



University of Northern California

Catalog

Volume 16

2009-10

The University of Northern California (UNC) received full institutional approval from the Bureau of Private Postsecondary & Vocational Education (BPPVE) of the State of California as a degree-granting institution in 1994, and has maintained approval since that date. With the sunset of BPPVE on June 30, 2007, UNC entered into a voluntary agreement with the Director of the Department of Consumer Affairs to comply with California's post-secondary educational state statutes, rules, and regulations that were in effect as of the close of business on June 30, 2007.

UNC is authorized by the U.S. Citizenship and Immigration Services (USCIS) to issue SEVIS I-20 forms to international students to apply for their student visas.

The University of Northern California is a private university and is not affiliated with the University of California or California State University or any of their campuses.

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The Heart of UNC's Vision

At inception the founder of the University of Northern California (UNC), Dr. Y. King Liu, envisioned the heart of the university to be a place where the precision of technology would blend with the mastery of language for better communication of expertise and new ideas. Similarly important, the original vision emphasized that the university's students participate in a learning community that is inspiring, stimulating, and fun.



Over the past fifteen years Dr. Liu's core vision has been implemented at a number of locations – from the contemplative campus on the hill near Novato; to the urban campus in Petaluma; to the dynamism of the present Santa Rosa corporate campus where academic vigor and innovative research interface with biomedical device development and the incubation of company spin-offs. Through the advent of UNC's Science and Technology Innovation Center (STIC), students and faculty now study, conduct research, and work alongside the STIC start-up companies' engineers, administrators, marketing, sales, quality, and regulatory personnel. Real-world intensity pervades the university's learning community with demands for technological precision and cogent communication a daily necessity. Students encounter new ideas and share their expertise in a milieu that is relevant, stimulating, inspiring, and to say the least - quite enjoyable.

Clearly, UNC today embodies the heart of the original vision. And by holding firmly to the vision's ideals, UNC is positioned to develop leaders in the biomedical engineering field who know how to creatively address the needs of the 21st century healthcare community.

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About UNC

The University of Northern California (UNC) is a highly selective graduate research institute that welcomes a small group of qualified students from around the world. UNC's academic and research focus is on graduate programs in biomedical technology and engineering that emphasize both theory and practical application.

Integral to UNC's 'learning-by-doing' educational methodology is the Science and Technology Innovation Center (STIC), a division of the university that promotes prototype development and business incubation of original faculty, student and entrepreneurial research. Through direct participation in STIC start-up companies, students are immersed in all aspects of the biomedical device industry. Upon completion of their program of study, graduates will have gained an over-all knowledge base of biomedical engineering theory, research, device creation, and business development.



The UNC campus is located in the San Francisco Bay Area in city of Santa Rosa, which is one of the largest and most scenic metropolitan regions of the United States. Beautiful beaches, redwood forests, wine country, mountain hiking trails, campgrounds, horseback riding facilities and golf courses are just minutes away. Also within easy access from UNC are outstanding museums, restaurants, performing arts companies, cultural festivals, and major-league sports teams.

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Science & Technology Innovation Center

STIC is noted for its ability to couple the scientific and technical capabilities of the University with the individual needs of the entrepreneurial business community, especially those businesses engaged in prototype development and production linked to biomedical research activities. UNC is eager to help businesses grow and STIC provides cost-effective office and laboratory space where collaborations between academic scientists and engineers and their counterparts in business can flourish.



The purpose of the University of Northern California's (UNC) Science and Technology Innovation Center (STIC) is to promote original faculty and student research by assisting in the transformation of cutting-edge technological research into practical and marketable devices that will benefit the healthcare community. STIC represents a substantial commitment on the part of the University to build a nucleus of science and technology based incubator businesses in Northern California that are drawn by the academic strengths of the University. These strengths include, but are not restricted to: biomaterials, biomechanics, biomedical engineering, optical

and photonic engineering, systems engineering, tissue engineering, human health and medicine, and

industrial biotechnology. This biomedical emphasis is consistent with UNC's strategic intent to reach out to external constituents and the business community, as well as participate in the growth of the local, national and international economies.

STIC has much to offer the business community, especially those engaged in basic and developmental research, product prototype development and production linked to research and development activities. Because UNC is eager to help businesses grow, STIC provides cost-effective office and laboratory space where collaborations between academic scientists and engineers and their counterparts in business can flourish. STIC also offers ready access to the University's computing facilities, research equipment and instruments, as well as assistance on such crucial issues as management, marketing, and finance.

Typically, companies are in residence at the Center for two to five years and are part of a unique environment. Interested parties have been attracted from local and regional start-ups. Spin-off companies from established firms, research and development units of existing companies, and international companies wishing to establish a branch office or a development laboratory in the United States are most welcome.

UNC's Mission

The University of Northern California is dedicated to advancing scientific and technological innovations in the field of biomedical engineering by promoting an integrative curriculum that encourages the practical application of theory to original research, medical device technology, and business development. The curriculum fully supports the transformation of cutting-edge technological research into marketable devices that will benefit the healthcare community.

Institutional Purpose and Objectives

To meet the foregoing mission, the University of Northern California recognizes that biomedical engineering is a technology-driven and communication interdependent field of study. UNC's doctoral-level biomedical engineering program, therefore, is designed to foster technical, analytical and communicative skills in order to enhance each student's potential for personal and professional success, as well as improving the long-range prospects for the human species.

