developing a curriculum plan. Further details of typical course sequences in the different emphases are described in the Biology Graduate Handbook available for download from the Graduate Student section of the Biology website http://bio.nmsu.edu/grad.

The Behavioral, Ecological and Evolutionary Biology program is appropriate for graduate students who wish to specialize in areas of biology that study the various processes that encompass the behavior, ecology, and evolution of living and extinct taxa.

The Cell and Organismal Biology program is appropriate for all Graduate students who wish to emphasize those areas of biology that integrate function and structure in cells and tissues, and is offered by the Department of Chemistry.

The Microbiology curriculum is appropriate for graduate students who wish to specialize in areas of biology that study the various processes that occur in microbes (bacteria, viruses, fungi, and protists) such as their physiology, ecology, development, or evolution.

Graduate students may also take a minor in other graduate departments and programs.

CHEMISTRY AND BIOCHEMISTRY

Department website: http://www.chemistry.nmsu.edu/
(505) 646-2505
wquantz@nmsu.edu

W. Quintana, Ph.D., Department Head, Ph.D. (Pennsylvania)—inorganic chemistry, biochemistry, chemical education, J.B. Arterburn, Ph.D. (Arizona)—organic chemistry, synthetic medicinal and medical chemistry, G.A. Freeman, Ph.D. (Colorado-Boulder)—analytical chemistry, gas and liquid chromatography, mass spectrometry, A. Gopal, Ph.D. (Ohio State University)—organic chemistry, synthetic medicinal chemistry, applications of enzymes in asymmetric synthesis, J.W. Hemdlen, Ph.D. (Princeton)—organic chemistry, organo-transition metal complexes, synthesis of biologically important cyclic compounds, K. Houston, Ph.D. (University of Texas—MD Anderson)—biochemistry, molecular mechanisms of hormone action in tumorigenesis, M.D. Johnson, Ph.D. (New Mexico State University)—analytical chemistry, functionalization of clay for remediation of environmental pollutants, F. L. Ph.D. (Minnesota)—inorganic chemistry, biopolymer chemistry, small molecule activation, S. L. Leuwer, Ph.D. (Wisconsin)—biochemistry, cell metabolism, disease etiology, B. A. Lyons, Ph.D. (Cornell University)—biochemistry, nmr spectroscopic studies of signal transduction pathways in breast cancer, W.A. Maio, Ph.D. (Johns Hopkins University)—organometallic chemistry, total synthesis of marine natural products, and explorations of new chemical methods, synthesis of oxazines and lactans, arbenzim—based antibacterial dimer, and total synthesis of (+)-isomethiodole 1a, G. R. Rayson, Ph.D. (Texas—A & M)—analytical chemistry, spectroscopy, A. Readford, Ph.D. (University of Utah)—toxicology, regulation of the orphan cytochrome P450 drug metabolism enzyme, CYP2F1, and its role in the human liver disease, S. N. Smrakov, Ph.D. (University of Florida)—physical chemistry, photo-induced charge separation, E. J. Smith, Ph.D. (California-Berkley)—physical chemistry, molecular dynamics in condensed phases, H. Wang, Ph.D. (Wayne State)—physical chemistry, reaction kinetics in complex systems, T. E. Yuki, Ph.D. (Oregon Health and Science University)—biochemistry, x-ray crystallography and spectroscopy of bacterial metalloproteins, C. G. Zoski, Ph.D. (Queens University, Canada)—analytical chemistry, Theoretical and experimental electrochemistry

DEGREE: Master of Science
MAJOR: Chemistry

DEGREE: Doctor of Philosophy
MAJOR: Chemistry

MINORS: Biochemistry

Chemistry

The Department of Chemistry and Biochemistry offers programs leading to the M.S. and Ph.D. degrees in the areas of physical, organic, inorganic, biological, and analytical chemistry. Admission to these programs without deficiency is based on an undergraduate program essentially equivalent to that pursued by a chemistry or biochemistry major at this university. An entering student is encouraged to take the Graduate Record Examination (GRT) to increase his or her chances for financial support. All foreign students must take GRE and TOEFL and must demonstrate adequate English speaking and writing skills. Students who wish to be admitted to the Ph.D. degree program must complete one of the following options: (a) two courses chosen respectively from the two major areas as set up in the department, or (b) one course chosen respectively from the two major areas. Students may not apply for a Ph.D. degree in the Department of Chemistry and Biochemistry until they have completed 12 units in Chemistry and Biochemistry. A student's final major will then be determined by the student's election of a field of thesis research. A student's election of a field of thesis research is made at the time the student is admitted to the Department of Chemistry and Biochemistry. A master's candidate will plan an appropriate program of further study with his or her advisor. The thesis requirement may be waived upon application to the department head. After completion of the doctoral comprehensive examination requirements, the student is required to submit a written proposal to the department head. The department head will approve the student's program of study for completion of the comprehensive examination. After completion of the comprehensive examination, the department head will approve the student's program of study for completion of the comprehensive examination. After completion of the comprehensive examination, the student is required to submit a written proposal to the department head.

