal Arts and Sciences. The mission of the department is to provide high-quality research, educational, extension, and international programs in economics and agricultural economics. Graduates pursue a wide variety of careers in private industry, business, government, research organizations, or self-employment.

Technology, agriculture, and a desire to help others learn combine to make agricultural education a great career path. Students in agricultural education learn how to teach and enhance learning about the latest technologies in agriculture, including biotechnology, bioethics, global positioning, environmental science, food technology, horticulture, and production agriculture. Graduates are prepared for a variety of careers in teaching, agribusiness, extension, and other government agencies.

The agricultural education profession rates Iowa State’s agricultural education and studies department as one of the top departments of its kind in the nation. Usually, more than 90 percent of the department’s students are employed by the time of graduation, and 98 percent are employed by six weeks after graduation.

Agronomy applies biotechnology techniques to improve the products that we get from plants. These developments are improving the health value of food, creating new biorenewable products, and protecting the food supply around the world. Through advancements in plant breeding, genetics, and other methods of biotechnology, agronomists are at the center of biotechnology and the bioeconomy.

Students in agronomy have the opportunity to work directly with research projects on campus and in the field. For example, agronomy students have been involved with research that is using nanotechnology to insert genes, mapping the corn genome, and breeding low linolenic oil from soybeans. The agronomy department offers paid jobs that are flexible with your class schedule and are hands-on work experiences for your area of interest.
Animal Ecology

Department of Natural Resource Ecology and Management
339 Science II
Ames, Iowa 50011
Phone: 515 294-6148
www.nrem.iastate.edu

Animal ecology is one of two curricula in the Department of Natural Resource Ecology and Management that offer unique career opportunities for students interested in biotechnology (also see forestry). Animal ecology focuses on the relationships of animals with their environment, both living and non-living components, in settings ranging from little human impact to human-dominated landscapes. Biotechnology plays a central role in many aspects of animal ecology, such as fish/wildlife forensics at the domestic and international level, identifying and controlling emerging diseases in fish and wildlife, managing for genetic diversity in species of conservation concern, and determining taxonomic status as a basis for conservation policy.

Animal Science

Department of Animal Science
119 Kildee Hall
Ames, Iowa 50011
Phone: 515 294-3161
E-mail: anweb@iastate.edu
www.ans.iastate.edu

Animal scientists provide services related to animal production and animal products. Students in the animal science department learn how to provide services that are economical and consistent with consumer needs, animal well-being, resource conservation, and environmental protection. A degree in animal science or dairy science also can prepare students for admission to professional schools, such as veterinary medicine.

For the animal science major interested in biotechnology, faculty members in animal breeding and genetics, physiology of reproduction, muscle biology, nutritional physiology, meat science, and animal nutrition have laboratory-based programs that offer undergraduates biotechnology research experience. Specific areas of research include, but are not limited to, the molecular analysis of genes and gene products of biological and economic importance in livestock, such as gene expression, gene function, gene mapping, protein expression and function; the development of biological and physiological methods to analyze muscle; the study of nutritional modification to improve nutrient utilization; and the development and use of gene transfer methods to improve livestock characteristics.

Biochemistry, Biophysics, and Molecular Biology

Department of Biochemistry, Biophysics, and Molecular Biology
1210 Molecular Biology Building
Ames, Iowa 50011
Phone: 515 294-6116
E-mail: biochem@iastate.edu
www.bbmb.iastate.edu

The Department of Biochemistry, Biophysics, and Molecular Biology offers B.S. majors in biochemistry, agricultural biochemistry, and biophysics, all of which are appropriate to careers in biotechnological sciences. The three programs focus on the explanations of life processes in terms of fundamental chemical and physical principles. The curricula include in-depth quantitative study in mathematics, chemistry, and physics, in addition to biological sciences with special emphasis on the molecular level. Advanced, state-of-the-art laboratory training in biochemistry and molecular biology is a featured aspect of the majors, including opportunities for individual undergraduate research projects integrated into the professional research programs of our faculty members. Training in these majors provides fundamental knowledge and experience that allow our graduates to function as scientific staff in the biotechnology industry and to advance to graduate-level training leading to research director positions in biotechnology. Some of the relevant biotechnology areas are pharmaceuticals, plant genetic engineering, animal health, and human medical research.

