3-11-1997

Faculty Senate Meeting Minutes, 03/11/1997, p 758-856

UNM Faculty Senate

THE UNIVERSITY OF NEW MEXICO

FACULTY SENATE MINUTES

1996-97

VOLUME 22

UNIVERSITY OF NEW MEXICO
FACULTY SENATE
MEETING AGENDA

March 11, 1997
3:30 - 5:30 p.m.
Kiva

	AGENDA TOPICS	TYPE OF ITEM/PRESENTER(S)
	1. Approval of Agenda	**ACTION**
pp. 1-12	2. Approval of Summarized Minutes for February 25, 1997	**ACTION**
	3. Senate President's Report	**INFORMATION** Beulah Woodfin
	Tabled Item: (from 2-25-97 Faculty Senate Meeting) • New BS degree in Geography - Geography *MOVED FROM AGENDA ITEM #7*	
	4. Provost's Report	**INFORMATION** William C. Gordon
	5. Resolution for Faculty Task Force to Develop A Process for Administrative Review **(Tabled from 2-25-97 Faculty Senate Meeting)**	**ACTION** Neeraj Magotra
	6. Nominations for Academic Freedom & Tenure Committee	**ACTION**
	7. Forms C from the Curricula Committee	**ACTION**
	~~**Tabled Item: (from 2-25-97 Faculty Senate Meeting)**~~ ~~• New BS degree in Geography - Geography~~ *MOVED TO FOLLOW AGENDA ITEM #3*	
	New Items: • Revision of degree/minor - Sociology/Criminology • Revision of Manufacturing & Robotics Option-Bachelor of Engineering degree • Deletion of Paleoecology Minor - Earth & Planetary Sciences • Revision of major and minor - Economics • Revision of major - Spanish & Portuguese • Revision of major in Chemical Engineering - Chemical & Nuclear Engineering • Revision of major in Nuclear Engineering - Chemical & Nuclear Engineering • Deletion of certificate - Radiation Therapy • Master of Science in Nursing concentration name change from Medical-Surgical to Adult Health • Revision of BS in Medical Laboratory Sciences - Medical Laboratory Sciences • Deletion of Certificate-Pre-Health Science Profession Certificate (Valencia Campus) • Revision of degree-Associate of Science in General Science (Valencia Campus) ***Form D:*** • New graduate degree Master's in Engineering - Civil Engineering	
	8. Improving Continuity in Faculty Governance	**DISCUSSION** Beulah Woodfin
	9. Open Discussion and New Business	
	10. Adjournment	

*AMENDMENTS SHOWN IN ~~STRIKEOUT~~ AND **SHADOWED** FONTS.*

FOR MORE INFORMATION CONTACT THE OFFICE OF THE UNIVERSITY SECRETARY, 277-4664

THE UNIVERSITY OF NEW MEXICO
FACULTY SENATE
SUMMARIZED MEETING MINUTES

March 11, 1997

The Faculty Senate meeting was called to order at 3:35 p.m., on March 11, 1997, in the Kiva. Senate President Beulah Woodfin presided.

Senators present: Steven Block (Music), James Boone (Anthropology), Laura Crossey (Earth & Planetary Sciences), William Dail (Anatomy), Helen Damico (English), Victor Delclos (Individual, Family & Community Education), Michelle Diel (Valencia), Kurt Fiedler (Neurology), John Gahl (Electrical & Computer Engineering), Patrick Gallacher (English), Deborah Graham (Health Sciences Library), Thomas Hagstrom (Mathematics & Statistics), William Johnson (Biology), Christiane Joost-Gaugier (Art & Art History), George Luger (Computer Science), Neeraj Magotra (Electrical & Computer Science), Christine Nathe (Dental Hygiene), Elizabeth Nielsen (Education Specialities), Eric Nuttall (Chemical & Nuclear Engineering), Peter Pabisch (Foreign Languages & Literatures), Jonathan Porter (History), Richard Reid (Anderson), Philip Reyes (Biochemistry), Mario Rivera (Public Administration), Stephanie Ruby (Cell Biology), Christine Sauer (Economics), Sandra Schwanberg (Nursing), Loretta Serna (Education Specialities), Joseph Spaeth (Radiology), Scott Taylor (Law), Carolyn Voss (Medicine), Holly Waldron (Psychology), Gerald Weiss (Physiology), Paul Weiss (General Library), Sherman Wilcox (Linguistics) Beulah Woodfin (Biochemistry), Melvin Yazawa (History), Nancy Ziegler (Gallup)

Senators absent: Margery Amdur (Art & Art History), Alok Bohara (Economics), Tom DeCoster (Orthopaedics), Raul de Gouvea (Anderson), Diane Dotts (Gallup), Jaime Grinberg (Education), Peggy Kelley (Surgery), Craig Kelsey (Physical Performance & Development), Larry Lavender (Theatre & Dance), Wanda Martin (English), Gloria Sarto (Obstretics & Gynecology), Nicole Touchet (Family & Community Medicine), and ex-officio Senate Operations member, Harry Llull (General Library)

Senators excused: Jane Bruker (Gallup), William Buss (Pharmacology), Joseph Champoux (Anderson), Ernest Dole (Pharmacy), Gregory Franchini (Psychiatry), John Geissman (Earth & Planetary Sciences), Donald Neamen (Electrical & Computer Engineering), Mete Turan (Architecture & Planning), Pauline Turner (Individual, Family & Community Education)

Guests present: Barbara Fricke (Medical Lab Sciences/Pathology), Philip Ganderton (Economics), Richard Heggen (Civil Engineering), Alexis Kerschner (*Daily Lobo*), Paul Matthews (Geography), Mohsen Shahinpoor (Mechanical Engineering)

1. **APPROVAL OF AGENDA**
   The agenda was approved after the following amendment was made: The tabled

item from the February 25, 1997 Senate meeting for a New BS degree in Geography was repositioned. It was moved up from under agenda item #7, Forms C from the Curricula Committee, to follow agenda item #3, the Senate President's Report.

2. **APPROVAL OF SUMMARIZED MINUTES (February 25, 1997)**
The summarized minutes for February 25, 1997 were approved as presented.

3. **SENATE PRESIDENT'S REPORT**
Senate President Beulah Woodfin reported on the following:

- Faculty volunteers will be needed for the task force to develop a process for administrative review, pending approval of a resolution by the Senate at this meeting. There have already been some volunteers.

- The Board of Regents held its organization meeting Monday, March 10, 1997. The new officers are: Larry Willard, President; Barbara Brazil, Vice President; and Mary Tang, Secretary/Treasurer.

- Subcommittees of the Regents will remain unchanged. The three subcommittees are: Regents' Academic and Student Affairs Committee, Regents' Finance and Facilities Committee, and Regents' Health Sciences Committee.

- A general faculty meeting has been scheduled for March 25, 1997, at 3:30 p.m., in the SUB North Ballroom. The meeting was scheduled in response to a petition signed by 5% of the voting faculty. The petitioners are proposing two amendments to the core curriculum policy approved by the Senate on January 28, 1997.

- The Senate Operations Committee is preparing to present a discussion on tenure at the next Regents' Academic and Student Affairs Committee meeting. The discussion will address the Senate's and the Regents' differences on the Post-Tenure Review Policy.

- A joint AAUP/Faculty Senate forum to discuss budget and salary issues has been scheduled for April 15, 1997, at 3:30 p.m., in Woodward Hall, Room 101.

- At the February 11, 1997 Senate meeting, the Community Education Committee requested an open meeting for faculty to discuss the Western Governors' University, and distance education in general. The meeting will be held on April 29, 1997. The time and location of the meeting will be announced through the Office of the University Secretary.

- President Woodfin encouraged Senators and their colleagues to attend the various scheduled meetings.

President Woodfin addressed Senator Pabisch's concerns about whether the Faculty Senate should conduct regular Senate business at extra meetings. He has had problems of availability for other than the regularly scheduled Senate meetings, and feels that business at extra Senate meetings should have been limited to curricular issues as previously indicated. President Woodfin stated the large load of the Senate to act on curricular issues was the reason for the extra meetings. The Senate Operations decided to add a variety of issues on Senate agendas for the extra meetings along with the curricular requests to generate a quorum at these meetings.

Discussion ensued. Some Senators felt the Senate should meet as frequently as needed to conduct business. A few Senators felt the Senate was wasting time going over issues already discussed at great length by other committees. The *Faculty Handbook* specifies the Senate should meet at least once a month.

President Woodfin suggested further discussion regarding these concerns continue through the Faculty Senate listserv.

(At this point, the curricular request from the Geography department was considered.)

The curricular request for a new BS degree in Geography was tabled at the February 25, 1997 Faculty Senate meeting. At that meeting, Senator Crossey expressed concern regarding the change in the course work requirements from 12 to 9 credits in Biology or Earth and Planetary Sciences. The change was made by the Curricula Committee. After discussion on whether students should be encouraged to establish a distinct minor in either Biology or Earth and Planetary Sciences, the Senate approved by voice vote the following request as it was presented:

- New BS degree in Geography - Geography

4. **PROVOST'S REPORT**

Provost William C. Gordon was unable to attend this meeting. President Woodfin reported briefly on the following:

- The establishment of seven task force committees consisting of faculty, staff and students to look at issues for systemic changes has progressed. Three of these committees have been established and the membership of the remaining

four committees will be finalized shortly.

- The four-year instructional budget approved by the House Appropriations and Finance Committee, and subsequently passed by the House of Representatives, calls for next year 's funding at 99% instead of 100%. For the current year a 1.5% reduction in higher education appropriations means a 6% budget cut for the final quarter of this academic year. This budget also calls for a 2% increase in compensation.

5. **RESOLUTION FOR FACULTY TASK FORCE TO DEVELOP A PROCESS FOR ADMINISTRATIVE REVIEW**

The motion for a faculty task force to develop a process for administrative review presented by Senator Magotra was discussed at the February 25, 1997 Senate meeting. However, due to concerns regarding rewording of the motion and meeting time constraints further discussion and action on the motion were tabled then.

A substitute motion by Senator Wanda Martin distributed at this meeting was introduced for discussion. Senator Magotra accepted Senator Martin's motion as a substitute for his original motion.

Discussion ensued. Senators made suggestions for wording preferences in items #1 and 2 of the motion. Senator Joost-Gaugier's motion to add " . . . to faculty members and the Board of Regents" to the end of item #2 in the motion was approved by voice vote of the Senate.

After discussing the frequency at which evaluations of administrators should occur, the Senate decided to give the task force flexibility in developing a method for these evaluations.

The Faculty Senate amended and adopted by voice vote Senator Martin's substitute resolution for a faculty task force to develop a process for administrative review.

RESOLUTION FOR FACULTY TASK FORCE
TO DEVELOP A PROCESS FOR ADMINISTRATIVE REVIEW

March 11, 1997

Whereas, annual evaluations of administrators above the dean's level to the President are not consistently being conducted;

Therefore, be it resolved, that the Faculty Senate set up a task force to:

1) Study the policies and procedures currently governing the evaluation of administrators above the dean's level and,

2) Propose to the Faculty Senate a method that will assure the regular evaluation of those administrators and the dissemination of the information thus acquired to faculty members and the Board of Regents.

6. **NOMINATIONS FOR ACADEMIC FREEDOM & TENURE**

Senate President Woodfin announced that nominations for the 1997-99 membership on the Academic Freedom & Tenure Committee would be accepted from the Senate floor. The Faculty Constitution has a provision that allows for nominations for the Academic Freedom & Tenure Committee to be made at Senate meetings. Fourteen nominations are required from which seven members will be elected by mail ballot. President Woodfin said the deadline for receipt of the nominations for the Academic Freedom & Tenure Committee, Committee on Governance, and at-large senators has been extended beyond Spring Break. Due to Printing Services' delay in getting the nominations packets copied and distributed, some faculty may have not gotten the forms in time.

Senators nominated the following faculty for 1997-99 membership on the Academic Freedom & Tenure Committee:

- Tim Lowrey (Biology) was nominated by Senator William Johnson,
- Susan Deese-Roberts (General Library) was nominated by Senator Paul Weiss,
- Edl Schamiloglu (Electrical & Computer Engineering) was nominated by Senator Neeraj Magotra,
- John Crawford (Valencia) was nominated by Senator Michelle Diel.

The nominees have indicated to their nominators that they are willing to serve if elected.

7. **FORMS C FROM THE CURRICULA COMMITTEE**

The Senate discussed and tabled by a show of hands the following curricular request due to concerns regarding the grade C- issue in the catalog description. No departmental representative was available for discussion of this curricular request. It will be presented for discussion and action at the April 8, 1997 Senate meeting.

- Revision of degree/minor - Sociology/Criminology

The Senate discussed and approved by voice vote the following curricular requests

as presented from the Curricula Committee:

- Revision of Manufacturing & Robotics Option-Bachelor of Engineering degree
- Deletion of Paleoecology Minor - Earth & Planetary Sciences
- Revision of major and minor - Economics
- Revision of major - Spanish & Portuguese
- Deletion of certificate - Radiation Therapy
- Master of Science in Nursing concentration name change from Medical-Surgical to Adult Health
- Deletion of Certificate-Pre-Health Science Professional Certificate (Valencia Campus)
- Revision of degree-Associate of Science in General Science (Valencia Campus)

Senator Weiss congratulated the Economics department for its well-written and easily understood curricular proposal.

The Senate discussed and approved by voice vote the following curricular requests, pending correlation with the core curriculum policy:

- Revision of major in Chemical Engineering - Chemical & Nuclear Engineering
- Revision of major in Nuclear Engineering - Chemical & Nuclear Engineering
- Revision of BS in Medical Laboratory Sciences - Medical Laboratory Sciences

The Senate discussed and approved by voice vote the following Form D, request for a new graduate degree:

- New graduate degree Master's in Engineering - Civil Engineering

The question was raised on how the core curriculum would be incorporated into these requests. President Woodfin responded two amendments are being proposed to the core curriculum policy passed by the Senate on January 28, 1997. If these amendments are approved at the general faculty meeting on March 25, 1997, they will be sent back to the Senate for consideration. The Senate, then, can either adopt the recommended changes or not. If the Senate votes not to adopt the changes, then it will be put to a vote of the faculty by mail ballot. When the core curriculum in its final form is approved, the Registrar's Office working with the colleges will have the responsibility of making sure that all degree programs reflect the provisions of the core curriculum.

President Woodfin reminded Senators that questions regarding curricular requests can be discussed via the Faculty Senate listserv before Senate meetings.

8. **IMPROVING CONTINUITY IN FACULTY GOVERNANCE**

Senate President Woodfin presented for discussion possible mechanisms by which the continuity of faculty governance at UNM could be improved. President Woodfin said she is committed to a strong role of the faculty in the governance of UNM. It is possible the criticism the Faculty Senate receives may be due to lack of continuity.

Suggested amendments to the Faculty Senate bylaws and the Faculty Constitution were presented by President Woodfin to Senators via the Faculty Senate listserv. The amendments to the bylaws would be to elect a president-elect for one year, then serve as president for a year. The amendment to the constitution would increase the present two-term (four years) limit for Senators' appointments to six years.

Senators discussed the suggestions to improve continuity. A few Senators were not convinced that having a president-elect or changing the term limits for Senators would help. Some Senators are opposed to term limits and would like to see this issue addressed. Most Senators supported the continuity concept in general, but were undecided what mechanisms should be used.

9. **OPEN DISCUSSION AND NEW BUSINESS**

Senator Waldron asked for clarification on how curricular requests approved by the Senate before approval of the core curriculum policy would be affected. President Woodfin said existing programs, including those approved by the Senate before January 28, 1997, will have to come into compliance with the core curriculum policy. However, students and their progress toward degrees are governed by the catalog in existence at the time they enter classes at UNM. It is hoped that the new core curriculum will be in place in the next catalog.

10. **ADJOURNMENT**

The meeting adjourned at 5:30 p.m.

Respectfully submitted by:

Marí A. Ulibarrí
Administrative Assistant III
Office of the University Secretary

Approved by:

Vivian Valencia
University Secretary

The University of New Mexico

Office of the Secretary
Scholes Hall 101
Albuquerque, NM 87131-3386
(505) 277-4664

February 27, 1997

TO: Faculty Senators

FROM: Beulah Woodfin, Faculty Senate President

SUBJECT: Forms C and Form D for Action at March 11, 1997 Senate Meeting

In response to Senators' concerns of inadequate time to review curricular requests prior to Senate meetings, the following copies of Forms C and Form D are being forwarded to you at this time. Please bring this packet with you to the March 11, 1997 meeting.

Tabled Item (from 2-25-97 Faculty Senate Meeting):

pp. 1-8 • New BS degree in Geography - Geography

Forms C:

pp. 9-10 • Revision of degree/minor - Sociology/Criminology
pp. 11-12 • Revision of Manufacturing & Robotics Option-Bachelor of Engineering degree
pp. 13-16 • Deletion of Paleoecology Minor - Earth & Planetary Sciences
pp. 17-21 • Revision of major and minor - Economics
pp. 22-24 • Revision of major - Spanish & Portuguese
pp. 25-34 • Revision of major in Chemical Engineering - Chemical & Nuclear Engineering
pp. 35-40 • Revision of major in Nuclear Engineering - Chemical & Nuclear Engineering
p. 41 • Deletion of certificate - Radiation Therapy
p. 42 • Master of Science in Nursing concentration name change from Medical-Surgical to Adult Health
pp. 43-57 • Revision of BS in Medical Laboratory Sciences - Medical Laboratory Sciences
p. 58 • Deletion of Certificate-Pre-Health Science Profession Certificate (Valencia Campus)
pp. 59-63 • Revision of degree-Associate of Science in General Science (Valencia Campus)

Form D:

pp. 64-87 • New graduate degree Master's in Engineering - Civil Engineering

The agenda packets for the March 11 meeting will be distributed next week.

DEGREE/PROGRAM CHANGE
FORM C

Date: 24 October 1996

Olen Paul Matthews
(Name of individual initiating curricular change form)

Chair, 277-2607
(Title, position, telephone number)

Geography
(Department/Division/Program/Branch)

CIP CODE

Assigned by Associate Provost for Academic Affairs

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if necessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

757

*** Plan for curricular process to take at least 12 months.**

Mark appropriate Program:

Undergraduate Degree Program [X]

Graduate Degree Program (For existing degree only) [ ]

This form is for Geography (BS)
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) 128-129

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree B.S. (Type)	[X] Undergraduate degree only	[ ]	[ ]	[ ]
Major	[ ]	[ ]	[ ]	[ ]
Minor	[ ]	[ ]	[ ]	[ ]
Concentration	[ ]	[ ]	[ ]	[ ]
Certificate	[ ]	[ ]	[ ]	[ ]
Emphasis	[ ]	[ ]	[ ]	[ ]
Department	[ ]*	[■]	[ ]	[ ]

*See New Units policy *Guidelines* book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

See attachments

Reason(s) for Request (attach additional sheets if necessary).

See attachments

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary)
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary)
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement.
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No__X__
If yes, have you resolved these issues with department/branch involved?_____ (attach statement)
Effective Date of Proposed Change: Fall (Semester) 1997 (Year)

Required Signatures:

		Date:
Department Chairperson	[signature]	24 Oct 96
Dean of Library Services (If necessary)	[signature]	10/28/96
CIRT (If necessary)		
College Curriculum Committee (If necessary)	[signature]	
College or School Faculty (If necessary)	[signature]	Nov-8 96
College or School Dean/Director of Instruction	[signature]	Nov-8, 96
FS Graduate Committee (If applicable)		
FS Curricula Committee	[signature]	1/31/97
Assoc. Provost for Academic Affairs	[signature]	2/07/97
Faculty Senate		
Regents		Date:

(1)

For Scheduling Office ONLY:
Received
Entered (Mainframe)
Entered (Catalog)
Mailed

PROPOSED GEOGRAPHY (B.S.)

		Credits
Geography 101 → 962	Physical Geography	3
Geography 103L 5	Physical Geography Lab (~~Environmental~~ should be 105L	1
Geography 102 → 952	Human Geography	3
Geography 195	Survey of Environmental Issues change from 295 → 955	3
Geography 381L	Intro GIS old 351 to 395	4
Geography 470	Intro. to Applied Geography - new course	1
Geography 471	Applied Geography Seminar - new course	3
1 course	Resource Use and Management Group	3
2 courses	Geographic Data Analysis Group	6-7
3 courses	300 level or above Physical Environment Group	9
Electives	Any 300-400 level geography course	3
		39-40

Courses included in the above groups are:

Physical Environment: 351, 356, 359, 452, 453, 455.

Resource Use and Management: 365, 495, 496, 497 include 367

Geographic Data Analysis: 382L, 383, 481L, 482, 483L, 484.

In addition, ~~12~~ 9 credits of 300 level or above coursework must be taken in Biology or Earth and Planetary Science. are required + Math162L

Budget and Faculty Load Impact

Because the Department is going through a complete curriculum reform, many classes are being added and dropped. The result is a nuetral impact on faculty load and the departmental budget.

Reasons For Request: Geography BS

Geography has undergone a significant programmatic revision in the last few years with three new faculty being hired and another scheduled for this academic year. The program has been refocused to concentrate on environmental analysis and geographic information technologies (GIT). This new focus has meant the addition of courses related to climatology, biogeography, and water resources as well as GIT. These new courses and the department's new direction are not like the social science orientation the department had in the past. This new direction is heavily oriented toward the physical and biological sciences. For these reasons, it is appropriate for geography to begin offering a BS degree along with its BA degree. Offering a BS degree within a Geography department is also the trend within the discipline. Of the 214 Geography departments listed in Guide to Geography Programs In The United States 1995-1996, a clear majority offer a BS degree (94 offer both BA and BS, 20 offer BS only, and 96 offer a BA only). Having the ability to offer a BS degree will more accurately reflect the department's current orientation and will serve students better. The BS degree will more accurately reflect the kind of education students will receive in this department.

