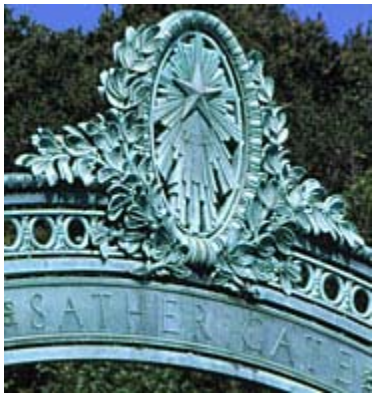
Mechanical Engineering

University of California at Berkeley

STUDENT HANDBOOK

2008-2009



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DEPARTMENT OF MECHANICAL ENGINEERING STAFF

For the most up-to-date staff listing visit www.me.berkeley.edu/who.html

ADMINISTRATIVE SUPPORT

Maria Aranas, Personnel Specialist/Benefits Counselor, 6141 Etcheverry Hall, 642-6834 mariaa@me, Provide high-level administrative support to the Department Chair, MSO, and Financial Officer in all areas of Academic and Staff Personnel, including faculty recruitments, post-doctoral and paid visiting researcher appointments.

Melissa Chavez, Executive Assistant to Chair, 6141 Etcheverry Hall, 642-1338, , Departmental Reception, Visiting Scholar Program Administrator as well as Coordinator for the Springer appointments. Post-doctoral and paid visiting researcher appointments, conference room bookings.

Sheila Slavin, Programmer/Analyst, 6165 Etcheverry Hall, 643-3924, slavin@me
Create, maintain and develop departmental web site (webmaster). Create, maintain and develop administrative databases for the department. Software support.

Judy Sykes, Management Services Officer, 6139 Etcheverry Hall, 642-1339, sykes@me, Senior administrative employee and serves as the Chair's executive assistant. Works with Chair in developing policy relating to administration and management of all department-related activities. Provides daily oversight of departmental functions related to budget, personnel, academic programs and administration.

FINANCIAL SERVICES

Carol Schoon, Administrative Analyst, 6195 Etcheverry Hall, 643-6159, schoon@me, Department Financial Officer. Plan, organize and implement all policies and procedures concerned with the financial responsibilities of the department. Manage funds belonging to the department and individual professors. Provide budget and expense reports to the Chair and senior administrative manager. Supervise financial and technical staff.

April Alford, Financial Administrative Assistant, 6195 Etcheverry Hall, 642-9332, amal@me
Provide administrative support for the Department's Financial Officer/Administrative Analyst. Prepare/process purchase orders, requisitions, interdepartmental orders (for ordering supplies, services from other campus offices), check requests for reimbursements/refunds, and travel vouchers. Process invoices, statements for submission to the Disbursements office. Input standard detail report (sdr) reconciliation. Provide copy codes for the 6th floor large copier.

FACULTY SUPPORT

Yawo Dagbevi Akpawu, Administrative Assistant, 5102 Etcheverry Hall, 642-3459, is responsible for access key control, shipping and receiving, inventory control, for preparation of on-line purchasing, and general administrative duties.

Open Position, Administrative Assistant, 5102 Etcheverry Hall, 642- 8877, is responsible for general department administrative support which includes, but not limited to: seminar program, daily mail sorting/distributing, photocopying, scanning, correspondence, preparation of course materials, up-dating departmental roster/directories, conference room reservations, audio visual equipment management, and back-up/assistance to other Department staff.

SHOP

Dan Essley, Etcheverry Hall Building Coordinator, 1110E Etcheverry Hall, 642-7789, dessley@nuc. Communication liaison between campus services and building occupants. Contact person for all building related issues (ventilation, lighting, water leaks, locked doors, etc.) Prepare building response plans for campus emergency.

Scott McCormick, Manager 30 Hesse Hall, 642-3427, mccormik@me.Under broad authority given by the Department Chair and MSO, serves as manager of all technical and instructional laboratories services. Provides guidance and oversight in the effective management of all functional areas related to technical & instructional laboratory support, information technology and computing resources, professional machine shop, student machine shop, mechanical shop, development, operations, security, safety and emergency preparedness

Mike Neufer, Senior Laboratory Mech., 31 Hesse Hall, 642-3427, neufer@me
Support staff in Mechanical Service Group. Alternate Building Coordinator Hesse Hall.
Support the ME 107B, ME 140, & ME 256 laboratories located in Hesse Hall and various research in Combustion, Diesel & I.C. Engines, Suspension Technology, Wind Tunnel & Fluid Mechanics.

Pete Graham, Principal Laboratory Mech., 31 Hesse Hall, 642-3427, pgraham@me.berkeley.edu
Support staff in Mechanical Service Group. Member of Committee on Safety - Hesse Hall
Support the ME 107B, ME 140, & ME 256 laboratories located in Hesse Hall and various research in Combustion, Diesel & I.C.Engines, Suspension Technology, Wind Tunnel & Fluid Mechanics.

Elligree Bennett, Supervisor, Professional Machine and Student Shop, 1168 Etcheverry, 642-3314. Prioritize incoming work, consult on design issues with all uses of both shops as well as produce high precision parts and assemblies for research. Provides valuable hands-on training and supervision for both undergraduate and graduate students engaged in making machine parts and assemblies for class assigned projects, student group vehicles and support of research projects.

Gordon Long, Supervisor, Student Shop. 1166 Etcheverry, 642-4006, Student Shop Supervisor. Assists in the development and implementation of training/lesson/safety plans and preparation of instructional materials as related to a machine shop course. Trains students each semester on safety issues related to use of the Student Shop, proper use of tools and processes, contemporary CAD/CAM programs, tool path generation for the CNC milling machines and advise on functional design issues related to the manufacture of parts and assemblies. Performs all duties of precision machinist, working on unique and potentially volatile experiments.

Wendy Penning, Professional and Student Shops, 1168 Etcheverry, 642-3314. Provides hands-on training and supervision of both undergraduate and graduate students engaged in making machined parts and assemblies for class assigned projects, student group vehicles and to support research projects.

Rene Viray, ME Computer Systems Administrator , 2113 Etcheverry Hall, 643-0873, renee@me, Systems Manager for ME Instructional Computer Facilities and departmental computers.

Tom Clark, ME Assistant Development Engineer , 2113 Etcheverry Hall, 643-0873, tomclark@me, Primarily responsible for development and support for instructional labs of ME102, ME130, ME135, ME230.

STUDENT SERVICES

Donna Craig, Student Affairs Officer (Manager), 6187 Etcheverry Hall, 642-5085, dcraig@me
Coordinate both the undergraduate and graduate programs and oversee all aspects of Student Services. Manage admissions, recruitment, fellowships, block grant awards, scholarships, current student matters and advising, temporary budget, and class scheduling. Maintain undergraduate and graduate student statistics.

Pat Giddings, Graduate Student Affairs Officer, 6189 Etcheverry Hall, 642-5084, giddings@me
Assistant to the Vice-Chair of Graduate Study. Professional academic counselor in all areas of academic advising to current graduate students and applicants to our graduate program. Assist students in interpreting policies and procedures regarding the preliminary and qualifying exams and progress towards completion of their degrees. Responsible for hiring Graduate Student Researcher's (GSRs) appointed on department funds.

Open Position, Undergraduate Assistant, 6189 Etcheverry Hall, 642-4094, Assistant to the Vice-Chair of Instruction. Responsible for class scheduling, course reports, hiring temporary lecturers, GSI, and Readers. Orders GSI textbooks and solution manuals. Coordinates the Undergraduate Advising session. Responsible for processing teaching records, course updates/changes, grades change, and teaching evaluations. Coordinates the selection of Outstanding GSI Award and

Undergraduate scholarships. Updates the Engineering Announcement and General Catalog. Coordinates Cal Day, College Day, Undergraduate Orientation, and the Annual Commencement reception.

STUDENT SERVICES OFFICE, 6189 Etcheverry

The Student Services Office provides information and resources that are intended to assist graduate students during their studies in the Department and to clarify some of the necessary bureaucratic demands of the Graduate Division.

The Student Services Office becomes quite hectic from January through March due to application processing, which has strict deadlines that must be met. Your patience is appreciated. We will accommodate your needs as quickly and as effectively as possible.

The Student Services Office is part of the Mechanical Engineering Department and acts as liaison to the Graduate Division. The Graduate Division is located on the 3rd floor of Sproul Hall. It is easy to confuse the Mechanical Engineering Student Services Office with Graduate Division unless you understand what role each plays. The Graduate Division is responsible for enforcing University regulations for all departments on campus, approving petitions, administering most fellowships and informing the Department when a student is not maintaining the required GPA. They have the official word on whether a student has completed all the degree requirements for graduation. The Graduate Division is also in charge of admission to the University. They can withhold admission if any documents (i.e.: transcripts, application fee, etc.) are not in order. They can also deny admission to anyone who does not meet the Graduate Division admission requirements, even though the department has recommended admission.

The Student Services Office, maintains student records, processes admission applications, assigns Graduate Advisors, awards tuition waivers, arranges and administers the Preliminary and Qualifying Exams. This office also processes various petitions, forms, and information regarding degree requirements to the Graduate Division and College of Engineering for approval. In general, the Student Services Office acts as a resource for information and/or referral to other University organizations when appropriate.

This office also coordinates department services for undergraduates. In addition, they complete and process GSI, Reader, and some GSR appointment hiring forms.

THE DEPARTMENT OF MECHANICAL ENGINEERING FACULTY

Alice M. Agogino, 5136 Etcheverry Hall, 642-6450, aagogino@me, Professor and Faculty Assistant to Vice-Chancellor Paul Gray, PhD, Stanford, 1984 – National Science Foundation – Presidential Young Investigator, – National Academy of Engineering – Intelligent learning systems, multiobjective and strategic optimal design, nonlinear optimization, graphics and computer-aided design, multimedia interface design, design databases, decision and expert systems, artificial intelligence, machine monitoring and supervisory control, design theory and methodology.

Stanley A. Berger, 6111 Etcheverry Hall 642-5950, saberger@maya, Professor, PhD, Brown, 1959 – Theoretical and computational fluid mechanics, biofluiddynamics, bioengineering.

Francesco Borrelli, 5132 Etcheverry Hall, 643-3871, fborrelli@me.berkeley.edu, Assistant Professor, PhD, ETH-Zurich, Switzerland, 2002 - Model Predictive Control, Distributed and Robust Constrained Control, Automotive Control Systems, Manufacturing Control Systems.

David B. Bogy, 6101 Etcheverry Hall 642-2570, dbogy@me, Professor, PhD, Brown, 1966 – Director, Computer Mechanics Laboratory, Mechanics in computer technology, tribiology in hard-disk drives, laser measurements systems, numerical simulations. Static and dynamic problems in solid and fluid mechanics.

Van P. Carey, 6185 Etcheverry Hall 642-7177 vcarey@me, Professor, PhD, State University of New York, Buffalo, 1981 – National Science Foundation, President Young Investigator, Computational thermophysics and computer-aided design; boiling phenomena in liquid mixtures; computational modeling of microscale thermophysics and transport; classical and statistical thermodynamics of multiphase systems; thermodynamic aspects of green design and manufacturing strategies.

James Casey, 6125 Etcheverry Hall, 642-2863, jcasey@me Professor, PhD, Berkeley 1980 – Continuum Mechanics, plasticity, theory of constrained materials, thermoplasticity.

Jyh-Yuan Chen, 6163 Etcheverry Hall, 642-3286, jychen@me, Professor, PhD, Cornell, 1985 – Computational modeling of reactive systems, turbulent flows, combustion chemical kinetics.