The goal of UNC graduate studies at the Ph.D. level is to provide students with expertise in contemporary biomedical engineering theory, methods, and practice. Graduates are prepared as leaders in therapeutic device design, development, and research. Each student's course of study is based on individual background and career objectives.

Integral to the UNC's biomedical engineering doctoral program is the students' involvement in practical curriculum training. UNC's Science and Technology Innovation Center (STIC) directly benefits students by affording them an opportunity to participate in start-up biomedical device companies that STIC is incubating. Students may also do internships at outside biomedical companies and health care organizations. This emphasis on practical curriculum training ensures that UNC graduates attain an over-all knowledge base that includes biomedical engineering theory, research, device creation, and business development.

UNC is a teaching and research university that seeks to make graduate study and research available to students regardless of their country of origin or native language. UNC encourages a multicultural academic community among its students and staff.

To the extent that it is financially able, the University will assist qualified students in meeting the financial costs of their education. Such assistance will be based on a student's academic ability and financial need, and presumes that students and their families have gone as far as they can in meeting these costs themselves.

UNC does not discriminate on the basis of race, national origin, color, religion, gender, sexual orientation, age, or physical disability.

Academic Calendar 2009

Winter Break 2008-2009	December 20, 2008 – January 4, 2009
Spring Semester	February 2 – May 22
Summer Session	May 23 – August 30
Fall Semester	August 31 – December 18
Winter Break 2005-2006	December 19, 2009 – January 3, 2010

Academic Calendar 2010

Winter Break 2009-2010	December 19, 2009 – January 3, 2010
Spring Semester	January 4 – April 23
Spring Break	April 24 – May 2
Summer Session	May 3 – August 20
Summer Break	August 21 – August 28
Fall Semester	August 30 – December 17
Winter Break 2010-2011	December 18, 2010 – January 2, 2006

Holidays

UNC observes the following Holidays:

- New Year's Day
- Martin Luther King, Jr.
- Presidents' Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Holidays (Thursday and Friday)
- Christmas Day

Semester Schedule

The University of Northern California operates under a semester instructional time frame: 16 weeks = 1 semester

Campus Resources

Physical Facilities

University of Northern California campus is where academic vigor and innovative research interface with biomedical device development and the incubation of company spin-offs. Located in Santa Rosa, California, the campus' physical facilities reside in a spacious 35,000 sq. ft. building and consist of classrooms, library, study areas, student cubicles, Research and Development laboratory, 5,000 sq. ft. Clean Room, Community Clinic, administrative offices, and the Science and Technology Innovation Center's (STIC) start-up companies' research and business areas. The campus lay-out enables students and faculty the opportunity to study, conduct research, and work alongside the STIC start-up companies' engineers, administrators, marketing, sales, quality, and regulatory personnel.

Library

At present the library contains approximately 5,600 volumes. Additional library access capabilities are available via the Internet and web based biomedical engineering journal and data-base resources. The university belongs to the North Bay Cooperative Library Service through which books can be made available via interlibrary loan. The UNC library is also connected to the Ruben Salazar Library at Sonoma State University in Rohnert Park, approximately five miles south of the UNC campus.

Online Education: Moodle

UNC's online coursework is accessed via the Internet through MOODLE, an open-source Learning Management System that is as convenient as the closest Internet connection. Students can log-on to Moodle 24-7, whenever they have time - thereby allowing them to study and learn on their own timetable, not someone else's. In addition, students can review and repeat a lesson as often as they need to assure full mastery of the material. Online coursework from other higher learning institutions may be used when appropriate, e.g. Open-Course Ware (OCW) from MIT.

Web Resources

UNC's Website address is: www.uncm.edu and the main e-mail address is: admits@uncm.edu.

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Admissions

Admissions Policy

Students wishing to enroll in the Doctor of Philosophy in Biomedical Engineering program must possess a bachelor's degree or its equivalent. Students who have a bachelor's degree in an engineering curriculum or in a mathematics curriculum or in physical and biological sciences, who have a 3.00 minimum grade-point average and an acceptable score on the Graduate Record Examination (GRE) General Test (combined verbal and quantitative score of 1250), are eligible to be considered for admission. Your work history is important for UNC. Non-native speakers of English must submit an official Test of English as a Foreign Language (TOEFL) with a minimum score of at least 550. For other students, a minimum score of 640 in the Japanese Society for Testing English Proficiency, Inc. (STEP) is required. Students may, under exceptional circumstances, be considered for conditional admission with a lower grade-point average and/or a lower GRE General Test score. Students on conditional status must achieve regular status within 9 unit hours of initial registration by attaining a 3.00 minimum grade-point average at the University of Northern California and regular acceptance by the program faculty. Students who do not meet these requirements are subject to dismissal.

Reference letters, research interests, previous graduate study grade-point average, work experience and other factors may be considered in making admission decisions. Students qualified for graduate studies are encouraged to apply for financial aid in work study, student loans and graduate assistantships. Preference for admission and scholarships will be given to those applicants who have the highest standard examination scores, references and undergraduate/graduate record.

When to Apply

Application to the University can be made at any time of the year, i.e., UNC utilizes a rolling admission policy. Students should allow reasonable time for the processing of their applications.