Long Range Planning Statement

During the Fall, 1993 semester, the department put together a *Five-Year Plan* that focuses the department's research and teaching orientation in two areas:

1. environmental analysis: physical geography (biogeography, climatology, and water resources) and human/environment interaction ; and
2. geographic information technologies - GIT (GIS, GPS and remote sensing).

Both of these specialties serve important societal needs and build on existing strengths within the university. When fully implemented, the plan will afford the department the opportunity to increase collaborative research and to serve the campus community with its newly completed GIT lab. It will also enable the department to attract graduate students of first quality and to raise the department's overall standing in the university and profession.

The two subfields selected for emphasis are well suited not only for the enhancement of geographical research but for integration into the missions of many other units of the university and the state. The development of geographic information technologies matches well with the developments at the major scientific laboratories, and promises to attract major grants and funding for the department. The demand for GIT training is not limited to the Department of Geography; biologists, geologists, anthropologists, economists, and planners all use the technologies and are utilizing our teaching laboratory.

Status of Five Year Plan

The primary goal of the Department of the Geography, as set forth in the *Five-Year Plan*, is to refocus and strengthen its curricula so that it will be in a position to initiate a Ph.D. program in the future. In order to achieve this goal,

the department will need to restructure its curriculum and degree programs, increase its FTE faculty to at least 9.5, and build an infrastructure that can support the programs.

The *Five-Year Plan* is being implemented, and the Department of Geography is dramatically different from the one that existed in 1993. The curriculum, which currently emphasizes breadth, is being focused on environmental analysis and GIT; the personality of the department is changing and will continue to change as existing faculty are replaced by new hires; the infrastructure to support a Ph.D. program is being developed; a colloquium series is being institutionalized; the mechanisms necessary to assure high quality teachings are being developed; and the faculty is beginning to actively pursue extramural funding.

Faculty Replacement and New Hires

The faculty was composed of 4.5 salaried members in the Fall, 1993. Three of the faculty members were professors and two were associate professors. During the 1993-94 AY the department searched for two additional faculty members and successfully hired one, Dr. Louis Scuderi, who joined the faculty in the Fall of 1994. Dr. Scuderi received his Ph.D. in 1984 from the University of California, Los Angeles. His research and teaching interests are in climatology and climate change, geographic information systems, and remote sensing. Dr. Scuderi has designed, developed and obtained funding for our geographic information system/image processing laboratory. He is an excellent addition to the department and will undergo tenure and promotion review this year. Additional faculty joined the department in 1995. Dr. David Gutzler has a split appointment with Geography and Earth and Planetary Sciences. His background in the analysis of low-frequency atmospheric variability, large-scale ocean-atmospheric interactions, climate change, tropical meteorology, radar

meteorology, and atmospheric predictability will enhance the missions of both departments. Also, Dr. Paul Matthews joined the department in the Fall, 1995, as department chair. Dr. Matthews has a background in water resources, natural resource policy, public lands, and mineral resources. In the fall of 1996 Dr. Theresa Mulhern joined the department. Dr. Mulhern is a biogeographer and specializes in remote sensing.

The department currently has 7 faculty members with one being half time and another being three quarters time. After this year Dr. Gutzler will be full time in Earth and Planetary Sciences. During this next year the department will be searching for an additional position with a specialization in GIS and environmental geography (water resources preference).

Spatial Data Analysis Lab

The Spatial Data Analysis Laboratory was successfully funded under NSF DUE-9551046: "Instrumentation for an Undergraduate Spatial Data Analysis Laboratory." Equipment for the lab was purchased during the past year, and it was used for the first class in the spring semester. Demand for the courses which use the lab was high in the spring, so additional sections were added this fall. Even with this increase, the demand far exceeds the space available.

The Spatial Data Analysis Laboratory (SDAL) is a state-of-the-art facility designed to provide undergraduate and graduate students with hands-on experience in Geographic Information Technologies (Geographic Information Systems, Image Processing, and Global Positioning Systems) and to support faculty research in these areas. Laboratory computer facilities are designed around twin SUN SparcStation 712 units networked to 10 SUN X-terminals. In addition, the SDAL has 5 Pentium based IBM clones which can be used as stand-alone machines or, through the use of X-terminal software, networked to the SUN workstations to provide additional workstation access. The SDAL has, in

addition to its main computing units, peripheral devices that allow for rapid input and output of raw data, maps and imagery. These include tape-drives, CD-ROM units, a full size digitizing table, individual digitizing tablets, a scanner, black and white as well as color printers, and a full size A-E color plotter. Besides storage on individual machines, the SDAL has a RAID storage unit with 12 GB of storage (expandable to 60 GB). Like the RAID unit, all SDAL equipment was chosen so it could be easily and cheaply upgraded. The laboratory has access to GIS, Image Processing, and Statistics software products, including: ARC/INFO (GIS), MapInfo (GIS), S+ (statistical software link to ARC/INFO), and ER-Mapper (Image Processing).

Through pricing discounts, special educational purchase agreements, and cooperative deals, the $140,000 allocated for SDAL development has been used to purchase ~$250,000 in hardware and software.

Curriculum Revision

In order to implement the five year plan extensive curriculum revisions havebeen required. These revisions have led to a change in our BA degree program. In addition, the Department is requesting the addition of a BS degree which will more accurately reflect the Department's new directions.

DEGREE/PROGRAM CHANGE
FORM C

Date: October 16, 1996

Richard Coughlin
(Name of individual initiating curricular change form)

Chair, Sociology, 7-2501
(Title, position, telephone number)

Sociology, Main Campus
(Department/Division/Program/Branch)

CIP CODE

Assigned by Associate Provost for Academic Affairs

RECEIVED
NOV 04 1996
COLLEGE OF ARTS & SCIENCES

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if neccessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

Plan for curricular process to take at least 12 months.

Mark appropriate Program:

Undergraduate Degree Program ☒

Graduate Degree Program (For existing degree only) ☐

This form is for Sociology/Criminology
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) 172 & 173

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree Criminology (Type)	☐ Undergraduate degree only	☒	☐	☐
Major	☐	☒	☐	☐
Minor	☐	☐	☐	☐
Concentration	☐	☐	☐	☐
Certificate	☐	☐	☐	☐
Emphasis	☐	☐	☐	☐
Department	☐*	■	☐	☐

*See New Units policy *Guidelines* book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

(See attached) 1B

Reason(s) for Request (attach additional sheets if necessary).

(See attached) 1B

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary)
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary)
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement.
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No_x_
If yes, have you resolved these issues with department/branch involved?_____ (attach statement)
Effective Date of Proposed Change: Summer (Semester), 1997 (Year)

Required Signatures:		Date:
	Department Chairperson	10/7/96
	Dean of Library Services (If necessary) N/A	Date:
	CIRT (If necessary) NA	Date:
	College Curriculum Committee (If necessary)	Date: 12/13/96
	College or School Faculty (If necessary)	Date:
	College or School Dean/Director of Instruction	Date:
	FS Graduate Committee (If applicable)	Date:
	FS Curricula Committee	Date: 2/7/97
	Assoc. Provost for Academic Affairs	Date:
	Faculty Senate	Date:

775

For Scheduling Office ONLY:
Received _____ Entered (Mainframe) _____ Entered (Catalog) _____ Mailed _____

The University of New Mexico Office of the Registrar (Revised 9/95)

Attachment 1B

Major in Criminology

The Department will accept the grade of C- in required and elective courses in the Criminology major and minor as counting toward graduation but requires that the student achieve a minimum GPA of 2.00 in the Criminology major or minor and a 2.00 overall GPA. A cumulative GPA of 2.25 or better in all courses completed is required for regular admission to the criminology major.

Reason(s) for Request.....

According to the University catalog, a grade of "C" means satisfactory. The Sociology faculty believe that students whose typical performance in the major is "satisfactory" should be allowed to graduate.

Also, the changes would bring the Criminology requirements more in line with the requirements of most other A & S departments.

Note: The catalog does not explicitly define C-. The Sociology faculty take the position that a C- represents a grade at the bottom of the "satisfactory" range. Thus, this level of performance in some particular course or courses should not disqualify the student from graduation.

777

DEGREE/PROGRAM CHANGE
FORM C

Date: January 30, 1997

Mohsen Shahinpoor
(Name of individual initiating curricular change form)

Chair, Manufacturing & Robotics Option
(Title, position, telephone number)

Manufacturing & Robotics Option
(Department/Division/Program/Branch)

CIP CODE

Assigned by Associate Provost for Academic Affairs

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if neccessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

*** Plan for curricular process to take at least 12 months.**

Mark appropriate Program:

Undergraduate Degree Program [X]

Graduate Degree Program (For existing degree only) [X]

This form is for Manufacturing & Robotics Option
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) 262

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree B. Engr. (Type)	☐ Undergraduate degree only	[X]	☐	☐
Major	☐	☐	☐	☐
Minor	☐	☐	☐	☐
Concentration	☐	☐	☐	☐
Certificate	☐	☐	☐	☐
Emphasis	☐	☐	☐	☐
Department	☐*	■	☐	☐

*See New Units policy *Guidelines* book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

1. Replace Engr-F 120, Engineering Computing, with CS 151L, Computer Programming Fundamentals. (Course is taken first semester freshman year)
2. Replace ME 362, Robotics, with a technical elective (second semester junior year).

Reason(s) for Request (attach additional sheets if necessary).

1. School of Engineering made change to all curriculum, but this paperwork (for M&R) was never prepared.
2. Because of small option population, there is never demand for course to be offered. With no anticipated growth in Option, it was felt best to add technical elective.

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary)
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary)
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement.
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No XX
If yes, have you resolved these issues with department/branch involved? _____ (attach statement)
Effective Date of Proposed Change: ~~8/95 for①~~ 8/97 for②, _____
8/97 (Semester) (Year)

Required Signatures:

Department Chairperson	Date: 1/27/97
Dean of Library Services (If necessary) N/A	Date:
CIRT (If necessary) N/A	Date:
College Curriculum Committee (If necessary) X	Date:
College or School Faculty (If necessary) X	Date:
College or School Dean/Director of Instruction	Date: 1-31-97
FS Graduate Committee (If applicable)	Date:
FS Curricula Committee	Date: 2/21/97
Assoc. Provost for Academic Affairs	Date: 2/26/97
Faculty Senate	Date:

For Scheduling Office ONLY:
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Entered (Catalog) _____ Mailed _____

The University of New Mexico Office of the Registrar (Revised 9/95)

Form C - Manufacturing & Robotics Curriculum Change.

1. Changing from Engr-F 120 to CS 151L was a school-wide change, and paperwork to change M&R was overlooked at the time.

2. Per my discussions with the M&R Option Chairman, there most likely will never be enough students at one time to offer ME 362. Adding a fifth technical elective in its place was agreed on as a viable solution.

I hope these changes can make it into the new catalog. If you have any questions, please call me at 7-1326. Thanks.

779

DEGREE/PROGRAM CHANGE
FORM C

Date: 10 Jan. 1997

Barry S. Kues
(Name of individual initiating curricular change form)

Chair - 7-4204
(Title, position, telephone number)

Earth & Planetary Sciences
(Department/Division/Program/Branch)

CIP CODE

Assigned by Associate Provost for Academic Affairs

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if neccessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

*** Plan for curricular process to take at least 12 months.**

This form is for Paleoecology minor
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) 76

Mark appropriate Program:

Undergraduate Degree Program ☑
Graduate Degree Program (For existing degree only) ☐

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree _____ (Type)	☐ Undergraduate degree only	☐	☐	☐
Major	☐	☐	☐	☐
Minor	☐	☐	☒	☐
Concentration	☐	☐	☐	☐
Certificate	☐	☐	☐	☐
Emphasis	☐	☐	☐	☐
Department	☐*	■	☐	☐

*See New Units policy *Guidelines* book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

Paleoecology is listed as a minor in A&S on p. 76 of current catalog. This should be deleted

Reason(s) for Request (attach additional sheets if necessary). The paleoecology minor was replaced with The Quaternary Studies minor many years ago. However, although all trace of the paleoecology minor was removed from the catalog, it still appears in the list of A&S minors (p. 76 of current catalog). This form is intended to completely remove the paleoecology minor from the UNM records.

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary)
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary)
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement.
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No✓
If yes, have you resolved these issues with department/branch involved?_____ (attach statement)
Effective Date of Proposed Change: Spring (Semester), 1997 (Year)

Required Signatures:		Date:
	Department Chairperson Barry S. Kues	1/10/96
	Dean of Library Services (If necessary)	
	CIRT (If necessary)	
	College Curriculum Committee (If necessary) D. White	Jan 9, 97
	College or School Faculty (If necessary) P. White	"
	College or School Dean/Director of Instruction P. White	"
	FS Graduate Committee (If applicable)	
	FS Curricula Committee	1/31/97
	Assoc. Provost for Academic Affairs Alan W. Hall	2/07/97
	Faculty Senate	

For Scheduling Office ONLY:
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The University of New Mexico Office of the Registrar (Revised 8/95)

The University of New Mexico

Office of the Dean
College of Arts and Sciences
Albuquerque, NM 87131-1081
(505) 277-3046

my copy

760

October 3, 1995

To: Barry Kues, Earth and Planetary Sciences and Terry Yates, Biology

From: Peter White, Associate Dean, Arts and Sciences

Subject: catalog questions

The advisors in Arts and Sciences have pointed out to me that both Biology and Earth and Planetary Sciences list Quaternary Studies as a minor. We are asking both departments to provide us with a description of the requirements of that minor (a) to make sure that there is agreement about the nature of the minor and (b) to help us better advise students, and (c) to incorporate the requirements into the next catalog so that we have the information in published form. Additionally, this will be necessary in the future because of our computerized, degree audit system which will be implemented in the next two years. We would also like to know who advises students in the Quaternary Studies minor?

A second, small issue is that p. 76 of the catalog lists paleoecology as a minor in A and S. Could we ask that Earth and Planetary Sciences include this in the next catalog in 1997 on p. 104 and also list the requirements for that minor? I am also writing to Kathleen Sena to ask her to put paleoecology in the catalog index.

Could advisors in E&PS speak with advisors in Biology and write back to me with the information we request? Thanks for your help.

The University of New Mexico

DATE: 14 October 1995

TO: Peter White, Arts & Sciences

FROM: William W. Johnson, Biology

SUBJECT: Quaternary Studies Minor

Vivian Kent, the Academic Support Aide in Biology, called my attention to your 3 October 1995 memorandum to Biology and Earth and Planetary Sciences Chairs. In that memorandum you asked about the requirements for the minor in Quaternary Studies. In all of the years I have been an advisor in the Department of Biology I have not dealt with a single student who chose this as a minor. Possibly this has not been the experience of advisors in Earth and Planatary Sciences.

The requirements for the minor in Quaternary Studies appear on Page 168 of the 1995-97 UNM Catalog. I notice in the entry that it is housed in a "Department of Quaternary Studies" and that Roger Anderson is the chairperson. I believe Dr. Anderson is professor emeritus, and so I must assume that he has agreed to remain as the chair of the program even though he has retired from UNM.

If the Quaternary Studies minor is still a viable one, it should be listed in the Catalog index so the interested student can find the requirements more easily.

copy: V. Kent

The University of New Mexico
Department of Earth and Planetary Sciences

DATE: October 4, 1995

TO: Peter White, Associate Dean, A&S

FROM: Barry Kues, Chair, Earth & Planetary Sciences

SUBJECT: Catalog questions

Peter,

You asked for information on a couple of catalog questions. The Quaternary Studies minor is listed (see attachment) in the current undergraduate catalog, together with a description of the requirements, which should answer your questions. In past editions of the catalog, more courses were listed (cross-listed with E&PS courses) but all but Q.S.-326 were arbitrarily excised by Kathleen Sena. To my knowledge, the Q.S. minor has been used very infrequently over the past few years, and the Chair of the program, Roger Anderson, retired a couple of years ago. With new Q.S. faculty recently or soon to be added in E&PS, we expect the Q.S. minor to become more popular.

On the mention of Paleoecology as an A&S minor in the catalog, this is an oversight. The Quaternary Studies minor replaced the Paleocology minor many years ago; apparently Paleoceology was not quite entirely omitted from the places in the catalog where it had appeared. Rather than including it in the next catalog, I think it should simply be removed from p. 76, as this minor program no longer exists.

Let me know if you need more information.

To: Kathleen Sena
From: Peter White, Assoc. Dean, A & S PW
---------- 10-5-1995

Please make the following changes in the undergraduate catalogue:

p. 76: delete minor in Paleoecology.

p. 89: Under Minor Study in Quaternary Studies add: "see p. 168 for requirements."

p. 104: Under Minor Study in Quaternary Studies add: "see p. 168 for requirements."

cc: Prof. Barry Kues, Chair, Earth & Planetary Sciences

Thank you very much.

Thanks for your attention, Barry. - Pete

UNM

JAN 02 1997

OFFICE OF THE REGISTRAR

DEGREE/PROGRAM CHANGE
FORM C

Date: November 19, 1996

David S. Brookshire
(Name of individual initiating curricular change form)

Professor, Chair, 75304
(Title, position, telephone number)

Economics
(Department/Division/Program/Branch)

CIP CODE

Assigned by Associate Provost for Academic Affairs

RECEIVED NOV 26 1996 COLLEGE OF ARTS & SCIENCES

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if necessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

*** Plan for curricular process to take at least 12 months.**

Mark appropriate Program:

Undergraduate Degree Program [X]
Graduate Degree Program (For existing degree only) [ ]

This form is for Economics
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) 108-109

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree ______ Type	[ ] Undergraduate degree only	[ ]	[ ]	[ ]
Major	[ ]	[X]	[ ]	[ ]
Minor	[ ]	[X]	[ ]	[ ]
Concentration	[ ]	[ ]	[ ]	[ ]
Certificate	[ ]	[ ]	[ ]	[ ]
Emphasis	[ ]	[ ]	[ ]	[ ]
Department	[ ]*	[■]	[ ]	[ ]

*See New Units policy *Guidelines* book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

see attached

Reason(s) for Request (attach additional sheets if necessary).

see attached

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary) not necessary
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary) not necessary
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement. attached
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No X
If yes, have you resolved these issues with department/branch involved?________ (attach statement)
Effective Date of Proposed Change: summer (Semester), 1997 (Year)

Required Signatures:

Department Chairperson	[signature]	Date: 11/26/96
Dean of Library Services (If necessary)	not necessary	Date:
CIRT (If necessary)	not necessary	Date:
College Curriculum Committee (If necessary)	[signature]	Date: 12/13/96
College or School Faculty (If necessary)		Date:
College or School Dean/Director of Instruction	P. White	Date: 12/22/96
FS Graduate Committee (If applicable)	not applicable	Date:
FS Curricula Committee	[signature]	Date: 2/2/97
Assoc. Provost for Academic Affairs	[signature]	Date: 2/07/97
Faculty Senate		Date:

For Scheduling Office ONLY: Received ____ Entered (Mainframe) ____ Entered (Catalog) ____ Mailed ____

The University of New Mexico Office of the Registrar (Revised 8/95)

Attachment to Form C
Revision of Major and Minor
Department of Economics
11/13/96

4. Budgetary and faculty load implications

None

5. Long-range planning statement.

The proposed changes address long-range plans to:

(1) increase number of majors;
(2) increase number of minors;
(3) increase number of students choosing economics electives;
(4) get majors and minors started in economics earlier in college careers.

Attachment to Form C
Revision of Major and Minor
Department of Economics
11/26/96

1. Purpose: allow 3 credit hours of 200-level electives for major and minor.

Catalog wording (amended from current galleys):

Major Study Requirements

A major in economics requires a common core consisting of Econ 105 [200] (Introductory [Principles of] Macroeconomics),[-] 106 [201] (Introductory [Principles of] Microeconomics), [Econ] 300 & 303 (Intermediate Micro- and Macroeconomics I), and Econ 309 (Introductory Statistics and Econometrics), and 18 credit-hours of [upper division-] electives in economics with a maximum of 3 credit hours from 200-level courses, for a total of 33 hours.

Minor Study Requirements

A minor in economics requires a total of 18 credit-hours consisting of 9 hours in required courses (Econ 105 [200], 106 [201], and either 300 or 303) plus 9 hours from [in] elective courses with a maximum of 3 hours at the 200-level [numbered 300 or above].

2. Reasons for Request

The department has submitted Form A requests to restructure 100- and 200-level courses. These changes will result in the following general format:

100-level	introductory theory courses (prerequisites for major and minor)
200-level	introductory applied courses (without prerequisites and suitable for all students)
300-level	intermediate theory and applied courses (with prerequisites)
400-level	more advanced theory and applied courses (with prerequisites)

The proposed changes in the major and minor

(1) reflect the new structure;

(2) give students who have taken 105 and/or 106 some credit toward a major or minor for 200-level classes as applications of principles learned;

(3) give non-declared students who take a 200-level course some credit toward a major or minor if they subsequently decide on economics.

(4) motivate students to expose themselves to introductory applied course work before intermediate theory.