C. K. Hari Dharan, 5135 Etcheverry Hall, 642-4933, dharan@me, Professor, PhD, Berkeley, 1968 – Design, mechanical behavior and manufacturing of engineered materials and structures, composites, biomaterials and microeletromechanical systems.

Robert Dibble, 6159 Etcheverry Hall, 642-4901, rdibble@me, Professor, PhD, Wisconsin, 1975 – Combustion; applications of diode lasers and novel approaches to removal of NOx from combustion systems.

David A. Dornfeld, 5100A Etcheverry Hall, 642-0906, dornfeld@me, Professor, PhD, Wisconsin, 1976 – Flexible manufacturing systems, intelligent sensors for untended manufacturing, precision manufacturing processes, CMP, process modeling.

Carlos Fernandez-Pello, 6105A Etcheverry Hall, 642-6554, ferpello@me, Professor, PhD, U.C. San Diego, 1975 – Heat and mass transfer processes in combustion, microgravity combustion, MEMs micro-combustion.

Michael Frencklach, 6185 Etcheverry Hall, 643-1676, myf@me, Professor and Vice Chair-Instruction, PhD, Hebrew University, Jerusalem, 1976 – Reaction mechanisms, kinetic and stochastic modeling, combustion chemistry, pollutant formation in combustion (Soot, NOx), chemical vapor deposition of diamond, interstellar dust formation.

Ralph Greif, 6107 Etcheverry Hall, 642-6462, greif@me, Professor, PhD, Harvard, 1962 – Heat and mass transfer, micro scale transport, cooling at the chip level, materials processing, laser surface interactions, bio heat transfer, phase change, reacting flows, chemical vapor deposition.

Costas P. Grigoropoulos, 6177 Etcheverry Hall, 642-2525, cgrigoro@me, Professor, PhD., Columbia, 1986 – Laser materials processing including ultra-fast laser micromachining, microscale heat transfer, integrated electronics cooling, transport in microdevices, rapid phase transformations.

J. Karl Hedrick, 5104 Etcheverry Hall 642-2482, khedrick@me, Professor, PhD, Stanford, 1971 – Nonlinear control with application to automotive control, automated highway systems and coordinated control of autonomous vehicles.

Roberto Horowitz, 5138 Etcheverry Hall, 642-4675, horowitz@me, Professor, PhD, Berkeley, 1983 – National Science Foundation – Presidential Young Investigator – Adaptive, learning and nonlinear control, control of robot manipulators, mechatronics, microelectromechanical systems (MEMS), intelligent vehicle and highways systems (IVHS).

George C. Johnson, 6149 Etcheverry Hall, 642-3371, gjohnson@me, Professor, PhD, Stanford, 1979 – Elasticity/Plasticity, acoustelasticity, geotechnical engineering, instrumentation, materials behavior, materials characterization, sensors, texture analysis, thin shells deformation, ultrasonic stress analysis, x-rays.

Homayoon Kazerooni, 5124 Etcheverry Hall, 642-2964, kazeroon@me, Professor, Sc.D., MIT, 1985 – Robotics, mechatronics, control systems, design, automated manufacturing, and human-machine systems, bioengineering.

Tony Keaveny, 6175 Etcheverry Hall, 643-8017, tmk@me, Professor, PhD, Cornell, 1991 – Biomechanics: mechanical behavior of bone tissue, finite element modeling of bone and bone-implant systems; bone tissue engineering.

Kyriakos Komvopoulos, 5143 Etcheverry Hall, 642-2563, kyriakos@me, Professor, PhD, MIT, 1986 – National Science Foundation – Presidential Young Investigator – Tribology, contact mechanics, plasma and ion beam-assisted modification processes, magnetic recording devices, FEM modeling of contact and metalworking problems, coatings, fracture mechanics, machining and tool wear, stiction and fatigue in microelectromechanical systems (MEMS), biomaterials.

Dorian Liepmann, 466 Evans Hall, 642-9360, liepmann@me, Associate Professor, PhD, Berkeley, 1990 – Experimental fluid mechanics, biofluid mechanics, micro-fluidic systems, bioMEMS, advanced drug delivery systems, mixing, free surface flows.

Dennis K. Lieu, 5128 Etcheverry Hall, 642-4014, dlieu@me Professor, DEng., Berkeley, 1982 – National Science Foundation – Presidential Young Investigator – Acoustics, actuators, electromechanical devices, magnetics, rolling elements, spindle motors, and structural mechanics.

Liwei Lin, 6189 Etcheverry Hall, 643-5495, lwlin@me, Professor and Vice Chair Graduate Study, PhD, Berkeley, 1993 – National Science Foundation – CAREER – Microelectromechanical Systems (MEMS); design and manufacturing of microsensors and microactuators; micro molding and packaging; mechanical issues in MEMS, including heat transfer, solid/fluid mechanics and dynamics.

Fai Ma, 6127 Etcheverry Hall, 643-6427, fma@me, Professor, PhD, Caltech, 1981– National Science Foundation – Presidential young Investigator – Vibration and control.

Arunava Majumdar, 5131 Etcheverry Hall, 643-8199, majumdar@me, Professor, PhD, Berkeley, 1989 – National Science Foundation – Presidential Young Investigator – ASME Melville Medal – Nanoscale thermophysics and transport phenomena; nanostructure imaging; DNA-based self assembly of nanostructures; microelectromechanicl systems (MEMS) and optomechanical design and fabrication; DNA and protein microarray chips for biological sensing and disease detection.

Alaa Mansour, 6171 Etcheverry Hall, 643-4996, alaa@me, Professor, PhD., Berkeley, 1966 – Structural reliability and safety, probabilistic dynamics of marine structures, strength of ship and offshore structures, development of design criteria.

Philip S. Marcus, 6121 Etcheverry Hall, 642-5942, pmarcus@me, Professor, PhD, Princeton, 1978 – Algorithms, atmospheric flows, convection, fluid mechanics, nonlinear dynamics, ocean flows, numerical analysis, turbulence.

Sara McMains, 5145 Etcheverry Hall, 642-9359, mcmains@me, Assistant Professor, PhD, Berkeley, 2000 – Computer graphics, geometric modeling, applied computational geometry, layered manufacturing/solid freeform fabrication, visualization, animation, out-of-core algorithms, and mesh generations.

Stephen Morris, 6115 Etcheverry Hall, 642-5545, morris@me, Associate Professor, PhD, Johns Hopkins, 1980 – Theoretical fluid mechanics: micromechanics of phase changes in technology and geophysics; geophysical convection, including the effects of phase changes and large viscosity variations.

Oliver O'Reilly, 6137 Etcheverry Hall, 642-0877, oreilly@me, Professor, PhD, Cornell, 1990 – Dynamical systems, continuum mechanics.

Andrew Packard, 5116 Etcheverry Hall, 643-7959, pack@me, Professor, PhD, Berkeley, 1988 – National Science Foundation – Presidential Young Investigator – Robustness issues in control analysis and design, linear algebra and numerical algorithms in control problems. On-line, optimization based control. Propagation of uncertainty through scientific calculations. Applications of system theory to flight control systems, automated steering systems for automobiles, and sound reinforcement.

Panayiotis Papadopoulos, 6131 Etcheverry Hall, 642-3358, panos@me, Professor, PhD, Berkeley, 1991 – Solid mechanics: Constitutive theories (e.g. plasticity, friction); and Structural Mechanics with emphasis on analytical and computational methods.

Albert P. Pisano, 6141 Etcheverry Hall, 642-9713, appisano@me, Professor and Chairman, Department of Mechanical Engineering and FANUC Chair of Mechanical Systems, PhD, Columbia University, 1981 – National Science Foundation – Presidential Young Investigator 1985 – 1991 – Invention, design, fabrication, modeling and optimization of microelectromechanical systems (MEMS): micro inertial instruments, micro information storage systems, micro fluidic systems.

Kameshwar Poolla, 5142 Etcheverry Hall, 642-6462, poolla@me, Professor, PhD, Univ. of Florida, 1984 – Robust multivariable control system synthesis, adaptive feedback systems, time-varying systems, process control for semiconductor manufacturing, and control of flexible structures.

Lisa Pruitt, 5134 Etcheverry Hall, 642-2595, lpruitt@me, Professor, PhD, Brown, 1993 – Medical polymers and Biomaterials, fatigue and fracture of materials, and bioengineering.

Omer Savas, 6113 Etcheverry Hall, 642-5705, savas@me, Professor, PhD, Caltech, 1979 – Fluid mechanics, rotating flows, turbulent flows, vortex dynamics, wake vortices, biofluid mechanics bluff body aerodynamics.

Lydia Sohn, 5118 Etcheverry Hall, 642-5434, sohn@me, Assistant Professor, PhD, Harvard, 1990 –Microfuidic devices for biological sensing at both the cellular and molecular levels and engineering novel inorgaic/organic hybrid materials utilizing micro- and nano-fabrication technologies.

David Steigmann, 6133 Etcheverry Hall, 643-3165, steigman@me, Professor, PhD, Brown, 1989 – Continuum mechanics, shell theory, tensile structures, elastic stability, variational methods, capillary phenomena, mechanics of thin films.

Andrew Szeri, 6119 Etcheverry Hall, 643-0298, aszeri@me, Professor, PhD, Cornell, 1988 – Office of Naval Research Young Investigator – – National Science Foundation – Presidential Young Investigator – Convective/diffusive transport, nonlinear dynamics, perturbation methods, cavitation physics, ultrasonic imaging, air-sea exchange, microscale dynamics.

Masayoshi Tomizuka, 5100B Etcheverry Hall, 642-0870, tomizuka@me, Professor, PhD, MIT, 1974 – Control of mechanical systems, mechatronics, vehicle control, robotics, motion control systems, adaptive control, nonlinear control, digital control.

Benson H. Tongue, 6129 Etcheverry Hall, 643-8629, bhtongue@me, Professor, PhD, Princeton, 1983 – Nonlinear dynamics, vibrations, model analysis, numerical modeling, acoustics.

Paul K. Wright, 5133 Etcheverry Hall, 642-2527, pwright@me, Professor and Co-Chair for the Management of Technology Program, PhD, University of Birmingham, England, 1971 –

Management of technology, rapid prototyping, wireless communications, Internet technologies and CAD/CAM.

Ronald Yeung, 6135 Etcheverry Hall, 642-8347, rwyeung@socrates, Professor, PhD, Berkeley, 1973 – Hydromechanics, mathematical modeling, numerical fluid mechanics, offshore mechanics, ship hydrodynamics, separated flows, wave loads, internal waves, hydroelasticity.

Xiang Zhang, 5136 Etcheverry Hall, 643-4978, xiang@newton, Associate Professor, PhD, Berkeley, 1996 – Micro- nano scale engineering, novel 3D fabrication technologies in micrfoelectronics and photonics, micro and nano-devices, nano-lithography and nano-instrumentation, rapid prototyping, bio-MEMS, and semiconductor manufacturing.

Tarek Zohdi, 6117 Etcheverry Hall, 642-9172, zohdi@me, Associate Professor, PhD, Habilitation, Universitaet Hannover, Germany, 2002, PhD. The University of Texas, Austin, 1997-Computational mechanics, micro-structural/macro-property inverse problems involving optimization and design of new materials, modeling and simulation of the dynamics of high-strength fabric, strongly coupled multifield processes in multiphase solid systems and particulate flows.

