

# NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

## FACULTY SENATE MEETING

Tuesday, October 5, 2010

Workman 101

### Minutes

Before a quorum was achieved, Dr. Stone began with announcements.

#### 1. Announcements:

A. Farewells - Dr. Stone would like the passing of colleagues acknowledged within the forum of the faculty senate.

Dr. Stone spoke of the passing of Charlie Moore and his work with weather balloons as atmospheric research tools and Clyde Dubbs whom many Faculty Senate Members remember from their undergraduate days at NM Tech.

2. Having reached a quorum, Dr. Stone called the meeting to order at 4:10 pm.

Continuing with announcements:

#### B. Dr. Stone announced:

NM Tech Press is calling for manuscripts. Consider this resource for publishing notes for class. If interesting in serving as editor, please contact Al Stavely or Dr. Stone.

A Forum for Gubernatorial Candidates will be held October 13, noon to 1:30 on the UNM Campus. Dr. Stone will be sending additional information.

Dr. Simpson and Dr. Stone will offer a dissertation boot camp. Looking to be offered the week before Spring semester begins. The focus will be to get students writing. Support resources from Title V grant will be on hand to help assist graduate students. Dr. Simpson and Dr. Stone are asking advisors to please identify and encourage students that are ready to benefit from this resource. Contact Dr. Simpson or Dr. Stone with questions and watch for further announcements.

#### c. Dr. Dezember announced:

The Writing Center is offering tutoring and writing assistance for both undergraduate and graduate students. Professors, TC Students, and Thom Guengerich are on hand to help. The Center, located in Fitch room 17, is open some hours Sunday through Friday. The Oral presentation center is open and available by appointment. Flyers are available or contact the C.L.A.S.S. department for details.

Rocky Mountain Modern Language Association will convene next week in Albuquerque. NMT is a host institution so faculty, staff and students can attend for free. Please consider attending and encourage your students to take advantage of this opportunity. Contact the C.L.A.S.S. department for details.

D. Dr. Liebrock announced:

Kenneth Silsbee will be speaking October 11, 2010 in Workman 101 beginning at 2:30pm. Dr. Silsbee, a NMT Alumnus will talk about Information Assurance. He has a broad industry background and is currently working for Boeing. Information is being distributed through the Computer Science Department.

Super Computer Challenge needs volunteers. Dr. Liebrock asked the senate members to consider the opportunity for recruiting students. This will be taking place October 16 and 17, on campus. Please contact Andrea in the CS department to get involved, x5126.

E. Dr. Zeman announced:

NMT has been awarded a second Title V grant for undergraduate programs. This award is for \$3.2 million over 5 years. The focus of this award is student success and engagement, faculty development, and includes 10 more smart classrooms. Dr. Zeman extended gratitude for the many that helped this award to fruition, specifically, Mike Pullin who will act as project director, Mary Dezember, Elaine Debrine-Howell, and Gabby Constantinescu and Stephany Moore.

The 4<sup>th</sup> Annual President's Lunch Run will be this Thursday, October 7, 2010 at noon and will start from the Gym.

3. Reports of Committees.

A. Nominating Committee-

As distributed, the slate of officers was presented by Dr. Mojtabai. Dr. Burleigh withdrew his name for Parliamentarian from the list of candidates. A motion was made to close the nominations. The motion was seconded and passed. The slate of uncontested officers was voted on favorably.

Faculty Senate Officers for 2010-2011 will be:

Parliamentarian:	Richard Sonnenfeld
Vice Chair:	Tom Kieft
Chair:	Bill Stone

B. Slate of NEW COMMITTEES –

Dr. Mojtabai put forward the slate of committee nominations as presented. The motion to close the nominations was made and seconded. The motion passed.

It was moved and seconded to accept the slate of committee membership as presented with the following corrections:

MST committee had five names to be corrected. Mark Samuels provided those corrections.

Honorary Degrees & Awards committee – Dr. McCoy's name was added by Dr. Mojtabai to complete the committee.

Computing on Campus committee – Dr. Fu's name was replaced with Dr. Liebrock's.

The motion passed.

4. Approval of the minutes of September 7, 2010.

Before returning to committee reports, Dr. Cormack pointed out that the minutes of the September 7, 2010 meeting had not been approved. A motion was made and seconded to approve these minutes. The motion passed.

5. New Business. Dr. Stone asked for change in the order of the meeting.

- A. DE Fees - Iver Davidson took the floor to explain the \$50 charge for students attending distance education classes on campus covers the cost of additional resources available to these students. These fees provide them access to the portal enabling them to access lectures on line. Mr. Davidson reported the fee has been in place for some time, perhaps it is being noticed as the number of students has increased. The on-campus students can benefit from the DE resources while sitting in the on-campus classroom.

Distance Ed currently records approximately 25 classes per week, today alone, 18 classes were recorded. For the students uncomfortable with the fee, a separate section for courses could be listed. The Registrar would need to address the ability of students to move between the DE section to a non-DE section throughout the semester. Distance Education is able to manage access to the portal through Banner. If students are not willing to pay for the fee, they need to know they will give up portal access.

It was pointed out that communication to students, informing them of the \$50 fee could help students to appreciate the value of the DE fee. One concern raised by the students addressed the bill for DE fees comes separate from the regular student bill. Mr. Davidson felt that could be fixed with the participation of the Registrar.

George Becker brought up the issue of more smart classrooms on campus that are not part of the DE program but delivers almost the same product. The need to manage this new resource and cover the cost for the support of these new classrooms needs to be addressed. This will be shelved for a future meeting.