Current Course Number	No Change	Delete Course	New Course	Number Change	Title Change	Description Change
101				204	X	X
200				105	X	X
201				106	X	X
203					X	
212					X	
239					X	
*331					X	X
*332					X	
*333					X	
*341					X	X
*343					X	X
*360						X
**400						X
*421						X
*423					X	X
*428		X				
*429						X
*440		X				
*442					X	X
*495				395	X	X

The University of New Mexico

Department of Economics
1915 Roma NE/Economics Bldg.
Albuquerque, NM 87131-1101
Telephone (505) 277-5304
FAX (505) 277-9445

November 26, 1996

To: Peter White, Associate Dean
College of Arts and Sciences
Ortega 201

From: David S. Brookshire, Chair of Economics

Re: Course and Curriculum Changes (effective summer 1997)

The Department of Economics is committed to a continuous review of the courses offered for the BA, MA and PhD. The current catalog and bulletin reflect substantial changes made in both undergraduate and graduate courses two years ago. Since that time the department has added three new faculty members, analyzed its enrollment patterns, and consulted with advisers on campus regarding additional changes.

The focus of this year's package is on undergraduate offerings (although several are available for graduate credit). These changes reflect: (1) the changing nature of the faculty, (2) further elimination of courses that will not be taught in the foreseeable future, (3) the need to address declining enrollments, (4) the need to balance offerings at different levels, and (5) the perceived needs of students.

Attached is a summary sheet of the proposed Form A changes: two courses are deleted, four courses are renumbered, and 14 course titles and 13 course descriptions are revised. We believe these changes offer significant fine tuning of our curriculum.

The general structure has changed in that our introductory courses are now on the 100-level, in line with most A&S departments. The 200-level courses present introductory level applications, and are also available to non-major/minor students. The accompanying program change allows one 3-credit hour 200-level course to count toward the major and the minor. We believe this design will allow us to more effectively attract students to our undergraduate program. Our students are often pressed for time to complete a major or minor that they have not started until their second, third or even fourth semester. We would like to get them started earlier.

These changes are important components of our continuous review process. Please advise if there are any questions or concerns from your office.

:dlp

Enclosures

DEGREE/PROGRAM CHANGE
FORM C

Date: October 28, 1996

John Lipski
(Name of individual initiating curricular change form)

Chair 277-5907
(Title, position, telephone number)

Spanish & Portuguese
(Department/Division/Program/Branch)

CIP CODE

Assigned by Associate Provost for Academic Affairs

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if neccessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

*** Plan for curricular process to take at least 12 months.**

Mark appropriate Program:

Undergraduate Degree Program ☒
Graduate Degree Program (For existing degree only) ☐

This form is for Spanish Major
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) 177

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree _____ (Type)	☐ Undergraduate degree only	☐	☐	☐
Major	☐	☒	☐	☐
Minor	☐	☐	☐	☐
Concentration	☐	☐	☐	☐
Certificate	☐	☐	☐	☐
Emphasis	☐	☐	☐	☐
Department	☐*	■	☐	☐

*See New Units policy *Guidelines* book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

See attached.

Reason(s) for Request (attach additional sheets if necessary).

To give students more choice among linguistic courses.
To clarify requirements.

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary)
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary)
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement.
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No x
If yes, have you resolved these issues with department/branch involved?_____ (attach statement)
Effective Date of Proposed Change: Fall (Semester), 1997 (Year)

Required Signatures:

Department Chairperson	Date: 10/31/96
Dean of Library Services (If necessary)	Date: 11/13/96
CIRT (If necessary)	Date: 11/14/96
College Curriculum Committee (If necessary)	Date: 12/3/96
College or School Faculty (If necessary)	Date: 12/4/96
College or School Dean/Director of Instruction	Date:
FS Graduate Committee (If applicable)	Date:
FS Curricula Committee	Date: 2/2/97
Assoc. Provost for Academic Affairs	Date: 2/07/97
Faculty Senate	Date:

For Scheduling Office ONLY:
Received _____ Entered (Mainframe) _____ Entered (Catalog) _____ Mailed _____

The University of New Mexico Office of the Registrar (Revised 8/95)

Budgetary and Faculty Load Implications:

Since the courses involved in this change are already offered, there will be no additional impact of this change. There will be no additional Library impact, no additional CIRT impact, no additional Budgetary and Faculty Load Implications. This change does not involve any other program or branch campus. In terms of long range planning, this change will allow more flexibility for students in fulfilling their linguistic requirement.

MAJOR STUDY REQUIREMENTS

Spanish

300 hours in Spanish courses numbered 300 or above. Required courses: (a) 301; (b) 302; (c) 307; (d) 352; (e) one of the following: 350, 351, 353; (f) one of the following: 411 or 412; (g) one of the following: 431 or 432; (h) at least 9 additional hours above 300, 3 of which must be at 400 level. Spanish 301 may be repeated for credit as topic changes; however, only 3 hours of 301 are applicable toward the major. A student may follow a general course of studies or emphasize one of the following areas: Spanish Peninsular Literature, Spanish American Literature, Southwest Hispanic Studies, or Linguistics. In addition, work in another foreign language at the 202 or 276 level (or equivalent) must be completed. Students planning to major in Spanish should consult with the Department undergraduate advisor.

UNM

JAN 02 1997

OFFICE OF THE REGISTRAR

DEGREE/PROGRAM CHANGE
FORM C

Date: November 1, 1996

David Kauffman
(Name of individual initiating curricular change form)

Professor/Associate Dean 7-5522
(Title, position, telephone number)

Chemical & Nuclear Engineering
(Department/Division/Program/Branch)

CIP CODE

Assigned by Associate Provost for Academic Affairs

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if neccessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

*** Plan for curricular process to take at least 12 months.**

This form is for Chemical Engineering
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) 233-234

Mark appropriate Program:

Undergraduate Degree Program [X]

Graduate Degree Program (For existing degree only) [ ]

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree B.S. (Type)	[ ] Undergraduate degree only	[ ]	[ ]	[ ]
Major	[ ]	[X]	[ ]	[ ]
Minor	[ ]	[ ]	[ ]	[ ]
Concentration	[ ]	[ ]	[ ]	[ ]
Certificate	[ ]	[ ]	[ ]	[ ]
Emphasis	[ ]	[ ]	[ ]	[ ]
Department	[ ]*	[■]	[ ]	[ ]

*See New Units policy *Guidelines* book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

See attached

Reason(s) for Request (attach additional sheets if necessary).

See Attached

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary)
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary)
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement.
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No X
If yes, have you resolved these issues with department/branch involved?_____ (attach statement)
Effective Date of Proposed Change: Fall (Semester), 1997 (Year)

Required Signatures:

	Date:
Department Chairperson	11/25/96
Dean of Library Services (If necessary)	1/10/97
CIRT (If necessary)	
College Curriculum Committee (If necessary)	12.20.96
College or School Faculty (If necessary)	
College or School Dean/Director of Instruction	1-2-97
FS Graduate Committee (If applicable)	
FS Curricula Committee	2/27/97
Assoc. Provost for Academic Affairs	2/07/97
Faculty Senate	

For Scheduling Office ONLY:
Received _____ Entered (Mainframe) _____ Entered (Catalog) _____ Mailed _____

The University of New Mexico Office of the Registrar (Revised 8/95)

Form B, Ch-NE 321, Mass Transfer

Much of the material for this course was transferred from Ch-NE 312 (Form A). CSEL has a copy of the suggested text on the shelf, and the additional reference material listed in the Form B is present in CSEL Reserve. The Libros online catalog includes 15 subheadings under the subject "mass transfer" with 87 entries under the main heading. There are 4 current periodical subscriptions in the field of mass transfer.

Form B, Ch-NE 486, Statistical Design of Experiments for Semiconductor Manufacturing

Of the 8 monographs, including the text, listed in the bibliography of this Form B, the Libros online catalog includes records for all 8. Of those, 1 is present only in an earlier edition, and the volume is not currently on shelf; 4 of the titles, including the suggested text, are on search, one of which has a second copy listed "lost and paid" and one of which has a second copy in CSEL Reserve; 1 additional title is in CSEL Reserve and is present on the shelves; 1 is currently checked out to a graduate student in the department; and 1 is actually on the circulating shelves. Replacement copies of those titles on search will be ordered and placed on CSEL Reserve. Subscriptions are current for the 2 periodicals listed in the bibliography. In addition, CSEL collects regularly in the area of experimental design, and materials on statistical analysis are present in both the CSEL and Zimmerman collections. The Form B notes that the course has been offered twice previously as a special section of a pre-existing course, so presumably library resources were/are adequate.

The University of New Mexico

Centennial Science & Engineering Library
Albuquerque, NM 87131
Telephone (505) 277-5256

To: Linda Lewis, Collection Development Officer

From: Bruce Neville, Selector for Chemical and Nuclear Engineering

Date: 8 January 1997

Re: Forms A, B, and C for Chemical and Nuclear Engineering

The Chemical and Nuclear Engineering Department proposed restructuring of the undergraduate core curricula in both Chemical Engineering and Nuclear Engineering. In support of the two Forms C, 10 Forms A and 4 Forms B have been submitted. The Forms A involve essentially a restructuring of previously offered course content, so the impact of these revisions on the UNM General Library should be minimal. The courses represented by the Forms A deal with core concepts in the fields of Chemical and Nuclear Engineering, which are adequately represented in the collections at the Centennial Science and Engineering Library.

Of the 4 Forms B, 1 course is a new, introductory-level core course; 2 courses are continuations or redistributions of existing core curriculum materials; and 1 is essentially a new elective offering. Holdings are considered adequate to support all of these courses, as described below.

Form B, Ch-NE 101, Introduction to Chemical Engineering and Nuclear Engineering

This introductory course will rely heavily on lecture and core monographs and journals, which are adequately covered in the Centennial collections and will continue to be augmented with new materials. Of the materials in the bibliography of the Form B, Centennial is purchasing the volumes of the 4th edition of the *Kirk-Othmer Encyclopedia of Chemical Technology* as they are being published and will continue to purchase the remaining volumes. The subscriptions to the four trade journals listed in the Form B are all current. Because the course will include materials on careers in chemical and nuclear engineering, some of the resources required by the students may be found in the Parish Library.

Form B, Ch-NE 253, Chemical Process Calculations II

Much of the material for this course is relocated from other core courses or is a continuation of the previous course, Ch-NE 251. The library does not have the current, second edition of the proposed text, but does have a copy of the first edition. The Libros online catalog includes 15 subheadings under the subject "chemical processes" with 47 entries under the main heading. Holdings in computer simulations and engineering mathematics are strong.

UNIVERSITY OF NEW MEXICO GENERAL LIBRARY

To: Robert Migneault, Dean
From: Linda Lewis, Collection Development Officer RKL
Date" January 9, 1997
Subject: Forms B and C: Chemical and Nuclear Engineering

The analysis of the impact of these requests done by the selector for the area, Bruce Neville, indicates that the library holdings are adequate to support the proposals. We will purchase some replacement copies, as loss of some high-demand items continues to be a concern in some areas, and will purchase some new editions of these titles. Other than that, the impact of these courses should be minimal.

Curriculum in Chemical Engineering

Rationale for Curriculum Changes

General Rationale. The changes in the B.S. Chemical Engineering curriculum are being made to meet several objectives. The new curriculum:

1. Reduces the total hours from 136 to 131. This is in line with changes in engineering education throughout the country.

2. Provides a freshman course to introduce students to the field and to bring them into contact with leading senior faculty.

3. Provides more credit hours in the key areas of transport phenomena, especially mass transfer, and thermodynamics.

4. Reduces the hours in formal design courses, but better incorporates engineering design issues throughout the curriculum.

5. Eliminates some material considered to be of marginal value by both students and faculty.

Ch-NE 101 Introduction to Chemical Engineering and Nuclear Engineering. This new course is being added in order to offer freshman students a chance to learn more about the technical areas of chemical engineering and nuclear engineering and the career options available in these fields. It should also help in student motivation and retention by bringing freshman into direct contact with leading senior faculty in the field.

Ch-NE 253 Chemical Process Calculations II. This new course will include material on unsteady-state material and energy balances, a logical follow-on from Ch-NE 251; material on staged separation operations, formerly in Ch-NE 312; and an introduction to the use of process simulation programs and other computer technique, part of which was formerly covered in Ch-NE 393L.

Ch-NE 302 Chemical Engineering Thermodynamics. This course is being increased by one semester hour in order to provide more thorough coverage of the field, which is extremely important to chemical engineers.

Ch-NE 311 Introduction to Transport Phenomena, Ch-NE 312 Unit Operations, and Ch-NE 321 Mass Transfer. This sequence of courses, with 4, 2 and 3 credits, respectively, replaces the existing Ch-NE 311 and 312, 4 and 4 credits. The total sequence is increased by one credit hour. The changes are being made to provide a more logical separation of topics and to provide adequate time for the important study of mass transfer processes.

Ch-NE 393L Introduction to Chemical Engineering Design, Ch-NE 493L Chemical Engineering Design, and Ch-NE 494L Advanced Chemical Engineering Design. Ch-NE 393L is being deleted. Its introductory design content is being split, with some being put in the new Ch-NE 253 course and the rest in Ch-NE 493L. Most of what had been in Ch-NE 493L is being deleted from the required curriculum. Those students interested in the topics previously covered in the various sections of Ch-NE 493L (traditional plant design topics, environmental process engineering, electronic materials processing, etc.) may take elective courses in these areas. Ch-NE 494L is being reduced by one credit hour.

Ch-NE 486 Statistical Design of Experiments for Semiconductor Manufacturing. This course will be an elective in the chemical engineering program. The material in it has been taught for the past two years as a special section of Ch-NE 493L, Chemical Engineering Design.

Faculty Load Implications. The total number of required hours in the Chemical and Nuclear Engineering Department for a B.S. in Chemical Engineering will increase from 43 to 45 as a result of the proposed changes in the curriculum. At the same time, the number of hours of technical electives is being reduced from 9 to 6. Chemical engineering students do not have to take their technical electives within the department, but most do. So the net result of the curriculum change is one less hour of departmental courses for a B.S. degree. This will have minimal impact on total faculty load. It just distributes it somewhat differently throughout the curriculum. There are sufficient faculty with expertise to cover the new and changed courses without putting an undue load on any individuals.

C- or Better Rule. The Chemical and Nuclear Engineering Department faculty voted to require a C- or better grade in all courses counted for bachelors degrees in the department. This increase in academic standards is in line with two other departments in the School of Engineering, the Electrical and Computer Engineering Department and the Computer Science Department.

Catalog corrected title copy

Curriculum in Chemical Engineering
effective Fall 1997

The Bachelor of Science Program in Chemical Engineering is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

Hours[9] required for graduation: 131

	Cr	Hrs Lect/Lab	
First Year - First Semester			
Ch-NE 101 Intr Che & Nclr Engr	1	(1-0)	New course
Math 162L Calculus I (eral)	4	(4-0)	
Chem 121L Gen Chemistry/Lab	4	(3-3)?	
Engl 101 Comp I: Exposition	3	(3-0)	
H&SS Elective[1]	3	(3-0)	
	15	(14-3)	
Second Semester			
Math 163L Calculus II (eral)	4	(4-0)	
Chem 122L Gen Chemistry/Lab	4	(3-3)	
C S 151L Comp Prog Fund/Lab	3	(3-1)	
Engl 102 Comp II: Analys & Arg	3	(3-0)	
Physcs 160 Gen Physics (eral)	3	(3-0)	
	17	(16-4)	
Second Year - First Semester			
Ch-NE 251 Chem Proc Calc (ok)	3	(3-0)	changing title
Math 264L Calculus III	4	(4-0)	
Chem 301 Organic Chem	3	(3-0)	
Chem 303L Organic Chem Lab	1	(0-3)	
Physcs 161 Gen Physics (eral)	3	(3-0)	
Econ 200 Prin and Prob[2] (Principles of Macro)	3	(3-0)	will become 105 see econ forms
	17	(16-3)	
Second Semester			
Ch-NE 253 Chem Proc Calc II	3	(3-0)	new course
Ch-NE 301 Thermodynamics	3	(3-0)	
Math 316 Appl Ord Diff Equas	3	(3-0)	
Basic Sci for Concentration[3]	3	(3-0)	
Adv Chem for Concentration[4]	3	(3-0)	
	15	(15-0)	
Third Year - First Semester			
Ch-NE 311 Intro (Nucl) Transpt Phenomena	4	(4-0)	
Ch-NE 317 Chem Engr Analysis	3	(3-0)	
Ch-NE 450 Ch-NE Economics	3	(3-0)	
Engl 219 Tech Writing[2] (eral) (4)	3	(3-0)	
Adv Chem for Concentration → Chem nucl engr econ	4	(4-0)	
	17	(17-0)	

see memo dated 1/27/91 for additional changes

added
Ch-NE 101
Ch-NE 253
Ch-NE 321

replaced
engr 120 → cs 151

deleted
engr 122
ChNE 393
one technical elective

Second Semester

Ch-NE 302	~~Ch-NE~~ Chem Engr Thermo~~dynamics~~	3	(3-0) (increase in hours)
Ch-NE 312	Unit Ops~~erations~~	2	(2-0) (decrease in hours)
Ch-NE 321	Mass Transfer	3	(3-0) new course
	Basic Engineering Elective[5]	3	(3-0)
	Adv Chem for Concentration[4]	4	(4-0)
	H&SS Elective[1]	3	(3-0)
		18	(18-0)

check this out - they may have meant to change 461.

Fourth Year[7,8] - First Semester

Ch-NE 414L	Chem Engr Lab I	2	(1-5)
Ch-NE 451	Senior Seminar	1	(1-1)
Ch-NE 461	~~Chem Engr Kinetics~~	3	(3-0) — Chem Reactor Engr
Ch-NE 493L	Chem Engr Design	3	(2-3)
	Technical Elective[6]	3	(3-0)
	H&SS Elective[1]	3	(3-0)
		15	(13-9)

Second Semester

Ch-NE 415L	Chem Engr Lab II	3	(1-8)
Ch-NE 454	Proc Dyn~~amics~~ & Control	3	(3-0)
Ch-NE 494L	Adv ~~Ch E Design~~ Chem Engr Design	2	(2-2) credit hour change
	Technical Elective[6]	3	(3-0)
	H&SS Elective[1]	3	(3-0)
	H&SS Elective[1]	3	(3-0)
		17	(15-10)

[1] Students should consult with advisors to obtain a list of acceptable humanities and social science (H&SS) electives. These courses may be taken whenever convenient.

[2] Econ 200 and Engl 219 may be taken in either the sophomore or junior year.

185 credit hour change

[3] Physics 262 or Biology 121, depending on the student's area of concentration.

[4] A minimum of three courses from Chem 302, 311, 312, 423 or 431, depending on the student's area of concentration.

[5] CE 202, CE/ME 304 or EECE 203.

[6] Technical electives are chosen from approved upper division courses in engineering, mathematics and science. The department requires that these courses be part of an approved concentration. The chairperson may allow up to 6 hours of technical electives for students taking required ROTC courses in aerospace or naval science.

[7] Students must file an application for the B.S. degree prior to the completion of 95 semester hours of applicable courses.

[8] Students are encouraged to take the Fundamentals of Engineering (EIT) Examination during their senior year. This is the first formal step toward professional registration.

[9] Only courses with grades of C- or better may be applied toward the bachelor of science degree in chemical engineering.

Curriculum in Chemical Engineering
effective Fall 1997

The Bachelor of Science Program in Chemical Engineering is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

Hours[9] required for graduation: 131

	Cr	Hrs Lect/Lab
First Year - First Semester		
Ch-NE 101 Intr Che & Nclr Engr	1	(1-0)
Math 162 Calculus I	4	(4-0)
Chem 121L Gen Chemistry	4	(3-3)
Engl 101 Comp I: Exposition	3	(3-0)
H&SS Elective[1]	3	(3-0)
	15	(14-3)
Second Semester		
Math 163 Calculus II	4	(4-0)
Chem 122L Gen Chemistry	4	(3-3)
C S 151L Comp Prog Fund	3	(3-1)
Engl 102 Comp II: Analys & Arg	3	(3-0)
Physcs 160 Gen Physics	3	(3-0)
	17	(16-4)
Second Year - First Semester		
Ch-NE 251 Chem Proc Calc I	3	(3-0)
Math 264 Calculus III	4	(4-0)
Chem 301 Organic Chem	3	(3-0)
Chem 303L Organic Chem Lab	1	(0-3)
Physcs 161 Gen Physics	3	(3-0)
Econ 200 Prin and Prob[2]	3	(3-0)
	17	(16-3)
Second Semester		
Ch-NE 253 Chem Proc Calc II	3	(3-0)
Ch-NE 301 Thermodynamics	3	(3-0)
Math 316 App Ord Diff Eq	3	(3-0)
Basic Sci for Concentration[3]	3	(3-0)
Adv Chem for Concentration[4]	3	(3-0)
	15	(15-0)
Third Year - First Semester		
Ch-NE 311 Intro Transpt Phenomena	4	(4-0)
Ch-NE 317 Chem Engr Analysis	3	(3-0)
Ch-NE 450 Ch-NE Economics	3	(3-0)
Engl 219 Tech Writing[2]	3	(3-0)
Adv Chem for Concentration	4	(4-0)
	17	(17-0)

Second Semester

Ch-NE 302 Ch-NE Thermodynamics	3	(3-0)
Ch-NE 312 Unit Ops	2	(2-0)
Ch-NE 321 Mass Transfer	3	(3-0)
Basic Engineering Elective[5]	3	(3-0)
Adv Chem for Concentration[4]	4	(4-0)
H&SS Elective[1]	3	(3-0)
	18	(18-0)

Fourth Year[7,8] - First Semester

Ch-NE 414L Chem Engr Lab I	2	(1-5)
Ch-NE 451 Senior Seminar	1	(1-1)
Ch-NE 461 Chem Engr Kinetics	3	(3-0)
Ch-NE 493L Chem Engr Design	3	(2-3)
Technical Elective[6]	3	(3-0)
H&SS Elective[1]	3	(3-0)
	15	(13-9)

Second Semester

Ch-NE 415L Chem Engr Lab II	3	(1-8)
Ch-NE 454 Proc Dynamics & Control	3	(3-0)
Ch-NE 494L Adv Ch E Design	2	(2-2)
Technical Elective[6]	3	(3-0)
H&SS Elective[1]	3	(3-0)
H&SS Elective[1]	3	(3-0)
	17	(15-10)

[1] Students should consult with advisors to obtain a list of acceptable humanities and social science (H&SS) electives. These courses may be taken whenever convenient.