For further information regarding the Faculty and their research, please visit the following web site: www.me.berkeley.edu/faculty.html

THE ROLE OF YOUR MAJOR FIELD ADVISOR (MFA)

Each of you has been assigned a Major Field Advisor (MFA). A MFA list is posted on the bulletin board outside the Student Services Office. You should meet with your MFA to discuss your class schedule before the beginning of each semester. We identify your major field from the information you provided in your application.

Your MFA is responsible for advising you on what courses to take each semester and to monitor your academic program and progress towards the completion of your degree. Once your MFA and you have agreed on your class schedule you may register through TeleBEARS.

Your MFA is your personal contact with the Department. In addition to advising you on your program of study, he is responsible for:

1) Recommending the members for various thesis and examination committees;
2) Recommending action to be taken on various petitions you may initiate;
3) Serving as a general source of advice and counsel on all matters pertaining to your relationship with the College and the University.

If you have a problem that your MFA cannot resolve, come the Student Services Office.

ACADEMIC PROCEDURES

REGISTERING FOR CLASSES

First Time Registration

As an incoming student you will receive your registration information with your letter of admission from the Graduate Division. For you first semester, you will not need an Advisor Code to register for classes, your PIN number is the only number you will need to register.

Each semester the course control numbers for classes may be found at the online Schedule of Classes Website http://schedule.berkeley.edu/. During Phase I of the TeleBear enrollment period you will be allowed to enroll for 10 units. During Phase II of this enrollment period you will add course units to equal a standard semester requirement of 15 units.

You should review the Student Handbook @ http://www.me.berkeley.edu/new/grad/index.html. This handbook contains all the areas of study in Mechanical Engineering and a list of core and recommended classes. After reviewing these lists you can plan your semester courses and prepare to enroll through TeleBears on or about August 10th.

You will need to complete the "Confirmation of Class Schedule located at http://www.me.berkeley.edu/new/academics2.html. When you arrive on campus you will take a printed copy of this Confirmation of Class Schedule and meet with your Major Field Advisor (MFA) to go over your course selection. If there are changes to be made you can go back to TeleBears and make the changes. Just remember: **You have until the end of the 3rd week of classes to be enrolled in the final 15 units of coursework necessary to be considered a full-time registered student**. You should make this form into a file which you can update each semester. After you have obtained your MFA's approval of your courses, you will bring this **TYPED** form to the Student Services Office.

If you cannot enroll in the classes you wanted, place your name on the wait list and attend the first lecture. There is a good probability that you will be able to enroll. The instructor can move you from the wait list, or you can add the course via paper (Petition to Add/Drop) **after the 3rd week of classes**. Please make sure that you check your schedule on TeleBEARS to insure that all changes have been made.

Continuing Student Registration

Registration for Fall semester takes place in April, and registration for Spring semester is done in October. Please check the Office of the Registrar under TeleBears regarding the TeleBears enrollment periods each semester.

Update your Confirmation of Class Schedule (http://www.me.berkeley.edu/) before meeting with your MFA each subsequent semester until graduation. You will choose classes for which you should register in consultation with your MFA. After meeting with your MFA, you will bring your Confirmation of Class Schedule to the Student Affairs Office and receive your Advisor Code. This along with your PIN number will allow you to enroll for classes

Each semester you can find the course control numbers at the online Schedule of Classes Website http://schedule.berkeley.edu/

After the first 3 weeks of classes be sure to review your confirmed class schedule through TeleBEARS to make sure that you are registered in the classes you requested. If you are registered in a class that you did not request, **YOU MUST DROP IT*; otherwise you will receive an F for non-attendance***. If you are not registered in a class you are attending you need to add it; otherwise you will not receive credit for the class as your name will not appear on the final course report. It is possible for you to add/drop classes on line through the 3rd week of each semester with the TeleBEARS system. After the 3rd week you must complete a Petition to Change Class Schedule have it signed by your Major Field Advisor and return the form to the Student Service Office for processing. Please be aware there is a charge for changes made after the 3rd week of classes. The Petition to Change Class Schedule can be located at the following web address: http://registrar.berkeley.edu/elecforms/PettoChgCCS.pdf

After the Adjustment period the Office of Admissions and Records produces the Official Confirmed Class Schedule that reflects changes you have requested. Make sure that you check your schedule on TeleBEARS to ensure that all changes have been made.

IMPORTANT RULES RELATING TO COURSE ENROLLMENT AND GPA

The Graduate Division has strict deadlines for adding and dropping classes, as well as minimum GPA requirements. The complete set of guidelines for graduate study can be found on the Grad Division web site at http://www.grad.berkeley.edu/grad/publications/gsh/index.shtml#1. Here are just a few of the most important rules to keep in mind:

Adds/Drops

You must be registered and enrolled in 15 units by the end of the third week of classes. You may lose your fellowship and/or fee remission as well as incur other penalties if you fail to do so. You must add, drop and change grading option by the end of the 3rd week of instruction via TeleBEARS. After the third week, students must complete a paper petition to add/drop a class,

change grading option and fees are incurred. Petition to change class schedule: http://registrar.berkeley.edu/elecforms/PettoChgCCS.pdf

All late add/drop petitions or any retroactive add/drop petitions will be reviewed by the Vice Chair-Graduate Study and may or may not be approved. Therefore, it is **essential** that you check your schedule of classes to confirm that you are correctly enrolled in your chosen courses each semester at the end of the 3rd week of classes.

Minimum Grade Point Average

You must maintain a grade point average of at least 3.0 or you will be placed on academic probation. If you cannot raise your cumulative GPA back to 3.0 or higher in the next semester after being put on academic probation, you are subject to dismissal from the University.

You need a GPA of 3.1 or higher to hold a GSR, GSI, or Reader position. You cannot hold an academic appointment (GSR, GSI or Reader) while on academic probation.

You cannot obtain a degree while on academic probation.

GRADUATE STUDENTS STATUS - A SUMMARY OVERVIEW

Registered Students

May take classes
May graduate
Have access to the Recreation and Sports Facilities (RSF) and Libraries
Covered by GSHIP (Graduate Student Health Insurance Plan)
May hold GSR, GSI appointment(s)
Eligible for all student services and privileges
Must register for 15 units
Cost are located at the Office of the Registrar's web site http://registrar.berkeley.edu

Withdrawn Students

May not take classes
May not graduate
Must pay for the Recreation and Sports Facilities (RSF)
Must pay for GSHIP (Graduate Student Health Insurance Plan) – Memo from Department to GSHIP stating student is in good standing required each semester.
Must pay for library card
Cannot hold GSR or GSI appointment
May be Junior Specialist or Reader – International students see SISS (Services for International Students and Scholars) first
May take Prelim Exam with permission of Vice Chair of Graduate Study and Chair of Prelim Committee
May not take Qualifying Exam
Must apply for readmission. No guarantee that student will be accepted back into the program.
Costs - none to withdraw, but $90 to be readmitted.
Forms available on line at http://www.me.berkeley.edu

Students on Filing Fee

May be used once for MS, once for PhD
Must be Advanced to Candidacy for either MS or PhD Degree before eligible
May not take classes
Must pay for GSHIP, RSF, & library card
May not hold GSR or GSI appointment
May not take Prelim Exam or Qualifying Exam
May graduate
Cost ½ of the University Registration Fee
Applications for Filing Fee are available at the Graduate Division web site:
http://www.grad.berkeley.edu

International Students: See the Services for International Students and Scholars (SISS) advisor for possible additional requirements to keep your I-20 active

Procedures To Transfer Courses

To transfer courses from another institution you first need to have an official transcript from the school the course will transfer from as well as a syllabus of the course. You will write a formal memo to the faculty here at Berkeley who teaches the course you wish to transfer and contains the same material(s). Meet with that faculty, if they approve it to contain the same content as the course at Berkeley, they will sign your memo. As these course transfers must also be approved by the Vice Chair of Graduate Study and the Dean of the Graduate Division, you will then bring all these materials to the Student Services Office, for the Vice Chair's approval. If approved your transfer request will forwarded to the Graduate Division Dean for final approval and transfer. Please be informed however that this course and grade will not appear on your transcript.

Please be aware that (1) you can transfer only 1 course for the MS degree and 2 courses for the PhD degree; (2) you cannot have used the course(s) for credit to receive your BS degree and (3) if taken at the undergraduate level, you must have been in senior standing at the time the course was taken.

Procedures to Change Major Field Areas

In order to change major, you must either request the transfer during the first three weeks of your **FIRST** semester or have taken and passed the preliminary examination, one of the three examinations taken and passed being the new major field area.

After your first semester to change your major you need to meet with the Major Field Advisor of the area you wish to transfer into. If the MFA approves your transfer they need to notify the Student Services Office by email.

DEGREE REQUIREMENTS

Master of Science (PLAN I) Thesis

Minimum number of units: 20 semester units. Must be either 200 or 100 upper division series. (One third of total units may be taken satisfactory/unsatisfactory.)

Minimum number of mechanical engineering units: 8 semester units must be in 200 series and can include 4 Semester units or ME 299.

Minimum number of specialty area (e.g. bioengineering, controls, fluids, etc.) units: 8 semester units must be in major field area

Number of units transferable: 4 semester units. (Must have been taken while in graduate standing and cannot have been used for another prior degree.)

Advancement to Candidacy: You must complete the Advancement to Candidacy Form by the end of the 5th week of the semester in which you plan to file your Thesis. The exact dates for filing this Advancement form are posted outside the Student Services Office.

Thesis: Written thesis required. Must follow Graduate Division guidelines.

Committee Requirements: The committee consists of three members: your Research Advisor, another ME faculty and a Professor outside the Mechanical Engineering Department. Please note your committee members must be members of the Berkeley Academic Senate.

Master of Science (PLAN II) Project/Presentation

Minimum number of units: 24 semester units. Must be either 200 or 100 upper division series. (One third of total units may be taken satisfactory/unsatisfactory)

Minimum number of mechanical engineering units: 12 semester units must be in 200 series and can include 4 Semester units or ME 299.

Minimum number of specialty area (e.g. bioengineering, controls, fluids, etc.) units: 12 Semester units (200 or 100 upper division series)

Number of units transferable: 4 semester units. (Must have been taken while in graduate standing and cannot have been used for another prior degree.)

Advancement to Candidacy. You must complete an Advancement to Candidacy Form by the end of the 5th week of the semester in which you plan to file your Report. The exact dates for filing this Advancement form are posted outside the Student Services Office.

Oral Presentation: Required

Written Report: Final written report required

Committee Requirements: The committee consists of two members: your Research Advisor and another ME faculty or a Professor from outside the Mechanical Engineering Department. Please note your committee members must be members of the Berkeley Academic Senate.

Master of Science (5 year BS/MS) Project/Comprehensive Examination

Minimum number of units: 24 semester units. Must be either in 200 or 100 upper division series. Only one third (1/3) of total units may be taken satisfactory/unsatisfactory.

Minimum number of Mechanical Engineering units: 12 semester units (must be in 200 series) letter graded

Backdating of Graduate Standing: You may backdate your Graduate Standing and use courses taken in your last undergraduate semester, not used towards your BS degree.

Oral Comprehensive Examination: You must arrange for your Comprehensive examination Oral Exam when you Advance to Candidacy for the MS Degree. You will Advance to Candidacy for the MS degree in your second semester following admission. At the top righthand corner of the Advancement to Candidacy application you will find a box. Inside this box you are to schedule your Comprehensive Examination.

Your Examination Committee will consist of 2 professors. One member must be from the Department of Mechanical Engineering, the other may be from outside the department. However, both must be members of the Berkeley Academic Senate.