## Reports of Committees – cont'd

- C. Academic Standards and Admissions – Dr. Arendt reported the academic warning system seems to be working. He reported the number of students on academic warning for this semester is 136 students compared to 141 students last semester. The average for previous semesters was 116 students. But, Dr. Arendt pointed out that this is a factor of the new system being more thorough in identifying students. He went on to point out that fewer students go on to suspension, (35% compared to 41%). A further report will be given during the spring.

Dr. Arendt thanks the Registrar's office for help with these numbers presented. He went on to say that it appears the warning system seems to be proactively supporting student's success rates. The Center for Student Success has been important in putting this system in place.

Dr. Dezember questioned the ability for students to register for classes pointing out that delays of as much as 2 weeks can make it difficult for these students to get into the classes they need, especially the 100 and 200 level courses. Students will be allowed to preregister but can't change courses until the warning has been lifted. Dr. Arendt reported that the Admissions Committee tries to review these cases a month early. It was pointed out that Elaine DeBrine-Howell personally reviews every file. The timing on the review process is important and the committee will make a point to look into expediting this process.

- D. Student Disciplinary Committee – Dr. Heagy reported there was one case involving check forgery. After the criminal courts found the student guilty he was put on academic suspension. The student called for a hearing and as a result of that hearing the suspension was lifted and the student was allowed to attend courses.
- E. Financial Aid and Scholarships – Dr. Erives reported one case came before the committee. The MST student did not finish a course he was enrolled in and wanted to use the tuition for a different course. It was determined the tuition was not transferable.

6. Old Business.  
None

New Business. Cont'd

- B. Benefits Committee – Dr. Stone announced he is forming a new committee to address the changes to the health plan. The Board of Regents asked V.P. Marquez to get input from the faculty senate. Dr. Stone is asking for volunteers for committee members. Dr. Heagy suggested spouses be allowed to serve on the committee. Dr. Stone would accept volunteers of either spouses or faculty. Without volunteers, Dr. Stone will be assigning faculty members to the committee. The benefits fair is usually held around the middle of November.
- 2) Adjournment - It was moved and seconded to adjourn. The motion passed the meeting adjourned at 4:58pm

Respectfully submitted,

Cathi VanFleet

NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY

FACULTY SENATE MEETING

Tuesday, November 2, 2010

Workman 101

4:00 p.m.

Minutes

3. Dr. Stone called the meeting to order at 4:05 by asking for approval of the minutes of October 5, 2010. It was moved and 2<sup>nd</sup> and the motion passed.

2. . Announcements.

- a. Dr. Gerity –

Announced the ABET site visit went very well. He extended thank you's to everyone involved in making this a very successful visit. The initial report cited small issues to be addressed. A couple of the bigger issues, safety related have already been addressed. After some correspondence this winter we should expect to see the final report in August.

Pathways HLC Pioneering Institution – NM Tech has been asked to be one of 14 Universities across country to participate in development of standards for both the criteria of HLC and future site visits. This stems from an edict from Washington to fix the system. It is possible that our participation may satisfy NM Tech compliance to the emerging requirements and avoid or minimize the anticipated 2014 visit.

- b. Registrar -

Sara Grijalva had a number of housekeeping announcements. First - the finals schedule is posted. Please review this on the website and let the registrar know if there are problems or conflicts. Second - alternate pins have been sent advisors. Third - Tech Scholar nominations due tomorrow. The decision on Tech Scholars will go out to the students in time for them to take advantage of early registration. Finally - flyers announcing the new DE options for Spring are available. Advisors are strongly encouraged to please one pick up.

- c. Benefits Committee –

Dr. Stone gave the following report: The Benefits Committee consisting of B. Harrison, S. Sessions, I. Avramidi, A Zagrai and M. Topliff met with the group putting together the latest changes to our Health Benefits package on the 15<sup>th</sup> of Oct. The meeting was to apprise us of the status on the NM Tech Health Care Plan and to go over the changes that have been proposed for next year. We also had a broad discussion on potential changes that will come about through the changes in Federal Laws which will take place over the next 3-4 years. There is a great deal of uncertainty of what the health insurance field will look like especially with a large number of its statutes being challenged politically and legally.

Continuing the trend of the last few years, the administration has been encouraging members to move from the Indemnity Plan to the PPO as the Indemnity plan is costing more to operate than the PPO. This is an attempt to minimize the Health Care cost increases that seem to be a feature of health care nationwide. Other changes in

the individual plans will be outlined at the health fair in early December. One suggestion we made was that both Tech and HCH improve the explanation of benefits by giving concrete examples of how the costs of treatment of the same complaint will differ under the PPO or Indemnity Plans.

#### The role of the Benefits Committee

The committee sees its mission to provide an avenue for information exchange regarding health care for NM Tech employees. Considerable changes have and will continue to occur in this area over the next few years and it is important that we as a self funded health care group are actively involved in shaping our health benefits and fully informed regarding the major issues.

#### Other suggestions

1 Put more information regarding the health care on the web

4. Consider moving from a self funded plan to combining with our entities.

5. Survey staff and faculty regarding their issues with our current plans.

5. Committees are reminded to meet, select a Chair and get that information back to the Academic Affairs office. Members are strongly urged to get this done or committee chairs will be randomly assigned.

6. Writing and Oral Presentation Centers – Dr. Dezember announced the Centers are open. Advisors are asked to please go with your grad students. Dr. Simpson went on to say that flyers are available. Some Grad students have scheduled time. Please encourage your advisees to participate in this resource.

Thesis / dissertation boot camp flyers are available. Please get the word out that this is dedicated writing time. Please send Dr. Stone or Dr. Simpson emails about interested grad students. This will be held the week before spring semester begins, January 9 -

If this first boot camp is successful, a possible summer boot camp could be added.