Biology

Biology Program
103 Bessey Hall
Ames, Iowa 50011
Phone: 515 294-1064
E-mail: biology@iastate.edu
www.biology.iastate.edu

Biology is the study of all aspects of life on this planet. Biologists will learn about plants and animals, ecology and molecular biology, genetics and physiology, and biotechnology and evolution.

The biology program at Iowa State University provides a broad education in all aspects of modern biology. It also can serve as a basis for students interested in more specific areas like animal ecology, biochemistry, botany, entomology, genetics, microbiology, or zoology.

Undergraduate biology majors are encouraged to work in some of the more than 200 biological sciences laboratories on campus, to study at a marine research station, to take courses at the Iowa Lakeside Laboratory, or to study the ecology of a foreign land. Biology majors are ideally suited for further graduate and professional training; employment in health, agricultural, biotechnology, or environmental professions; and work in education.
Biomedical Sciences

The Department of Biomedical Sciences at Iowa State University studies anatomy, histology, molecular biology, cell biology, physiology, and pharmacology. It is a foundation subject that includes the study of normal functions of mammalian animals. The department teaches undergraduates who use the subject for furthering preprofessional and paraprofessional studies. The department also teaches doctor of veterinary medicine (DVM) students in the first three years of their program. The graduate students study biomedical sciences with option of focus on four specialties. These specialties are cell biology, physiology, physiology and pharmacology, and anatomy. DVM and graduate students conduct research in the areas of faculty specialties that include neuroscience, neurotoxicology, parasite biology, and pharmacology. Graduate students of the DVM program go into a wide range of careers, including veterinary practice. Graduate students frequently enter careers in research and teaching at other universities.

Chemical and Biological Engineering

Chemical engineering is the study of the use of chemical methods to make new materials, including bulk chemicals and fuels, pharmaceuticals, construction materials, foodstuffs, synthetic textiles, plastics, and advanced materials. Chemical engineers are skilled in chemistry, mathematics, and physics, as well as in engineering subjects such as fluid mechanics, heat and mass transfer, separations of chemical components, thermodynamics, reactor engineering, process control, and plant design. Because chemical engineers have a thorough knowledge of chemistry, it is common for them to move into biotechnology. Chemical engineering students often take courses in biochemistry, microbiology, genetics, and food science, and nearly half ultimately work in the biotechnology industry. Many graduate students and undergraduates also conduct research within the department on biological topics such as plant metabolic engineering, protein separations, secondary metabolite production, enzyme mutagenesis, modeling of enzyme structure and function, biorenewables, phytoremediation, drug delivery, and biocompatible polymers.

Chemistry

Chemistry is the study of the composition, structure, properties, and interactions of chemicals. Because chemicals are the basis of life, chemists study a wide range of topics. Some are intrigued by environmental problems such as global warming, ozone depletion, or acid rain. Some chemists work with other researchers to seek cures for diseases. Other chemists enjoy synthesizing new materials. Emerging areas include nanotechnology and microanalytical instrumentation. A chemistry degree from Iowa State can qualify you for a career as an environmental chemist, pharmaceutical chemist, forensic scientist, science writer, technical salesperson, product development chemist, or research worker. Opportunities exist for students to perform research with world-renowned chemists. Many Iowa State chemistry graduates are professors at noted universities and colleges, researchers in well-known industrial laboratories, or leaders in world business and commerce. Undergraduate chemistry majors may continue in graduate school or professional studies related to biotechnology.

Civil, Construction, and Environmental Engineering

One of the options available to civil engineering majors is environmental engineering. In the field of environmental engineering, students can be involved in environmental biotechnology, which is the multidisciplinary integration of sciences and engineering in utilizing the biochemical potential of microorganisms, plants, and parts thereof for the restoration and preservation of the environment and for the sustainable use of resources. Graduates of environmental engineer-

Computer Science

Computer scientists engage in fundamental and applied research; design, analysis, and development of algorithms; software; databases; and information systems and their applications across virtually every area of human endeavor. The Department of Computer Science actively participates in biotechnology education and research at Iowa State in a variety of ways. Several computer science faculty members conduct research in bioinformatics and computational biology, a discipline that is critical to the advances in animal and plant agriculture, drugs, biomaterials, and foods. Computer science faculty work on the development of information systems and data mining software that can aid in the discovery of predictive models and relationships from complex data sets, for example, in the discovery of macromolecular sequence-structure-function relationships, in discovery of quantitative structure-activity relationships (QSAR) for rational drug design, and in precision farming.