[2] Econ 200 and Engl 219 may be taken in either the sophomore or junior year.

[3] Physics 262 or Biology 121, depending on the student's area of concentration.

[4] A minimum of three courses from Chem 302, 311, 312, 423 or 431, depending on the student's area of concentration.

[5] CE 202, CE/ME 304 or EECE 203.

[6] Technical electives are chosen from approved upper division courses in engineering, mathematics and science. The department requires that these courses be part of an approved concentration. The chairperson may allow up to 6 hours of technical electives for students taking required ROTC courses in aerospace or naval science.

[7] Students must file an application for the B.S. degree prior to the completion of 95 semester hours of applicable courses.

[8] Students are encouraged to take the Fundamentals of Engineering (EIT) Examination during their senior year. This is the first formal step toward professional registration.

[9] Only courses with grades of C- or better may be applied toward the bachelor of science degree in chemical engineering.

THE UNIVERSITY OF NEW MEXICO
SCHOOL OF ENGINEERING
Farris Engineering Center, Room 107
Albuquerque, New Mexico 87131
Phone: **505-277-5522** Fax: **505-277-1422**
e-mail: kauffman@unm.edu

January 27, 1997

To: Kathleen Sena, Associate Registrar

From: David Kauffman, Associate Dean

Subject: Editorial Corrections: Forms from Chemical and Nuclear Engineering

Please make the following minor corrections in the pack of forms submitted January 2, 1997, from Chemical and Nuclear Engineering. These changes come as a result of discussions with Henry Shapiro, Curricula Committee chair, after his detailed review of the package.

1. Chemical Engineering B.S. Curriculum sheet

   Correct the title of CH-NE 461 to read **Chem Reactor Engr**. The incorrect title, Chem Engr Kinetics, was a mistaken holdover from the 1995-97 catalog.

   Correct the title of ECON 200 to read **Principles of Macroeconomics.**

2. Nuclear Engineering B.S. Curriculum sheet

   Swap **CS 151** and **H&SS elective** in the freshman year.

   Correct the title of ECON 200 to read **Principles of Macroeconomics.**

3. CH-NE 312 - Form A

   Delete **CH-NE 253** as a prerequisite.

4. CH-NE 321 - Form B

   Add **CH-NE 253** as a prerequisite.

We assume your office will make any necessary changes which result from the planned course number change for ECON 200.

Copies of corrected pages are enclosed.

Encl.

cc: Henry Shapiro, CS

JAN 02 1997

802

DEGREE/PROGRAM CHANGE FORM C

OFFICE OF THE REGISTRAR

CIP CODE

Assigned by Associate Provost for Academic Affairs

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if neccessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

Date: November 21, 1996

David Kauffman
(Name of individual initiating curricular change form)

Professor/Associate Dean 7-5522
(Title, position, telephone number)

Chemical & Nuclear Engineering
(Department/Division/Program/Branch)

*** Plan for curricular process to take at least 12 months.**

Mark appropriate Program:

Undergraduate Degree Program [X]

Graduate Degree Program (For existing degree only) [ ]

This form is for Nuclear Engineering
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) _____

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree B.S. (Type)	[ ] Undergraduate degree only	[ ]	[ ]	[ ]
Major	[ ]	[X]	[ ]	[ ]
Minor	[ ]	[ ]	[ ]	[ ]
Concentration	[ ]	[ ]	[ ]	[ ]
Certificate	[ ]	[ ]	[ ]	[ ]
Emphasis	[ ]	[ ]	[ ]	[ ]
Department	[ ]*	[■]	[ ]	[ ]

*See New Units policy *Guidelines* book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

see attached

Reason(s) for Request (attach additional sheets if necessary).

see attached

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary)
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary)
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement.
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No X
If yes, have you resolved these issues with department/branch involved?_____ (attach statement)
Effective Date of Proposed Change: Fall (Semester), 1997 (Year)

Required Signatures:

	Date:
Department Chairperson	11/25/96
Dean of Library Services (If necessary)	1/10/97
CIRT (If necessary)	
College Curriculum Committee (If necessary)	12.20.96
College or School Faculty (If necessary)	1-2-97
College or School Dean/Director of Instruction	
FS Graduate Committee (If applicable)	
FS Curricula Committee	2/2/97
Assoc. Provost for Academic Affairs	2/07/97
Faculty Senate	

For Scheduling Office ONLY:
Received _____ Entered (Mainframe) _____ Entered (Catalog) _____ Mailed _____

The University of New Mexico Office of the Registrar (Revised 8/95)

Catalog copy - Corrected titles
Be sure to put - between Ch-NE

CURRICULUM IN NUCLEAR ENGINEERING

The Bachelor of Science Program in Nuclear Engineering is accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology.

Hours [6] Required for Graduation: 133

First Year - First Semester

Course Title	Cr. Hrs.	Hrs. Lect/Lab
ChNE 101 Intr Che & Nclr Engr	1	(1-0)
Chem 121L Gen Chemistry eral	4	(3-3)
Math 162 Calculus I L	4	(4-0)
Engl 101 Comp I: Exposition	3	(3-0)
C S 151L Comp Prog Fund	3	(3-1)
	15	(14-4)

see memo of 11/27/97

Second Semester

Course Title	Cr. Hrs.	Hrs. Lect/Lab
Physcs 160 Gen Physics eral	3	(3-0)
Chem 122L Gen Chemistry eral	4	(3-3)
Math 163 Calculus II	4	(4-0)
Engl 102 Comp II: Analys & Arg	3	(3-0)
H&SS Elective [1]	3	(3-0)
	17	(16-3)

being changed to 105

Second Year - First Semester

ChNE 230 Princ Rad Prot iation	3	(3-0)
Physcs 161 Gen Physics eral	3	(3-0)
Math 264 Calculus III L	4	(4-0)
C E 202 Statics Engineering	3	(3-0)
Econ 200 ~~Prin & Probs~~ Principles of Macro	3	(3-0)
	16	(16-0)

added
ChNE 101
ChNE 312
one H&SS elective

replaced
ChNE 468 or 485 → NE Tech
Tech elective → NE Tech elective elective

deleted
Engr 122
Physics 330

changed sometime in the past?

Second Semester

ChNE 231 Princ ~~Nuel Engr~~ of Nuclear Engr	3	(3-0)
Physcs 262 Gen Physics eral	3	(3-0)
Math 316 Appl Ord Diff Equas	3	(3-0)
ChNE 301 Thermodynamics	3	(3-0)
Engl 219 Technical Writing	3	(3-0)
EECE 203 Circuit Analysis I	3	(3-0)
	18	(18-0)

Third Year - First Semester

ChNE 311 Intro Transpt Phenomena	4	(4-0)	
ChNE 317 Chem & Nucl Engr Analysis	3	(3-0)	
ChNE 323L Rad & Det Meas — Nucl Det Meas/Lab	3	(2-3)	
ChNE 450 Ch-NE Economics — Chem Nucl Engr Econ	3	(3-0)	
H&SS Elective [1]	3	(3-0)	
	16	(15-3)	

Second Semester [3]

ChNE 312 Unit Operations — NE	2	(2-0)	
ChNE 313L Intro Lab Techniques	3	(2-3)	Credit hour change
ChNE 314 Nuclear Systems	2	(2-0)	credit hour change
ChNE 330 Nucl Engr Science	3	(3-0)	
ChNE 370 Engr Matls Science — Materials Sci	3	(3-0)	
Tech Elective [2]	3	(3-0)	
	16	(15-3)	

Fourth Year [3,4] - First Semester

ChNE 410 Nucl Retr Theory I — Reactor Thry I	3	(3-0)	
ChNE 464 Thermal-hydraulics — Thrml-Hydrl	3	(3-0)	
ChNE 497L Intro NE Design/Lab — Nucl Sys	3	(2-3)	
NE Tech Elective [5]	3	(3-0)	
H&SS Elective [1]	3	(3-0)	
H&SS Elective [1]	3	(3-0)	
	18	(17-3)	

Second Semester

ChNE 413L Nucl Engr Lab I	3	(1-6)
ChNE 498L NE Design — Nuclear Engr Design	4	(3-3)
NE Tech Elective [5]	3	(3-0)
ChNE 452 Seminar — Senior	1	(1-0)
Tech Elective [2]	3	(3-0)
H&SS Elective [1]	3	(3-0)
	17	(14-9)

NOTES

1 Students should consult with advisors to obtain a list of acceptable humanities and social science (H&SS) electives. These courses may be taken whenever convenient.

2 Technical electives are chosen from approved upper division courses in engineering, mathematics, and science. The Chairperson may allow up to 6 hours of technical electives for students taking required ROTC courses in aerospace or naval science.

3 Students must file an application for the B.S. Degree prior to the completion of 95 semester hours of applicable courses.

4 Students are encouraged to take the Fundamentals of Engineering (FE or EIT) Examination during their senior year. This is the first formal step toward professional registration.

5 The NE Technical Elective is chosen from a list of approved upper division nuclear engineering courses with the approval of the student's advisor.

6 To count towards graduation credit hours, each course must be completed with a grade of C- or better.

Curriculum in Nuclear Engineering

Rationale for Curriculum Changes

General Rationale. The changes in the B.S. Nuclear Engineering curriculum are being made to meet several objectives. The new curriculum:

1. Reduces the total hours required for graduation from 136 to 133. This is in line with changes in engineering education throughout the country.
2. Provides a freshman course to introduce students to the field and to bring them in contact with leading senior faculty.
3. Better integrates material from quantum mechanics and nuclear physics into courses where this material is used as the basis for understanding radioactive decay and radiation.
4. Eliminates some material considered to be of marginal value by both students and faculty.
5. Responds to changes in the chemical engineering curriculum where those changes affect the nuclear engineering curriculum.

ChNE 101 **Introduction to Chemical Engineering and Nuclear Engineering**. This new course is being added to offer freshman students a chance to learn more about what an engineer does, the technical areas of chemical and nuclear engineering, and the career options available in these fields. It should also help in student motivation and retention by bringing freshman into direct contact with leading senior faculty in the field and providing some college survival skills in time management and computer skills. The class would meet 2 hours each week and include presentations on job opportunities in both fields, same basic survival skills (unit conversions, graphical presentations, and other techniques, study skills, etc. that will help them be a successful engineering student and practicing engineer), and some simple hands-on design projects.

Ch NE 312 **Unit Operations**. This course is being modified by the chemical engineering faculty to focus on fluid flow and heat transfer which is exactly what the nuclear engineers need. They have taken this material as part of the ChNE 314 Nuclear Systems class, but have only had 1.5 credit hours of material. Adding this class to their schedule will increase the fluid and heat transfer material to 2 credit hours and provide the nuclear engineering students opportunities for team design projects with the chemical engineering students.

ChNE 313L **Introduction to Laboratory Techniques**. One credit hour of material on neutron diffusion theory is being added to this class. Previously it had two laboratory experiments dealing with neutron behavior and transport, but the fundamentals of these processes were being taught in ChNE 330. Oftentimes a student would not be taking the two courses concurrently so material needed in the laboratory was not necessarily available to the students. By integrating the fundamentals into the lab class, we hope to eliminate this mismatch.

ChNE 314 **Nuclear Systems**. The material on fluid flow and heat transfer has been moved out of this class into ChNE 312. This provides more time to focus on power generation, environmental issues, and thermodynamics which are needed for the students going to work in the nuclear power industry.

ChNE 330 **Nuclear Engineering Science**. This class was a combination of nuclear physics and neutron diffusion theory. The material covered in the nuclear physics part was dependent on concurrent coverage of the background material in Physics 330. The timing between the two classes never quite matched, so we found it difficult to depend on the students having previously seen the background material. It was felt that integrating the background material into the class would provided continuity and less repetition. To integrate this material meant that the diffusion theory material needed to be moved to ChNE 313L where it fits better with the laboratory experiments and allows us to focus the nuclear science class on the nuclear processes leading to radioactive decay and radiation emission.

NE Tech Electives. To be responsive to changes in the nuclear industry we decided to expand our tech elective options from the ChNE 468 Space Power and the ChNE 485 Fusion to allow other upper division NE courses to be included.

Faculty Load Implications. The total number of required hours in the Chemical and Nuclear Engineering Department will increase from 53 to 56 as a result of the proposed changes in the curriculum. There is one new course being added (ChNE 101 at 1 credit hour), and changes made in the content of other courses. However, as much of the increase is due to integration of material into current classes and the faculty have often had to teach that material before they could proceed with standard course material, it is expected that there will be little change in faculty time requirements. If anything, removing the stress of timing course material with material taught by other faculty should reduce the faculty load. There are sufficient faculty with expertise to cover the new and changed courses without putting an undue load on any individuals.

DEGREE/PROGRAM CHANGE FORM C

Date: December 4, 1996

Rebecca Hall, PhD
(Name of individual initiating curricular change form)

Prog Dir, DMS Program
(Title, position, telephone number)

Radiology 272-6672
(Department/Division/Program/Branch)

CIP CODE

_____
Assigned by Associate Provost for Academic Affairs

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if neccessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

*** Plan for curricular process to take at least 12 months.**

This form is for Radiation Therapy (RTT)
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) pp.s 323-324

Mark appropriate Program:

Undergraduate Degree Program ☐

Graduate Degree Program (For existing degree only) ☐

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree _____ (Type)	☐ Undergraduate degree only	☐	☐	☐
Major	☐	☐	☐	☐
Minor	☐	☐	☐	☐
Concentration	☐	☐	☐	☐
Certificate	☐	☐	☒	☐
Emphasis	☐	☐	☐	☐
Department	☐*	☒	☐	☐

*See New Units policy *Guidelines* book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

Reason(s) for Request (attach additional sheets if necessary). The UNM Program in Radiation Therapy has been discontinued as of July, 1996.

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary)
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary)
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement.
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No__X__
If yes, have you resolved these issues with department/branch involved?_____ (attach statement)
Effective Date of Proposed Change: July, 1996 (Semester) _____ (Year)

Required Signatures:

Department Chairperson	Date: 12/4/96
Dean of Library Services (If necessary) Jon Eldredge	Date: 12/5/96
CIRT (If necessary)	Date:
College Curriculum Committee (If necessary)	Date:
College or School Faculty (If necessary)	Date:
College or School Dean/Director of Instruction	Date: 12/5/96
FS Graduate Committee (If applicable)	Date:
FS Curricula Committee	Date: 2/6/97
Assoc. Provost for Academic Affairs	Date: 2/07/96
Faculty Senate	Date:

For Scheduling Office ONLY:
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Approved by College Graduate Committee December 1996

809

DEGREE/PROGRAM CHANGE
FORM C

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if neccessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

Date: December 16, 1996

Jeannette Cochran
(Name of individual initiating curricular change form)

Interim Associate Dean (277-0849)
(Title, position, telephone number)

College of Nursing
(Department/Division/Program/Branch)

CIP CODE
Assigned by Associate Provost for Academic Affairs

* Plan for curricular process to take at least 12 months.

Mark appropriate Program:

Undergraduate Degree Program ☐

Graduate Degree Program (For existing degree only) ☐

This form is for Master of Science in Nursing
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) _____

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree _____ (Type)	☐ Undergraduate degree only	☐	☐	☒
Major	☐	☐	☐	☒
Minor	☐	☐	☐	☐
Concentration	☐	☐	☐	☒ ?
Certificate	☐	☐	☐	☐
Emphasis	☐	☐	☐	☐
Department	☐ *	■	☐	☐

*See New Units policy Guidelines book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

This is a request to change the title of our "Medical-Surgical" nursing concentration to "Adult Health" nursing.

Reason(s) for Request (attach additional sheets if necessary).

The name change will not require any course changes. It is only a name change to more accurately reflect the concentration.

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary)
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary)
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement.
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No XX
If yes, have you resolved these issues with department/branch involved?_____ (attach statement)
Effective Date of Proposed Change: Spring (Semester) 1997 (Year)

Required Signatures:

Department Chairperson	Jeannette Cochran	Date: 12-17-96
Dean of Library Services (If necessary)	Not applicable	Date:
CIRT (If necessary)	Not applicable	Date:
College Curriculum Committee (If necessary)		Date:
College or School Faculty (If necessary)		Date:
College or School Dean/Director of Instruction	Donna L. Thomas	Date: 12/17/96
FS Graduate Committee (If applicable)		Date:
FS Curricula Committee		Date: 1/31/97
Assoc. Provost for Academic Affairs	Bill W. Wu	Date: 2/07/97
Faculty Senate		Date:

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The University of New Mexico Office of the Registrar (Revised 8/96)

(47)

PROGRAM CHANGE

November 20, 1996

Barbara Fricke
(Name of individual initiating curricular change form)

Program Director, 277-5434
(Title, position, telephone number)

Pathology/Medical Laboratory Sciences
(Department/Division/Program/Branch)

CIP CODE

Assigned by Associate Provost for Academic Affairs

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if neccessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

*** Plan for curricular process to take at least 12 months.**

Mark appropriate Program:

Undergraduate Degree Program [X]

Graduate Degree Program (For existing degree only) [ ]

This form is for Medical Laboratory Sciences
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) 304-307

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree BS-MLS (Type)	[ ] Undergraduate degree only	[X]	[ ]	[ ]
Major	[ ]	[ ]	[ ]	[ ]
Minor	[ ]	[ ]	[ ]	[ ]
Concentration	[ ]	[ ]	[ ]	[ ]
Certificate	[ ]	[ ]	[ ]	[ ]
Emphasis	[ ]	[ ]	[ ]	[ ]
Department	[ ]*	[■]	[ ]	[ ]

*See New Units policy *Guidelines* book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

See attached sheets.

Reason(s) for Request (attach additional sheets if necessary).

See attached sheet.

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary)
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary)
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement.
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No X
If yes, have you resolved these issues with department/branch involved?_____ (attach statement)
Effective Date of Proposed Change: Fall (Semester), 1998 (Year)

Required Signatures:

Department Chairperson	Date: 12/2/96
Dean of Library Services (If necessary) Jan Eldredge	Date: 11/27/96
CIRT (If necessary) N/A	Date:
College Curriculum Committee (If necessary) N/A	Date:
College or School Faculty (If necessary) N/A	Date:
College or School Dean/Director of Instruction	Date:
FS Graduate Committee (If applicable) N/A	Date:
FS Curricula Committee	Date: 11/21/97
Assoc. Provost for Academic Affairs	Date: 2/10/
Faculty Senate	Date:

(43)

For Scheduling Office ONLY:
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Entered (Catalog) _____ Mailed _____

SIGN HERE

Changes* of old MLS courses to new MLS courses

OLD CURRICULUM		NEW BSMLS CURRICULUM	
300L Orientation	1	300L Orientation/Phleb	1
310 Clinical Chemistry	5	310* Intro Clinical Chemistry	5
311LClin Chemistry Lab	2	311L* Intro Clinincal Chemistry Lab	2
320 Clin Hematology/ Hemostasis	4	320* Intro Clin Hematology /Hemostasis	4
321LClin Hematology/ Hemostasis Lab	2	321L* Intro Clin Hema/Hemo Lab	2
340LClinical Immunohematology & lab	2	340L* Intro Clin Immunohematology	3*
350LClinical Urinalysis	2	350L* Clinical Urinalysis	2
403# Clinical Bacteriology	6	330# Intro Clinical Microbiology	4
404L# Clin Bacteriology Lab	2	331L# Intro Clinical Microbiology Lab	2
407L# Clin Parasitology with Lab	3	430# Advanced Clinical Microbiology	4
408L# Clin Mycology with Lab	2	431L# Advanced Clinical Microbiology Lab	2
415 Clin Immunology & Serology	3	315L* Clinical Immunopathology	2*
416L#Clin Immunology/Serology Lab	1		
431LAdvanced Clinical Chemistry	4	410L* Advanced Clin Chemistry	2*
432L Adv Clin Hema/Hemo	4	420L* Advanced Clin Hema/Hemo	3*
434LAdv Clin Immunohem	3	440L* Advanced Clin Immunohematology	1*
445 Clin Management &Education	1	445 Clinical Lab Management & Education	2*
	47		
		470# Applied Lab Sciences	3
		475# Applied Lab Studies	3
			47
451 Pract Train in Clin Chem	4	351# Basic Clin Chemistry Rotation	3
		451* Advanced Cinical Chemistry Rotation	2*
452 Pract Train in Clin Hema/Hemo	4	352# Basic Clin Hematology/Hemo Rotation	3
		452* Adv Clin Hematology/Hemo Rotation	2*
454 Pract Train in Clin Immunohemat	3	354* Clinical Immunohematology Rotation	3
455 Pract Train in Clin Urinalysis	1	355* Clinical Urinanlysis Rotation	1
453 Pract Train in Clin Microbiology	4	453* Clinical Microbiology Rotation	4
456# Pract Train in Cl Immuno/Serology	1		
499 Pre-Employment Seminar	1	499* Alternative Experiences 2x @ 1each =	2
	18		20

- deleted courses

(44) # - new courses * - changes to courses

101. Introduction to Human Services. (3)
An overview of the caregivers, the delivery systems, and the types of services provided within the field of Human Services, with particular emphasis on the development of the field and the roles and functions performed by these "new professionals."