Transferring Units of Credit

The University of Northern California grants credit units for certain courses completed at other colleges and universities. To receive credit units, the student must submit to the Registrar a written request and an official transcript from the institution(s) previously attended. The Registrar, in conjunction with the Chief Academic Officer, will make decisions regarding the acceptance of credit units earned elsewhere. The University does not award credits based on experiential learning.

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Applying for Graduate Admission

1. Obtain an Application for Graduate Admission either by downloading the Application Form (PDF) from our web site: www.uncm.edu; or by contacting the Office of Admissions at (707) 636-5960 ext 210; or by writing to the UNC Office of Admissions.
2. Fill out the application, being careful to answer all the applicable questions, and complete the essay.
3. Mail the completed application form along with the nonrefundable \$50.00 application fee to the Office of Admissions.
4. Have official copies of your previous college transcripts sent to the Office of Admissions.
5. Submit official results of your Graduate Record Examination (GRE). International students who have enrolled in the US previously and with appropriate credentials may be exempted from this requirement.

TOEFL: use TOEFL code - 4935 - for scores to be sent to UNC.

GRE: must be directly submitted by applicant.

Note: All information, once submitted, becomes the property of the University of Northern California and will not be returned.

Notification of Admission

The Office of Admissions will promptly acknowledge receipt once an application has been received. However, the process of review of potential students will not begin until all documents have been received and the \$50.00 application fee paid. Once the review has been completed, a letter will be sent to the applicant explaining his/her admission status. Students may anticipate receiving a decision from the Admissions Committee (admissions staff, academic chair, and Dean of Students) within three weeks.

Enrollment Deposit

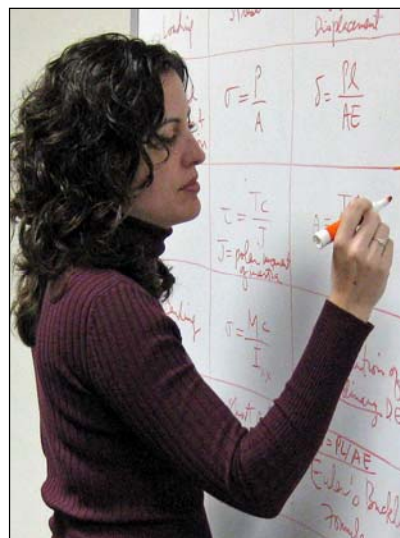
Once a student has seen the UNC catalog, toured the campus and been accepted for admission, he/she will receive an enrollment agreement form which must be signed and returned with the enrollment deposit of \$100.00 not less than four weeks before the first day of classes. Exceptionally, students who are unable to visit the campus prior to enrollment, e.g., applicants residing abroad, may sign the enrollment agreement form after their arrival on campus. This non-refundable enrollment deposit will be applied to the registration fee for the term of admission.

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Application Materials and Information

For additional information and to receive application materials, contact the Office of Admissions:

Office of Admissions
University of Northern California
2330 Circadian Way Santa Rosa, California 95407
Phone: (707) 636-5960
Fax: (707) 636-5941
E-mail: admits@uncm.edu



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Financial Aid

Financial Aid Opportunities

It is the goal of the University of Northern California to provide a package of financial assistance that will enable eligible graduate students to meet their tuition and living expenses. The University of Northern California Foundation (UNC Foundation) distributes funds on the basis of financial need and demonstrated potential for scholastic achievement.

Eligibility for Grants, Student Loans, Internships, and Work Study is dependent on the ability of the applicants to demonstrate financial need. Candidates for Scholarships, Graduate Fellowships and Teaching Assistant and Research Assistant positions will be judged and awarded funding on the basis of scholarship and financial need.

Financial Aid Awards

Presently, all applicants who are admitted to the PhD in Biomedical Engineering program are granted the following full-tuition scholarships and fellowships plus living stipend:

Tuition	\$90,000.00 (based on 42-plus credit hours over six semesters)
Fellowship	\$12,000.00 per year
Living Stipend	\$ 9,324.00 per year

Applying for Financial Aid

Students who wish to apply for financial assistance need to do the following:

- Completed the Application for Admission form
- Completed the Application for Financial Assistance form
- Submit GRE test scores if required
- Submit TOEFL test scores for international applicants if required
- Submit three letters of reference

Students interested in applying for financial assistance need to obtain an Application for Financial Assistance form by contacting:

Director of Financial Assistance
University of Northern California
2330 Circadian Way
Santa Rosa, CA 94907
(707) 636-5960

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Student Health Insurance

All full-time students are required to show proof of personal health insurance for each semester of enrollment. The University can provide basic health care policies for both domestic and international students. These policies are available at a competitive current market price. Once admitted to the University, students must also complete a medical history form including all information about prior immunizations.

Housing Information

Student housing is available either close to the campus and through-out the Santa Rosa community area. The average cost of a single room with a home-stay family ranges is approximately \$800 per month. A one to two-bedroom apartment rents for about \$1,000 -1700 per month not including utilities. Food costs vary. A minimum of \$200-300 per month should be expected.