Undergraduate students interested in biotechnology can take courses in programming, data bases, information systems, machine learning (data mining), bioinformatics, and related areas as part of an undergraduate minor in computer science. Research projects led by computer science faculty offer a broad range of research and research-based advanced training opportunities to qualified undergraduate students.
**Electrical and Computer Engineering**

Department of Electrical and Computer Engineering
2215 Coover Hall
Ames, Iowa 50011
Phone: 515 294-2664
E-mail: ecpe@iastate.edu
www.ece.iastate.edu

Electrical and computer engineering plays a central role in the design and development of electrical devices and in applying computers to a variety of problems. Electrical engineering students apply the theories and technologies in system modeling and control, signal analysis and filtering, and electrical device design toward modeling and sensing biological systems. Computer engineers apply their background in algorithm development, network analysis, and software engineering to improving biomedical software and sensor networks.

The Department of Electrical and Computer Engineering supports biotechnology development in a variety of ways, such as designing biomedical instrumentation, biomedical image processing, and bioinformatics. Department faculty are active in the Plant Sciences Institute and the bioinformatics and computational biology interdisciplinary program. Many graduate and undergraduate students work with faculty performing research in areas such as algorithm design for more efficient assembly of large genomes, systems biology modeling of complex biological systems, surgical simulation using biomedical images in virtual reality, and instrumentation related to medical and biological applications.

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**Entomology**

Department of Entomology
110 Insectary Building
Ames, Iowa 50011
Phone: 515 294-7400
E-mail: entomology@iastate.edu
www.ent.iastate.edu

Entomology is the scientific study of insects. Entomology students are trained in the evolutionary and ecological relationships of insects with other life forms; the principles of insect structure and function; the impact of insects relative to human and animal health; and the relationships between insects and humanity's food, fiber, structural and aesthetic needs and expectations. Graduates understand the principles and methods available to manage beneficial and pest insect populations.

The Department of Entomology offers research opportunities for undergraduates interested in biotechnology, which has revolutionized strategies used for management of insect pests and insect-vectored diseases of humans, plants, and animals. Entomology majors are prepared for further graduate and professional training or for a wide range of positions within industry, business, government, education, and public health.

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**Food Science and Human Nutrition**

Department of Food Science and Human Nutrition
2312 Food Sciences Building
Ames, Iowa 50011
Phone: 515 294-3011
E-mail: fshnweb@iastate.edu
www.fshn.hs.iastate.edu

Students who select the food science major in the Department of Food Science and Human Nutrition apply the basic principles of biology, chemistry, and physics in studying the quality, preservation, preparation, and safety of foods. Students who choose the nutritional science major investigate the interactions and effects of food components, for good or ill, in the human body.

Students can work with faculty studying the molecular mechanisms of carcinogenesis, developing means to recover cloned proteins from plants, improving microorganisms to carry out valuable fermentation processes, or investigating the cellular reactions in lipid metabolism. A course in food biotechnology follows the production of food enzymes from gene cloning through fermentation and protein recovery.

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**Forestry**

Department of Natural Resource Ecology and Management
339 Science II
Ames, Iowa 50011
Phone: 515 294-6148
www.nrem.iastate.edu

Forestry is one of two curricula in the Department of Natural Resource Ecology and Management that offer unique career opportunities for students interested in biotechnology (also see animal ecology). Forestry focuses on conservation, renewal, and utilization of trees and their associated plant and animal communities across the spectrum from wilderness areas to urban tree populations and industrial plantations. Because trees and forests develop over longer time spans than most organisms, biotechnology is playing a particularly important role in understanding how genetics and environment interact to determine the health and utilization qualities of trees, the level of population diversity in natural stands, and the impacts of management on diversity.

Many biotechnology approaches will be developed in the future to optimize the production of consumer goods from wood, one of earth’s most abundant and renewable resources.