### 3. Committee Reports.

2 Academic Freedom and Tenure Committee – Dr. Bond reported that this committee has a new chair, Ken Minschwaner. The committee has provided a written report. This report is available if interested. Please pick one up.

3 Faculty Development Committee – B Bonnekesen gave the report on behalf of Dr. S. Dunston. In addition to supporting the promotion process to full professor and the final tenure process from Assistant to Associate professor, the committee has also arranged faculty development seminars to take place just prior to Faculty Senate meeting. The first of these seminars will take place on December 7 at 3:30. Elias Hernandez is invited to speak to the faculty senate regarding bullying. The committee is in the process of developing sexual harassment training. Please work with Barbara Bonnekesen to help develop this. And finally the committee is adding faculty wealth fare to the scope, addressing dual career and family leave policy or anything else that pertains to the care and feeding of faculty. Your input is always welcome.

4 Assessment report. Dr. Bonnekesen reported that all assessment reports were reviewed. General remarks: all dept provided in depth assessment, all departments applied different yet appropriate standards, each department program should be

following best practice for their department, information pertaining to combined departments could show information in a better way.

The review of all assessment for the institution falls to the point person, Dr. DeZemmer. The committee still needs executive summaries from some departments. The committee is looking for methods for continued improvement. The report concluded with the need for more faculty and staff in order to meet and maintain assessment objectives.

4. Old Business.  
None

5. New Business. Council  
of Chairs September

Earth and Environmental Science CO<sub>2</sub> Sequestration course and option:

Dr. Aster moved for the addition of an E&ES CO<sub>2</sub> sequestration course and option. The motion was seconded.

#### CO<sub>2</sub> Sequestration Education

Overview:

The EES department at NMT (through the PRRC), in conjunction with Brian McPherson at the University of Utah and Tarla Petersen at Texas A&M, has been funded (for \$1,200,000) by DOE to establish a training and education program in CO<sub>2</sub> Sequestration. Each of the three schools involved will have different but overlapping programs

For NMT we are proposing to start an educational program for geological CO<sub>2</sub> sequestration. Our plan is focused in five areas to cover a range of educational levels:

- 1) An undergraduate option in geological sequestration.
- 2) A specialized undergrad class in geological sequestration
- 3) An MST course
- 4) A graduate course in geological sequestration by distance education.
- 5) A summer mini course for high school students.

From the department point of view, we hope this will attract additional undergraduate students to NMT and the department. The EES department endorsed this program (Spring 2010).

Undergraduate Option and 400-level class

In order to increase the number of professionals in the field of carbon sequestration, it is important to prepare students at the undergraduate level. We propose to start an undergraduate option in geology designed to prepare students for graduate level studies in geological CO<sub>2</sub> sequestration. The option will contain the core Earth science courses required for all EES undergraduates, as well as other courses directly applicable to geological sequestration. These courses include additional mathematics, chemistry and geochemistry, petroleum engineering, subsurface geology, hydrology, basin analysis, and sedimentary petrology.

We will also develop a new course that focuses on carbon sequestration at the 400-level, aimed at upper level undergraduates and graduate students. The course will cover all aspects of geological carbon sequestration, including reservoir geology, seal analysis, diagenetic/geochemical issues, basin scale flow issues, and seismic

monitoring of injection sites.. We envision this as part lecture and part seminar, with some guest lectures provided by other NMT faculty and researchers involved in carbon sequestration efforts at Los Alamos National Laboratory, Sandia National Laboratory, and the Petroleum Recovery Research Institute. This would be a regular, semester long course taught in the spring semester.

In addition to the 400-level course on CO<sub>2</sub> sequestration, we will work on adding content to existing courses to raise awareness of the topic and emphasize the applications of specific geological concepts to the study of sequestration. For example in EARTH 101 (Physical Geology) we will add a lecture on climate change, green house gasses and sequestration. In EARTH 203 (The Earth's Crust) we will add the topics of enhanced oil Recovery and CO<sub>2</sub> sequestration to the discussion of petroleum reservoirs.

We have attached a draft curriculum for the option and a tentative syllabus for the 400-level course.

#### Summer internships and work experience

Both Los Alamos and Sandia National Laboratories have agreed to place some of our interested undergraduate students in internship programs related to carbon sequestration. The majority of these will be during the summer, but the proximity of Sandia makes internships through the academic years possible as well. Summer internships and student employment are also available through the PRRC

#### Outreach and recruitment

In order to interest a new generation of students in sequestration we will pursue a two pronged approach: 1) we will appeal directly to high school students with a summer Mini course and 2) we will inform K-12 educators about the topic by adding a Masters of Science Teaching (MST) course in carbon sequestration.

New Mexico Tech has a series of summer mini courses for high school students designed to interest students in science and engineering. We will design a mini course in Climate, Geology and CO<sub>2</sub> sequestration. The course will introduce students to climate change and develop their knowledge of geology to the point that geological sequestration can be discussed. This course will include a laboratory component and local geologic field excursions.

The Masters of Science Teaching (MST) course for high school and middle school teachers will take advantage of New Mexico Tech's large MST program, and will allow us to inform teachers of opportunities for student in carbon sequestration. The MST students will return to their schools with specialized knowledge in carbon sequestration that they can incorporate into their teaching. This is a good way to recruit students for training in this area (see below). The MST class will be taught in the summer. High school and middle school science teachers are highly influential in student career choices.

#### Bachelor of Science in Earth Science with Carbon Sequestration Option.

And for the Undergraduate course:

ERTH 427 Carbon Sequestration Science, 3 cr. hrs, 3 class hrs.