The Oral Comprehensive Exam will be scheduled 45 days before the end of your second semester. The exam will be scheduled for ½ hour periods and you can contact our Student Services Office to reserve a conference room for the examination.

At the conclusion of your examination the faculty will sign your Application of Completion. Should you not pass the examination, you are eligible to reschedule a second examination within 2 weeks of your first examination. This second examination must be conducted with your original examination committee members.

Master of Engineering

Minimum number of units: 40 Semester units.

Minimum number of units in mechanical engineering: 24 semester units

Minimum number of units in mechanical engineering courses oriented toward design and analysis: 16-20 units

Minimum number of units in mechanical engineering courses in professional major: 12 Semester units must be 200 series, (IDS courses in the major field may be used to satisfy this requirement)

Number of ME 299: 4 – 8 units

Minimum number of units in technical fields different from the professional major: 8 semester units must be in 200 or 100 upper division series

Minimum of units in programs outside the College of Engineering: 8 semester units must be in 200 or 100 upper division series, (***Courses in basic sciences, statistics and mathematics are not considered appropriate since these courses principally enhance the student's engineering competence.)***

Number of units transferable: 4 semester units, (Must have been taken while in graduate standing and cannot have been used for another degree.)

Advancement to Candidacy: You must complete an Advancement to Candidacy Form by the end of the 5th week of the semester in which you plan to file your Report. Exact dates for filing this Advancement form are posted outside the Student Services Office.

Oral Presentation: Required

Written Report: Final written report required

Committee requirements: The committee consists of two members; your Research Advisor and either an ME faculty or a Professor outside the Mechanical Engineering Department. Please note your committee members must be part of the Academic Senate.

Doctoral

Preliminary Examination: Must pass three of nine exams (One of the exams must be in the major field area).

Required number of courses: Six semester courses in major (all courses must be taken for a letter grade). Must take three semester courses in each of the two minors (two courses in each minor must be taken for a letter grade).

Minimum number of units: 36 semester units

Minimum number of ME 299: No limit (299 units will not be counted in the minimum number of semester units)

GSI/ME 301 Requirement: Must have held a GSI appointment and taken ME 301 for one semester

Grade Point Average Major: 3.5

Grade Point Average each Minor: 3.0

Qualifying Examination: Exam may be taken after having completed four courses in the major and two in each of the minors. Must have completed 2 courses in each minor with a GPA of 3.0 in each and 4 courses in the major with a GPA of 3.5. All courses in the major must be taken for a letter grade. **In order to have Non-Resident Tuition waived the examination must be taken and passed, the Advancement to Candidacy form completed and returned to the Graduate Division before the first (1st) day of classes of the Fall or Spring Semester**.

Advancement to Candidacy: Must complete Advancement to Candidacy Form as soon as possible after passing qualifying exam. Forms are located in the Student Services Office, or at the following web page: http://www.grad.berkeley.edu.

Ph.D. Candidate Oral Presentation Seminar: Present dissertation findings. Members of dissertation committee should attend, but at least one must attend.

Thesis required: Committee consists of a Chair: ME Faculty, 1st or only inside member: ME Faculty and a 2nd or additional inside member: ME Faculty or Outside the Department (Must follow Graduate Division guidelines http://www.grad.berkeley.edu/degrees/pdf/disguide.pdf)

Committee members: The committee consists of three members, your Research Advisor, one ME Professor, and one Professor outside the ME Department. Please note your committee members must be members of the Berkeley Academic Senate.

If your Research Advisor is a faculty member outside the Mechanical Engineering Department you will need an ME faculty to be Co-Chair of your Dissertation Committee with your Research Advisor. In addition you will need another 2 ME members and an Outside the Department member and have a 5 person committee.

Ph.D. Requirements for the Minor

Ph.D. student must select two minor fields. The minor fields should serve to broaden the base of the studies ***and lend support to the major field as well as the dissertation research***.

(a) Each minor program should have an orientation different from the major program and the courses involved should contain concepts not present in the major program.

(b) One minor program should consist of courses outside of the Mechanical Engineering Department. Engineering courses or courses that are cross-listed with other departments can be part of an outside minor (e.g. E230A-B, ME C219). However, please be advised when setting your qualifying exam committee, the outside minor committee member must be from outside the department. Mechanical Engineering faculty cannot serve in this capacity.

(c) Three courses (of advanced undergraduate and graduate level) typically represent a minimum program for a minor. In some programs of study, a minor that consists only of high-level, upper-division courses taken in a department outside the College of Engineering may be acceptable.

(d) Use of the number 298 shall be restricted to *"Group Studies, Seminars, and Group Research."* No 298 units shall count toward the minimum unit requirements for master or doctoral degrees. All 298 courses in the College of Engineering shall be offered on the *"Satisfactory/ Unsatisfactory"* basis.

Notes to Students:

The qualifier that *minors should lend support to the major field as well as the dissertation research* should be taken strictly. As the intent of the qualifying examination is to ascertain the breadth of a student's knowledge and preparation in their field of study, the minors play a critical role in this demonstration of breadth. The use of mechanical engineering courses as part of an outside minor is strongly discouraged, unless the course is cross-listed with another department. In selecting your minors you should work with both your research and major field academic advisors in identifying the minors that are best suited to your doctoral research and academic program, and obtain the approval of your major field advisor.

RECOMMENDED COURSES FOR DOCTORAL STUDY (SPECIFIC TO AREA)

The following lists have been compiled to assist you in selecting courses to achieve your program objective. Because there is a wide spectrum of students' interests within the different areas, each list has been divided into either two or three groups. The first group is comprised of core courses, which are recommended to all students in the specified program. The second and third groups are suggested for enhancing your specialty area. To ensure that you are making adequate progress toward your degree goal, you should consult with your Major Field Advisor each semester before registering for classes.

Recommended Courses for Doctoral Study in Bioengineering

In the biomechanical engineering program, students may choose from a broad range of emphasis areas such as mechanics, materials, MEMS, or controls.

BIOENGINEERING CORE COURSES:	ME/BioE 117, ME/BioE 176, ME C212/BioE C212, ME C213/BioE C213, ME C214/BioE C214, ME C223/BioE C223
EMPHASIS AREAS:	
Mechanics:	ME 185, ME 280A/B, ME 284
Materials:	ME 224,ME C225/MSE C212, ME 226, ME 227
MEMS:	ME 119, ME C219/EECS C246, EE 245
Controls:	ME 134, ME 230, ME232

If Bioengineering represents the major of your PhD study, you should take at least 3 courses from the core list. You can choose 3 other graduate ME courses. There must be a strong connection between these two sets of courses.

Selection of other courses not listed above can be done with the approval of the Major Field Advisor. You should prepare a written justification of your selection.

Recommended Courses for Doctoral Study in Combustion

COMBUSTION CORE COURSES:	ME 140, ME 254, ME 256, ME 257
Recommended Courses:	E 230A ME 252, ME 253, ME 255, ME 260A/B, ME 265
Encouraged Courses:	ME 251, ME 258, ME 263, Chemistry 122, 223A, Math 121, Math128A/B, Math 224A/B, Math 228A/B

If Combustion represents the major of your PhD study, you should take at least 6 courses from the lists shown above. Of these, at least 3 courses should be from the Combustion Core list.

Selection of other courses not listed above can be done with the approval of the Major Field Advisor. You should prepare a written justification of your selection.

If Combustion represents a minor of your PhD study, you should take at least 3 courses from the lists shown above. Of these, 2 courses should be from the Combustion Core list.

Recommended Courses for Doctoral Study in Controls

CONTROLS CORE COURSES:	E 231, ME 134, ME 230, ME 232, ME 233, ME234, ME 237, ME 290N
EMPHASIS AREAS:	
Control Systems:	ME 235, ME 290S, EECS 221A, EECS 222, EECS 223, EECS 226A, EECS 227A/B
Dynamic Systems:	ME 175, ME 273, ME 274, ME 275, ME277, ME 280A, ME 283, ME 288
Mechatronics and Robotics:	ME 136, ME 229, ME 239, ME 290M, ME 290Q, EECS C125/BioE C125, EECS 192

If Controls represents the major of your PhD study, you should take at least 6 courses from the lists shown above. Of these, at least 4 courses should be from the Controls Core list.

You must consult your Major Field Advisor if you are planning to include any of the courses listed in the emphasis areas as part of a non-control minor that has common courses with the emphasis area (e.g. an emphasis in Dynamic Systems and a minor in Dynamics).

Selection of other courses not listed above can be done with the approval of the Major Field Advisor. You should prepare a written justification of your selection.

If Controls represents a minor of your PhD study, you should take at least 3 courses from the lists shown above. Of these, 2 courses should be from the Controls Core list. The third course should be from either the Controls Core list or the Control Systems list.

Recommended Courses for Doctoral Study in Design

DESIGN CORE COURSES	E 128, ME C223/BioE C 223, ME 224, ME C225/MSE C212, ME 228, ME 290H
EMPHASIS AREAS:	
Computation and Optimization:	ME 128, ME 145, ME 180, ME 280A/B, ME 290D, ME 290M, CS 160, E 128, IEOR 262A&B, IEOR C215/Information C258, IEOR 268
Mechatronics Design:	EE 192, ME 132, ME 133, ME 134, ME 135, ME 229, ME 230, ME 232, ME 290Q

Product Design:	ME 101, ME 110, ME 127, ME 221, ME 227, ME 229, IEOR 170
Machine Design:	ME 127, ME 130, ME 133, ME 220, ME 221, ME 222, ME 223, ME 225, ME 226, ME 227, ME 229
MEMS Design:	EE 245**,** ME 119, ME 219

If Design represents the major of your PhD study, you should take at least 6 courses from the lists shown above. Of these, at least 3 courses should be from the Design Core list.

You must consult your Major Field Advisor if you are planning to include any of the courses listed in the emphasis areas as part of a non-Design minor that has common courses with the emphasis area (e.g. an emphasis in Mechatronics and a minor in MEMS or Controls).

Selection of other courses not listed above can be done with the approval of the Major Field Advisor. You should prepare a written justification of your selection.

If Design represents a minor of your PhD study, you should take at least 3 courses from the lists shown above. Of these, 2 courses should be from the Design Core list.

Recommended Courses for Doctoral Study in Dynamics

DYNAMICS CORE COURSES	ME 175, ME 273
EMPHASIS AREAS:	
Dynamics:	ME 170, ME 274, ME 275, ME 277, ME 290A
Dynamic Systems:	ME 134, ME 232, ME 233, ME 234, ME 237, ME 274, ME 275, ME 277
Other Applications:	ME 173, ME 230, ME 231, ME 235, ME 240A, ME 280A, ME 283, ME 288

If Dynamics represents the major of your PhD study, you should take at least 6 courses from the lists shown above. The two Dynamics Core courses will be required unless you have taken equivalent courses previously.

You must consult your Major Field Advisor if you are planning to include any of the courses listed in the emphasis areas as part of a non-dynamics minor that has common courses with the emphasis area (e.g. an emphasis in Dynamic Systems and a minor in Controls).

Selection of other courses not listed above can be done with the approval of the Major Field Advisor. You should prepare a written justification of your selection.

If Dynamics represents a minor of your PhD study, you should take at least 3 courses from the lists shown above. The two Dynamics Core courses will be required unless you have taken equivalent courses previously.