The forestry curriculum provides options for students to specialize in forest ecosystem management, conservation and restoration, or materials science and technology. Graduates from these programs pursue rewarding careers with a variety of government agencies, forest industries, and public conservation organizations. Qualified students are encouraged to participate in the Honors Program, which provides one of the best ways to individualize their program of course work to achieve the particular emphasis on biotechnology aspects of forestry that they desire.

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**Genetics**

Undergraduate Genetics Major
103 Bessey Hall
Ames, Iowa 50011
Phone: 515 294-1606
E-mail: ug-genet@iastate.edu
www.public.iastate.edu/~ugradgen

Genetics is the study of how characteristics of living organisms are passed from generation to generation. Students with the B.S. degree may find employment in the biotechnology, health, or food industries. Recent graduates have developed careers in conservation biology, technical writing, science journalism, technical sales, biological illustration, and genetic counseling. Many students find the genetics major to be good preparation for professional studies in human or animal medicine.

Genetics students pursue a rigorous program of chemistry, physics, math, biology, and genetics that prepares them for graduate programs in any area of genetics or other biological sciences. With more than 60 faculty campus-wide conducting research in genetics, exceptional opportunities exist for genetics majors to do undergraduate internships.
Horticulture promotes the creative utilization of plants to improve society. Biotechnology is an important tool used to study and improve horticultural crops.

The Department of Horticulture offers numerous research opportunities for undergraduates through honors programs, independent study, and the science option within the horticulture major. Students may choose to work with faculty and experienced graduate students on a broad array of research projects, including molecular biology of fruit ripening and development, physiology of disease resistance, molecular controls of vegetative growth, transgenic plant production and analysis, micropropagation of ornamental plants, and woody plant physiology. Several undergraduate courses offer some training in the principles and techniques of biotechnology.

Graduates of the horticulture program become fruit and vegetable producers, turfgrass managers at golf courses and sports fields, lawn care professionals, nursery crop producers and garden center managers, landscape design and installation professionals, public garden and arboretum horticulturists, plant breeders, plant biologists, garden writers and communication specialists, and greenhouse managers.

Kinesiology involves the study of physical activity and its influence on health and well-being. One of the career options is exercise science, which allows a student to develop a program of study involving various biotechnological aspects of human performance. Students acquire knowledge in the psychological, physiological, mechanical, and motor control of human movement. Students are involved in faculty research laboratories with the opportunity to explore various neurological, biomechanical and physiological aspects of human movement and health. Coursework can be tailored to a student’s individual interests and is an excellent preparation for advanced study in physical therapy, medicine, occupational therapy or other allied health professions.

With increased availability of DNA and other data, quantitative methods have become central to many fields in biotechnology. Diverse fields of mathematics are now used, for example, to uncover phylogenetic relationships among species using DNA, to model population growth and epidemics, to predict the shapes of proteins, and to model the growth of cancers. All these topics require advanced mathematics.

Mathematics majors normally spend the first two years obtaining a grounding in calculus and differential equations. At the junior and senior levels, the department offers undergraduate courses relevant to different topics in biotechnology. Mathematics provides tools for deeper analysis of many subjects taught in other departments.

Microbiology is the study of living organisms that generally are seen only with a microscope. Some microbes are devastating pathogens of humans, animals, or plants or cause serious problems in food production systems. Microbiologists study the interaction of microbes with other organisms or with the environment in order to solve problems caused by microbes or to use microbes for their advantageous properties. For example, microbiologists study how microbes cause diseases, or they study and devise ways to manipulate microorganisms to produce products of interest, such as antibiotics, insulin, or vaccines. Industrial microbiologists are responsible for generating and maintaining the bacterial cultures that produce compounds needed in human and animal medicine each day.