PREREQUISITES: Calculus II, Chemistry II, Physics II, one EARTH 100-level Overview of geological carbon sequestration. Topics include: Earth's changing climate, sources and sinks of greenhouse gases, carbon

capture, reservoirs and caprocks, physical and aqueous chemistry of CO<sub>2</sub>. Field trips.

### Undergraduate Option in Carbon Sequestration

Course	Credit Hours
<i>NMT General degree requirements (includes 1 year calculus, chemistry and physics as well as humanities)</i>	53
<i>EES Core classes (common to all Earth Science undergraduate degrees)</i>	
any EARTH 100 level class and lab	4
ERTH 201 (Bio)	4
ERTH 202 (Surface)	4
ERTH 203 (Crust)	4
ERTH 204 (Whole Earth)	4
ERTH 205 (Earth Science Practicum)	1
ERTH 390 (General Geochemistry)	3
ERTH 325 (Near Surface Geophysics)	3
ERTH 330 (Global Change Hydrology)	3
ERTH 468 (Evolution of Earth)	3
ERTH 483 (Intro to Field Mapping)	2
PETR 101 (Intro to Petro. Engineering)	1
ERTH 370 (Formation Evaluation)	3
ERTH 440 (Hydrological Theory and Field Methods)	3
ERTH 447 (Depo. Systems & Basin analysis)	3
ERTH 460 (Subsurface and Petroleum Geology)	3
ERTH 484 (Surficial Mapping)	2
ERTH 485 (Metamorphic and Advanced Structure Mapping)	2
ERTH 4XX Carbon Sequestration Science)	3
<i>At least one of the following</i>	3
ERTH 424 (Sedimentary Petrography)	
ERTH 445 (Exploration Geophysics)	
HYD 507/4XX (Hydrogeochemistry)	
CHEM 331 + 331L (P-Chem)	4

MATH 283 (Statistics) <u>or</u> 382 +382L (Probability)	3
Total	118
Electives to complete 130 credit hours	

There was no discussion and the motion passed

Physical Recreation courses. –

Dr. Samuels – moved for inclusion of 36 physical recreation courses. The motion was 2<sup>nd</sup>. There was no discussion and the motion passed.

P R 100C Weight Lifting 1 cr, 2 cl hrs

Introduction to basic principles and techniques of weight training

P R 101C Weight Lifting for Women 1 cr, 2 cl hrs

Introduction to basic principles and techniques of weight training as related to women

P R 102C Physical Conditioning 1 cr, 2 cl hrs

Physical fitness, stress management, weight management, nutrition and muscular strength and endurance

P R 103C Beginning Racquetball 1 cr, 2 cl hrs

Basic fundamentals of all strokes and strategies used in the game of racquetball

P R 203C Intermediate Racquetball 1 cr, 2 cl hrs

*Prerequisite: PR 103C or consent of instructor.*

Perfection of all strokes and strategies used in the game of racquetball

P R 104C Beginning Tennis 1 cr, 2 cl hrs

Fundamentals skills in footwork, forehand, back hand, volleys, and servings

P R 105C Badminton 1 cr, 2 cl hrs

Instruction in basic skills such as serving, volleys, forehand and backhands

P R 106C Beginning Golf 1 cr, 2 cl hrs

Instruction in the basic skills, equipment, rules, etiquette and shot-making and use of irons and woods.

P R 206C Intermediate Golf 1 cr, 2 cl hrs

*Prerequisite: PR 106C or consent of instructor.*

Instruction emphasizing actual play

P R 110C Beginning Volleyball 1 cr, 2 cl hrs

Introduction to basic skills, rules, and strategies

P R 210C Intermediate Volleyball 1 cr, 2 cl hrs

*Prerequisite: Prior experience is required.*

Improve individual skill levels and apply more tactics and strategies

P R 111C Basketball 1 cr, 2 cl hrs

Instruction and practice of game skills in a team setting

P R 112C Indoor Soccer 1 cr, 2 cl hrs

Instruction and practice of basic skills in an indoor setting

P R 113C Flag Football 1 cr, 2 cl hrs

Instruction and practice of basic skills, rules, field positions in a team setting

P R 120C Beginning Yoga 1 cr, 2 cl hrs

Introductory practices focus on alignment, strength, breath relaxation, and restoration

P R 220C Intermediate Yoga 1 cr, 2 cl hrs

*Prerequisite: PR 120C or consent of instructor.*

Intermediate training and skill techniques in Yoga

P R 121C Gentle Yoga 1 cr, 2 cl hrs

Focus on stress reduction, body/breath awareness and flexibility

P R 122C Slow Flow Yoga 1 cr, 2 cl hrs

Instruction supports structural integrity of spine, back and abdominals

P R 123C Pilates Matwork 1 cr, 2 cl hrs

Designed exercise program involves the entire body while focusing on strengthening the core muscles of the torso. Exercises promote coordination, balance and strength

P R 124C Stretch and Relaxation 1 cr, 2 cl hrs

Instruction emphasizes stretch and relaxation techniques

P R 130C Aerobics 1 cr, 2 cl hrs

Instruction in continuous movement using basic steps for improved cardio respiratory endurance.

P R 131C Salsa Aerobics 1 cr, 2 cl hrs

Instruction emphasizes exercise and cardiovascular endurance with the use of Latin music

P R 132C Zumba 1 cr, 2 cl hrs

The trademark name for Salsa Aerobics instruction emphasizing exercise and cardiovascular endurance with the use of Latin music

P R 133C Indoor Cycling 1 cr, 2 cl hrs

Designed to progressively build strength and endurance while improving cardio respiratory function

P R 134C Spinning 1 cr, 2 cl hrs

The trademark name for Indoor Cycling designed to progressively build strength and endurance while improving cardio respiratory function

P R 140C Beginning Kung Fu 1 cr, 2 cl hrs

Foundations of Chinese martial arts, self defense, and health systems with special emphasis on the Northern Longfist style.