COMMUNICATION STUDIES

Department website: http://web.nmsu.edu/~nmsucom/ (505) 646-2001
khsucon@nmsu.edu

K. Hacker, Department Head, Ph.D. (Oregon)—new media networking, political communication, national security communication, R. Armentrout, Ph.D. (University of Missouri-Columbia)—organizational communication, communication theory, I. Dykoff, Ph.D. (Ohio State University)—communication theory, political communication, communication technology, research methods, J. F. Lewis, Ph.D. (Kansas)—communication, A. Hubbell, Ph.D. (Michigan State)—organizational communication, health communication, E. Morgan, Ph.D. (University of Massachusetts-Amherst)—communication and culture, environmental communication

DEGREE: Master of Arts
MAJOR: Communication Studies

MINORS: Communication Studies

Communication and National Security

The Master of Arts in Communication Studies provides students with a social scientific approach to the study of human interaction, using qualitative and quantitative methods. Our curriculum is designed to explore how oral communication takes place interpersonally, within organizations, within our political system, and between and within cultures. Students take courses in interpersonal communication, organizational communication, political communication and other communication courses. All graduate students take courses in communication theory and research methods. In addition, students can take courses in topics such as conflict management, group communication, persuasion, and nonverbal communication.

The program offers a wide variety of courses allowing students an opportunity to select topics pursuant to their special interests. In addition to courses, students have the opportunity to obtain practical experience by participating in professional activities offered by the department; for example, graduate teaching assistantships, research, and colloquia.

DEGREE: MASTERS OF ARTS
MAJOR: COMMUNICATION STUDIES

The department offers both thesis and non-thesis options in its Masters of Arts Program. Both options require a minimum of 30 credits, which includes not only Communication courses but also courses from outside the department. The thesis option requires a minimum of 30 credits of coursework, 3-5 credits of thesis (COMM 599), and an oral defense of the thesis and coursework. The non-thesis option requires 36 credits of coursework, plus a comprehensive written examination, followed by an oral defense. Both options require a minimum of 30 credit hours of Communication courses.

Both of the following courses are required:
COMM 505 Research Methods

| 3 |
COMM 588 Seminar in Theories of Communication 3

Students must take three of the following four courses:

COMM 590 Seminar in Political Communication 3
COMM 570 Seminar in Organizational Communication 3
COMM 578 Seminar on Communication and Culture 3
COMM 594 Seminar in Interpersonal Communication 3

COMM Electives (15 credits)

Electives in Related Fields (graduate levels; numbered 585-)
3-6

Thesis Option: COMM 598, Thesis
3-6

Non-thesis Option: Additional Graduate COMM Electives
3-6

A GPA of 3.0 or better must be maintained overall and grades in each course must be a B- or better.

Entrance requirements for graduate study in communication studies

The Graduate Record Exam (GRE) General Test is not required for admission; however, high GRE scores will strengthen a candidate's application and are highly regarded in the awarding of Graduate Assistantships. Students wishing to enroll in the Master program in Communication Studies must meet the following criteria:
1. Hold a BS degree, from an accredited institution of higher learning; Social Science disciplines are preferred
2. Hold a minimum grade point average of 3.25

To apply for an assistantship, please submit the following application materials

- Three letters of recommendation
- Current Vita/Resume
- 750 word statement of intent
- A sample of scholarly writing

MINOR: COMMUNICATION STUDIES

Students who wish to take a minor in Communication Studies will need to accumulate a minimum of 9 graduate credits in Communication Studies courses. Students are encouraged to contact the Communication Studies Department Chair for directions in the selection of courses.

MINOR: COMMUNICATION AND NATIONAL SECURITY

This minor is aimed at graduate students who seek employment in national security, intelligence, international business, military affairs in other nations, and other positions which require knowledge of how communication affects the national image of the United States and how Americans communicate with members of other cultures about political matters. Graduate students will be required to write a special analysis for each course that is not required of the undergraduate students. Each graduate student will also be required to present a one-hour lecture on an area of research specialization.