Recommended Courses for Doctoral Study in Fluid Mechanics

FLUIDS CORE COURSES:	ME 241A/B, ME 260A/B, ME 262, ME263, ME 267, ME C268/ChemE C268
Fluids Recommended Courses	E 266A, ME 185, ME C212/BioE C212, ME243, ME 248

If Fluid Mechanics represents the major of your PhD study, you must take at least 6 courses from the lists shown above. Of these, you must take ME 260A-B and at least 2 others from the Core list. The remainder can be from either list. Selection of other courses not listed above can be done with the approval of the Major Field Advisor. In which case you should prepare a written justification of your selection.

If Fluid Mechanics represents a minor of your PhD study, you should take at least 3 courses from the lists shown above. Of these, you must take ME 260A-B from the Core list. The third course should be from either list.

Recommended Courses for Doctoral Study in Heat Transfer

HEAT TRANSFER CORE COURSES:	ME 251, ME 252, ME 253, ME 258, ME 259
Supplementary Courses:	ME 151, ME C212/BioE C212, ME 248, ME 290G, ME 254**,** ME 256, ME 260A/B, ME 268, ME 290T

If Heat Transfer represents the major field of study for your PhD program you should take the five core courses listed above and one of the supplementary courses. If you wish to use other courses for your major field you must first obtain the approval of the Major Field Advisor.

If Heat Transfer represents a minor field for your PhD program you should take two core courses and either another core course or a supplementary course. If you wish to use other courses for your minor field you must first obtain the approval of the Major Field Advisor.

Recommended Courses for Doctoral Study in Manufacturing

MANUFACTURING CORE COURSES:	ME 101, ME 220, ME 221, ME 222, ME 290D, ME 290R, E 290C

EMPHASIS AREAS:

Design:	ME 228, ME 290M, ME 290P, CS 160, CS 260

Controls	ME 230, EE 290G
Materials:	ME C223/BioE C223, ME 224, ME C225/MSE C212, ME 226, ME 227, ME 287
Geometric Modeling	ME C218/EECS C245, ME C219/EECS C246, CS 184, CS 274, CS 284, CS 285
Other	EE 243, ME 280A, ME 290G

If Manufacturing represents the major of your PhD study, you should take at least 6 courses selected from a combination of the lists shown above. Of these, at least 3 courses must be from the Manufacturing Core list.

You must consult your Major Field Advisor if you are planning to include any of the courses listed in the emphasis areas as part of a non-Manufacturing minor that has common courses with the emphasis area (e.g. an emphasis in Design and a minor in Design or an emphasis in Geometric Modeling and a minor in Computer Science). You may not double-count courses towards both the major and minor requirements.

Selection of other courses not listed above can be done with the approval of the Major Field Advisor. You should prepare a written justification of your selection.

If Manufacturing represents a minor of your PhD study, you should take at least 3 courses from the lists shown above. Of these, 2 courses should be from the Manufacturing Core list.

Recommended Courses for Doctoral Study in Materials

MATERIALS CORE COURSES:

Required	ME 224, ME C225/MSE C225, ME 226, ME 227
Strongly recommended:	ME C124/ME 108, ME/BioE C223, ME127
Encouraged:	ME /BioE 117, ME/BioE 176, ME/BioE 214, ME 185, ME 221, ME 222

A maximum of two (2) 100 level courses can be used toward the major area requirements.

Selection of other courses not listed above can be done with the approval of the Major Field Advisor. You should prepare a written justification of your selection.

Recommended Courses for Doctoral Study in MEMS/NANO

MEMS/NANO CORE COURSES:	ME 118**,** ME 119, ME C218/EECS C245, ME C219/EECS C246

EMPHASIS AREAS:

IC Processing:	EE 130, EE 143, EE 243
Mechatronics:	ME 128, ME 130, ME 134, ME 224, ME C225/MSE C212, ME 228, ME 229, ME 231, ME232
Other ME courses:	ME 175, ME 185, ME 226, ME 248, ME 259, ME 260A/B, ME 275, ME 280A
Bioengineering:	BioE 121
Nano:	Physics 141A/B, Physics 250
Nanoscale Synchesis and Processing	Chemistry 253A/B, EE 290B, EE C219, EE 143, MSE 224, MSE 227, MSE 260, ME 119
Nanoscale Characterization:	MSE 204, MSE 242, AS&T C295R/Chemical Engineering C295
Nanoscale Modelling:	ME 224, ME 254, ME 259, Physics 240A/B, Chemistry C191/Physics C191/CS C191, CE 237/NanoSci& Engr C237

If MEMS represents the major of your PhD study, you should take at least 6 courses from the lists shown above. Of these, at least 1 course should be from the MEMS Core list.

You must consult your Major Field Advisor if you are planning to include any of the courses listed in the emphasis areas as part of a non-MEMS minor that has common courses with the emphasis area (e.g. an emphasis in Mechatronics and a minor in Design or Controls).

If MEMS represents a minor of your PhD study, you should take at least 3 courses from the lists shown above. Of these, 1 course should be from the MEMS Core list.

Selection of other courses not listed above may be made with the approval of the Major Field Advisor(s). Please prepare a written justification of your selection before seeing the Major Field Advisor(s).
If Nanoscale Science and Engineering represent the major of your PhD study, you should take 2 of the Core Courses in the core course and two elective courses chosen from two of the possible areas and the weekly Nanoscale Science and Engineering Interdisciplinary Seminar.

If Nanoscale Science and Engineering represents a minor in your PhD study, you should take the core course and two courses from the lists shown above.

Recommended Courses for Doctoral Study in Ocean Engineering

OCEAN ENGINEERING CORE COURSES:	ME 164, ME 165, ME 185, ME 240A/B, ME 241A/B, ME 243, ME 260A, ME 263,

(Marine Fluids and Marine Structures)	ME 267, CE 220, CE 225, CE 205B

EMPHASIS AREAS:

Design & Optimization:	ME 128, ME 145, ME 228, IEOR 162, IEOR 262A, IEOR 262B, IEOR 268, CE 290A
Robotics & Control:	ME 134, ME C219/EECS C246, ME 230, ME 232, ME 234, ME 237, ME 239
Materials & Fabrication:	ME 127, ME 227, ME C225/MSE C212, ME 220, ME 222
Mathematics & Statistics:	Math 220, Math 224A/B, E 230, E 231, E C233/CS C267, Stat 200A/B

If Ocean Engineering represents the major of your PhD study, you must take at least six 200-series courses in the core and recommended lists, which must include ME 240A, ME 240B, and ME 241A and ME 241B.

Selection of courses outside of the above lists could be done with approval of the Major Field Advisor. You should prepare a written justification of your selection.

If Ocean Engineering represents a minor of your PhD study, you must take at lest 3 courses in the core list, which should include ME 240A, ME 240B or ME 241A or ME 241B.

Recommended Courses for Doctoral Study in Solid Mechanics

SOLID MECHANICS CORE COURSES	ME 185, ME 280A, ME 281, ME 282
Recommended Courses:	ME 280B, ME 283, ME 284, ME 285A, ME 285B, ME 285C, ME 286, ME 287, ME 288, ME 289, ME 290B
Continuum Mechanics Core Courses	ME 185, ME 260A/B, ME 282, ME 285
Continuum Mechanics Recommended Courses	ME 261, ME 262, ME 263, ME 264, ME 280A, ME 281, ME 283, ME 284, ME 287

If Solid Mechanics represents the major of your PhD study, you should take all four of the Core Courses. The remaining two courses for your major should be normally selected from the list of Recommended courses. Selection of major courses not listed above can be made with the approval of the Major Field Advisor. You should prepare a written justification for your selection.

If Solid Mechanics represents a minor in your PhD study, you should take at least three courses from the lists shown above. Of these, two courses should be from the Core Courses list

and should include ME 185. The additional course(s) should be normally selected from the Core or Recommended Courses list.

If Continuum Mechanics represents the major of your PhD study, you should take at least four of the Core Courses, including ME 185, ME 260A. The remaining two courses for your major should be normally selected from the list of Core and Recommended courses. Selection of major courses not listed above can be made with the approval of the Major Field Advisor. You should prepare a written justification for your selection.

If Continuum Mechanics represents a minor in your PhD study, you should take at least three courses from the lists shown above, of which two should be ME 185 and ME 260A. The additional course(s) should be normally selected from the Core or Recommended Courses list.

GRADUATE APPEALS PROCEDURE

PURPOSE AND SCOPE

The purpose of this procedure is to afford graduate students in the Department of Mechanical Engineering an opportunity to resolve conflicts, complaints or issues regarding dismissal from graduate standing, placement on probationary status, denial of re-admission, and other administrative of academic decisions that terminate or otherwise impede progress toward academic or professional degree goals.

The scope of this procedure is limited to the matters listed above and excludes complaints regarding denial of admission, student records, grades in courses of instruction, student employment, student discipline and auxiliary student services, such as housing, child care, etc. This procedure may not be used for complaints regarding actions based solely on faculty evaluation of the academic quality of a student's performance, or evaluation of a student's appropriate academic progress, unless the complaint alleges that the actions may have been influenced by non-academic criteria.

INFORMAL RESOLUTION PROCEDURES

A student may pursue informal resolution of a complaint by scheduling a meeting with the Vice Chair-Graduate Study to discuss the issue and explore possible avenues of resolution. If informal resolution is pursued, it must be initiated, and should be completed, within 30 days. At any point in this process, if a satisfactory solution cannot be reached, the student may initiate formal resolution by putting the complaint in writing.

FORMAL RESOLUTION PROCEDURES

A written complaint must include information regarding the action being complained of and the date it occurred, the grounds upon which the appeal is based, and the relief requested. The complaint must be based on one or more of the following grounds:

1.) Procedural error or violation of official policy by the academic or administrative personnel.

2.) Judgments improperly based upon non-academic criteria including, but not limited to, discrimination or harassment on the basis of sex, race, national origin, color, age, religion, sexual orientation, or disability.

3.) Specific mitigating circumstance beyond the student's control not properly taken into account in a decision affecting the student's academic progress.

A written complaint must be received by the Vice Chair-Graduate Study within thirty days from the time the student knew or could reasonably be expected to have known of the action that is the subject of the complaint. The department should complete its investigation and notify the student of the outcome of the complaint within sixty days of the date received.

The time frame for filing a written complaint may be extended by the department if the student has been involved in continuing efforts toward informal resolution, and the informal resolution process was initiated within thirty days of the time the student knew or could reasonably be expected to have known of the action that is the subject of the complaint. All time frames referred to in this procedure refer to calendar days. Summer and inter-semester recesses are not included within these time frames.

Upon receipt of a written complaint, the Vice Chair-Graduate Study will assign an individual to investigate the complaint and make a recommendation to the Vice Chair-Graduate Study regarding the outcome of the complaint. Generally, the investigation will include an interview with the complainant, a review of any relevant written materials, and an effort to obtain information from available witnesses (i.e. interviews or written statements or documents). The Head Graduate Advisor will notify the student in writing of the outcome of the complaint. A written complaint under the procedure satisfies the requirement of a unit level resolution process pursuant to the Graduate Appeals Procedure.

APPEAL TO THE GRADUATE DIVISION

If the student is not satisfied with the outcome of the complaint under the department's procedure, he or she may bring the complaint to the Formal Appeal Procedure of the Graduate Appeals Procedure. The formal appeal must be received in the Office of the Dean of the Graduate Division, 424 Sproul Hall, within fifteen days of the date of the written notification for the result of the unit level procedure. Copies of the Graduate Appeals Procedure may be obtained from the Office of the Dean of the Graduate Division.