P R 141C Karate 1 cr, 2 cl hrs

Instruction in the basic skills, blocks, strikes, and kicks of Japanese karate

P R 142C Taijutsu 1 cr, 2 cl hrs

Instruction in the basic techniques of punching, falling, rolling and kicking in Taijutsu

P R 143C Tai Chi Chuan 1 cr, 2cl hrs

Instruction and practice in techniques to enhance body awareness, reduces stress, improve balance and increase strength.

P R 150C Beginning Belly Dance 1 cr, 2 cl hrs

Instruction in the basic moving steps and rhythms of the belly dance

P R 250C Intermediate Belly Dance 1 cr, 2 cl hrs

Instruction on the isolation and slow movements of Middle Eastern dance, including use of the veil and improvisation

P R 151C Irish Step Dance 1 cr, 2 cl hrs

Introduction to the traditional Irish step dance

P R 152C Ballroom Dance 1 cr, 2 cl hrs

Introduction to ballroom dance such as the lindy, foxtrot, waltz, tango, cha-cha and rumba

P R 160C Outdoor Rec 1 cr, 2 cl hrs

*Prerequisite: Good Physical Condition and able to hike several miles on rough terrain.* Selected outdoor activities such as rappelling, rock climbing, paddling, caving, and hiking

P R 161C Beginning Rock Climbing 1 cr, 2 cl hrs

Introduction to basic climbing technique with an emphasis on safety, safe knot and belay

P R 261C Intermediate Rock Climbing 1 cr, 2 cl hrs

*Prerequisite: Beginning Rock Climbing or consent of instructor*

Continuation of safety, rope set-up, belaying lead climb, rappelling and anchor set-up

P R 170C Aquatic Fitness 1 cr, 2 cl hrs

*Prerequisite: Swimsuits and Aqua shoes recommended*

Designed to enhance the level of muscular development, and cardiovascular endurance through exercise in water

Biology –

Dr. Kieft moved for corrections to the Biology curriculum. He explained in previous catalogue changed they had inadvertently dropped 6 credits. The motion was 2<sup>nd</sup> and passed without discussion.

Bachelor of Science in Biology with Environmental Science Option

*Minimum credit hours required—130*

*In addition to the General Degree Requirements (page 87), the following courses are required:*

1. BIOL 111 & 111L (4), 112 & 112L (4), 311 & 311L (4), 331 (3), 333 & 333L (4), or BIOL 343 & 343L, and BIOL 471 (1)
2. At least 12 additional credit hours from: BIOL 343 (3), 343L (1), 344 (3), 344L (1), 446 (3), 493 (4); CHEM 422 (3), 422L (1), EARTH 340 (3), 390 (3), 422 (3), 440 (3)
3. Additional Biology (~~6~~ 12) CHEM 441 and 442 (Biochemistry I and II) ←
4. CHEM 333 (3); plus 6 additional hours of the following: CHEM 311 (3–4), 331 (3–4), 333L (1), 334 (3), 334L (1), 422 (3–4), 441 (3–4)
5. Computer Science or Mathematics: CS 111 (4) or MATH 283 (3)
6. Electives to complete 130 hours

This is to correct an error generated a couple of years ago that caused the Biology B.S. with Environmental Science Option to have fewer required courses than the Biology B.S. degree:

Biology B.S.

Biol core courses 20 cr  
Med/cell courses 6 cr  
Env/Ecol courses 6 cr  
Additional Biol 12 cr  
Total 44 cr

Biol w/Env Sci Option B.S.

Biol core courses 20 cr  
Med/cell courses 0 cr  
Env/Ecol courses 12 cr  
Additional Biol ~~6~~ 12 cr  
Total 38-44 cr ←

Only one student has graduated with a B.S. in Biology with Environmental Science Option under the current catalog that has the lower course requirement.

Math –

Dr. Hossain moved for corrections of pre-requisites for math courses. The motion was seconded. There was some discussion regarding the graduation time frame if students take Math 103 and 104 in sequence instead of simultaneously. The preliminary statistics show, students that try to take these courses together do not pass Calculus the first try and they lose the semester they would have gained by taking the 2 courses in the same semester. The motion passed.

1) Remove Math 283 prerequisite from math 430; It should read:

Math 430, mathematical modeling, 3 cr, 3 cl hrs.

Prerequisites for Math 430: Math 254, math 335, or math 382; passes with grade C- or better.

Rationale: In justifying this, it should be noted that this course is only required for math majors and that we require our majors to take MATH 382. Non majors are welcome to take the course, but we need them to have the material in MATH 382.

First, we always have the option of waiving the prerequisite of any student. In the case of a graduate student, chances are that they took some undergraduate prob/stat at another university that wouldn't correspond to either of our courses, so we'd have to consider it on a case by case basis anyway. In the case of NMT undergraduates, it's clear that MATH 283 as it is currently taught doesn't provide enough background in probability for students to get started in doing the stochastic modeling and Monte Carlo simulations that we want to include in Math 430. Students who don't have MATH 382 or a rough equivalent have a very difficult time with this material. Since our math majors are required to take MATH 382 anyway, this shouldn't affect them at all.

2) Add Math 231 for a prerequisite for Math 336;

It should read:

Math 336, Introduction to Partial differential Equations, 3cr, 3cl hrs Prerequisites: Math 231, 254, and 336, each passed with grade C- or better Rationale: In the past the prerequisite was in place for Math 335, at the time we removed the 231 prerequisite forgetting that the 231 was needed for Math 336 which follows 335. The students who have not had Math 231 are not prepared because they have not been exposed to Partial Differentiation and some additional exposure to cylindrical polar coordinates and other topics essential for successfully completing Math 336.