102. Principles of Interviewing. (3)
Provides basic knowledge of the interviewing process with emphasis on developing interviewing skills. Developing an awareness of ways in which the student's background, attitude, and behavior influence the interview. Videotaped class interviews will provide material for discussion and critique.

105. Group Dynamics. (4)
Drawing on both theoretical and observer participation models the student will explore various relationships as they develop in dyads, small-group and large-group settings. Relates practical experience from field placement to group models of interaction.

109. New Techniques of Assessment and Intervention. (3)
Looks at means of obtaining and evaluating information about difficulties which bring people to mental health or social service settings. Introduces the student to a variety of modalities for assisting individuals, groups, and families to enhance their capacities for coping with their personal and environmental stresses.

201. Family Process: Functional and Dysfunctional Families. (3)
Assists in developing an understanding of how families function in today's society, in terms of their ability to cope with various sources of stress. Describes theoretical and therapeutic systems which serve as a guide for human services workers in family interventions.

250. Clinical Experience in Human Services. (4)
Practical experience in a clinical setting involving service to clients and patients in various human service agencies; understanding the helping process through closely supervised assumption of responsibility for human service care; developing skill in observation, report writing and interviewing; guidance in establishing therapeutic relationships with individuals by participation in case analysis, case presentation and program planning. 240 hours per semester plus weekly seminar with Human Service staff required. May be repeated for credit up to a maximum of 8 credit hours.

302. Contemporary Issues in Mental Health. (3)
Current social, ethical, legal, medical issues and trends will be explored including the community mental health movement, patient's rights, functions and side effects of psychopharmacology.
Prerequisites: 101 and 109, or equivalent.

305. Experiential Groups: Theory and Practice. (4)
Theory and techniques of working with groups in community service settings: emphasis on development of ability to apply concepts to practice.
Prerequisite: 102.

309. Human Service Methods: Theory and Practice. (3)
Introduces student to concepts and applications of multidimensional assessments and problem-solving models of inervention used with diverse populations.
Prerequisite: 102.

337. Family Psychology. (3)
(Also offered as Psych 337.)
Focuses on the major theoretical appoaches to family dysfunction and examines family influences on the development and maintenance of deviance, including juvenile delinquency, substance abuse, anorexia nervosa, depression, and schizophrenia
Corequisite: Psych 332.

350. Advanced Clinical Experience in Human Services. (4)
Continuation of 250 with increased student responsibility for client care/service. Weekly seminar.
Prerequisite: 250.

351. Advanced Clinical Experience in Human Services. (4)
Continuation of 350 with increased student responsibility for client care/service. Weekly seminar.
Prerequisite: 350.

398. Workshop. (1-3)
In depth individual and/or small-group exploration of problem or special interest areas. May be research or demonstration project. May be repeated for credit to a maximum of 9 hours.

MEDICAL LABORATORY SCIENCES

Barbara Fricke, Director
University of New Mexico School of Medicine
Health Sciences and Services Bldg. 217
Albuquerque, NM 87131-5651
(505) ~~277-5404~~ 272-5434

Ph.D, MT(ASCP), University of New Mexi

Lecturers
Cecilia C. Dail, B.S., MT(ASCP), Carson Newman College
Leslie Danielson, B.S., ~~MT(ASCP), University of Colorado~~
Barbara Fricke, M.S., MT(ASCP), Ohio State University
S. J. Sperry, B.S., MT(ASCP), University of New Mexico
Bonnie L. Varela, B.S., MT(ASCP), University of Albuquerque

Introduction

(Medical Sciences) are encompassing the fields of clinical chemistry, hematology, microbiology, immunology, urinalysis, and blood banking. With tremendous advances in medical research in recent years, modern health care has become increasingly dependent on a growing variety of complex laboratory tests and technologies to diagnose and treat disease. The medical technologist is a professional clinical laboratory scientist who, as a member of the health care team, is responsible for providing this essential service.

medical laboratory scientists

A ~~technologist~~ requires a broad educational background and clinical laboratory training to be proficient in performance of the required laboratory procedures. Medical technologists may manage or supervise a clinical laboratory or may perform the laboratory tests on blood, other body fluids, and tissues, requiring the use of sophisticated equipment and techniques. The medical ~~technologist~~ is responsible for the quality and accuracy of these laboratory results, which provide critical information to the physician for diagnosis and treatment of patients. The medical technologist may find challenging opportunities in hospital and independent laboratories, physicians' offices, clinics, research, industry, and educational institutions.

laboratory scientist

Medical Laboratory Science Program

The Medical Laboratory Science Program at UNM is offered through the Department of Pathology in the School of Medicine. The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS).

* - get ₱ from p 305

deletions are lined out
small changes in red here + in brackets on
new description (45)

The ~~18 month MT~~ Program may be taken as part of a four-year curriculum leading to the Bachelor of Science degree in Medical Laboratory Science from UNM's School of Medicine, OR as part of a degree from another four-year academic institution, OR as a certificate program following a baccalaureate degree.

In the degree programs, the student follows a prescribed curriculum which requires 2½ years of preprofessional academic study and ~~1½~~ years in the MLS Program.

The program meets the requirements for Medical Technology training leading to a B.S. in Medical Technology at the following New Mexico colleges or universities: ~~College of Santa Fe~~, Eastern New Mexico University, New Mexico ~~Institute of Mining and~~ Tech~~nology~~, New Mexico State University, and Western New Mexico University. Students may also be accepted from other universities which agree to give credit for the training program toward a B.S. in Medical Technology. The parent institution awards the degree upon completion of the Program. Students earning a BS degree from an academic institution other than UNM, must meet the degree requirements established by that university in addition to the minimum educational requirements specified below for entering UNM's MLS Program.

In the certificate program, students need to have their college degree and the minimum educational requirements specified below before entering UNM's MLS Program.

Students register through UNM for all MD LAB courses.

Students who successfully complete the program are eligible to sit for national certification examinations given by the Board of Registry (ASCP) and by the National Certification Agency for Medical Laboratory Personnel (NCA).

Admission Requirements

Minimum education requirements are ~~X~~ semester hours of acceptable college credits from a college or university approved by a recognized accrediting agency including the required courses listed below. All credit-hours must be acceptable towards a baccalaureate degree. A minimum grade-point average of 2.00 in all subjects including a grade of C or better in each prerequisite biology, chemistry, and math course is required.

Students coming from other universities or colleges who will earn their baccalaureate degree from their parent institutions or students who already have a baccalaureate degree must have the following prerequisites for admission to the Medical ~~Technology~~ program at UNM.

Total of ~~X~~ semester hours of credit including:

1. Chemistry - ~~a minimum of 16~~ hours. ~~This must~~ include ~~one course in quantitative analysis, and~~ one course in organic or biochemistry.
2. Biological Sciences - ~~a minimum of~~ 16 semester hours. ~~This must~~ include courses in microbiology and immunology.
3. Mathematics - a minimum of one course in college level algebra or a higher math course.

~~NOTE:~~ Remedial and survey courses are not acceptable.

Other recommended courses are: anatomy and physiology, cell biology, parasitology, pathogenic bacteriology, biochemistry, psychology, sociology, computer science, communications, management, and education.

Students earning their B.S. degrees from the School of Medicine at UNM must follow the prescribed curriculum outlined below and should make their intentions known to a medical laboratory science advisor as early in their student career as possible.

Pre-Medical Laboratory Science Curriculum

	Credits
First Year—First Semester	
Chem 121L Gen Chem or 131L	4
Biol 121L Prin of Biol	4
Math 121 College Algebra	3
Engl 101 Comp I: Exposition	3
MD LAB 121 Intro to MT (optional)	1
	14-15
Second Semester	
Chem 122L Gen Chem or 132L	4
Biol 122L Prin of Biol	4
Engl 102 Comp II: Analys & Arg	3
Math Elective [1]	3
	14
Second Year—First Semester	
Chem 212 Organic/Bio Chem	
-or- 301-303L Organic Chem	4
Biol 239L or 350L Microbiology	4
Liberal Arts Elective	3
Elective	1
	12
Second Semester	
Biol 219 Cell Biology	3
Chem 302-304L Organic Chem (optional)	4
Electives (as needed)	8-12
	15
Third Year-First Semester	
Chem 253L Quant Analysis [2]	4
Biol 456 Immunology or Pharm 302	3
C & J 221, 321 or 425	3
Mgt 113 or 361	3
Elective	3
	16

1 Prefer Math 145 or a Math course higher than Math 121.
2 Not required if Chem 132L is taken.

Medical Laboratory Science Program Curriculum

The Medical Laboratory Science Program begins each Spring Semester and Summer Session with students taking Med Lab Sciences (MD LAB) courses on the Medical Campus. Full-time students complete on-campus courses in 12 months while part-time students will require additional semesters. Students are then assigned to an affiliate laboratory for practicum training courses in the Spring or Fall Semester. Hospital and reference laboratories currently used as clinical affiliates are: Clovis High Plains Hospital, Clovis; Santa Fe Medical Laboratory, Santa Fe; Eastern New Mexico Medical Center, Roswell; Memorial Medical Center, Las Cruces; and the following Albuquerque sites:

Lovelace Medical Center, Presbyterian Hospital Center, S.E.D. Medical Laboratory, University Hospital, and New Mexico Regional Federal Medical Center.

300L	Orientation	1
310	Clin Chemistry	5
311L	Clin Chemistry Lab	2
320	Clin Hematology/ Hemostasis	4
321L	Clin Hematology/ Hemostasis Lab	2
340L	Clin Immunohematology	2
350L	Clin Urinalysis	2
403	Clin Bacteriology	6
404L	Clin Bacteriology Lab	2
407L	Clin Parasitology	3

Symbols - See page 370

408L	Clin Mycology	2
415	Clin Immunology & Serology	3
416L	Clin Immunology & Serology Lab	1
431L	Advanced Clin Chemistry	4
432L	Advanced Clin Hematology/Hemostasis	4
434L	Advanced Clin Immunohematology	3
445	Clin Management & Education	1
		47

Spring -or- Fall (23 Weeks)

451	Practical Training in Clin Chemistry	4
452	Practical Training in Clin Hematology/ Hemostasis	4
453	Practical Training in Clin Microbiology	4
454	Practical Training in Clin Immunohematology	3
455	Practical Training in Clin Urinalysis	1
456	Practical Training in Clin Immunology & Serology	1
499	Pre-Employment Seminar (1 week)	1
		18

Application and Admission

Categories under which applicants may be admitted to the Medical Laboratory Science Program are:

1. Students who have completed 74 semester hours in the prescribed premedical laboratory sciences curriculum at UNM.
2. Students from other New Mexico colleges or universities who meet the minimum educational requirements previously stated and will be eligible for a degree from their parent institution upon completion of the Medical Technology Program.
3. Individuals who possess a baccalaureate or higher degree from an accredited college or university and meet the minimum course work requirements previously stated. Those whose academic work was seven or more years prior to making application must update their academic preparation in a manner acceptable to the admission committee.

An application must be submitted to the Director of Medical Laboratory Sciences by the **September 15** deadline for January admission or ~~February~~ **15** deadline for ~~Summer~~ admission. Application may be made while enrolled in courses needed to complete the prerequisites. Official transcripts of all college course work must be sent directly from each institution. Admission is selective and limited each year. Selection is based on cumulative GPA, science GPA, letters of reference, and a personal interview. A cumulative GPA of 2.50 is recommended. Selection of applicants will be made by the Medical Laboratory Sciences Admission Committee. All applicants will be notified of their admission status. Selection will be given to qualified persons regardless of their race, color, religion, gender, national origin, age qualified handicap, or military involvement. Residents of New Mexico receive preference in admission.

Tuition and Expenses

Tuition and fees for the pre-Med Lab Science courses and the courses in the MLS program are the same as those established for undergraduate students at UNM and listed in the current Schedule of Classes. Refund policies also follow those for the university.

In addition to tuition and fees, the cost of laboratory coats, microscope rental, laboratory manuals, books, and living expenses during the program must be assumed by the student.

Various types of financial aid are available to university students through the Office of Student Aids. In addition, there are certain scholarships and financial aid from local and national organizations specifically for students enrolled in the Medical Laboratory Science Program. Information regarding these funding sources may be obtained from the Director of Medical Laboratory Sciences.

Degree Requirements

A Bachelor of Science in Medical Technology will be awarded by the School of Medicine at UNM to students who:

1. Complete 128 semester hours, including all courses in the prescribed Medical Technology curriculum.
2. Have a cumulative GPA of 2.00 with a grade of C or better in each required Biology, Chemistry, Math and MD LAB courses.
3. Fulfill the university minimum degree requirements.
4. Are recommended for the degree by the faculty.

Information Requests

Communications regarding information and applications should be addressed to the Director, Medical Laboratory Sciences, Health Science Center, School of Medicine, the University of New Mexico, Albuquerque, NM 87131-5651.

NOTE: Changes in the Medical Laboratory Science Program occur. Therefore, you need to follow the described curriculum carefully and stay in touch with the student-technology advisors.

Medical Laboratory Sciences (MD LAB)

121. Introduction to Medical Laboratory Sciences. (1) Introduction to scope and practice of the Medical Technology profession. Basic terminology and a tour of UNMH laboratory are included. Test procedures performed in a medical lab will be covered in three lab sessions. 1 lecture. (Fall)

300L. Orientation to Medical Technology Professional Training. (1) Introduction to the profession, and a review/study of basic lab math, blood collection techniques, safety procedures, spatting, electronics, use of basic lab instruments and equipment.
Prerequisite: acceptance into Medical Technology Program (Spring, Summer)

310. Clinical Chemistry II. (5)
A study of metabolic reactions which involve the most common chemical analytes of blood and other body fluids and the principles and methods used in measuring those analytes. Includes theory of basic instrumentation.
Prerequisite: acceptance into Medical Technology Program.
Corequisite: 311L.

311L. Clinical Chemistry II Laboratory. (2)
Laboratory experiences for performing and/or evaluating the clinical testing procedures used in a clinical chemistry laboratory.
Corequisite: 310.

320. Clinical Hematology and Hemostasis II. (4)
A thorough study of the development, identification and abnormalities associated with blood cells, and the fundamentals of hemostasis. The principles of routine laboratory procedures and basic instrumentation will be included.
Prerequisite: acceptance into Medical Technology Program.
Corequisite: 321L.

321L. Clinical Hematology/Hemostasis II Laboratory. (2)
Laboratory experiences in the performance and/or study of routine procedures in the clinical hematology and coagulation laboratory.
Corequisite: 320.

340. Clinical Immunohematology II. (2)

detection and identification, and compatibility testing. Laboratory practice of basic procedures performed in a clinical immunohematology lab will be included.
Prerequisite: acceptance into Medical Technology Program.

350L. Clinical Urinalysis II. (2) [1]
A study of kidney functions and the physiochemical and microscopic urine tests. Case studies, demonstrations and laboratory practice will enhance the development of critical thinking and problem solving skills needed in clinical urinalysis laboratory.
Prerequisite: acceptance into Medical Technology Program.

403. Clinical Bacteriology II. (6) [1]
A thorough study of medically important bacteria and the aspects of infectious diseases with emphasis on techniques, methods and differential media used to isolate and identify pathogens. Case studies will be used for critical thinking and problem solving.
Prerequisite: acceptance into Medical Technology Program; Corequisite: 404L.

404L. Clinical Bacteriology II Laboratory. (2)
Laboratory experiences in the performance of and/or study of procedures used in a clinical bacteriology laboratory.
Corequisite: 403.

407L. Clinical Parasitology II. (3) [1]
A study of disease characteristics, life cycles and diagnostic morphology of medically important parasites, including laboratory practice with wet preps and staining procedures. Development of critical thinking and problem solving skills will be emphasized.
Prerequisite: acceptance into Medical Technology Program.

408L. Clinical Mycology II. (2) [1]
A study of the medically important fungi including diseases, methods of isolation and identification by the use of common laboratory procedures. Emphasis will include the development of critical thinking/problem solving techniques.
Prerequisite: acceptance into Medical Technology Program.

415. Clinical Immunology and Serology II. (3) [1]
A study of principles of immunology and serological methods used in evaluation and diagnosis of disease, augmented by the use of case studies. Development of critical thinking and problem solving techniques is emphasized.
Prerequisite: acceptance into Medical Technology Program; Corequisite: 416L.

416L. Clinical Immunology and Serology II Laboratory. (1)
Laboratory experiences for practicing the procedures to be performed in a clinical immunology and serology laboratory.
Corequisite: 415.

431L. Advanced Clinical Chemistry II. (4)
Lecture and laboratory experiences on specialized and complex chemical analytes in blood and body fluids; disease patterns, interpretation and correlation of laboratory test results. Includes case studies, problem solving and evaluation techniques.
Prerequisites: C or better in 310, 311L.

432L. Advanced Clinical Hematology/Hemostasis II. (4)
A study of the principles and practice of non-routine Hematology/Hemostasis procedures, with the development of problem solving and interpretive skills through the use of case studies and laboratory tests.
Prerequisites: C or better in 320, 321L.

434L. Advanced Clinical Immunohematology II. (3)
Advanced study and development of problem solving abilities applied to blood group antigens and antibodies, compatibility testing, blood collection, and component therapy. Includes use of case studies, discussion groups, and practice of advanced laboratory procedures.
Prerequisite: C or better in 340L.

445. Clinical Management and Education. (1) [1]
The theory and principles for supervising a clinical laboratory with emphasis on problem solving techniques and current lab managerial methods. Education methods for instruction in the lab or for presentations will also be covered.
Prerequisite: acceptance into Medical Technology Program. (Fall, Spring)

451. Practical Training in Clinical Chemistry II. (4) [1]
Supervised instruction in the performance of analytical procedures for the various chemical analytes of blood and other body fluids in an affiliated laboratory. 40 hrs. per week.
Prerequisite: C or better in 431L. (Fall, Spring)

452. Practical Training in Hematology and Hemostasis II. (4) [1]
Supervised instruction in the performance of hematological procedures and coagulation studies in an affiliated laboratory. 40 hrs. per week.
Prerequisite: C or better in 432L. (Fall, Spring)

453. Practical Training in Microbiology II. (4) [1]
Supervised instruction in the performance of microbiological procedures in an affiliated laboratory. 40 hrs. per week.
Prerequisites: C or better in 403, 404L, 407L, 408L. (Fall, Spring)

454. Practical Training in Immunohematology II. (3) [1]
Supervised instruction in the performance of blood banking procedures in an affiliated laboratory. 40 hrs. per week.
Prerequisite: C or better in 434L. (Fall, Spring)

455. Practical Training in Urinalysis II. (1) [1]
Supervised instruction in the performance of urinalysis and special urine test procedures in an affiliated laboratory. 40 hrs. per week.
Prerequisite: C or better in 350L. (Fall, Spring)

456. Practical Training in Clinical Immunology and Serology II. (1) [1]
Supervised instruction in the performance of immunological and serological test procedures in an affiliated laboratory. 40 hrs. per week.
Prerequisites: C or better in 415, 416L. (Fall, Spring)

469. Pre-Employment Seminar. (1) [1]
Supervised experience in a variety of laboratory settings with increased responsibility, or an independent study with tutorials as outlined by the program director. Prerequisite: Successful completion of all Medical Technology courses. (Fall, Spring) **Offered on a CR/NC basis only.**

[1] Credit limited to students in Medical Laboratory Science program.

MEDICINE

Robert G. Strickland M.D.
University of New Mexico School of Medicine
University Hospital Ambulatory Care Center
5th Floor
Albuquerque, NM 87131
(505) 272-4661

Professors
Jonathan Abrams, M.D., University of California, (San Francisco)
Pratap S. Avasthi, M.D., King George Medical College (India)
Arthur D. Bankhurst, M.D., Case Western Reserve University

Symbols - See page 370

replace with new curriculum courses, #, descriptions from FORMs A + FORMs B

CATALOG DESCRIPTION
(changes)

MEDICAL LABORATORY SCIENCES

Barbara Fricke, MS, MT(ASCP), CLDir, Director
The University of New Mexico Health Sciences Center
Health Sciences and Services Bldg. Room 217
Albuquerque, New Mexico 87131
(505)(272)-5434

Lecturers
Cecilia C. Dail, B.S.,MT(ASCP),CLS, Carson Newman College
Leslie Danielson, (Ph.D.,MT(ASCP), University of New Mexico)
Barbara A.Fricke,M.S.,MT(ASCP),CLS,CLDir, The Ohio State University
S.J. Sperry, B.S.,MT(ASCP), University of New Mexico
Bonnie L. Varela, B.S.,MT(ASCP), University of Albuquerque

INTRODUCTION

(Medical laboratory sciences, or medical technology, is the health profession of clinical laboratory medicine) encompassing the fields of clinical chemistry, hematology, microbiology, immunology, urinalysis and blood banking. With advances in medical research, modern health care has become increasingly dependent on a growing variety of complex laboratory tests and technologies to diagnose and treat diseases. The medical technologist is a professional clinical laboratory scientist who, as a member of the health care team, is responsible for providing this essential service.