If the complaint is about an action taken by the Vice Chair-Graduate Study, the complainant may elect to take the complaint directly to the Department Chair. If the student is still not satisfied with the outcome, the student may take the complaint to the Formal Appeal state of the Graduate Appeals Procedure. Such a complaint must be received by the Office of the Dean of Graduate Division within thirty days from the time the student knew or could reasonably be expected to have known of the action that is the subject of the complaint.

COMPLAINTS INVOLVING DISCRIMINATION

If the complaint involves allegations of discrimination or harassment on the basis of sex, race, national origin, color, age, religion, sexual orientation, or disability, the department should consult the appropriate campus compliance officers prior to commencing informal or formal resolution procedures. The names, phone numbers, and campus addresses of these individuals

are listed in various campus publications and may be obtained from the Office of the Dean of the Graduate Division at (510) 642-5472 or the Academic Compliance Office at (510) 642-2795.

OTHER COMPLAINT PROCEDURES

Graduate Students may contact the Office of the Ombudsman for Students, the Title IX Compliance Officer, or the 504/ADA Compliance Officer for assistance with complaint resolution. There are also other complaint resolution procedures listed in the Graduate Appeals Procedure for use regarding complaints that do not fall under this procedure.

PRELIMINARY EXAMINATION

The objective of the Preliminary Examination is the early assessment of a student's potential for satisfactory completion of the doctoral degree. The exams are entirely closed books and notes.

All students admitted to the Ph.D. program on entry are required to take the examination. Students who enter with a declared M.S. or M. Eng. degree goal and who wish to petition for a change in degree goal to Ph.D. or D. Eng. must pass the examination before such petitions can be approved. Change of Degree goal petitions must be filed **BEFORE** completion of the M.S. or M. Eng. degree requirements and must be approved by the Vice Chair Graduate Studies and the Dean of the Graduate Division if a student is to register beyond the Master's Degree.

The examination is given twice a year in January and August. The examination must be taken upon completion of two semesters of registration for those students entering with a Bachelor's degree. Those entering with a Master's degree must take the examination upon completion of one registered semester or the second semester of registration. Some flexibility is allowed for students who do not have undergraduate degrees in mechanical engineering or closely related areas. These students may petition the Preliminary Examination Committee to take the examination at a later than normal time.

College regulations state that a student studying for the doctoral degree should maintain a GPA of 3.5 or better in the major field, and at least a 3.0 in the minor fields, and a 3.5 overall. With this in mind, students are only admitted to the Preliminary Examination with an overall GPA of 3.3, based on work done at Berkeley. Prior to passing the Preliminary Examination, all courses in the major field with the exception of ME 299, Independent Study must be taken for a letter grade. At most, one third of the total units of course work may be taken S/U.

The Preliminary Examination Committee will meet approximately one week after the last exam is given. This gives the committee an adequate amount of time to gather results and meet to discuss each student's individual circumstance. The results will then be mailed to the students. The results of the examination will be one of the following:

1. Pass - Continue in the doctoral program (for change of degree goal candidates admission to doctoral program.) Such students then prepare for the Ph.D. Oral Qualifying Examination.

2. Not Pass - The Examination Committee decides whether or not such students retake the examination a second time. The examination may not be taken more than twice.

There are nine core examination areas. In each area the two grades are Pass and Not Pass. The student must pass in three areas, one of which must be the proposed doctoral major. Students may attempt the Preliminary Examination in as many areas as they please at each offering. If a student only passes in one (or two) area(s) at the first offering, the student will still have to pass two (or more) areas at the following offering (provided a second examination is permitted). A student must attempt no fewer than three areas at the first offering. Students may review their solutions along with a typical recommendation solution to the problems with the area Advisor after the exam results are received. Preliminary Examination results are valid for five years.

ADVANCEMENT TO CANDIDACY (Master Students)

Before you can receive a Master's degree, you must first be Advanced to Candidacy. The opportunity for this occurs during the first two weeks of each semester. The Advancement to Candidacy form is available in the Student Services Office or on the following web address: http://www.grad.berkeley.edu/nav/forms.shtml and is completed in consultation with your MFA. Both the Research Advisor, Major Field Advisor and Vice Chair Graduate Study must sign this form prior to being sent to the Graduate Division for Advancement.

FILING FEE

It is necessary that you be registered during the term you receive your degree. There are times, however, when all the academic and research work for the degree is completed with the exception of the thesis or dissertation. Instead of registering for the semester and paying full fees, it is possible to go on Filing Fee. Filing Fee is a way of registering that costs $196.50. Filing Fee will apply for the length of the semester for which Filing Fee status has been approved. You may file for graduate degrees during the Summer Session if you are registered and enrolled. Degrees for which you file in Summer Sessions will be awarded at the end of the following fall semester. Summer Sessions enrollment must be for a minimum of four units. The current fee for Summer Sessions is approximately $182 per unit. You must apply for the filing Fee by the end of the first week of classes of the semester (or Summer Session) in which you intend to file. It can be used once to obtain the M.S. degree and once to obtain the Ph.D. degree. Filing Fee requires that you have been continuously registered except for two semester of approved withdrawal since you began your degree work, and that you must be registered in the semester (or in a Summer Session) immediately preceding the one for which Filing Fee status is requested. If you do not complete the dissertation, thesis, or make the final presentation of your research project under M.S. Plan II before your Filing Fee deadline you will be required to register for the following semester to receive your degree. The Filing Fee application can be found at : http://www.grad.berkeley.edu/nav/forms.shtml

Please note that you are not allowed to hold a student appointment, i.e. GSR or GSI, while on Filing Fee status.

You will not automatically be allowed library, gym or health insurance benefits while on Filing Fee, but it is possible to arrange for health insurance coverage, a library card and a Recreation Facilities pass by obtaining a memo from the Graduate Student Affairs Officer.

WHEN YOU TURN IN YOUR MASTER'S REPORT

The Engineering Library requires uniformity in the Title Page and binding of your MS Report. A copy of the correct title page can be found at http://www.me.berkeley.edu/new/grad/todo/htm. The Engineering Library will not accept ring bindings for your Report. It should be a plastic braded binding. The copy stores will know which binding as they do so many. Once you have presented your MS Report to your committee, you need to bring a signed, bound copy of the MS report to the Student Services Office. All reports are filed in the Engineering Library at Bechtel.

QUALIFYING EXAMS (PhD Students)

The Qualifying Examination Committee consists of four member, all of which must be members of the Berkeley Academic Senate. These faculty should represent (1) the major, which is in the Mechanical Engineering Department and (2) the minors, one of which must be from outside the Department. At least 2 members must be from within the ME Department and at least one from outside the Department. The chair of your PhD dissertation committee may **NOT** serve as a member of your qualifying exam committee. Permission to take the exam must be obtained from Graduate Division and they require at least a three weeks notice, minimum to approve your request for taking the Qualifying Exam. Therefore, the ***Qualifying Exam Application*** must be approved by the Vice Chair of Graduate Studies and the Graduate Division Dean at least **FOUR WEEKS PRIOR TO THE EXAM**. The Student Affairs Officer will process the application after you have completed and returned your Program of Study form. It is wise to plan a few months in advance since there are so many demands on faculty time and room use. Please see the staff in the Student Services Office, to reserve a room for your exam.

All courses that are counted toward the major **must be taken for a letter grade** prior to taking the qualifying examination. The exception is ME 299 research units. At most, one third of the total units may be taken S/U. Only one course in each minor can be taken S/U.

Note to Students:

In most major fields, a student must take at least 4 courses in the major and 2 courses in each minor before taking the qualifying examination. Students in solid mechanics must take 6 courses in the major and 3 courses in each minor before taking the qualifying examination.

PROGRAM OF STUDY FOR DOCTORAL CANDIDATE CARD

The student and his/her MFA decide upon the timing for the Qualifying Exam jointly. Located at http://www.me.berkeley.edu/new/grad/todo.html is the Program of Study for Doctoral Candidate Card. List all the classes you have taken as a graduate student at Berkeley. They are to be organized and listed into your required major and two minors. The columns are self-explanatory.

After you have completed and reviewed the program of study form with your Major Field Advisor they will sign Section 2.

Section 3, the ***Suggested Examination Committee*** is where you list the names of faculty who will be conducting the Qualifying Exam.

At the bottom of the card print the following information, date, time, and location of the qualifying exam. When the card is completed, bring it back to the Student Services Office for the approval and signature of the Vice Chair and submission to the Graduate Division for the Dean's approval.

AFTER THE EXAM

After you pass the exam, the Graduate Student Affairs Officer will ask you to come in and complete the Advancement to Candidacy Form. You need to complete the form within 2 weeks of passing the exam. It is important that you return this application right away. **YOU MUST BE ADVANCED TO CANDIDACY FOR AT LEAST TWO SEMESTERS BEFORE YOU GRADUATE**. These two semesters can include the semester in which you took the exam. You cannot go on Filing Fee or File your dissertation if you are not advanced to candidacy.

If you do not pass the exam, the Committee can recommend that you retake it once again after at least three months. The retake exam is conducted with the same committee members of your first exam and should be within eighteen months or special permission will be required.

WHEN YOU TURN IN YOUR DISSERTATION (Ph.D. Students)

If you thought that you were finished when you took your dissertation to the Graduate Division, Degrees and Petitions, 318 Sproul Hall, read on. You need to bring an unbound copy of your dissertation to the Engineering Library. When these things are taken care of you can be cleared for graduation.

FINANCING A GRADUATE EDUCATION AT BERKELEY

Numerous programs—from fellowships and loans to instructorships and research assistantships, subsidized housing and childcare—provide ways you can cut the cost of graduate school. Some of the programs are merit-based and administered through the Graduate Division Fellowships Office; others are need-based and administered through the Financial Aid Office. The academic departments administer additional funding sources. By tapping these and other resources, you can plan a program of financial support.

If you are not a resident of California, you will need to know the current requirements on establishing legal residency. While all out-of-state students are required to have three years of "financial independence" in California before being eligible to reclassify for lower registration fees, in most cases graduate students can qualify for legal residency by their second year of graduate school, thereby significantly reducing their fees.

International students and students who are not U.S. citizens or permanent residents cannot establish California residency and should expect to pay nonresident tuition each semester of their graduate study. Doctoral candidates, will be eligible for a NRT waiver for up to three years after Advancement to Candidacy.

GRADUATE STUDENT RESEARCH AND TEACHING ASSISTANTSHIPS

Graduate Student Research (GSR)

GSRs are supported to do research work that fulfills part of their degree requirements for the M.S. and Ph.D. degrees. You should carefully consider your Research Advisor's academic or industrial career prospects in selecting and committing yourself to a funded research project.

The duties of a GSR vary according to who your research advisor is and the chosen field of study. Some research advisors will give complete instructions with lots of detail about what they want. Others may give a general direction to "work on this" with no other instruction unless you ask. In some cases students may spend their first year developing presentations from coursework or from research literature and will only begin hands-on work after they have gained considerable background. In experimental work, GSRs may become more involved in the research projects sooner.

Most GSRs are paid from faculty grants. GSRs who work at least 45% time for the entire semester are entitled to have their GSHIP (Graduate Student Health Insurance Plan) paid. Non-resident Tuition and Fees are also paid by this GSR appointment.

Graduate Student Instructors (GSI)

GSIs are responsible for various aspects of course instruction. GSIs hold regular office hours and may also be asked to proctor exams, grade homework and make up solution sets. Some larger classes have Readers to help the GSI with grading homework.