3) Change math 103 corequisite to prerequisite for Math 104.  
Math 104, Trigonometry, 3 cr, 2 cl hrs, 3 lab hrs

Prerequisite: Math 103 or ACT Math score of at least 26 or SAT math score of at least 590 or a score of 20 or higher on the algebra portion of the math placement test (page 36).

Why: Success rate in Calculus is lower when students are taken both math 103 and 104 in the same time compared to students that have taken 103 before going to 104.

Rationale: The point is that when students try to take both MATH 103 and MATH 104 at the same time, they frequently fail MATH 104 even if they fail MATH 103, because they don't have sufficient algebra skills. Students who have passed both MATH 103 and MATH 104 (either at the same time or one after another) seem to do reasonably well in calculus. Gabriela Constantinescu, Registrar's office did produce a report on this which showed a much higher failure rate in MATH 104 among students who were taking both 103 and 104 at the same time.

#### Environmental Engineering –

Dr. Cal moved for an additional section of senior design. This course would allow for team participation on projects versus the existing senior design that is for individual projects. It was seconded and after no discussion the motion passed.

New Course:

ENVE 480 – Environmental Engineering Senior Design, 3 cr

*Prerequisite: senior standing and consent of instructor*

Design of equipment, unit processes, and systems in environmental engineering through application of scientific, technological, and economic principles.

Emphasis is placed upon problem formulation and the conceptual, analytical, and decision aspects of open ended design situations. Course integrates knowledge and skills gained in previous and concurrent courses. Students work as a team in a local, regional or national design competition. A team project report is required. Instructors may also require interim reports, an individual final report, and a final presentation.

Instructors: all faculty

ENVE 480 or ENVE 490 (Senior Thesis) will fulfill the environmental engineering capstone design graduation requirement. Students only need to take one of the two courses

#### Council of Chairs October -

##### CLASS department:

Dr. Dezember brought forward twenty fine arts classes for inclusion in the catalogue. The discussion clarified the courses are not new to NM Tech, just new to the catalogue. The motion passed

F A 130C Intro to New Mexico Tin Punching 1  
cr, 2 cl hrs

Fundamental tools and processes in creating traditional Hispanic folk art.

F A 150C Drawing and Painting 1 cr, 2 cl hrs

Survey of introductory skills and techniques using a variety of drawing and painting

media

F A 151C Technical and Industrial Drawing 1 cr, 2 cl hrs  
Free hand three dimensional and industrial drawing techniques

F A 152C Painting in Oils 1 cr, 2 cl hrs  
Basic skills and techniques of oil painting

F A 153C Painting in Acrylics 1 cr, 2 cl hrs  
Basic methods and skills in acrylic painting

F A 160C Stained Glass and Mosaics 1 cr, 2 cl hrs  
Introduction to materials and construction techniques of stained glass panels and mosaic objects

F A 240C Photography 2 cr, 3 cl hrs  
Technical and aesthetics process in Photography as an art form

F A 260C Stained Glass 2 cr, 3 cl hrs  
Investigation of tools and techniques in creating inspired stained glass compositions.

F A 261C Glass Fusing/Slumping 2 cr, 3 cl hrs  
Fundamental tools and processes in creation of glass objects; mold making and slumping processes used in basic kiln forming.

F A 262C Glass Bead Making 2 cr, 3 cl hrs  
Exploration of flame working methods and techniques used in creating wearable art

F A 270C Hand Building in Clay 2 cr, 3 cl hrs  
Studio arts survey of hand forming techniques used in creating diverse utilitarian and sculptural ceramics. Accommodates all skill levels

F A 271C Wheel Thrown Ceramics 2 cr, 3 cl hrs  
*Prerequisite: FA 270C, Hand Building in Clay*  
Technical and aesthetic processes used in functional wheel thrown ceramics. Accommodates all skill levels

F A 272C Sculptural Ceramics 2 cr, 3 cl hrs  
Studio art class in three dimensional construction of abstract and figurative sculpture. Accommodates all skill levels

F A 280C Beginning Enameling 2 cr, 3 cl hrs  
The art of fusing glass to metal, safe handling of equipment and chemicals in beginning techniques

F A 281C Enameling II 2 cr, 3 cl hrs  
*Prerequisite: FA 280C, Beginning Enameling*  
The art of fusing glass to metal using advanced techniques and methods

F A 282C Beginning Metal Arts/Lapidary 2 cr, 3 cl hrs

Fabrication techniques in metal construction: cutting, shaping and soldering, lost wax casting. Lapidary works of cut stone may be incorporated into metal processes.

F A 283C Metal Arts/Lapidary II 2 cr, 3 cl hrs

*Prerequisite: FA 282C, Beginning Metal Arts/Lapidary*

Continued development of skills and processes in lapidary and metal work

F A 284C Precious Metal Clay 2 cr, 3 cl hrs

The art of kiln fired fused copper, bronze and silver metals in creating wearable art. Safe handling of kilns and equipment

F A 285C Precious Metal Clay II 2 cr, 3 cl hrs

*Prerequisite: FA 284C, Precious Metal Clay I*

Continued exploration of skills and techniques acquired in PMC I

F A 286C Armor Making 2 cr, 3 cl hrs

*Prerequisite: FA 282C, Beginning Metal Arts/Lapidary*

Hot and cold working of steel and leather in historical design and construction of wearable medieval protective clothing

C.L.A.S.S. Department Catalogue changes:

Dr. Dezember brought CLASS department catalogue changes forward. She explained the changes began with the name change to CLASS but with the help of Dr. Bonnekenen an extensive reorganization and correction of catalogue listings took place. Before Dr. Bonnekenen presented these changes, she asked the senate to please correct your webpages to reflect new CLASS department name.