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Academic Program

Presently, UNC offers one interdisciplinary academic program: Doctor of Philosophy in Biomedical Engineering. The goal of UNC graduate studies at the Ph.D. level is to provide students with expertise in contemporary biomedical engineering theory, methods, and practice. Graduates are prepared as leaders in therapeutic device design, development, and research. Faculty members have teaching and research expertise in areas of biomechanics (biosolid and biofluid mechanics), biomaterials, biomechanical engineering, bioinstrumentation, biomedical optics, bioelectrical engineering, and biosystems. Each student's course of study is based on individual background and career objectives.

Integral to the Ph.D. in Biomedical Engineering program is the students' involvement in UNC's Science and Technology Innovation Center (STIC) in the form of curriculum practical training. STIC directly benefits students by offering an opportunity to participate in the development of the biomedical device companies that STIC is incubating. Students may also do internships at outside biomedical companies and health care organizations. A UNC student, therefore, graduates with an over-all knowledge base that includes biomedical engineering theory, research, device creation, and business development.

Doctor of Philosophy in Biomedical Engineering

Chair: Y. King Liu, Ph.D., L.Ac.

Biomedical Engineering (BME)

The past five decades have seen tremendous growth of technological activity in biology and medicine. Engineers are increasingly becoming involved in the life and health sciences. Accordingly, they have a great need to become more familiar with these fields in order for them to apply the tools of engineering and physics to biology and medicine. Conversely, students of biomedicine are required to become conversant with physics, mathematics and engineering in addition to chemistry. Recognition of this need brought about the emergence of a new interdisciplinary engineering activity known as biomedical engineering that was designed to bridge the gap between the life sciences, medicine and engineering.

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Careers

The various branches of Biomedical Engineering are concerned with fields such as biomechanics, biomaterials, biomedical electronics, medical imaging, medical instrumentation, biochemical engineering and tissue engineering. The University of Northern California's doctorate in biomedical engineering prepares students for careers in medicine and medical instrumentation, diagnostic aids, tissue engineering, safety engineering, rehabilitation engineering, life support systems, human-machine systems, prosthetics and orthotics. In addition to positions in higher education, graduates can find employment in the biomedical device industry and/or biotechnology. Graduates may also pursue careers in government, e.g., Veterans Administration, National Institutes of Health, Environmental Protection Agency, Food and Drug Administration, and Centers for Disease Control.

Ph.D. Requirements

The doctoral program, including acceptable transfer unit hours, requires a minimum of 30 credit hours of formal course work beyond the masters degree level, and at least 12 credit hours must be dissertation research credit hours. Based on research progress, examination results or other measures, the student's graduate committee may require additional formal course work in order to strengthen areas of perceived weakness.

Admission to the Ph.D. program requires a 3.25 minimum grade point average (GPA) and is conditional until students successfully complete a qualifying examination, which is administered by the biomedical engineering faculty. If the student's performance on this examination is adequate, he/she is admitted to Ph.D. program. A 3.25 minimum grade-point average must be maintained throughout Ph.D. studies. Upon completion of the course work specified in the plan of study, with the grade-point average stipulated above, and upon the adviser's recommendation, students are admitted to the comprehensive examination to be administered by their committee. Having satisfactorily completed these examinations, students must complete and defend their dissertation before their committee and their peers.

Requirements for the Ph.D. generally can be completed in two or three years beyond the master's degree.

Prerequisites:

M.S. Degrees in Engineering, Physical Sciences or Mathematics, or Biomedical Sciences

The admissions committee will also consider the exceptional BS graduate. He or she must be prepared to pursue 30 additional credit hours of coursework required of the M.S. degree prior to official admission to the Ph.D. program.

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Curriculum and Instruction

Students enjoy close working relationships with the faculty, promoted by small class sizes and joint research projects. The core curriculum provides students with the necessary foundation of knowledge in the interface disciplines of biology, medicine, and engineering. A series of elective classes expanded upon the core courses enabling students to focus on a particular aspect of biomedical engineering that is of special interest to them.

Students upon entering the Ph.D. program meet with the BME program representative to develop a plan of study that is individualized for each person. The plan of study includes evaluation and mutual agreement on how the student will progress through the program and demonstrate competency in the following biomedical engineering areas: 1) BME core topics; 2) research methodologies; 3) patents, regulatory and quality; and 4) practical BME training achieved through immersion in the activities of the STIC start-up biomedical device companies and/or approved internships. Competency is evaluated by means of achieving a minimum grade of B (3.0) in coursework taken at UNC or the transfer equivalent, and positive evaluations of practical training activities.

All Ph.D. students are considered fulltime and enroll in a minimum of 9 credits per semester. Coursework, research, and STIC company involvement require a 40 hour per week commitment.

BME Core Curriculum (18 credits)

Core Topic Areas

- BME 320** Biomechanics with lab (3 credits)
- BME 420** Biomaterials with lab (3 credits)
- BME 480** Optical Engineering in Biomedicine (3 credits)

Research Methodologies

- MAT 410** Introduction to Biostatistics (3 credits)
- MAT 420** Design and Analysis of Experiments (3 credits)

Patents, Regulatory and Quality Procedures

- BME 450** Patents and Regulatory Pathways for BME Devices (3 credits)

Practical Training

- BME 510** Individual Investigations in Biomedical Engineering (3-9 credits/semester)

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Dissertation Research

BME 660 Research in Biomedical Engineering, Ph.D. Dissertation (12 credit minimum)

All BME doctoral students are required to complete a minimum of 12 credit hours in dissertation research. Enrollment in the Dissertation Research course requires prior approval from the chair of the student's dissertation committee.