GSIs believe that being a teaching assistant is great preparation for the Qualifying Exam, as both situations require good English skills and thinking accurately and spontaneously. It is required that all PhD students **HOLD** a GSI position for one semester and take ME 301 during their PhD studies. The Graduate Division requires all first-time GSI's to take or have taken ME 301.

Getting Paid

If you are a **GSI or Reader** in the Department of Mechanical Engineering you will complete your employment forms with the Undergraduate Assistant in the Student Service Office. Application forms are located at: http://www.me.berkeley.edu/studentemp.html Students holding Reader appointments must submit time cards each month. Failure to do so will result in your not receiving your monthly stipend as well as possible reversal of fee remission.

If you are a **GSR,** most employment forms are processed through the Organized Research Unit, (ORU) in which the PI's funds are held. These are usually paid from outside funding such as research grants. Your hiring faculty will direct you to the hiring unit where you will complete these hiring forms. Please inform the Student Services Office where your GSI/GSR/Reader appointment paperwork is processed each semester. The following are the most common ORUs:

Engineering Research Support Organization (ERSO) 199M Cory
Electronics Research Laboratory, (ERL), 253 Cory Hall
Institute of Transportation Studies, (ITS), 108B McLaughlin Hall

CALIFORNIA RESIDENCY

For tuition purposes, U.S. citizens or permanent residents who are not residents of California may be able to establish California residency to be effective in one year.

To become a California resident for tuition purposes, you must show that you have lived in California and established the intent to make California your permanent home for more than one year **BEFORE** the first day of classes in the semester for which you seek resident status. (For Fall 2009 classification, you must have been physically present in California by August 21, 2008.) You must begin to document your presence in the state as soon as you arrive. Be sure to:

Obtain a driver's license or a California Identification Card (if you have never had an out-of-state driver's license) within ten days of settling in California. You must have a valid California operator's license to drive a car, motorcycle, or moped in the state. You can obtain a license at any of the local Department of Motor Vehicles (DMV) offices in nearby Oakland (5300 Claremont Ave., Oakland, 94618 [800] 777-0133) or El Cerrito (6400 Manila Avenue; [510] 235-9171). If you have a driver's license from another state, you will be required to pass a written test of California vehicle laws, pass an eye exam, and provide a certified copy of your birth certificate. A driving test is required if you do not have a valid license from another state or if you plan to operate a motorcycle. The DMV handbook is located at the following web site: http://www.dmv.ca.gov/pubs/pubs.htm.

Register your vehicle in the state of California within 20 days of settling in California. Vehicles are registered at the local DMV office.

Open a local bank account as soon as possible and close all non-California bank accounts. Retain official documents showing the opening and closing of your accounts.

Register to vote and vote in California elections. Voter registration forms are available from the Graduate Division and at voter registration tables on Sproul Plaza or any fire station, public library, or DMV office. The form is postage-paid -- just fill it out and mail. You should receive verification from the County Registrar within four weeks of submitting your application. If you do not receive confirmation of your voter's registration you should immediately contact your County's Registrar of Voters.

Use your California address as your permanent address. Do not list your parents or any other out-of-state address as a permanent address on any University form or other legal documents.

Remain in California when school is not in session. Some travel allotted for purposes of research, fieldwork or a fellowship may not necessarily jeopardize your resident classification if the absence is part of a regular requirement for your degree program or fellowship. Contact the Residence Affairs Unit at 39 Sproul Hall for more information regarding any absences outside California.

Financial independence is another factor considered when determining your eligibility for classification as a California resident for tuition purposes. For fall classification, you are presumed by law to be financially independent if you are at least 24 years of age by December 31. If you will not be 24 years of age by this date, then you must show that you were not

claimed as an income tax deduction by your parents or any other individual for the next tax year. Financial independence is not a factor in determining residence for graduate students who are employed as Graduate Student Instructors or Graduate Student Researchers for a minimum of 49 percent time or awarded the equivalent in University-administered funds for the term in which resident classification is sought.

Your physical presence in California must be demonstrated during nonacademic periods. You should keep all dated material that proves your presence in the state, including airline tickets; paycheck stubs from work; credit card receipts; and bank and credit card statements showing ATM, credit card, and debit card activity. Students with joint accounts should consult with the Residence Affairs Unit. The credit card receipts need not be signature copies. Please note that the foregoing items are primary indicators of physical presence and will be weighed heavily in determining your status. Items such as copies of lease agreements, rent or utility checks, etc., are much lesser indicators of physical presence and are not acceptable alone. Your intent will be questioned if you are absent from California for more than 21 total days during the period in which you are establishing resident status for tuition purposes. Graduate students who are planning to travel outside of California for more than 21 total days during nonacademic periods should visit the Residence Affairs Unit, 39 Sproul Hall, to seek advising prior to filing for classification and leaving the state.

For more information, contact the Residence Affairs Unit at 39 Sproul Hall, (510) 642-1614, or see the handout "Establishing Legal Residence for Tuition Purposes at the University of California," available from the Graduate Division, in your department, or at the Office of the Registrar Web site (http://registrar.berkeley.edu/Residency/establish.html).

Note: This summary is not a complete explanation of the law regarding California residence. Please note that changes may be made in the residence requirements between this publication date and the relevant residence determination date.

DEPARTMENT AND CAMPUS SERVICES

DISABLED STUDENTS PROGRAM

The campus offers many different resources for graduate students with disabilities. The purpose of an academic accommodation is to offer the graduate student an equal opportunity to meet the department's academic standards and requirements. The Disabled Students Program [link to http://dsp.berkeley.edu] at (510) 642-0518 serves graduate students with disabilities (who complete the process for establishing eligibility) by authorizing academic accommodations. Disabled Access Services [link to http://access.berkeley.edu] at (510) 643-6473 or 643-6456 can usually assist with accommodations to extra-curricular events. Most physical access issues are addressed in the Campus Access Guide [link to http://acads.chance.berkeley.edu/CAG/]. Finally, problems with accommodations may be reported to the campus Disability Resolution Officer [link to http://acads.chance.berkeley.edu/ada.shtml] at (510) 642-2795.

REPRODUCTION SERVICES

Students may use the copy machine on the 6th floor. Your faculty member must submit a memo to the Financial Assistant in 6195 Etcheverry requesting an account number. This account

number is valid during the current semester only. Please remember that students are last in terms of priority for using the machine – after faculty, staff, and visiting scholars.

PHOTO IDENTIFICATION

All students must have your photo taken for your student I.D. card. The Cal Photo ID card is the official student identification. It is important that you obtain your card as soon as possible. Your ID card will be created on the spot using a computerized photo identification system. To obtain your card you need to bring your TeleBEARS letter or Letter of Acceptance, Student Identification Number and a valid photo ID (driver's license, state ID card or passport). We recommend that you bring reading material as the lines can be quite long at times.

Your Cal ID card will last for years. Lost or damaged cards may be replaced at the Cal Photo ID Office for a $15 nonrefundable replacement fee.

The Cal Photo ID Office is located at 110 Cesar Chavez Center, Lower Sproul Plaza. The office is open Monday through Friday 9:00 am to 5:00 pm. For additional information check the website: http://www.housing.berkeley.edu/photoid/welcome.html

LIBRARY

Your Cal Photo ID also serves as your library card at both the Doe and Moffitt libraries as well as subject specialty libraries. It also allows you to use the library of any other campus in the UC system, as well as interlibrary borrowing (www.lib.berkeley.edu/ILS/ibs.html). You are eligible for free borrowing privileges from the Stanford University Libraries and the University of Texas, Austin, through the Research Library Cooperative Program (RLCP). For more information, visit the Library Service Desk, Level A, Gardner Stacks.

When you arrive on campus, a good way to get acquainted with the vast resources of the Library is to enroll in drop-in library research, Internet, and other workshops (including online catalog and article database orientation) or a faculty seminar offered by the Teaching Library, (510) 643-9959. If you are a Graduate Student Instructor, you can arrange for a library resources session for your class by calling the Teaching Library. If a subject specialty library serves your discipline, phone that library for specific tour information. A listing of subject specialty libraries is available on the Library Web site (www.lib.berkeley.edu/).

Subject specialists are available for consultation in Doe Library and the subject specialty libraries. Phone the library that serves your discipline or one of the following Doe/Moffitt Library services: Art History/Classics, (510) 642-5358, Area Studies, (510) 642-0956, Government & Social Sciences Information Services, (510) 642-2569, Humanities, (510) 642-7600, or South/Southeast Asian Library, (510) 642-3095.

STUDENT MAIL

There is a 3-drawer file cabinet on the 6th floor of Etcheverry next to the elevator on the North side. Graduate Student mail is put into these drawers by staff. It is your responsibility to pick up your mail on a regular basis. The drawers are cleared out about every 3 months and any mail in them is discarded. **DO NOT HAVE ANY PERSONAL MAIL SENT TO ETCHEVERRY**. All personal mail will be returned to sender. All mail must have the mail code 1742. The file

cabinet remains unlocked during working hours (8 am – 5 pm) otherwise they remain locked for security reasons. The hours could change depending on staff availability.

EVENTS

Graduate Reception. Approximately two Fridays a month, the Student Services Office and MEGSCo hosts a reception on the Etcheverry Roof (weather permitting) for all students, faculty and staff from 5:00pm – 6:30pm. This is an opportunity for graduate students, faculty and staff to get better acquainted.

Holiday Party. This annual holiday party is held several weeks prior to the winter break. The party is normally organized by the Department Social Committee for faculty, staff and students and their families and is a fun filled occasion.

STUDENT ORGANIZATIONS

There are many student organization groups on campus, which you may be interested in joining. Some of these are listed below. For more information on other student groups contact Student Activities and Services in 102 Sproul, 642-5778.

American Society of Mechanical Engineers (ASME). This professional organization provides information on conferences, papers published and jobs in the profession. If you'd like to become a member of ASME, stop by our office in 220 Bechtel and pick up an application. Student membership is $20 per year. This membership includes, monthly subscription to Mechanical Engineering magazine & ASME News, San Francisco Section newsletter and an ASME pin. You can also apply for membership at the ASME International website. Applications are available in PDF. Website: www.me.berkeley.edu/~asme/

Association of Graduate Student Employees (United Auto Workers, local 2165). We are the Association of Graduate Student Employees, AGSE/UAW Local 2165, the labor union that a majority of the student academic employees (graduate student instructors, graduate student researchers, readers, tutors, acting instructors, community teaching fellows, and nursery school assistants) at the University of California at Berkeley have chosen to represent them. Website: http://www.laborcenter.org/

Berkeley Chinese Students-Scholars Association. The Berkeley Chinese Students-Scholars Association has social' cultural and academic interests. Contact Student Activities and Services Office, for information on a contact person.

Black Graduate Engineering and Science Students (BGESS). BGESS was created to fulfill the role of both academic and social support systems for African-American graduate students in the fields of Engineering and Applied Sciences. The principal objectives of BGESS are the recruitment and retention of African-American graduate students, at both the Master of Science and Doctor of Philosophy level. Other objectives include recruitment of African-American faculty in the area of Engineering and Applied Sciences to UC Berkeley.

Chinese Student Service Center. This group was formed to facilitate the accommodation of American culture for Chinese Students from Taiwan. It was also formed to enhance mutual understanding of culture for Chinese students on campus.

Graduate Students de la Raza. This is a campus wide, cultural, social, support group for Chicano and Latino graduate/professional students. For more information, call 642-0240, 3404 Dwinelle Hall.