During the presentation Dr. Borchers – asked for a friendly amendment to remove the pre-requisites when listing courses offered by other departments.

After some discussion the motion for the friendly amendment passed.

Dr. Bonnekenen continued with her presentation pointing out the addition of a table for clarification of core curriculum courses offered in Areas 1, 4 and 5. These courses are articulated from the state matrix.

She was asked to clarify the confusion of the communications courses, (COMM) and the English, (ENGL) 242 course is now described as a Public Speaking course. This is driven by state articulation.

English is designated as either writing or literature courses and listed separately.

The motion is asking for inclusion of new courses in the catalogue and asking for deletion of courses that are not being taught and not expected to be taught. Dr. Dezember moved to approve the changes as a whole including the friendly amendment. There was no additional discussion and the motion passed.

Communication, Liberal Arts,  
Social Sciences (CLASS)

# Humanities

*Professor Lara-Martinez*

*Associate Professors DeZemmer (Chair of the Department), D.*

*Dunston, S. Dunston, Ford, Prusin, Zeman*

*Assistant Professors Bonnekessen Lanier Newmark*

*Professors D. Dunston, Lara Martínez, López, Zeman*

*Associate Professors DeZemmer (Chair of the Department), S. Dunston, Ford, Prusin,*

*Assistant Professors Bonnekessen, Lanier, Newmark, Simpson*

*Instructors Griffin, Stewart Langley Adjunct Faculty Price*

*Emeritus Professors Campbell, Corey, Deming, Olsen, Wilson, Yee*

*Degrees Offered:*

*B.S. in Technical Communication,*

*B.G.S.*

*A.G.S.*

*Minors Offered: Hispanic Studies, History, Literature, Philosophy, Technical Communication*

The multidisciplinary Department of Communication, Liberal Arts, Social Sciences develops students' ability to learn, reason, and communicate in diverse fields of study and areas of human experience. The CLASS Department's mission is threefold: to help students write well, think critically, and read widely; to provide an intellectual experience that increases students' awareness of human history, human cultures, and human values; and to encourage the lifelong study of human experiences.

The Department provides virtually all courses in three of the five areas of the General Education Core Curriculum required by the New Mexico Higher Education Department for the comprehensive education of undergraduates enrolled in New Mexico state institutions of higher education.

These areas are:

Area 1 -- Communications (College Writing and Public Speaking); Area 4 -  
- Social Sciences (Cultural

Anthropology, Political Science, Women's and Gender Studies); Area 5 -- Humanities/Liberal Arts (Art History, Communication, Creative Writing, Hispanic Studies, History, Languages, Literature, Media Studies, Music, Philosophy, Popular Culture, Technical Communication).

## Technical Communication

The Technical Communication curriculum combines courses from three fields of study to prepare students for technical communication positions upon graduation:

- The TC courses introduce students to document design, graphics, and computer documentation, created online and for multimedia. The TC courses also develop students' writing, speaking, and editing abilities.
- The humanities and social science courses improve students' understanding and appreciation of history, literature, philosophy, psychology, and the arts.
- The science and technology courses provide students a background in one specific science or engineering discipline.

The Department offers three degrees: an industry-endorsed Bachelor of Science in Technical Communication, a Bachelor of General Studies, an Associate of General Studies, and several minors, allowing students to enrich their studies at Tech to become successful professionals and knowledgeable members of society.

The CLASS Department offers students the opportunity to add a strong classical education component to a cutting-edge Tech education.

### Degrees and Curricula:

#### Bachelor of Science in Technical Communication

The Technical Communication curriculum combines courses from three fields of study to prepare students for technical communication positions upon graduation:

The TC courses introduce students to document design, graphics, and computer documentation, created online and for multimedia. The TC courses also develop students' writing, speaking, and editing abilities.

The humanities and social science courses improve students' understanding and appreciation of history, literature, philosophy, psychology, and the arts.

The science and technology courses provide students a background in one

## **Bachelor of Science in Technical Communication**

*Minimum credit hours required—132*

*In addition to the General Education Core Curriculum (page 87), the following courses are required:*

- Technical Communication—32 credit hours of technical communication courses including TC 100 (1), 101 (1), 151 (3), 202 (3), 211 (3), 321 (3), 411 (3), 420 (3), 421 (3), 422 (3), and six credit hours of technical communication electives. All technical communication courses must be completed with grade C or better. Students may use these TC courses to fulfill Area 5 of the General Education Core Curriculum Requirements (page 78) with the exception of TC 321, TC 429, and TC 422.
- Humanities: 12 credit hours in excess of the General Education Core Curriculum Requirements and excluding TC courses.
- MGT 330 (3)
- Foreign Language: Six credit hours of one language
- Science or Engineering: 12 credit hours in a single discipline in excess of general degree requirements
- Electives to complete 132 hours

### **Sample Curriculum for the Bachelor of Science in Technical Communication**

#### *Semester 1*

- 1 TC 101 (orientation)
- 3 ENGL 111 (college English)
- 4 MATH 131 (calculus)
- 4 CHEM 121 & 121L (general)
- 3 Foreign Language
- 15 Total credit hours

#### *Semester 2*

- 3 TC 151 (visual communication)
- 3 ENGL 112 (college English)
- 4 MATH 132 (calculus)
- 4 CHEM 122 & 122L (general)
- 3 Foreign Language
- 17 Total credit hours

#### *Semester 3*

- 3 TC 202 (elements of editing)
- 5 PHYS 121 & 121L (general)
- 4 Biology/Earth Science/Engineering with lab
- 3 Humanities
- 3 Social Science
- 18 Total credit hours

specific science or engineering discipline.