BME Elective Courses (12 credits)

Students choose to enroll in elective courses that enhance their knowledgebase in a specific biomedical specialty area. Enrollment in an elective course requires prior approval from a BME program representative. In addition, a student's program representative and/or graduate committee may require additional formal course work in order to strengthen areas of perceived weakness.

General BME Elective Courses:

- BME 310 I&II** Anatomy/Physiology & Medical Terminology for Biomedical Engineers (3-6 credits-online)
- BME 580** Curriculum Practical Training in Biomedical Engineering (18 credit limit)

Specialty BME Elective Areas of Concentration

Elective specialty area coursework is decided upon through mutual agreement between the BME program representative and student. Areas of specialty concentration include:

- Bioelectrical
- Biomechanics - biofluids and biosolids
- Biomaterials
- Bioinstrumentation
- Biomedical optics
- Biosystems

Course Descriptions

MAT 410 Introduction to Biostatistics (3 credits)

Descriptive statistics, exploratory data analysis, random variables, important discrete and continuous distribution, point and interval estimation, tests of hypotheses, regression, design of experiments including factorial and fractional factorial designs.

MAT 420 Design & Analysis of Experiments (3 credits)

Planning experiments; analysis of variance; randomized complete block design; factorial designs; 2^k factorial designs; blocking and confounding in 2-level factorial designs; random factors in factorial experiments; nested and split-plot designs; linear regression models.

Prerequisite: MAT 410 Introduction to Biostatistics

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BME 310 I&II Anatomy/Physiology & Medical Terminology for Biomedical Engineers (3-6 credits)

Cell function, organ systems, and principles of functional anatomy. Medical terminology with emphasis on prefixes, roots, and suffixes that are used in common medical vocabulary.

BME 420 Biomaterials and lab (3 credits)

Material properties, biocompatibility characteristics, performance requirements of materials for in vivo implants.

BME 450 Patents, Regulatory and Quality Pathways for BME Devices (3 credits)

Biomedical devices from conception to market; rudiments of patent protections and filings; FDA and CE Mark safety and efficacy requirements and regulatory pathways; manufacturing requirements for assuring quality.

BME 480 Optical Engineering in Biomedicine (3 credits)

Introduction of optical and photonic engineering to biomedicine. Concepts of interference and coherence, Fourier transform and Fourier optics, image and signal processing, holography, fiber optics, lasers, instrumentation. Case study in biomedical optics.

BME 510 Individual Investigations: Biomedical Engineering (3-9 credits/semester)

Individual projects for biomedical engineering graduate students. Investigations could be: laboratory studies, engineering design projects, analysis and simulation of a bioengineering system, computer software development, research.

Prerequisite: Consent of instructor. May be taken repeatedly for credit.

BME 520 Biomedical Engineering Graduate Labs (3-9 credits per semester)

Specialized research projects in laboratories associated with BME faculty members.

BME 660 Research in Biomedical Engineering, Ph.D. Dissertation (12 credits min)

Experimental and/or analytical investigation of an approved topic for partial fulfillment of the requirements for the Ph.D. dissertation in biomedical engineering.

Prerequisite: Consent of adviser

Tuition, Fees, and Other Charges

Graduate Tuition

Graduate tuition per semester; full time (9 units): \$15,000.00

Other Fees:

Health Insurance (mandatory)	\$ 500.00 (approximate)
Textbooks (2 semesters mandatory)	\$ 800.00 (approximate)
Computer (mandatory)	\$ 600.00 (approximate)
Instructional Supplies (9 months)	\$ 100.00 (approximate)
Application	\$ 50.00
Enrollment Deposit	\$ 100.00 (applied to tuition)
Late Registration	\$ 25.00
Add/Drop (after 14 days)	\$ 10.00
Returned Checks	\$ 20.00
Late Tuition	\$ 50.00
Transcription Fees	\$ 7.00 (first, \$4.00 for additional)

A student who has not paid the tuition bill by the close of the course will not be allowed to register for additional courses. Grades and credit for courses will be withheld until full payment is made.

Transcripts will not be issued to students with delinquent accounts.

Key Deposit (per key, refundable)	\$ 25.00
Course Audit (per credit)	\$ 150.00
Graduation	\$ 50.00

No audit fee will be charged to students who are enrolled full-time (9 credits per semester). Students who are responsible for college items that are lost or broken will be charged the replacement cost. Students are cautioned to protect and secure personal items. The University is not responsible for personal items that are lost or damaged.

Note: There is no differential between the costs of domestic (in-state, out-of-state) and international students. Students may wish to budget approximately \$20.00 to \$60.00 per week for leisure expenses.

All fees are subject to change at any time without notice.

Fee Payment

Tuition and all other fees incurred at University of Northern California are due in full on the first day of each semester. Fees are due on the first day of each course.

Extended Payment Plan

Payment plans are available only to students enrolled full-time.