A microbiology major will study genetics, chemistry, biochemistry, physics, and cell biology, in addition to medical microbiology and microbial physiology and genetics. Microbiology majors often participate in the microbiology club, first- and second-year learning communities, and research internships in on-campus or local company laboratories. Microbiology students interested in biotechnology often take advanced course work in immunology, virology, cell biology, and plant pathology. In the past, students graduating with a B.S. in microbiology from Iowa State University quickly have found jobs working in genetics-based biotechnology companies, in pharmaceutical companies developing new drugs and vaccines, and in state or federal research laboratories like the United States Department of Agriculture’s animal research laboratories. Microbiology graduates also are well prepared to enter graduate and professional programs or clinical laboratory scientist programs designed to train personnel to work in hospitals. In short, a degree in microbiology prepares students for careers in food, industrial or environmental microbiology, or animal health and plant pathology, or it provides the preparation needed to succeed in graduate school or professional programs, such as veterinary or medical school.
Philosophy and Religious Studies
Department of Philosophy and Religious Studies
402 Carrie Chapman Catt Hall
Ames, Iowa 50011
Phone: 515 294-7276
www.philrs.iastate.edu

Philosophy studies the most general features of our world, the fundamental principles of value, and the nature and methods of knowledge. The Department of Philosophy and Religious Studies at Iowa State offers undergraduate majors that can prepare students for graduate work in philosophy or in religious studies, or for further study in law, history, political science, or literature.

Offerings in philosophy include theoretical and applied ethics, the philosophy of biotechnology, environmental ethics, general philosophy of science, and the philosophy of biology. Through studying social and political philosophy and the philosophy of technology, students can learn about the political ideas that may affect the adoption or regulation of biotechnology discoveries.

Offerings in religious studies enable students to examine the practices and ideas of the world’s religions and their effects on ways of living. Students can explore religious ethical beliefs that have important consequences for the adoption of particular biotechnologies.

Physics and Astronomy
Department of Physics and Astronomy
12B Physics Hall
Ames, Iowa 50011
Phone: 515 294-5440
E-mail: phys_astro@iastate.edu
www.physastro.iastate.edu

Physics and astronomy are basic natural sciences that attempt to describe and provide an understanding of our world. They serve as the underpinning of many different disciplines, including the other natural sciences and technological areas. Students may choose physics for their major subject as preparation for diverse areas, such as engineering, medicine, law, or business administration, or simply as a challenging approach to personal development with an emphasis on rigorous scientific thinking. Other students choose physics as preparation toward a career as a professional physicist or a science educator.

The physics of biological systems program in the Department of Physics and Astronomy is a highly interdisciplinary research program that involves the development and application of experimental and theoretical methods to understand biology from a physical perspective. This program is designed to provide the quantitative skills and the biological background for students who would like to pursue careers in fundamental research in biophysics, quantitative biology, and biotechnology. Current research areas include macromolecular structural determination, structure and function of biological membranes, bioinformatics, and computational biology.

Political Science
Department of Political Science
509 Ross Hall
Ames, Iowa 50011
Phone: 515 294-8682
E-mail: polsci@iastate.edu
www.pols.iastate.edu

The Department of Political Science prepares students for careers in law and public service. Students interested in public policy, public administration, American politics, comparative politics, international relations, or political theory will find issues related to biotechnology to be an important part of their studies in a wide array of departmental courses. Legislatures, executives, courts, political parties, and interest groups in the United States and many other countries deal with the economic, environmental, and political consequences of biotechnology. These political participants and issues are often an important component of our curricular offerings.

In particular, the Department of Political Science addresses aspects of biotechnology in its courses on environmental politics, constitutional law, ethics and political theory, and international political economy. The department also offers courses on public administration and administrative laws that assess the political and legal requirements for the implementation of laws related to biotechnology issues.

Statistics
Department of Statistics
102 Snedecor Hall
Ames, Iowa 50011
Phone: 515 294-3440
E-mail: statistics@iastate.edu
www.stat.iastate.edu

Statistics is the science of collection, organization, analysis, and interpretation of data. The principles of statistics apply to a wide variety of professional and scientific fields.

There are many opportunities for students to apply methodology learned in statistics courses to biotechnology research. In courses about design of experiments and survey sampling, students learn how to efficiently collect data. Courses in applied probability modeling include applications in bioinformatics and genomics. Courses in time series analysis and spatial data analysis examine patterns in data related to time and space. Students may wish to combine a major in a biotechnology field with a second major, or minor, in statistics.
Biotechnology

Preparing to do your best while you’re in high school
To prepare for a career in biotechnology at Iowa State University, you should focus on science, mathematics, and English while you are in high school. Taking three years of one foreign language in high school, earning advanced placement credits, or taking community college classes can give you a head start on your university studies. Entrance requirements are not the same for all academic departments at Iowa State, so contact the department of your choice for specifics. Try to follow these general recommendations for courses you should take in high school:

- Sciences: biology, chemistry, physics
- Mathematics: algebra, calculus, geometry, trigonometry
- Language arts: English grammar and writing courses, foreign language

Getting to know biotechnology at Iowa State
Iowa State University is a public land-grant institution that has earned a world-class reputation for leadership in the life sciences. Biotechnology has added to that reputation.