A (medical laboratory scientist) requires a broad general science background and specialized laboratory education to become proficient in performance of clinical laboratory procedures. Medical technologists may manage or supervise a clinical laboratory or may perform testing on patient blood or other body fluids or tissues, requiring the use of sophisticated equipment and techniques. The (medical laboratory scientist) is responsible for the quality and accuracy of laboratory test results, providing critical information for diagnosis and treatment of patients. The medical technologist may find challenging opportunities in hospital or other independent laboratories, physicians' offices, clinics, research, industry and educational institutions.

MEDICAL LABORATORY SCIENCES PROGRAM

The Medical Laboratory Sciences Program at UNM is offered through the Department of Pathology in the School of Medicine. The program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Students who successfully complete the program are eligible to sit for national certification examinations given by the Board of Registry (ASCP) and by the National Certifying Agency for Clinical Laboratory Sciences (NCA).

The 2-year MLS Program may be taken as part of a four-year curriculum leading to the Bachelor of Science degree in Medical Laboratory Sciences from UNM's School of Medicine, OR as part of a degree from another four-year academic institution OR as a certificate program following a baccalaureate degree. In the degree programs, the student follows a prescribed curriculum which requires 2 years of preprofessional academic study and 2 years in the MLS program.

The program meets the requirements for Medical Technology education leading to a B.S. in Medical Technology at the following New Mexico colleges or universities: Eastern New Mexico University, New Mexico Highland University, New Mexico Tech, New Mexico State University and Western New Mexico University. Students may also be accepted from other universities which agree to give credit for this program toward a baccalaureate degree. The parent institution awards the degree upon completion of UNM's program. Students earning a B.S. degree from an academic institution other than UNM must meet the degree requirements established by that university in addition to the minimum educational requirements specified below for entering UNM's MLS Program. In the certificate program, students need to have their college degree and the minimum educational requirements specified below before entering UNM's MLS Program. Students register through UNM for all MD LAB courses.

ADMISSION REQUIREMENTS

Minimum education requirements are 64 semester hours of acceptable college credits from a college or university approved by a recognized accrediting agency including the required courses listed below. All credit-hours must be acceptable towards a baccalaureate degree. A minimum grade-point average of 2.0 in all subjects including a grade of C or better in each prerequisite biology, chemistry and math course is required.

Students coming from other universities or colleges who will earn their baccalaureate degree from their parent institutions or

students who already have a baccalaureate degree must have the following prerequisites for admission to the (Medical Laboratory Sciences) Program at UNM.

Total of (64) semester hours of credit including:

1. **CHEMISTRY** - (approximately 12) semester hours credit including courses in organic and/or biochemistry.

2. **BIOLOGY** - (approximately) 16 semester hours credit including courses (in physiology) microbiology and immunology.

3. **MATH** - a minimum of one course in college level algebra or a higher math course.

(NOTE:) Remedial and survey courses are not acceptable.

Other recommended courses are: anatomy and physiology, cell biology, parasitology, pathogenic bacteriology, biochemistry, psychology, sociology, computer science, communications, management and education.

(Students are admitted to the program at the beginning of the Fall and Spring semesters. An application must be submitted to the Director of Medical Laboratory Sciences by the September 15 deadline for January admission or April 15 deadline for August admission. Application may be made while enrolled in courses needed to complete the prerequisites. Official transcripts of all college course work must be sent directly from each institution. Admission is limited, with selection based on cumulative GPA, science GPA, letters of reference, and a personal interview. A cumulative GPA of 2.5 is recommended. Selection of applicants will be made by the Medical Laboratory Sciences Admissions Committee. All applicants will be notified of their admission status. Selection will be given to qualified persons regardless of their race, color, religion, gender, national origin, age, qualified handicap or military involvement. Residents of New Mexico receive preference in admission.)

Students earning their B.S. degrees from the School of Medicine at UNM must follow the prescribed curriculum outlined below and should make their intentions known to a MLS Program advisor as early in their student careers as possible.

PRE-MEDICAL LABORATORY SCIENCES CURRICULUM

BIOLOGICAL SCIENCES: Approximately 18 semester hours to include:
- General: Biol 121L + 122L (8 hrs)
- Cell Biology: Biol 219 (3 hrs)
- Anatomy and Physiology: Biol 237 + 238 (6 hrs) -after Jan.'99
- Microbiology: Biol 239L Microbiology for Health Sciences (4 hrs) OR Biol 350L General Microbiology (4 hrs)
- Immunology: Biol 456 Immuno (3 hrs) OR Pharm 302 Immuno for Pharmacy (3 hrs) OR MD LAB 234 Intro Clin Immuno

CHEMISTRY: Approximately 12 semester hours to include:
- General: Chem 121L + 122L(8 hrs) OR Chem 131L + 132L(9 hrs)
- Organic or Biochem:* Chem 301 + 303L Organic (4 hrs) OR Chem 212 Integrated Organic & Biochemistry (4 hrs)

MATHEMATICS: Minimum of 2 courses to include:
- College Algebra: Math 121 (3 hrs)
- Higher Math or Statistics: Math 145 An Introduction to Probability & Statistics (3 hrs) is recommended

ENGLISH: Competence in writing English as determined by the English department OR the following 2 English courses:
- Engl 101 Composition I: Exposition (3 hrs)
- Engl 102 Composition II: Analysis & Argument (3 hrs)

INTERPERSONAL COMMUNICATIVE SKILLS: 1 course from the following:
- C & J 221 Interpersonal Communication (3 hrs)
- C & J 225 Small Group Communication (3 hrs)

MANAGEMENT THEORY: 1 course from the following on general management theory:
- Mgt 113 Management: An Introduction (3 hrs)
- Mgt 361 Organization Theory (3 hrs)

LIBERAL ARTS COURSE: At least one three-semester hour non-science or math course that is acceptable towards a bachelor's degree.

ELECTIVES*: Sufficient hours to complete the required 64 semester hours. Up to 4 hours of physical education courses are allowed.

*It is recommended that a year of organic chemistry (301,303L & 302,304L), biochemistry (423), microbiology 350L, a year of physics (151,153L & 152,154L) and calculus be taken if post baccalaureate degree studies are planned.

MEDICAL LABORATORY SCIENCE PROGRAM CURRICULUM

The MLS Program begins each Fall and Spring semester. Courses may be taken as a part-time student taking up to 3 years instead of the normal 2 years to complete the program. Students are assigned to an affiliated clinical laboratory for practical experiences in the rotation courses. Hospital laboratories and reference laboratories currently used are: Eastern NM Medical Center in Roswell, San Juan Regional Medical Center in Farmington, Memorial Medical Center in Las Cruces, Plains Regional Medical Center in Clovis, St. Vincent Hospital in Santa Fe, and the following Albuquerque sites: Lovelace Medical Center, VA Medical Center, Presbyterian Hospital, NM Reference Laboratory, S.E.D. Medical Laboratory, and University Hospital.

300L	Orientation/Phlebotomy	1
310	Intro Clinical Chemistry	5
311L	Intro Clinical Chemistry Lab	2
315L	Clinical Immunopathology	2
320	Intro Clin Hematology/Hemostasis	4
321L	Intro Clin Hematology/Hemostasis Lab	2
330	Intro Clinical Microbiology	4
331L	Intro Clinical Microbiology Lab	2
340L	Intro Clinical Immunohematology	3
350L	Clinical Urinalysis	2
410L	Advanced Clinical Chemistry	2
420L	Advanced Clin Hematology/Hemostasis	3
430	Advanced Clinical Microbiology	4
431L	Advanced Clinical Microbiology Lab	2
440L	Advanced Clinical Immunohematology	1
445	Clinical Lab Management & Education	2
470	Applied Lab Sciences	3
475	Applied Lab Studies	3
		47

CLINICAL ROTATION COURSES:

351	Basic Clinical Chemistry Rotation	3
352	Basic Clin Hematology/Hemostasis Rotation	3
354	Clinical Immunohematology Rotation	3
355	Clinical Urinalysis Rotation	1
451	Advanced Clinical Chemistry Rotation	2
452	Adv Clin Hematology/Hemostasis Rotation	2
453	Clinical Microbiology Rotation	4
499	2 - Alternative Experiences @1 each =	2
		20

INFORMATION REQUESTS

Communications regarding information and applications should be addressed to the Director, Medical Laboratory Sciences, UNM Health Sciences Center, School of Medicine, Albuquerque, NM 87131-5651.
(NOTE: Changes in the MLS Program could occur. Therefore, you will need to stay in touch with a MLS advisor.)

MEDICAL LABORATORY SCIENCES (MD LAB)

MD LAB 121 (description stays the same, but please remove the footnote)

MD LAB 300 to 499
(--get descriptions of courses FORMS A + FORMS B--)

(DELETE FOOTNOTE AT END OF THIS SECTION)

FORM C

REASONS FOR REQUEST:

This revision to the B.S. in Medical Laboratory Sciences degree plan is requested for the following reasons:

1. The profession of medical laboratory scientists or medical technologists has changed greatly since our last curriculum revision. In changing the curriculum to prepare students for their future roles in health care in this rapidly changing environment, we needed to do more than just change the content of existing courses. We need to make change the prerequisite courses for entering the profession program and to change how we teach the program. Therefore, the courses taught as part of the program are being revised, some old courses deleted and new courses created to incorporate new theory and professional methods that our graduates will need.

2. At the School of Medicine (SOM), an Interdisciplinary Training Grant has been initiated to put students from various health disciplines together in a rural community for 8 weeks during the summer. To allow our students easier access to participate in these interdisciplinary training groups, this proposed curriculum changes are needed.

3. The faculty for this program have had extra teaching loads due to a teaching contract with T-VI. By changing when we teach the professional courses, some theory can be taught once instead of twice each year, teaching loads can be adjusted, faculty can have time for other activities (service and research).

BUDGETARY AND FACULTY LOAD IMPLICATIONS

There is no budget implications. The faculty that currently teaches the courses for the program will teach all the courses listed in the revised curriculum including the new courses.
The impact on faculty will be to lower their overall faculty teaching load and allow time for them to do service work in a clinical laboratory and/or research.

LONG RANGE PLANNING STATEMENT

The revision will allow the program greater flexibility in what is taught, it allows for greater use of problem solving case studies in the applied lab courses, it allows greater flexibility in when and how students received clinical experiences. These changes will allow us to change course content so that we remain current with the changing times in health care without making curriculum plan changes for many years in the future.

THE UNIVERSITY OF NEW MEXICO ♦ HEALTH SCIENCES CENTER
HEALTH SCIENCES CENTER LIBRARY

TO: Henry D. Shapiro, PhD, Chair
UNM Faculty Senate Curriculum Committee

FROM: Jon Eldredge, MLS, PhD, Chief, Jon Eldredge
Collections & Information Resources Development

RE: Form C: Bachelor of Science in Medical Laboratory Sciences

DATE: November 27, 1996

This memo addresses ***all impact statements*** that would normally appear on each Form B for the new courses related to the proposed Bachelor of Science in Medical Laboratory Sciences Program.

The subjects covered in the Bachelor of Science EMS Program are already within the scope of HSC Library collections. Realistically, the Medical Laboratory Sciences Program has been operating academically at a Bachelor Degree level for several years. With close communication between the faculty in this program and my office, I predict that the HSC Library will be able to serve the collection resources needs of students in this new curriculum.

Although no research studies to date have determined the extent of increased impact of Problem-Based Learning approaches upon libraries serving health sciences programs, these innovative approaches *appear* to increase usage of library collection resources. Because the Vice President of the Health Sciences Center has provided the HSC Library with additional funds for the years ahead, and because of the present existence of bond monies available for book purchases, we therefore can be fairly confident that the HSC Library collections will be complete enough to meet any increased demand for the next few years.

In closing, I would like to thank the faculty in the Medical Laboratory Sciences Program for providing me with detailed lists of monographs and textbooks associated with certain courses. These lists have enabled me to acquire a concrete sense of what kinds of titles might be helpful for students in the Medical Laboratory Sciences Program.

Please contact me at either 277-0654 or jeldredg@biblio.unm.edu if I can be of further assistance. Thank you.

CC: Barbara Fricke, M.S., MT (ASCP), CLDir

Albuquerque, New Mexico 87131-5686 • PHONE (505) 277-2311 • FAX (505) 277-5350

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The University of New Mexico

Health Sciences Center
Medical Laboratory Sciences
Health Sciences and Services Building
Albuquerque, NM 87131-5651
(505) 277-5434

CIRT IMPACT STATEMENT

The Medical Laboratory Sciences Program is making curriculum changes to their baccalaureate degre program. In revising the degree plan, some previous courses have been broken into beginning and advanced courses that will allow two year educated medical laboratory technicians to easily proceed into the baccalaureate degree program. Overall, the content of what is being taught in the program will not change, but the course numbers and titles will change.

I do not forsee any additional requests of CIRT resources than currently used by this program. Currently, all students have e-mail accounts and that will remain the same. The program processes all written exams through the Test Scoring system and that will remain the same.

Therefore, there should be no additional impact on CIRT due to these curriculum changes.

I have discussed the proposed MLS curriculum changes with the MLS Program Director and I agree there will be no impact on CIRT by the proposed changes.

Terrence Wold — Signature

11-20-96 — Date

Terry Wold, CIRT
Director, Information Resource Center

DEGREE/PROGRAM CHANGE
FORM C

Date: 12-13-96

V. Jenna Johnson
(Name of individual initiating curricular change form)

Science Coordinator 925-8617
(Title, position, telephone number)

A&S / Science/ Valencia Campus
(Department/Division/Program/Branch)

CIP CODE

Assigned by Associate Provost for Academic Affairs

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if neccessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

*** Plan for curricular process to take at least 12 months.**

Mark appropriate Program:

Undergraduate Degree Program ☐

Graduate Degree Program (For existing degree only) ☐

This form is for Pre-Health Science Professions Certificate
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) 76-77

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree Certificate (Type)	☐ Undergraduate degree only	☐	☒	☐
Major	☐	☐	☐	☐
Minor	☐	☐	☐	☐
Concentration	☐	☐	☐	☐
Certificate	☐	☐	☐	☐
Emphasis	☐	☐	☐	☐
Department	☐*	■	☐	☐

*See New Units policy *Guidelines* book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

Reason(s) for Request (attach additional sheets if necessary).

The certificate degrees do not articulate well with the baccalaureate degrees at UNM-Albu. Students are better advised to seek an Associate at Science in General Science (currently being revised).

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary)
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary)
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement.
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No_x_
If yes, have you resolved these issues with department/branch involved?_____ (attach statement)
Effective Date of Proposed Change: Fall (Semester), 1997 (Year)

Required Signatures:

Department Chairperson Gregory A. Cencetta	Date: 12-20-96
Dean of Library Services (If necessary) Otis Warren	Date: 1/3/97
CIRT (If necessary) [illegible]	Date: 1/7/97
College Curriculum Committee (If necessary) Otis Warren	Date: 1/3/97
College or School Faculty (If necessary) _____	Date: _____
College or School Dean/Director of Instruction [illegible]	Date: 12-20-96
FS Graduate Committee (If applicable) _____	Date: _____
FS Curricula Committee [illegible]	Date: 2/21/97
Assoc. Provost for Academic Affairs Ignacio R Cordova	Date: 2/25/97
Faculty Senate _____	Date: _____

For Scheduling Office ONLY:
Received _____
Entered (Mainframe) _____
Entered (Catalog) _____
Mailed _____

DEGREE/PROGRAM CHANGE
FORM C

Date: 12-13-96

V. Jenna Johnson
(Name of individual initiating curricular change form)

Science Coordinator 925-8617
(Title, position, telephone number)

A&S / Science/ Valencia Campus
(Department/Division/Program/Branch)

CIP CODE

Assigned by Associate Provost for Academic Affairs

UNIT PREPARES IN QUADRUPLICATE
Routing (All four copies)
1. Dean of Library Services (if neccessary)
2. CIRT (Comp & Inform Res & Tech), (if necessary)
3. College Curriculum Committee (if necessary)
4. College or School Faculty
5. College or School Dean/Director of Instruction
6. FS Graduate Committee (if applicable)
7. FS Curricula Committee
8. Associate Provost for Academic Affairs
9. Faculty Senate

*** Plan for curricular process to take at least 12 months.**

Mark appropriate Program:

Undergraduate Degree Program ☐

Graduate Degree Program (For existing degree only) ☐

This form is for Associate of Science in General Science
Name of New or Existing Program

This program is or would be located in current undergraduate/graduate catalog on page(s) 62-63

Mark appropriate category

	NEW:	REVISION OF:	DELETION:	NAME CHANGE:
Degree ____ (Type)	☐ Undergraduate degree only	☒	☐	☐
Major	☐	☐	☐	☐
Minor	☐	☐	☐	☐
Concentration	☐	☐	☐	☐
Certificate	☐	☐	☐	☐
Emphasis	☐	☒	☐	☐
Department	☐*	■	☐	☐

*See New Units policy *Guidelines* book available from the Provost's Office.

Give exact title and requirements as they should appear in the catalog. See current catalog for format within the respective college (attach additional sheets if necessary). Identify in bracket form what is being changed.

Reason(s) for Request (attach additional sheets if necessary).
To improve articulation with baccalaureate science degrees in the College of Arts & Sciences at UNM-Albuquerque and professional health programs (listed in degree description)

Library Impact Statement. Name of librarian consulted and attached signed impact statement. (If necessary)
CIRT Impact Statement. Name of individual consulted and attached signed impact statement. (If necessary)
Budgetary and Faculty Load Implications (attach statements). Long-range planning statement.
Does this change affect in a significant way, any other departmental programs/branch campuses? Yes____ No_x_
If yes, have you resolved these issues with department/branch involved?_____ (attach statement)
Effective Date of Proposed Change: Fall (Semester), 1997 (Year)

Required Signatures:

		Date:
Department Chairperson	Gregory L Candela	12-20-96
Dean of Library Services (If necessary)	Ruth Dawson	1/13/97
CIRT (If necessary)	Cindra Myers	1/7/97
College Curriculum Committee (If necessary)	Chris Wenner	1/13/97
College or School Faculty (If necessary)		
College or School Dean/Director of Instruction	Debbie Zorn	12-20-96
FS Graduate Committee (If applicable)		
FS Curricula Committee		2/24/97
Assoc. Provost for Academic Affairs	Ignacio R. Gordon	2/25/97
Faculty Senate		

For Scheduling Office ONLY:
Received _____ Entered (Mainframe) _____
Entered (Catalog) _____ Mailed _____

Core Curriculum: (12-16 Credits)

Students must take one sequence from two of the following areas (biology, chemistry and physics) to total 12-16 credits:

Biology:

Sequence 1:

BIOL 121L: *Principles of Biology* (4)
BIOL 122L: *Principles of Biology* (4)

Sequence 2:

BIOL 123: *Biology for Health-Related Sciences and Non-Majors* (4)

Chemistry:

Sequence 1:

CHEM 121L: *General Chemistry* (4)
CHEM 122L: *General Chemistry* (4)

Sequence 2:

CHEM 111L: *Elements of General Chemistry* (4)
CHEM 212: *Integrated Organic Chemistry and Biochemistry* (4)

Physics:

Sequence 1:

PHYSCS 151: *General Physics* (3)
PHYSCS 152: *General Physics* (3)
PHYSCS 153L: *General Physics Laboratory* (1)
PHYSCS 154L: *General Physics Laboratory* (1)

Sequence 2:

PHYSCS 160: *General Physics* (3) — 161 (typo - Shapiro 1/28/97)
PHYSCS 162: *General Physics* (3)
PHYSCS 163L: *General Physics Laboratory* (1)

Electives (11 - 18 Credits)

Students must select 11 to 18 credits of electives from among the following areas: astronomy, biology, chemistry, computer sciences, Earth and Planetary Sciences, English writing (ENGL 219 or 220)*, nutrition (NUTR 244 only), and physics or other courses approved by the science faculty advisor.

mathematics (up through 264L) Shapiro after discussions with Schwarz 2/4/97

* English 219 or 220 is highly recommended. Both will help students improve their communication skills and bring together the worlds of science and humanities.

Associate of Science in General Science (Revised)

The Associate of Science in General Science degree provides the first two years of study for a student who plans to transfer to a four-year institution to pursue a baccalaureate degree in science. This program of study includes many requirements for a bachelor's degree in the many fields of science in the College of Arts and Sciences or health occupations such as dental hygiene, medical laboratory sciences, nursing, pharmacy, physical therapy, and physician's assistant programs at the UNM Albuquerque Campus. ***Students planning to transfer to a four-year institution for a baccalaureate degree MUST see an advisor to determine which courses are most appropriate for their major. Completion of this degree does NOT guarantee acceptance into a baccalaureate degree program.***

Total credit hours required: 60

Students must complete a minimum of 60 credit hours.