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Cancellation and Refund Policies

The following formula will be used to determine the amount of refund granted when a student withdraws from a course after having received 60% or less of the instruction:

$$\text{amount paid for instruction} \times \frac{\text{clock hours of instruction paid for but not received}}{\text{clock hours of instruction paid for by student}} = \text{refund amount}$$

Students withdrawing from a course after 60% of the course has been completed will not be eligible for a tuition refund. Students who withdraw from school prior to the beginning of classes will be granted a full tuition refund minus the application fee and the enrollment deposit.



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Student Services

Academic Advisement

Prior to each student's arrival at UNC, he/she is assigned a faculty adviser. The faculty adviser counsels the student with regard to the student's academic program helps the student plan a course of study and discusses with the student any other issues related to the University. Students are encouraged to utilize the services of their adviser. Faculty will encourage students to form study groups.

Career Planning and Placement

Career planning and placement is part of the academic advising function of the faculty. The individual faculty adviser assists the student in the assessment of his or her potentials for placement.

Student Health and Safety

The office of the Chief Academic Officer provides on campus first aid supplies for general health care needs. The office can also provide students with health insurance information and information about local clinics and private health care providers within the Santa Rosa area.

International Students

One of the most effective ways to increase one's understanding of other languages and cultures as well as improving one's ability to function effectively in an interdependent world, is to take advantage of the educational opportunities available in other countries. UNC encourages international students to take advantage of this opportunity by making application for admissions to the university's Ph.D. in Biomedical Engineering program.

After receipt and acceptance of the Application for Admission form and a \$100.00 pre-registration tuition deposit, UNC will provide a United States Citizenship and Immigration Services (USCIS) SEVIS I-20 Form, which will allow a student to apply for a F-1 student visa. Students on a F-1 visa must enroll, maintain continuous attendance and satisfactorily complete each semester, at least 9 units of graduate study at UNC. Before registration, F-1 students transferring from a college or university in the United States must submit a Transfer Verification Form that will be sent to them by the Office of Admissions.

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Academic Achievement and Recognition

The establishment of student scholarships, prizes and other awards for outstanding academic achievement is a priority of the University of Northern California Foundation. The Chief Academic Officer will review all such official programs of recognition for appropriateness and financial sufficiency, before being presented to the faculty for approval. Members of the faculty periodically recommend students for honors and other recognitions of academic achievement.

Accent Modification Workshop

UNC has made special collaborative arrangements with the Institute of Language and Phonology, located in nearby Petaluma, CA, for those international students whose English speech is perceived to be difficult to understand. The Workshop is highly individualized to assist in modifying accents to the point where the student's speech patterns are clearly understandable to a native speaker of American English. There is an additional charge above normal tuition for this Workshop, due to the extremely small class size (a maximum of 3 students) and intensive individual attention.

Student Organizations

Students are encouraged to develop on-campus student organizations.



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Policies

Academic Performance and Records

Grades

Grades (and grade points) in courses are: A=4.0, B=3.0, C=2.0, D=1.0, and F=0.0. Instructors, at their individual discretion, may refine these grades by indicating + (+ = 0.3) or - (- = 0.3). However, in order to maintain the 4.0 rating scale, the highest GPA a student may receive is 4.0, such that there is no 'A+'.

Each student's level of achievement is evaluated according to the following grade scale:

A or A-	Excellent
B+, B, or B-	Above Average
C+, C, or C-	Good
D+, D+ or D	Below Average
F	Unsatisfactory
I	Incomplete

The grades of F and I do not yield credit. An F grade is considered in computing a student's grade point average, the 'I' grade is not. The grade of 'I' may be given only if the student submits a Petition for Grade of Incomplete form to the instructor that has already been authorized by the Program Coordinator; it must be approved by the instructor and submitted to the Registrar prior to the end of the given term. The work must be made up in accordance with the specifications outlined on the Petition form, within the first six weeks of the following semester. Failure to do so will result in a final course grade of F.

Student Performance

A graduate student who consistently performs below average (GPA < B) may be referred to the Dean of Students. A graduate student whose cumulative grade point average is below 3.25 may be subject to suspension. A graduate student re-admitted after academic suspension, whose cumulative academic average (calculated from the date of re-admission) falls below 3.0 may be subject to dismissal.

Attendance

Instructors will keep records of each student's attendance. Students are expected to attend all scheduled activities in every course in which they are enrolled. Instructors may excuse a student from no more than 10% of the scheduled activities in a course. Students who are absent from more than 10% of a course must have the approval of the Chief Academic Officer before they are eligible for credit for the course.

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Leave-Of-Absence

Students wishing to take a leave of absence with the intent of returning may do so by writing a letter of intent to the Chief Academic Officer. This letter should include reasons for withdrawal and plans for returning.

Withdrawal

Withdrawal from Course

Students who withdraw from school without giving notice to the Chief Academic Officer will be removed from the roster of active students and will be required to reapply for entry into their program. Refunds for such students will be calculated based on the last date of actual attendance.

Withdrawal from UNC

A student may withdraw from a course no later than the end of the 11th week of the semester and receive a grade of W. After this date, a student who withdraws from a course normally will receive a grade of F.

Retention of Student Records

Students' admission records are kept in the Office of Admissions. Once a student has matriculated, the Office of the Registrar maintains students' academic files. All transfer credits, credits awarded by examination, for completion of research projects, dissertations, and related achievements are maintained in the Office of the Registrar.