Total required credit hours: 12.

Students will take three of four courses below plus one outside course approved by the department. The list below is our expected course rotation.

COMM 555 Seminar Fundamentals of Communication and National Security 3
COMM 556 Seminar Communication and the Intellig... 3
COMM 557 Seminar Strategic Communication and Public Diplomacy 3
COMM 558 Seminar Intercultural Communication and National Security 3

The courses from other departments can include special topics courses or related courses relevant to this minor, as well as regular courses such as the ones listed below.

GEOG 501 Research Design and History of Geographic Thought 3
GOVT 582 Advanced Issues in Security and Intelligence Studies 3
GOVT 588 Advanced Intelligence Studies 3
HIST 581 Islam and the West: Cultural Contacts, Conflicts and Exchanges 3
SOC 478 Sociology of Development and the World 3

SOC 489 System Globalization 3

GEOG 501: should focus research project on national security.
HIST 581, corequisites or corequisites include HIST 501 or HIST 521

COMPUTER SCIENCE

Department website: http://www.cs.nmsu.edu
(575) 646-3723
cc@nmsu.edu

E. Portell, department head, Ph.D. (New Mexico State) - parallel processing, logic programming, knowledge representation, bioinformatics, artificial intelligence, H. Cao, Ph.D. (Hong Kong) - data mining, databases, data integration, J. Cook, Ph.D. (Colorado) - software engineering, component-based systems, Y. Jin, Ph.D. (Texas A&M) - computer architectures, interconnection networks, multicore architectures, H. Leung, Ph.D. (Penn State) - automated theory, S. Misra (Arizona State) - communication networks, social networks, high performance computing, security and privacy, I. Pavhina, Ph.D. (Kentucky) - artificial intelligence, computer science education, data mining, M. Song, Ph.D. (Washington) - statistical computing, systems biology, computer vision, Z. Toups, Ph.D. (Texas A&M) - digital games, human-computer interaction, mixed reality, S. C. Tran, Ph.D. (Texas EL Paso) - artificial intelligence, knowledge representation, planning, logic programming, non-monotonic reasoning, W. You (Southern California) - artificial intelligence, heuristic search, distributed constraint reasoning

Support and Adjunct Faculty:
S. Cooper, Ph.D. (New Mexico State) - computer networks, R. T. Hartley, Ph.D. (Pennsylvania) - programming systems, computer music, J. J. Pfeffer, Jr., Ph.D. (Washington) - visual programming, E. Steiner, Ph.D. (Georgia State) - computer science education

DEGREE: Master of Science
MAJOR: Computer Science

DEGREE: Master of Science
MAJOR: Bioinformatics

DEGREE: Doctor of Philosophy
MAJOR: Computer Science

MINOR: Computer Science

Mission of the Department

The mission of the Department of Computer Science at New Mexico State University is to provide formal education in the core disciplines of computer science, as well as to prepare our graduates for research, development, and academic careers. The department offers specific expertise in several research areas, such as bioinformatics, artificial intelligence and knowledge representation, software engineering, and programming languages, computer and wireless networks, data mining and machine learning, game design and human-computer interaction, high performance computing, theory of computing, computer architectures, and assistive technologies. A number of laboratories have been established to coordinate research activities, including the Knowledge representation, Logic and Advanced Programming (KALP) laboratory, the Programming Languages, Environments, and Automated Software Engineering (PLEASE) laboratory, the Game Development laboratory, the Database Management and Data Mining laboratory, and the Network and Systems Optimization laboratory. The Department members are also directing the CREST Center for Research Excellence in Bioinformatics and Computational Biology, offering educational and research opportunities in bioinformatics.

Entrance Requirements for Graduate Study in Computer Science

The Graduate Record Exam (GRE) General Test is not required for admission; however, high GRE scores will strengthen a candidate's application and are highly regarded in the awarding of Graduate Assistantships. To be admitted without undergraduate deficiencies, an entering student must have completed undergraduate preparation substantially equivalent to that required for the Bachelor of Science degree in Computer Science at New Mexico State University. In particular, this includes courses equivalent to C S 172, C S 271, C S 272, C S 273, C S 276, C S 370, C S 371, C S 372, C S 417, C S 418, C S 473 and C S 474.

Deficiencies should be satisfied as early in the student graduate program as possible, through the regular undergraduate courses, the C S 460-469 transition courses, or through tests administered by faculty members in the relevant areas.