General Education Requirements: (31-33 Credits)

Communications: (9 credits)
Students must take the following courses (6 credits):
ENGL 101: *Composition I: Exposition* (3)
ENGL 102: *Composition II: Analysis and Argument* (3)
Students must choose an additional 3 credits from one of the following areas:
Communication and Journalism
Linguistics

Mathematics: (7-9 credits)
Students must take one of the following course sequences:
Sequence 1:
MATH 121: *College Algebra* (3)
MATH 180: *Elements of Calculus I* (3)
MATH 181: *Elements of Calculus II* (3)
Sequence 2:
MATH 123: *Trigonometry* (2)
MATH 150: *Advanced College Algebra* (3)
MATH 162L: *Calculus I* (4)
Sequence 3:
MATH 120: *Intermediate Algebra* (3)
MATH 145: *An Introduction to Probability and Statistics* (3)
BSM 146T: *Probability and Statistics Lab* (1)

Computer Science: (3 credits)
Students must take one of the following courses:
CS 150L: *Computing for Business Students* (3) or
CS 151L: *Introduction to Computer Science* (3)

Humanities or Fine Arts: (6 credits)
Students must take six credits in either humanities **or** fine arts.

Social Sciences or Behavioral Sciences: (6 credits)
Students must take six credits in either social sciences **or** behavioral sciences.

Associate of Science in General Science (original)

The Associate of Science in General Science degree provides the first two years of study for a student who plans to transfer to a four-year institution to pursue a baccalaureate degree in science. This program of study includes many requirements for a bachelor's degree in the fields of biology, chemistry, pharmacy and physical therapy.

Total credit hours required: 60

General Education Requirements: (32 credits)

Communications: (9 Credits)
Students must take the following courses:
ENGL 101: *Composition I: Exposition* (3)
ENGL 102: *Composition II: Analysis and Argument* (3)
ENGL 219: *Technical Writing* (3)

Associate of Science in General Science Cont.

Mathematics: (8 Credits)
Students must take the following courses from either of the following two sequences:
MATH 123: *Trigonometry* (2)
MATH 180: *Elements of Calculus I* (3)
MATH 181: *Elements of Calculus II* (3)

or

MATH 162L: *Calculus I* (4)
MATH 163L: *Calculus I* (4)

Computer Science: (3 credits)
Students must take one of the following courses:
CS 150L: *Computing for Business Students* (3) or
CS 151L: *Introduction to Computer Science* (3)

Humanities/Fine Arts: (6 credits)
Students must take six credits from courses in humanities and fine arts. The student is advised to check with an advisor for approved courses.

Social Sciences: (6 credits)
Students must take six credits from courses in the social sciences area. The student is advised to check with an advisor for approved courses.

Core Curriculum: (28 Credits)

Physical/Biological Sciences: (16 credits)
Students must take the following courses:
BIOL 121L: *Principles of Biology* (4)
BIOL 122L: *Principles of Biology* (4)
CHEM 121L: *General Chemistry* (4)
CHEM 122L: *General Chemistry* (4)

Science Electives (12 - 15 credit hours)
Students must select 12 to 15 credits of electives from among the following courses:

AGR 110T: *Introduction to Agronomy* (3)
AGR 120T: *Introduction to Horticulture* (4)
BIOL 136: *Human Anatomy and Physiology for Non-Majors* (3)[1]
BIOL 139L: *Human Anatomy and Physiology Laboratory for Non-Majors* (1)[1]
BIOL 221: *Introductory Genetics* (3)
BIOL 239L: *Microbiology for Health Sciences* (4)[1]
CHEM 212: *Integrated Organic Chemistry and Biochemistry* (4)[1 2]
E&PS 101: *Physical Geology* (3)
E&PS 105L: *Physical Geology Laboratory* (1)
E&PS 102L: *Historical Geology* (4)
E&PS 250: *Geology of New Mexico* (3)
PHYSCS 151: *General Physics* (3)
PHYSCS 153L: *General Physics Laboratory* (1)
PHYSCS 152: *General Physics* (3)
PHYSCS 154L: *General Physics Laboratory* (1)

or

PHYSCS 160: *General Physics* (3)
CS 151L: *Introduction to Computer Science* (3)
(provided CS 150L is taken to fulfill the Computer Science requirement)

[1] - The student is cautioned that these courses may not count towards a biology major at UNM

[2] - The student is cautioned that this course will not count towards a chemistry major at UNM

NEW GRADUATE DEGREE
FORM D

UNIT PREPARES IN QUINTUPLICATE
Route as indicated below under approvals. Return to the Scheduling Office once all signatures have been obtained.

Date: October 25, 1996

Richard Heggen
(Name of Individual initiating new Graduate Degree)

SOE Graduate Committee/277-5737
(Title, position, telephone number)

Civil Engineering
(Department/Division/Program)

***Allow 18 months for process to be completed.**

Note: Proposals for new graduate degrees need to follow a CHE approved format. Please call the Office of Graduate Studies and ask for an outline. Revisions of graduate degrees also may need state approval, depending on the extent of changes proposed. Please consult the Office of the Provost for advice prior to initiating this form.

1. Give exact title in the space provided and requirements for the new graduate degree as they should appear in the Graduate Bulletin.

   No catalog change needed, as the two current M Eng. degrees are already authorized. Future "areas of concentration" will require UNM approval process

2. Attach the complete proposal in the approved format.

3. Does this new degree affect any existing program? Yes____ No X. If yes, attach statement.

4. Library Impact Statement. Name of individual consulted and attached signed impact statement.

5. CIRT Impact Statement. Name of individual consulted and attached signed impact statement. N/A

6. Proposed date to admit new students: Semester Fall Year 1997

Required Signatures:

		Date:
Department Chair	[signature]	10/24/96
Dean of Library Services	[signature]	10/28/96
Assoc. VP for CIRT	[signature]	11/1/96
College Curricula Committee	[signature] Chair SOE Grad Com.	10/24/96
College or School Dean	[signature]	10-24-96
FS Graduate Committee	[signature]	12-11-96
Office of Graduate Studies	[signature]	12-18-96
FS Curricula Committee	[signature]	1/17/97
Office of the Provost	[signature]	2/07/97
Faculty Senate		Date:

Returned to The Office of the Provost for presentation to following entities:

	Date:
Board of Regents	Date:
Council of Graduate Deans	Date:
Academic Council of Higher Education	Date:
Commission on Higher Education	Date:
State Board of Finance	Date:

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The University of New Mexico Office of the Registrar (Revised 6/95)

(4)

FROM THE DEAN

Changing job market spurs new degrees

We are putting together two new, experimental degree programs in this college in response to the changing needs of students.

One is a bachelor of arts degree that combines engineering and liberal arts. The other is a master of engineering degree that is industry oriented, rather than academic research oriented.

WE WON'T CHANGE WHAT WORKS

We won't change our highly successful traditional bachelor's and Master's degree programs. But we are expanding our offerings to meet the needs of students and employers who will be better served by different programs.

With the help of a $624,000 grant from the National Science Foundation, we will sponsor a five-year program to develop a bachelor of arts degree in engineering.

The program is called Engineering with Liberal and Technical Education (ELITE), and, offers students a chance to integrate interests in liberal arts studies and engineering studies.

DEGREE HAS A BROAD BASE

It is designed to give students more than the nitty-gritty technical matters so that they can pursue careers with broader applications of technology.

Finance, health care, and entertainment companies are seeking engineers to write software unique to their industries, create information systems, and develop and operate electronic sound systems and theme park attractions (Disneyland's Indiana Jones Adventure project was headed by a systems and industrial engineer).

These jobs involve engineering, but in a different context than traditional engineering, and in order to be prepared for opportunities like these, engineers need to have an interdisciplinary education.

A student who is interested in photography and technology, for instance, can integrate the two areas under the ELITE program by studying optical sciences and photography. In the past, a student may well have given up one of the interests in making a career choice, but under this program might end up being a photographer; working for Kodak designing lenses or other photography equipment; or teaching photography.

We hope to have students begin this pilot program this coming January.

MASTER OF ENGINEERING

The new masters program will be practice oriented and administered in close partnership with industry.

Students will get an equivalent education in terms or rigor, but it will be different from the traditional Ph.D. and M.S. programs. Many students will take their courses remotely, through satellite TV hookups because they are working full time and can't attend classes on campus.

The master of engineering degree is a direct response to the needs of engineers to continue learning throughout their careers. In some cases, engineers have to update half of their engineering knowledge every two to five years, while at the same time working full time. Even in more relaxed fields, they have to amass a new set of intellectual tools once a decade.

The master of engineering degree will build in the flexibility they need, without relaxing standards.

THE VIRTUAL UNIVERSITY

It will be administered through what can be thought of as a "virtual university," which will have three elements.

- Cooperation among the state's three universities — UA, ASU, and NAU — so that a student can register at one university and take some courses through another. This allows students to accumulate credits from a number of universities to get a degree.
- Distance learning will make it possible for students to study the course material at times convenient to them.
- Innovative instructional technologies will be phased into the degree program as we work on it. Most likely, this will include interactive communication with the professor and classmates through the worldwide web.

While these ideas can seem radical to those of us who went through school in four years as undergrads and moved on to graduate school, the job market is entirely different today, and these new ways of studying engineering are just what some of today's students need.

— Ernest T. Smerdon

Victor Baker named HWR department head

Regents' Professor Victor Baker is the new department head in Hydrology and Water Resources (HWR).

Baker, who is a faculty member in the UA Geosciences Department, took over the post in August. He replaces HWR Professor Soroosh Sorooshian, who has stepped down after seven years to devote more time to his teaching and research.

Baker's major research focus has been on floods, ranging from modern ones to those that occurred on Earth and Mars millions of years ago. Much of his work has to do with assessing flood hazards to high-risk structures, such as dams and nuclear power plants.

"These are challenging times for the academic community and for our society," Baker says. "I hope to help the department meet those challenges and to give faculty the support they need to solve some of the water problems our society faces."

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Photos on pages 14-16 provided by alumni.

UNIVERSITY OF NEW MEXICO GENERAL LIBRARY

To: Robert L. Migneault, Dean
From: Linda K. Lewis, Collection Development Director
Date: Oct. 24, 1996
Subject: Form D: Engineering

This proposal, requesting a new master of engineering program, is basically a restructuring of existing programs and courses. There should not be any additional impact upon library services or collections.

Clara.
This can get signed
and go on
Linda K

(66)

THE UNIVERSITY OF NEW MEXICO
SENATE GRADUATE COMMITTEE

The Senate Graduate Committee met on Thursday, April 6, 1995, at 7:30 am in the Springer Conference Room.

Members Present: Gloria Birkholz, Scott Burchiel, Teresa Cordova, Susan Deese-Roberts, Bill DeGroot, *Edward DeSantis, Ken Frandsen, William Galey, Douglas George, *Ellen Goldberg, Su-Moon Park, Howard Schreyer, Virginia Seiser (chair), Scott Storment

Members Excused: Allen Parkman, Bruce Perlman, *Alan Reed, Peter White

Guests: Edward Angel, Peter Winograd

College of Engineering Degree Discussion

The College of Engineering presented a position paper to the Committee on the possibility of pursuing a Masters of Engineering Degree. The College asked for preliminary ruling from SGC on the feasibility of an interdisciplinary, professional degree at the master's level, which would allow for multiple tracks/concentrations. The position paper states there has been an increasing demand for interdisciplinary programs for individuals who are not adequately served by the current, research-oriented MS degrees. Furthermore, the College faculty desires to be proactive in developing new areas of concentration in response to technological advances. The Committee discussed the arguments presented in the position paper and had no objection to the proposal. They suggested the College prepare the proper forms to formalize their new degree request.

October 1996

PROPOSAL FOR THE CREATION OF A MASTER OF ENGINEERING DEGREE

Introduction

There is a national movement in engineering schools toward the Master of Engineering (M.Eng.) degree. The M.Eng. offers professional/interdisciplinary emphasis in a timely and focused manner. The M.Eng. complements the more-traditional M.S.-Ph.D. basic research direction by addressing engineering education needs of a dynamic and technically-based economy.

The incremental cost of a M.Eng. is small. The incremental benefit of moving New Mexico's substantial engineering workforce into new professional and inderdisciplinary endeavors is large.

The M.Eng is based upon the expertise already existing in SOE departments where professional and interdisciplinary education have been successfully pursued for many years. The M.Eng. makes optimum use of resources through interdepartmental cooperation while providing a highly needed service to New Mexico's professional engineering community.

Two M.Eng. degrees currently exist at UNM: M.Eng in Manufacturing Engineering and M.Eng. in Hazardous Waste Engineering. Authorization for these two programs has demonstrated a procedural chain unduly long and complex to be repeated for each area of concentration. The Commission on Higher Education (CHE) in Santa Fe has authority over the general degree. CHE should not, however, have to weigh each option within a degree designed to respond in a timely manner to the technically-dynamic New Mexico economy.

This proposal establishes an "umbrella" CHE authorization for the M.Eng. degree. An "umbrella" authorization simplifies the administrative procedure in which specific "areas of concentration" approved within the established UNM mechanism, can be offered to the New Mexico engineering community.

Professional Orientation

Graduate programs can be divided into two groups: "academic studies", illustrated by programs in history, languages, arts and science, and "professional studies", illustrated by studies in medicine, law and business.

Traditional engineering at the graduate level largely has been within the "academic studies" domain. For the research-oriented student, an M.S. thesis is a vehicle for scientific exploration and, in some cases, an aptitude check for possible Ph.D.

dissertation work. For other students, however, thesis research is of less appeal or benefit. UNM offers "Plan II", a coursework non-thesis M.S. option as a postgraduate route for such students. While Plan II provides an educational pathway, its process can be less than responsive to the changing professional world. The degree "M.S." is granted to thesis and coursework students alike, blurring its meaning.

Interdisciplinary Orientation

There is likewise an increasing demand for "interdisciplinary" programs in which engineering and computer science are prime parts. Some students and professionals desiring such programs have backgrounds different from graduates of engineering/computer science BS programs. Others with traditional undergraduate engineering specialties wish to bridge the gap between related fields. Neither group is adequately served by a research oriented MS degree.

Professional/Interdisciplinary Integration

The "professional" and "interdisciplinary" focuses are in fact interrelated. Professional engineering practitioners are increasingly involved in multi-disciplinary projects. Interdisciplinary-capable professionals are increasingly incorporated into professional engineering endeavors. There is need for SOE to respond in both arenas.

SOE presently offers an M.Eng. in two areas, Manufacturing Engineering and Hazardous Waste Engineering. The Manufacturing program has a significant "professional" emphasis. The Hazardous Waste program incorporates an "interdisciplinary" perspective. SOE sees a demand for concentrations spanning the practice/interdisciplinary spectrum.

At some risk of partitioning two intertwined educational approaches, but for the benefit of illustrating the breadth of the M.Eng., this document employs the adjective **professional** to identify M.Eng. areas of concentration associated with a single SOE department and **interdisciplinary** to identify M.Eng. areas of concentration associated with more than one SOE department.

Other Institutions

The need to include professional-type graduate studies for engineering is well recognized. See the attached articles by Cranch, *The Next Frontier in Engineering Education: The Master's Degree*, page 48, and Fitzgerald, *Mastering Engineering*, page 40. The National Society of Professional Engineers (NSPE) has long advocated the institution of "professional schools" (page 44, *NSPE Professional Policy, No. 104*). A major impetus for this movement is the realization that a four-year bachelor degree is insufficient training for the advanced level of technology now expected in professional practice. See the attached article by Augustine, *Engineering an Education*, page 45.

The M. Eng. is an established degree in leading engineering schools. Page 20 identifies over 40 institutions advertising their M. Eng. on the Internet or in *Peterson's*

Guide. A search through graduate catalogs uncovers additional programs. Sample descriptions from several institutions begin on page 21 to provide a flavor of what exists nationwide. The proposed UNM M.Eng. falls squarely within the coursework requirements, academic standards and professional/interdisclipinary emphases of the national M.Eng. norm.

Timelines

The two existing M.Eng. degrees required several years between SOE adoption and final CHE approval. At least four other M.Eng. proposals died in the formative stage when the instigators faced the sole trek of shepherding the proposal all the way to Santa Fe. SOE seeks a more timely method to respond to market-place demands.

Rather than obtaining approval for each M.Eng area of concentration as a unique degree, SOE proposes a single "umbrella" approval for one M.Eng. degree with multiple areas of concentration.

Degree Title

The proposed degree will be designated the "Master of Engineering" without additional title. The existing M.Eng. in Manufacturing Engineering and the M.Eng. in Hazardous Waste Engineering will have their degree titles appropriately shortened.

SOE has no objection to specifically titled M.Eng. degrees, but sees such labeling as potentially encumbering the authorization process with recurring "New Degree" procedures.

Degree Granting

The M.Eng. will be granted by SOE. The M.S. is structured to provide the theoretical foundations for the more advanced research degree, the Ph.D. Most M.S. programs in the country are thus administered in University Graduate Schools and treated as research degrees. Such degrees do not provide the practice-oriented post-graduate education that many engineers need. The M.Eng., by its professional nature, is more akin to an MBA, JD or MD, which at UNM are granted by Anderson School, Law School and Medical School respectively.

Areas of Concentration

Each M.Eng. area of concentration must have a strong engineering component.

M.Eng. professional areas of concentration will be associated with single SOE departments. Specialties could exist within a professional area of concentration. For example, the Department of Electrical and Computer Engineering could offer a M.Eng. in electrical engineering. Within the electrical engineering area of concentration, specialties might include: computer design, communication systems, control systems, optoelectronics, signal processing, microelectronics, or pulse power.

M.Eng. interdisciplinary areas of concentration will be associated with more than one SOE department. Specialties could exist within an interdisciplinary area of

concentration. For example, in the existing Hazardous Waste Engineering area of concentration specialties exist in radioactive waste and chemical waste.

Area of Concentration Authorization

The umbrella M.Eng. facilitates creation of new areas of concentrations in an expeditious manner. New M.Eng. areas of concentration or major changes within an authorized M.Eng. area of concentration will require the following sequential steps:

1. Approval by the associated SOE department for a M.Eng. professional area of concentration. Approval by each associated SOE department. for a M.Eng. interdisciplinary area of concentration.
2. Approval by the SOE Graduate Committee.
3. Approval by the SOE Faculty.
4. Approval by the Senate Graduate Committee.
5. Approval by the Faculty Senate.

4a. Approval by the Faculty Senate Curriculum Committee

The approval process is the same as that currently required if, for example, Civil Engineering wished to offer an M.S. track in geodesic engineering. UNM's Form C, "Major Program Changes", will be followed.

The two existing M.Eng. degrees, having already received their individual CHE approval, will be authorized de-facto under the M.Eng. umbrella. Current academic requirements of these two M.Eng. areas of concentrations will not be changed.

Admission Requirements

1. An ABET-accredited Bachelors degree in engineering.

   or

   A Bachelors degree having a minimum of:
   4 semester hours of laboratory courses beyond the freshman level.
   6 semester hours of calculus.
   3 semester hours of differential equations.
   32 semester hours of mathematics, calculus and above, and science.
   1 semester of computer programming.
2. 3 letters of references.
3. GPA in technical courses (science, mathematics, engineering) of 3.0 or better
4. GRE scores, general examination, of a standard set by the Program Committee.
5. Prerequisites for the M.Eng. area of concentration as required by the Program Committee. Prerequisites may be taken in undergraduate or non-degree status.

6. Compliance with UNM and SOE requirements applicable to all Masters applicants.

SOE Graduate Committee

The SOE Graduate Committee, having representation from all SOE departments, will have oversight responsibility for the M.Eng. The Dean of Engineering will appoint an ex-officio representative to the SOE Graduate Committee to serve as an administrative liaison on M.Eng. matters.

The SOE Graduate Committee will:

Oversee, on behalf of the SOE Faculty, all M.Eng. areas of concentration to insure compliance with general M.Eng. requirements and objectives.

Evaluate proposals for new M.Eng. areas of concentration and make recommendation to the SOE Faculty.

Coordinate activities in the common interest of the M.Eng.

Program Committee

Each M.Eng. area of concentration will be administered by a Program Committee of at least four SOE regular faculty. Each Program Committee will designate its own Chairperson.

M.Eng. professional areas of concentration will be administered by a Program Committee appointed by the appropriate SOE department. The Program Committee may be the regular Graduate Committee of that department. Student records will be maintained by that department.

M.Eng. interdisciplinary areas of concentration will be administered by a Program Committee appointed by the SOE Graduate Committee. The Program Committee will include at least one representative from each associated SOE department. M.Eng. student records will be maintained by a SOE department identified in the area of concentration authorization.

The Program Committee will:

Establish academic and administrative requirements particular to the area of concentration.

Establish and monitor specialty requirements.

Make admission decisions.

Certify satisfaction of degree requirements.

Prepare an annual report to the SOE Graduate Committee summarizing M.Eng. activity within the area of concentration.

Committee on Studies

Each student will have a Committee on Studies of at least three members, two of

which must be SOE regular faculty and one of whom must be a member of the Program Committee. The Committee on Studies will be authorized and approved by the Program Committee. A Committee on Studies in an interdisciplinary M.Eng. area of concentration must have members from at least two UNM departments.

The Committee of Studies will:

Approve the plan of coursework

Guide and evaluate the professional project, independent study or practicum.

Give and evaluate the Master's Examination.

Curriculum

The M.Eng. will require:

1. 30-36 semester hours of credit, as specified in the area of concentration authorization.
2. A minimum of 27 hours of coursework excluding design project, independent study or practicum.
3. A minimum of 9 hours of core coursework in the area of concentration.
4. A minimum of 12 hours of 500-level coursework in the area of concentration.
5. A minimum of 3 hours of design project, independent study or practicum, as determined by the Program Committee.
6. A minimum of 18 hours in SOE classes.
7. Particular requirements for the area of concentration as specified by the Program Committee.
8. Compliance with UNM and SOE requirements applicable to all Masters degrees with regard to grade point average, time limitations, transfer and non-degree enrollment hours, etc.