Full student academic files are maintained by the Registrar's Office for five years after an enrolled student has graduated or withdrawn. Both hardcopy and computer records of students' transcripts are maintained in perpetuity in the Registrar's Office and on the University's server.

Students may order official transcripts by contacting the Office of the Registrar. A \$5 fee is charged for the first transcript. Additional transcripts requested thereafter are \$3 each.

Student Records and Release of Information

Student records are supervised by the Registrar and access is afforded by school officials for purposes of recording grades, attendance, advising, audits, and accrediting reviews, as well as determining tuition and eligibility.

Change of Status

Students are required to notify the Registrar when a change in status occurs, i.e., change in address, e-mail address, phone number, name, attendance, eligibility, or any other change that may have an impact upon completion of the student's education.

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Graduation Requirements

The minimum grade point requirement for an advanced degree is 3.25 in graduate level courses. The Ph.D. degree requires the submission of a satisfactory dissertation and the approval and recommendation of the Graduate Committee.

- All UNC students have the right to review their academic records, including grades, attendance, and advising.
- Students may inspect and review their educational records upon request to the Registrar. A student desiring to review his or her records should submit to the Registrar a written request, which identifies as precisely as possible the record or records he or she wishes to inspect. If, after a review of records, the student finds that they contain errors, are inaccurate or misleading, the student may request that the records be amended. If the institution does not agree with this position, the student may request a hearing. Students who feel that the institution has not followed the Federal rules under the Family Educational Rights and Privacy Act may write to the United States Department of Education.
- Generally, the college will not release any information about students to outside individuals unless the college first receives the student's permission, or is legally obligated. However, it is considered that certain information does not violate the student's rights of privacy and, therefore, the college is permitted to routinely release this information, unless the student specifically asks the college, in writing, not to release it. This general information is considered to be name, program of study, dates of attendance, and certificates or degrees obtained.

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Policies

Rights and Conduct

Academic Freedom

UNC is strongly committed to academic freedom and free speech, and endorses in principle the 1940 Statement of Principles of Academic Freedom set forth by the American Association of University Professors and the Association of American Colleges:

Academic freedoms are the right of every UNC faculty member. These freedoms include:

- **Freedom to teach and discuss a field of competence without restrictions on instructional method.**
In the exercise of this freedom, the faculty member should be careful not to introduce controversial matters that have no relation to the subject matter of the course. The faculty member is also obligated to encourage the free pursuit of learning by students. The faculty member adheres to a proper role as intellectual guide and counselor. Every reasonable effort is made to foster honest academic conduct and to assure that evaluation of students reflects the true merit of their work. The confidential nature of the relationship between faculty member and student is respected.
- **Freedom as a private citizen to speak out on public issues.**
The special position of the faculty member as a person of learning and an educational officer in the community, however, imposes the special obligation that he or she must remember that the public may judge the profession and the institution on the basis of such public utterances. The faculty member measures all rights and obligations as a citizen against rights and responsibilities to the field of specialization, to students, profession, and institution. When speaking, writing, or acting as a private person, the faculty member avoids creating the impression that he or she is speaking for UNC.

Student Rights

It is the policy of University of Northern California that each student be guaranteed the following rights and freedoms:

- The right to participate in any and all university-sponsored activities and services without regard to the student's race, creed, color, gender, nationality, or age.
- The right to be evaluated in the classroom solely on the basis of academic ability, achievement and fulfillment of the requirements of the class.

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- The right to organize for the purpose of promoting common interests.
- The right to participate in the formulation and implementation of academic and non-academic policy.
- The right to petition for changes in academic or non-academic policies and procedures.
- The right to due process in any action brought or taken by the University against the student that can reasonably be expected to affect the student's status with the University.
- The right to restrict the release of information taken from the student's academic records as stated in Section 438 of the Family Educational Rights and Privacy Act of 1974.

Principles of Ethical Conduct

Inherent within the responsibility for educating the future leaders of our society is the obligation to adhere to the highest ethical standards and principles. UNC is committed to maintaining the highest standards of ethics and integrity in all of its academic and administrative operations.

- Members of the university community are expected to exercise and demonstrate personal and professional honesty and to respect the rights, values and contributions of others.
- Members of the university community are expected to be aware of and comply with relevant laws, regulations, contract requirements and university policies and procedures.
- Individuals with access to confidential, proprietary or private information must never use or disclose such information except where authorized or legally obligated to do so.
- All members of the university community are responsible for avoiding, where possible, real or potential conflicts of interest and commitment between personal and professional responsibilities, including relationships that have the appearance of a conflict.
- The university's interests should be foremost in all official decision making and employees and others acting on behalf of the university shall remove themselves from decision-making roles that involve them in any personal capacity or which involve their friends or family members.
- All individuals acting on behalf of the university have a responsibility to ensure that funds and other assets received are used in an ethical manner. Assets of the university (including personnel), whether tangible or intangible, may not be used for illegal purposes or personal gain.
- Members of the university community shall strive to present all information, including financial information and research data and results, completely and accurately.

Members of the university community are expected to comply with these principles. Failure to do so may be grounds for dismissal.