Graduate Women in Etcheverry (GWE). The GWE is a group of graduate women in Mechanical and Nuclear Engineering and IEOR Departments. It is primarily a source for networking and support for women pursuing graduate studies in engineering. We enjoy social events such as coffee hours and brown bag lunches but also work closely with the department administration to actively improve life at Berkeley for all engineering students through student surveys, mentoring and social activities. For further information check our website: www.me.berkeley.edu/gwe or contact Carolyn Sparrey at csparrey@me.berkeley.edu.

Korean Graduate Student Association. This is a group organized within the department as a social, cultural support group for Korean students. This group usually has orientations for new students and farewell parties for departing students. For information check website: http://kgsa.berkeley.edu/

Mechanical Engineering Graduate Student Council (MEGSCo). MEGSCo acts as a liaison between students and faculty for ideas, suggestions, and complaints regarding:

1. Student activities
2. Building safety and conditions
3. Student academic policy
4. Issues of concern to the Etcheverry hall community as they arise.

Formed in 1990, MEGSCo has participated in constructive discussions leading to improvement of Etcheverry Hall after-dark parking for students. It also organizes a regular rooftop happy hour, providing an opportunity for students, faculty and staff to meet and have discussions in an informal setting. Website: www.me.berkeley.edu/megsco/

Society of Women Engineers (SWE). Provides career opportunities and support for women in engineering. SWE can be contacted on line at swe.berkeley@gmail.com.

Women in Computer Science and Engineering (WCSE). The purpose of this group is to promote mentoring and peer advising for students. The group meets on Fridays for lunch and is primarily made up of EECS (Electrical Engineering and Computer Science) graduate women students. ME Graduate women are very welcome also. Contact Sheila Humphries, EECS Dept. 643-8205 for further information.

For additional student organizations visit www.me.berkeley.edu/student_organizations.html

CHILD CARE

The University Child Care Program serves student families, with priority given to children currently enrolled in the program and then to children of families with low incomes. There are also some full-fee spaces available. Services are available to registered Berkeley students with children from three months to seven years. Parents are asked to participate at the Child Care centers for two hours a week. Contact Child Care Services, 2537 Haste Street, (510) 642-1827, or see the Web site (www.housing.berkeley.edu/child/) for more information. Bananas, a local Child Care Referral Agency, can provide names of other child care services in the community if you should find yourself on a waiting list with UC Child Care. Call them at (510) 658-0381 for more information.

SAFETY

On the campus and in the surrounding area, you should take the usual precautions you would in any urban setting. When you arrive on campus, take the opportunity to tour the campus during daylight hours to get familiar with your surroundings. If you need to be on campus at night, stay on lighted, well-traveled walkways, or use the Night Safety Shuttle and Night Escort Service. For information, call the 24-hour Cal-B-SAFE information line at (510) 642-7233, or see the UC Berkeley Police Department Web site (http://police.berkeley.edu).

EMERGENCY PROCEDURES

Ask your research supervisor or the shop supervisor for emergency procedures for the area in which you are working in case of earthquakes, suspicious packages, etc. Inquire about the availability of first aid and what to do in case of injury.

Check the safety manual website: www.me.berkeley.edu/safety_manual/index.html for further information.

The Office of Emergency Preparedness has information on how you can prepare your home and office for earthquakes and other emergencies. For information, call (510) 642-9036, or see the office's Web site www.berkeley.edu/oep/.

The University maintains a reference guide of safety information and procedures, annual campus crime statistics, and emergency-disaster preparedness information. A copy of this report, Safety Counts, will be mailed to you at your department. If you do not receive a copy, you may contact the Police Department Campus Safety Programs (mail to: ucpolice@uclink.berkeley.edu, 643-6442, or University of California, Berkeley, Police Department, Attention: Campus Safety Programs, 1 Sproul Hall, Berkeley, CA 94720-1199). Or, you can find the report on the UC Berkeley Police Department website http://police.berkeley.edu.

SAFETY IN THE SHOP

Before you can work in the machine shop, it is necessary for you to attend an orientation. This orientation is to familiarize you with various types of equipment within the machine shop. These orientations are given as group training session once or twice per semester by appointment. Contact the Safety Coordinator in 1168 Etcheverry to make an appointment.

You are also required to take a Shop Safety Class from the Environmental Health & Safety (EH&S) Office **PRIOR** to doing **ANY** research in any of the Mechanical Engineering Laboratories. These safety classes are usually given during the first 3 weeks of the Fall and Spring Semesters.

PROFESSIONAL ENGINEER LICENSE

Contact the Board of Registration for Professional Engineers at 1428 Howe Ave. Suite 56, Sacramento, CA 95825 (916) 926-7466. University Extension offers examination preparation courses. http://www.unex.berkeley.edu/

EARTHQUAKEs occur in California but to our knowledge there has never been an earthquake related injury on the Berkeley campus. For information relating to earthquake preparedness we refer you to Environmental Health and Safety, 643-7381. You can also check the website: www.seismo.berkeley.edu/seismo/.

Etcheverry hall does not have alternate emergency lighting in all laboratories, especially those on the first and second floors. It is recommended that those working in laboratories have easy access to a flashlight in the event of a power outage.

HOUSING AND TRANSPORTATION

HOUSING

Most graduate students live off campus in an apartment or house. Searching for housing in the Bay Area can be a challenge, so plan to spend several days looking for rentals in Berkeley and nearby cities. Rentals range from $700-$1,000 per month for a room in a shared apartment or house, $650-$1,500 per month for a studio apartment, $1,000 – $1,500 per month for a one-bedroom apartment, $950 and up per month for a two-bedroom apartment outside of Berkeley, and $1,500 and up for a two-bedroom apartment in Berkeley.

The University's Cal Rentals Office, (calrentals.housing.berkeley.edu/), located at 2405 Bowditch Street lists vacant apartments and shared rentals. Most are in the East Bay. Student housing counselors are available in the office on a drop-in basis to answer your questions. To examine the listings, be sure to bring your letter of admission and photo identification. There is a modest fee for all services. You may obtain the listings by e-mail in advance of your arrival. Call (510) 642-3642, or e-mail homeinfo@uclink4.berkeley.edu.

Another place to look for off-campus housing is in local newspapers: The Oakland Tribune, The Berkeley Voice, The Montclarion, The East Bay Express, and The Daily Californian. You can also buy a subscription for rental listings at a fee agency, such as Homefinders, for about $65, or $75 with additional e-mail services.

The Manville Apartments consist of 132 small, single studios for law and graduate students. Rents range from $661-717 per month. Single graduate students may also live in the University residence halls, and certain halls are designated for upper division/graduate students. Be aware, however, that in the residence halls you will be assigned to a double or a triple room, and you are committed to a contract for an academic year. For more information, contact University of California, Berkeley, Residential & Student Service Programs, 2610 Channing Way, Berkeley, CA, (510) 642-2456 or email www.housing@berkeley.edu.

If you are married or a single parent, you can be added to a wait list for Family Student Housing that is located either several blocks from campus or at University Village in the nearby city of Albany, about a 25-minute bike ride northwest of campus. Rates are less expensive than comparable off-campus housing (1999-2000 rates ranged from $425 for a one-bedroom to $655 for a three-bedroom unit). Rates for new units in the East Village Apartments range from $990-1,175 for two- and three-bedroom units. If you are interested, immediately contact Residential & Student Service Programs, 2610 Channing Way, (510) 642-2456, or e-mail www.housing@berkeley.edu.

PARKING AND TRANSPORTATION

Parking for students near campus is severely limited, and on street parking in the surrounding area is restricted to two hours for nonresidents of the area. The best plan is to walk, bike, or use public transportation.

Bike racks outside most buildings make bicycling to campus a convenient and inexpensive transportation solution. Be sure to always lock your bike securely. Ask about the Berkeley Lock Program at Berkeley TRiP (see below), which offers a subsidy on high-quality locks. Bikes must be registered. Registration costs $6 for three years. You can register at the Parking & Transportation Bicycle Registration Office, located at 2150 Kittredge Street, (510) 642-4936, or at a local police department. Be sure to pick up a copy of the campus Bike Book.

BERKELEY TRiP

Berkeley TRiP is located at 2033 Center Street and provides information about Bay Area alternate transportation, including campus shuttles, the AC Transit Class Pass, carpools, and Bay Area Rapid Transit (BART). The AC Transit Class Pass gives Cal Students unlimited rides all semester long on AC Transit, including the Transbay routes to San Francisco. For more information on this and other alternate transportation programs, call Berkeley TRiP at (510) 643-7665, or e-mail berktrip@uclink4.berkeley.edu. You can also visit the Alternate Transportation section of the Parking & Transportation web site (www.berkeley.edu/transportation/).

Remember to use your AC Transit Class Pass on CAL's many shuttle routes. The Campus Transit System runs 11 lines to and around campus nearly 24 hours a day. The shuttle routes offer service to Moffitt Library, BART, the ASUC, and other popular destinations. Shuttle schedules are available on board or on the Parking & Transportation Web site. Motorcycles and scooters (without pedals) may park in designated areas with display of a valid parking permit. You can buy motorcycle/scooter permits at Parking & Transportation Permit Services, 2150 Kittredge Street, from 7:30 a.m. to 4 p.m. on Mondays, Tuesdays, Thursdays, and Fridays and from 7:30 a.m. to 5:30 p.m. on Wednesdays.

If you need to drive to campus and live two or more miles away, you can get an all-day parking permit for designated student fee lots by applying in person at Parking & Transportation Permit Services. Be sure to bring your Cal Photo ID card and proof of local residence, such as a rental agreement, utility bill, and driver's license. If you drive to campus every day, you can save money by purchasing a prepaid student-parking permit for a full semester. If you drive to campus only occasionally, you may purchase a Daily Student Fee Lot Permit that allows you to park in student lots. Night/weekend permits also are available. Maps showing parking areas are available at the Permit Services Office. For current permit prices, please call (510) 642-4283, or check the Parking & Transportation web site (www.berkeley.edu/transportation/).o

Public parking is available before the first week of classes in the Underhill, Ellsworth, and Foothill lots with display of a daily ticket purchased from machines at the lots. For more information, call Parking & Transportation at (510) 642-4283.

PUBLICATIONS OF INTEREST

Daily Cal – Daily campus newspaper: interesting articles, editorials, comics on campus and community.

East Bay Express: Free Bay Area newspaper. Will keep you informed on entertainment in and around the East Bay, also includes, movie reviews and a classified section.

Bay Guardian published in San Francisco

East Bay Guardian – East Bay version of the Bay Guardian.

The Graduate – Published by the Graduate Assembly

Resource: A Reference Guide for New Berkeley Students, published by Student Activities and Services and distributed at Orientation.

EXERCISE

You will find just about everything you'll need to stay in shape at the campus Recreational Sports Facility (RSF): swimming pool, racquetball/handball courts, weight room, cardiovascular machines, basketball, volleyball and badminton courts, fitness classes, and more. Once you have your Cal Photo ID, you can use the RSF free of charge. Cal Aerobics, CalFIT classes, and one-on-one personal training are available at special student rates. Spouses of UC Berkeley graduate students can buy a pass to the RSF for a special rate of $99/semester and $25/summer. Call (510) 642-7796 for more information. Web site: http://calbears.berkeley.edu/info/calrec.html

FEEDBACK SHEET

This page is provided so you can make comments and suggestions about the handbook. This is the fourth edition of the first student handbook for this department. We are interested to know if you find it useful and will readily consider any additions or improvements you would like to see in the next edition. Please write your comments below and return this page to the Student Service Office, 6189 Etcheverry Hall.

Name/Enrollment Year (optional)