Students will be encouraged to select coursework from among instructional television offerings from NMSU and NMIMT in order to take advantage of the specialized expertise of faculty at those institutions.

Master's Examination

A Master's Examination is required of all students completing master's degrees at UNM. The M.Eng. Examination will consist of a comprehensive examination, written and/or oral, in which the student must demonstrate breadth of knowledge in the area of concentration. Students will normally take this exam after substantial completion of M.Eng. coursework

Financial Implications

Financial resources for the program, in terms of faculty and staff time, fall into three

categories: teaching of classes, advising students and administering the program.

All of the classes for the two existing M.Eng. areas of concentration are already being taught on a regular basis. Future areas of concentration are anticipated to rely heavily upon existing classes used for other degree programs. Where new subject matter is required, SOE departments will allocate their teaching resources accordingly, an ongoing adjustment with which SOE is familiar. Many of the students enrolled in M.Eng. classes are professionals already working, frequently enrolled in non-degree status.

It is anticipated that establishment of the program will lead to higher enrollments in the applicable graduate-level engineering courses. The net result will be an increase in revenue to UNM. Any increase in budget for the academic units offering the program will be the result of the normal enrollment-based I&G allocation.

State of New Mexico
COMMISSION ON HIGHER EDUCATION
1068 Carrillos Road
Santa Fe, New Mexico 87501-4295

GRADUATE PROGRAMS—APPROVAL OF NEW

Statutory Reference(s): 21-1-24, NMSA, 1978

XI. PROPOSAL GUIDELINES

The criteria set out below will generally be used in reviewing new program proposals. However, the stringency of individual criteria will depend on the specific program, and, in particular circumstances, other criteria may be added.

A. Mission of the Proposing Institution.

1. Does the program adhere to the role and scope of the institution as set forth in its mission statement approved by its governing board?
2. Is the program consistent with the institution's plans and goals?
3. Does the program adequately serve a clear and appropriate purpose?
4. What is the program's institutional priority as indicated in its five-year plan?
5. Does the program proposal reflect interinstitutional cooperative planning? For those programs needing the cooperation of other institutions (including government, education, health, and business), evidence of the willingness of the other institutions to participate is required.

B. Curriculum.

1. Is the curriculum adequately structured to meet the stated objectives of the program?
2. Does the curriculum reflect breadth, depth, theory, and practice appropriate to the discipline and the level of the degree?
3. Is the curriculum compatible with accreditation, where available?

C. Academic Standards. Are the admission, retention, and graduation standards clearly stated, compatible with existing institutional and Commission policy, and designed to encourage high quality?

D. Assessment. Has evidence been provided to demonstrate that careful evaluation of the program will be undertaken periodically?

E. Underrepresentation.

1. How will the program promote the enrollment and retention of adequately prepared students from underrepresented and economically disadvantaged groups?
2. How will the program promote the state's effort to achieve racial mix and balance within institutions?

F. Evidence of Institutional Readiness.

1. Will the current and/or anticipated faculty resources ensure a program of high quality? Do the number and qualifications of the faculty meet existing institutional standards and are they consistent with external standards where appropriate?
2. Do current and/or anticipated library resources meet recognized standards for study at a particular level or in a particular field where such standards are available?
3. Are all other support resources——existing and/or anticipated——adequate to support a high quality program? Include clear statements of clerical personnel needed, equipment needed, and arrangements for clinical or other affiliations necessary for the program.
4. Are existing and/or anticipated facilities adequate to support a high quality program? New and/or renovated facilities required to implement the program should be clearly outlined by amount and type of space and the costs identified.
5. Are resources likely to be available in future years?

6. Will the institution seek special accreditation for the program, assuming special accreditation is available by an agency recognized by the Council on Postsecondary Accreditation? Why not, and if so, how soon can accreditation be anticipated?
7. Does the program meet other discipline or professional standards?
8. What is the relationship of the program to the undergraduate or graduate offerings of the unit(s) housing it?
9. Does the institution have strong undergraduate programs in related disciplines?
10. Does the program include a rigorous, final integrating experience?

G. Administration/Organization. Are the organizational placement and the administrative responsibility for the program clearly defined and designed to promote success of the program?

H. Cost of the Program.

1. What are the costs of operating this program?
2. How do these costs compare with the costs of other programs in the institution and comparable programs elsewhere?
3. Are the costs reasonable?
4. Will the program require additional resources, or be funded through a reallocation of existing resources?
5. Where will the institution obtain additional resources?
6. What percentage of the program costs are funded by various state agency general fund appropriations?
7. Is the program primarily dependent on public resources?
8. Are costs related to potential benefits for graduates and the society? The benefit to the state should outweigh the cost of the program.
9. What is the probability of permanency of external funding sources?

I. Identification of the Geographic Area the Program Is Designed to Serve. What is the proposed service region for the program?

J. Justification for Implementation of the Program

1. Need

a. Is there sufficient business and academic employer demand? Evidence of sufficient employer demand, normally in the form of anticipated openings in an appropriate service area (which may be national, regional, or local), in relation to existing production of graduates for that service area.

Evidence may include employer surveys, current labor market analyses, and future manpower projections. Where appropriate, evidence should demonstrate employers' preference for graduates of the proposed program over persons having alternative existing credentials and employers' willingness to pay higher salaries to graduates of the proposed program.

b. Does the degree fulfill university needs for the next generation of qualified faculty?
c. Do developments in the field justify the program?
d. Are enough potential students interested in the program? Evidence of student demand, normally in the form of surveys of potential students and enrollment in related programs at the institution, should be adequate to expect a reasonable level of productivity.
e. Is there a valid intellectual need for the program?

2. Duplication With Other Programs and Other Non-Formal Educational Sectors

a. Where other similar programs in/the state or area may serve the same potential student population, is there evidence that demonstrates that the proposed program is sufficiently different from the existing programs or that access to the existing programs is sufficiently limited to warrant initiation of a new program?
b. Is the program primarily dependent on public resources?
c. Is the program available through the Western Interstate Commission on Higher Education student exchange programs? If so, what is the closest WICHE program?

3. Identification of the Geographic Area the Program is Designed to Serve: What is the proposed service region for the program?

4. Utilization and Capacity of Existing Programs*

a. How many students are being served?
b. What is the student/faculty ratio?
c. How many students could existing programs accommodate without additional resources for faculty, equipment, and facilities, etc.?

*The Commission will provide information requested under a and b that pertains to other New Mexico institutions.

5. Marketability: Does the program have a clear market advantage?

6. Placement Data for Graduates from Existing Programs: What are the employment placement rates and experiences for graduates of existing programs?
7. For Programs Not Offered in the State, an Assessment of How Education and Training Needs are Currently Being Served: Why is a new formal education program needed in a field of study where it was formerly not required?

RESPONSES TO CHE PROPOSAL GUIDELINES

(A) Mission of the Proposing Institution

1. The M.Eng. adheres to the mission of UNM. UNM *"...offers comprehensive educational programs at the associate, baccalaureate, master's and doctoral levels in a wide range of academic and professional fields... The University contributes to the quality of life in New Mexico by providing selected services to the public that are part of, contribute to or originate from the university's teaching and scholarly activities."* [UNM Mission statement, *Catalog*, 1995-97.]

   The M.Eng. adheres to UNM's mission of advancing the capability of professionals working, or planning to work, in the dynamically expanding fields of technology. *"The university recognizes important changes that are occurring in scholarly approaches to learning, in the needs of the future work force, ... in technological innovations..."* [UNM Mission statement, *Catalog*, 1995-97.]

2. UNM's goals include advancement in national stature and achievement in regional excellence. Leading engineering schools nationwide offer the M.Eng. See Table 1. It is in New Mexico's interest for higher education to remain nationally competitive.

3. The M.Eng. addresses a need for professional expertise in the emerging fields of engineering.

4. The M.Eng. fits well within UNM's long range plans, as expressed in *UNM 2000*, which includes the following criteria for areas of emphasis:

   "build upon existing strengths of the University;"

   "be relevant to the educational, technical, economic, political, and cultural needs and trends of the future of New Mexico;"

   "provide an opportunity to make a unique contribution to the educational and research enterprise of the state, nation, and world;"

5. As an illustrative M.Engr. area of concentration, the existing Hazardous Waste Engineering program contributes to the established UNM-NMSU-NMIMT instructional television interchange program. It is anticipated that new M.Eng. areas of concentration will likewise seek collaborative venues with the other New Mexican engineering schools. The M.Eng., however, does not rely on commitments or resources from other institutions.

(B) Curriculum

1. The general curriculum is on page 6. Curriculum specific to an area of concentration will undergo UNM review in the standard manner.

2. Curricula may be focused in an area of concentration dealing with a specific professional topic (optoelectronics, for example, were Electrical Engineering to pursue that area of concentration) or may be broad in interdisciplinary concentrations (engineering administration, for example, were several departments to pool their resources toward that area). The key to a successful M.Eng. is flexibility to tailor concentration to needs.

   In all cases, as illustrated by the two existing M.Eng. programs, curricula will reflect the breadth, depth, theory and practice at a level commensurate with M.Eng. programs nationwide and UNM's academic expectations for a Master's degree.

3. There are no plans for specific program accreditation. See item F6.

(C) Academic Standards

Admission requirements are on page 4. They meet or exceed current SOE Plan II M.S. requirements. Retention requirements are the same as those for other graduate programs, as explained in the *Graduate Bulletin*. Graduation requirements (page 6) meet the requirements of OGS.

The above standards assure a high quality academic program.

(D) Assessment

UNM graduate units are reviewed by qualified external experts every seven years. Review standards and procedures are established by the Senate Graduate Committee. Each M.Eng. area of concentration will be reviewed as part of the normal UNM review of a SOE department with which the M.Eng. area of concentration is associated. The departmental association for review purposes will be specified at the time of authorization for the M.Eng. area of concentration. The review team will be informed of the objectives of the M.Eng. and pursue the review in the Senate Graduate Committee framework.

(E) Underrepresentation

1) The M.Eng. program will promote the enrollment and retention of students from underrepresented and economically disadvantaged groups by providing such students an achievable degree having both high professional and remunerative

value.

The WERC certificate program has evolved into the M.Eng. in Hazardous Waste Engineering, a de-facto area of concentration under this M.Eng. umbrella proposal. The WERC enrollment of minority and women students, both traditionally underrepresented in engineering, is tabulated below. The population of M.Eng. students is expected to be similar to that of the WERC program.

	Grad	Non-Degree
Currently enrolled students		
Hispanic	5	9
Black	2	2
Native American	2	2
Women (all ethnic backgrounds)	21	27
Total students	48	111
Completed students		
Hispanic	5	5
Black	0	0
Native American	0	1
Women (all ethnic backgrounds)	9	15
Total students	27	42

2) Underrepresented groups are being well served in the existing M.Eng. in Hazardous Waste Engineering. They will continue to be well represented in an expanded M.Eng. program.

(F) Evidence of Institutional Readiness

1. Courses required for the M.Eng. are already being taught by existing UNM faculty or by qualified professionals with OGS adjunct faculty appointments. All faculty satisfy the requirements for instructional approval by UNM.

2. UNM library resources meet the requirements for the M.Eng. New M.Eng areas of concentration would, in the normal course of authorization, need specific Library concurrence.

3. The necessary administrative, advising and clerical support will be handled by appropriate SOE departments, as elaborated in item H1.

4. Facilities are adequate to support the program. The M.Eng., based largely on classwork, will include little laboratory work on campus.

5. Resources for teaching will be available in future years since the classes are also

used for other SOE degree programs.

6. There is no programmatic accreditation body for the M.Eng. umbrella. M.Eng. areas of concentration can pursue accreditation specific to their content, if available.

7. The program exceeds professional development standards required for engineering registration in New Mexico.

8. Since the M.Eng. has interdisciplinary and multidepartmental aspects, it is not tied closely to any single undergraduate degree program. Some M.Eng. coursework will be drawn from existing 400-level classes carrying graduate credit taken as electives by advanced undergraduates. Most M.Eng. coursework will be drawn from the existing M.S. offerings.

9. UNM has strong accredited undergraduate engineering programs which provide the depth of faculty capabilities necessary for a strong M.Eng.

10. The M.Eng. requires both a 3-hour independent study or practicum and a comprehensive Master's Examination. This examination will serve to prove a student's breadth of knowledge.

(G) Administration/Organization

The SOE Graduate Committee will oversee the M.Eng. A Program Committee will administer the academic program for each M.Eng. area of concentration. A Committee on Studies will direct the curriculum for each student. See page 5 for further details.

(H) Cost of the Program

1. Since most classes required for the M.Eng are already taught for other SOE programs, instructional cost of the M.Eng. is minimal. Such administrative costs as publicity, admission review and paperwork processing will not be large and will be borne by the SOE departments associated with the areas of concentration.

2. M.Eng. costs will be minor in comparison to the SOE budget.

3. The costs for the program are reasonable.

4. Start-up costs, announcements, formwork preparation, etc. will be absorbed by SOE. Most M.Eng. programs nationwide internalize their costs in a similar manner.

5. An M.Eng. area of concentration may opt to pursue contractual or grant support,

based on the merit of the program. Both existing M.Eng. programs illustrate successful external funding. Additional M.Eng. areas of concentration will require no additional revenues beyond the Dean of Engineering's apportionment of I&G funds to the associated departments.

6. State funds will support the program per UNM's I&G formula.

7. The program is not dependent on public resources other than I&G funding to UNM.

8. Economic benefits are potentially numerous. The need for professionals with specialized training in emerging fields of engineering is great. The salaries are high. The economic multiplier for high-tech jobs is large. New Mexico needs such professionals if New Mexico is to attract appropriate industry.

   For the individuals whose past careers have been in defense activities, the M.Eng. can mean the difference between a state-of-the-art, well-paid job and no job at all.

9. The M.Eng. requires no new external funding.

(I) Identification of the Geographic Area the Program is Designed to Serve

Most of the M.Eng. students initially will be from Bernalillo, Sandoval, Los Alamos and Santa Fe Counties. The program will ultimately attract students throughout the nation.

(J) Justification for Implementation of the Program

1a. There is strong demand for persons rigorously trained in the emerging fields of engineering at

Los Alamos National Laboratory,
Sandia National Laboratories,
USAF Phillips Laboratory,
DOE Albuquerque Operations Office,
Contractors and subcontractors to the above,
Local technology-based industries,
More than 150 engineering and consulting firms with local offices, and
State agencies such as the New Mexico Environment Department.

Employment projections consistently indicate emerging opportunities for engineers. The demand is documented every Sunday in the "Engineering" employment section of the *Albuquerque Journal*.

1b. The M.Eng. is purposely not a research degree; it is aimed at the professional practitioner. It is not intended to develop the next generation of university faculty. The M.Eng., however, could be an appropriate degree for someone teaching technology in a two-year college.

1c. As indicated on page 20 and following, the M.Eng. is very much part of national developments in engineering education.

1d. Enrollment in existing M.Eng. areas of concentration demonstrates student demand. When new areas of concentration are proposed, specific demand assessment will be a matter of the authorization process.

Some current and prospective M.S. students may opt to switch to the M.Eng. While these students do not represent a net increase to the student population, they do represent UNM's commitment to providing relevant and dynamic educational options.

1e. There is valid intellectual need for an engineering graduate degree focused on problem solving, interdisciplinary analysis, communication, etc., aspects of professional practice all.

2a. NMSU and NMIMT each offer M.S. engineering degrees in competition with UNM. The M.Eng., however, is more professionally specific and practice oriented than any other engineering degree in the State. Planning for the M.Eng. degree has been coordinated with faculty and administrators to assure a complementary program rather than a competing one. The M.S. engineering degrees at NMSU, NMIMT and UNM complement the M.Eng.

2b. All New Mexican engineering programs are State funded. From a cash flow perspective, however, SOE programs generate more in external research and grant funding than they consume in State appropriations. Allowing the growth of one SOE progam has not been shown to reduce another.

2c. There is no WICHE M.Eng. exchange program. Were there one, there would be little benefit to New Mexico if local engineers had to move to neighboring states to further their training.

3. The M.Eng. addresses the needs of a large number of people already residing in Bernalillo, Sandoval, Santa Fe and Los Alamos counties. Traditional defense-related engineering opportunities are being replaced with a need for professionals trained in new aspects of engineering.

4a. Enrollment in the two existing M.Eng. areas of concentration is approximately 40.

4b. The graduate student/faculty ratio is that of SOE, approximately 6:1.

4c. The two existing M.Eng. areas of concentration have room for expansion.

5. SOE is well situated to market the M.Eng. The Sandia-Los Alamos corridor is deeply involved in technology and has close ties to SOE. UNM is the proximate engineering school to the majority of New Mexican engineers.

6. Virtually all graduates of the two current M.Eng. degrees are immediately employable. As the M.Eng. is a response to economic opportunities for engineers, it can be reasonably predicted that employment openings will exist.

7. The M.Eng. provides credentials for professionals who are, or who plan to be, in the emerging fields of engineering. The traditional engineer needs specific training. People with undergraduate degrees in science wanting to work in the emerging fields lack credentials. To be recognized as professionals, they need rigorous and appropriate engineering degrees. Taking courses is not sufficient. There is a strong need for the M.Eng. degree.

Universities having professional Master of Engineering degrees

Clarkson Univ.
Clemson Univ.
Cornell Univ.
Dartmouth College
Drexel Univ.
George Washington Univ.
Harvard Univ.
Howard Univ.
Mass. Institute of Technology
North Carolina State Univ.
Oklahoma State Univ.
Old Dominion Univ.
Oregon State Univ.
Penn State Univ.
Rensselaer Polytechnic Inst.
Rochester Institute of Technology
Santa Clara Univ.
State Univ. of NY @ Buffalo
Texas A & M Univ.
Texas A & M Univ. @ Kingsville
Texas Tech Univ.
Univ. Calif. @ Berkeley
Univ. Calif. @ Davis
Univ. Calif. @ L.A.
Univ. Colo. @ Boulder
Univ. Colo. @ Colorado Springs
Univ. of Detroit Mercy
Univ. of Florida
Univ. of Hartford
Univ. of Houston
Univ. of Kansas
Univ. of Louisville
Univ. of Maryland
Univ. of Michigan
Univ. of N. Carolina @ Charlotte
Univ. of Puerto Rico
Univ. of S. Carolina
Univ. of Virginia
Utah State Univ.
Vanderbilt Univ.
Virginia Polytechnic Institute
Worcester Polytechnic Institute

Motion for Senate Task Force to Evaluate Administrators

. . .that the Faculty Senate set up a task force to:

1) study (explore, investigate, examine, look up) the policies and procedures currently govening the evaluation of administrators above the dean's level and

2) propose to the Faculty Senate a method (system, procedure) that will assure the regular evaluation of those administrators and the dissemination of the information thus acquired.

Wanda Martin
English

Distributed at March 11, 1997 Senate mtg.

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NOMINATION FORM
ACADEMIC FREEDOM AND TENURE COMMITTEE

I nominate_____ for the AF&T Committee.

Signed_____
Nominator

I agree to serve if elected.

Signed_____
Nominee

Faculty Ineligible for Membership for 1997-1999

1. Faculty in the Departments of Pathology, Psychology, Foreign Language and Literature, Biochemistry, History, and the School of Law
2. Faculty without tenure
3. Deans, department chairpersons, and other ex-officio members of the faculty.

Please mail by March 14 to the Office of the University Secretary, Scholes Hall 101

ACADEMIC FREEDOM AND TENURE COMMITTEE

The Academic Freedom and Tenure Committee is a constitutionally designated standing committee of the general faculty. The Faculty Constitution, Section 7(b) as amended in 1982 states:

The membership of the Academic Freedom and Tenure Committee shall be composed and elected as follows: thirteen members, all of whom shall be members of the Voting Faculty, with tenure (or whose tenure decision date has passed without adverse notification). Not more than one member of any department shall serve as a member on the committee at the same time. The Voting Faculty shall make nominations by mail addressed to the University Secretary. Election shall be by a mail ballot, accompanied by biographical sketches of the nominees, distributed by the Secretary to all members of the Voting Faculty who shall then indicate their choices up to a maximum of six in even-numbered years or of seven in odd-numbered years. The six nominees in even-numbered years or the seven nominees in odd-numbered years receiving the highest number of votes shall become members of the committee for a two-year term commencing at the start of the academic year following election. The remaining nominees shall be called on to serve, in order of the votes they have received, as replacements to complete the terms of any members of the committee who shall resign from the committee during the academic year following the election. No committee member shall serve more than two consecutive two-year terms.

Current membership of the Academic Freedom and Tenure Committee:

Philip Blume (SOM-Pathology)
Harold Delaney (Psychology)
***Gloria Dyc (Gallup Campus)**
Natasha Kolchevska (Foreign Lang. & Lit.)
John L. Omdahl, Chair (Biochemistry)
***Allen Parkman (Anderson Schools of Mgmt.)**
Jonathan Porter (History)
***Jennifer Predock-Linnell (Theatre & Dance)**
***Janice Schuetz (Communication & Journalism)**
***Susan Scott (Pediatrics)**
Antoinette Sedillo-Lopez (School of Law)
***Virginia Shipman (Division of Individual, Family and Community Education)**
***John Taber (Philosophy)**

*Terms expire June 1997 and are eligible for re-election