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Policy Concerning Plagiarism

UNC requires academic honesty. All work submitted by a student must represent her or his own original words or ideas. In cases where a student chooses to use the words or ideas of another person, then the student is required to cite all relevant sources, and the extent to which such sources were used. Words or ideas that require citation include, but are not limited to, all hard copy or electronic publications, whether copyrighted or not, and all verbal or visual communication when the content of such communication clearly originates from an identifiable source.

Regulations Regarding Harassment and Sexual Harassment

UNC is committed to maintaining an environment that recognizes the inherent worth and dignity of every person. Critical to UNC's mission is providing a nondiscriminatory environment that is conducive to learning. Therefore, all forms of harassment are antithetical to UNC's goals and counter to UNC's commitment to fostering a community based on tolerance, sensitivity, understanding, and mutual respect.

UNC is committed to providing all employees and students a workplace free of harassment and will not tolerate sexual harassment in any form. Prohibited harassment includes anyone (male or female) making unwelcome sexual advances, requesting sexual favors, or engaging in other written, verbal or physical conduct of a sexual nature. Some examples of the forms sexual harassment may take include sexually suggestive or derogatory comments, jokes or innuendoes about sex, crude pranks, sexual advances or propositions, leering, whistling, obscene gestures, displaying sexually explicit or pornographic material, unwelcome touching, physical assault, or disparate treatment based on gender.

Any student who believes he or she has been the subject of sexual harassment in school should immediately report the incident to an instructor or any UNC employee. The report will then be immediately forwarded to the school's sexual harassment investigator. All reports of sexual harassment will be investigated promptly, impartially, and as confidentially as possible under the direction of the school's sexual harassment investigator. Appropriate corrective action will be taken to remedy all violations of this policy. Under no circumstances will the reporting student be subject to retaliation.

Any person associated with UNC who is found to have harassed a fellow student or employee will be subject to severe disciplinary action including possible discharge or withdrawal. UNC will also take any additional action necessary to appropriately remedy the situation.

The individual who makes unwelcome advances, threatens, or in any way harasses another student or employee is personally liable for such actions and their consequences. UNC will not provide legal, financial or any other assistance to an individual accused of harassment if a legal complaint is filed.

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Policy on Student Complaints and Grievances

This policy applies to complaints regarding fellow students, staff and faculty. It is suggested that the student pursue the following progression for the resolution of a complaint:

1. Attempt to resolve the issue with the party in question.
2. Seek the advice of the Program Coordinator and/or Department Chair.

At the point where the student has exhausted all of the previous avenues for resolution of the conflict, the Chief Academic Officer (CAO) should be apprised of the situation in writing. If unable to resolve the matter, the CAO will convene a board of hearing composed of the CAO, a faculty member, a student member and the parties involved in the dispute.

ADA and Disability Policy

UNC does not discriminate on the basis of disability in the educational programs or activities, which it conducts in accordance with Sections 503 and 504 of the Rehabilitation Act of 1973, as amended. It does provide reasonable ADA accommodations in accordance with U.S.C. 12101, Et. Seq. and EEOC Bulletin 915.002.

If you are an individual with a disability who may require assistance or accommodation in order to participate in or receive benefit from a UNC educational program, or if you desire more information, please contact the President at UNC.

Equal Opportunity

All members of the UNC community will be provided equal opportunities for equal accomplishment and ability. UNC encourages diversity and appreciates the special attributes of each individual.

Nondiscrimination Policy

UNC does not discriminate on the basis of age, parental status, marital status, sexual preference, disability, race, color, or national origin in admissions and/or employment in its programs and activities, which it conducts in accordance with Title VI of the Civil Rights Act of 1964, as amended. In addition, UNC does not discriminate on the basis of gender in the educational programs or activities which it conducts in accordance with Title IX of the Education Amendments of 1972, as amended. Moreover, UNC is committed to maintaining a working and learning environment, which is free from racial harassment. No person shall, on the basis of gender, age, creed, marital status, disability, race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination or be subjected to sexual harassment in any programs or activities.

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The President is the campus officer assigned responsibility for ensuring compliance with federal, state, and UNC regulations prohibiting discrimination on the basis of gender, disability, sexual preference, marital status, age, parental status, race, color, or national origin and for ensuring a working and learning environment which is free from sexual harassment and racial discrimination.



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UNC Administration and Faculty

Administration

Y. King Liu, Ph.D., *President*
John Stalcup, Ph.D., *Provost*
Paul Dunn, Ph.D., *Chief Academic Officer*
Lynn Ford-Cargill, *Registrar*

Administrative Faculty

Y. King Liu, Ph.D., L.Ac.
Wayne State University, Detroit, MI
H. John Stalcup, Ph.D.
Washington University, St. Louis, MO
Suganda Jutamulia, Ph.D.
Hokkaido University, Japan
Jack Chu, Ph.D.
University of Michigan, MI
Allyson Washburn, Ph.D.
John Hopkins University, Baltimore, MD
Paul Dunn, Ph.D.
UC Santa Barbara, Santa Barbara, CA

UNC Governance

UNC Board of Directors:

Y. King Liu, Ph.D., *UNC Founder and Chairman*
John Stalcup, Ph.D.
Robert D. Roberts, CPA
Emmitt George, J.D.
Sidney Lazard

UNC Foundation Board of Directors:

Y. King Liu, Ph.D., *Chairman*
Michael Lyster, M.D.
Suganda Jutamulia, Ph.D.

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