Since our biotechnology program was established in 1984, Iowa has invested millions of dollars to keep Iowa State among the leaders of life science education, research, and outreach. That investment is paying off in many research firsts and unique programs. If you want to be among the best in 21st century biotechnology, Iowa State is the place to be. You can read about all of the biotechnology opportunities offered by Iowa State University at www.biotech.iastate.edu.

Honors
The Honors Program provides opportunities for high-achieving students to do their best early in their years at Iowa State. An individualized academic program, priority scheduling for courses, smaller class sizes, independent research projects, and a mentoring relationship with renowned faculty members are benefits for students who qualify.

Internships
Internships and other cooperative education experiences are available to students in many academic departments. In addition to giving you a head start in building on-the-job experience for your future career, these paid positions can help you finance your education.

Learning communities
A course-based learning community is a small group of students with similar academic goals who work and learn together in study groups. Students may take their courses together and have a ready-made set of potential friends. Many undergraduate departments at Iowa State offer students the opportunity to be part of a learning community family.

Study abroad
Students who want to study life sciences in the international arena can choose their special spot in the world. Earn academic credits while you study in Mexico, the Philippines, China, the Ukraine, Australia, Spain, France, Greece, or many other countries. You’ll find many exciting options for both the academic semesters and the summer.

Student organizations
Iowa State has a wide variety of clubs and special interest groups for students. The following activities may be of interest to students in the life sciences:
- Agronomy Club
- American Institute of Chemical Engineers
- Biochemistry, Biophysics, and Molecular Biology Club
- Biological Sciences Club
- Family and Consumer Sciences Education and Studies Club
- Fisheries and Wildlife Biology Club
- Forestry Club
- Mathematics Club
- Pre-Medical Club
- Student Chapter of the American Veterinary Medical Association
- Undergraduate Microbiology Club

Honor societies
- Alpha Kappa Delta—Sociology
- Alpha Zeta—Agriculture and Life Sciences
- Beta Beta Beta—Biological Sciences
- Omega Chi Epsilon—Chemical Engineering
- Phi Beta Kappa—Liberal Arts and Sciences
- Phi Upsilon Omicron—Human Sciences
- Pi Mu Epsilon—Mathematics
- Upsilon Pi Epsilon—Computer Science
- Xi Sigma Pi—Forestry

For more information
If you have questions or want more detailed information about Iowa State’s biotechnology program, please contact:

Iowa State University
Office of Biotechnology
1210 Molecular Biology Building
Ames, Iowa 50011-3260
Phone: 515 294-9818
E-mail: biotech@iastate.edu
www.biotech.iastate.edu

Iowa State University
Office of Admissions
100 Enrollment Services Center
Ames, Iowa 50011-2011
Phone: 515 294-5836
Toll Free: 800 262-3810
E-mail: admissions@iastate.edu
Web: www.admissions.iastate.edu

Questions about admission
In addition to writing us at the address at left, we encourage you to visit our Web site, which features a course catalog, online application, and campus information.

Also, you can follow us on:

Preparation to do your best while in school
The best preparation continues to be a strong college preparatory program of study, which includes courses in English, mathematics, laboratory science, social studies, and foreign languages. If you intend to transfer credits from another institution, you may contact our Office of Admissions for assistance in selecting the best courses for your program of study.

Material in this brochure was accurate at the time of printing. For the most up-to-date information, visit our Web site at www.iastate.edu.

Iowa State University does not discriminate on the basis of race, color, age, religion, national origin, sexual orientation, gender identity, sex, marital status, disability, or status as a U.S. veteran. Inquiries can be directed to the Director of Equal Opportunity and Diversity, 3280 Beardshear Hall, 515 294-3612.

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