*Minimum credit hours required—132 In addition to the General Education Core Curriculum (page 87), the following courses are required:*

Technical Communication—32 credit hours of

Technical communication courses including TC 100 (1), 101 (1), 151 (3), 202 (3), 211 (3), 321 (3), 411 (3), 420 (3), 421 (3), 422 (3), and six credit hours of technical communication electives. All technical communication courses must be completed with grade C or better. Students may use these TC courses to fulfill Area 5 of the General Education Core Curriculum Requirements (page 78) with the exception of TC 321, TC 429, and TC 422.

Humanities: 12 credit hours in excess of the General Education Core Curriculum Requirements and excluding TC courses.

MGT 330 (3)

Foreign Language: Six credit hours of one language  
Science or Engineering: 12 credit hours in a single discipline in excess of general degree requirements  
Electives to complete 132 hours

### **Sample Curriculum for the Bachelor of Science in Technical Communication**

#### *Semester 1*

- 1 TC101 (orientation)
- 3 ENGL111 (college English)
- 4 MATH131 (calculus)
- 4 CHEM121&121L (general)
- 3 Foreign Language
- 15 Total credit hours

#### *Semester 2*

- 3 TC151 (visual communication)
- 3 ENGL112 (college English)
- 4 MATH132 (calculus)
- 4 CHEM122&122L(general)

3 Foreign Language  
17 Total credit hours

*Semester 3*

3 TC 202 (elements of editing)  
5 PHYS 121 & 121L (general)  
4 Biology/Earth Science/Engineering  
with lab  
3 Humanities  
3 Social Science  
18 Total credit hours

*Semester 4*

3 TC211 (media studies)  
5 PHYS122&122L(general)  
4 Biology/Earth Science/Engineering  
with lab  
3 Humanities  
3 Social Science  
18 Total credit hours

*Semester 5*

1 TC100 (community service)  
3 ENGL 341 (technical writing)  
6 Humanities  
3 Humanities/Social Science  
3 Science or Engineering  
16 Total credit hours

*Semester 6*

3 TC421 (professional writing workshop)  
3 Technical Communication Elective  
6 Humanities  
3 Social Science  
3 Science or Engineering  
18 Total credit hours

*Semester 7*

3 TC321 (internship)  
3 TC411 (persuasive writing)  
3 TC420 (senior seminar)  
3 MGT330 (management and  
organizational  
behavior)  
3 Science or Engineering  
15 Total credit hours

*Semester 8*

3 Technical Communication Elective

3 TC422 (senior thesis)  
3 Science or Engineering  
6 Electives  
15 Total credit hours

## Bachelor of General Studies

*Minimum credit hours required—130.*

This degree allows a student to plan a program of courses according to individual educational goals and career plans. The Bachelor of General Studies degree will be awarded after completion of 130 credit hours with a grade-point average of 2.0 or more. Other requirements for this degree include the following:

- Completion of the General Education Core Curriculum listed below;
  - 42 credit hours in courses numbered 300 or above;
  - Completion of the BGS Academic Career Plan with a stated Emphasis area or areas;
  - Fulfillment of the Institution's residence credit requirement (30 credit hours).
- To be admitted into the program for this degree, the candidate must meet with the CLASS department chair and the BGS academic advisor, who will be approved by the CLASS department chair, to create a BGS Academic Career Plan that will be on file with the Registrar. Any changes to the BGS Academic Career Plan must be approved by the CLASS department chair and the student's BGS academic advisor. These changes will be on file with the Registrar and must be met, along with above-stated requirements, before the degree will be awarded.

### General Education Core Curriculum for the Bachelor of General Studies (BGS)

#### Area 1: Communications (9 credit hours)

ENGL 111 -- ENGL 111 is waived for students who scored 27 or higher on the ACT English Test or 610 or higher on the SAT Critical Reading Test. These students must take ENGL 112, COMM 242 and ENGL 341 to fulfill the required 9 credit hours in this area.

ENGL 112 – *Prerequisite:* ENGL 111 or equivalent course passed with a grade C or better.

**COMM** 242 or

ENGL 341 – *Prerequisites:* ENGL 111 and 112 or the equivalent with a grade C or better and at least junior standing.

#### Area 2: Mathematics (3 credit hours)

MATH 101  
MATH 103

MATH 104  
MATH 105

Area 3: Laboratory Sciences (8 credit hours)

Any 100-Level EARTH Course and Lab  
BIOL 111 & 111L – *Corequisite*: CHEM 121.  
BIOL 112 & 112L – *Prerequisite*: BIOL 111.  
CHEM 109 – *Prerequisite*: MATH 103  
CHEM 121 & 121L – *Prerequisite*: MATH 103 or equivalent, passed with grade C or better.  
CHEM 122 & 122L – *Prerequisites*: CHEM 121 and 121L *Corequisite*: MATH 131  
PHYS 121 & 121L – *Corequisite*: MATH 131.  
PHYS 122 & 122L – *Corequisite*: MATH 132.  
ES 110 & 110L – *Corequisite*: MATH 103. ES 111 & 111L – *Corequisite*: MATH 131.  
CSE 113 – *Corequisite*: MATH 103 or equivalent.  
Engineering (ChE, CE, EE, ENVE, MATE, METE, ES, MENG, ME, PETR)

Area 4: Social Sciences (6 credit hours)

Anthropology (ANTH)  
Economics (ECON)  
Political Science (PS)  
Psychology (PSY)  
Social Sciences (SS)  
Women's and Gender Studies (WGS)

Area 5: Humanities (6 credit hours)

English (ENGL), except 103, 111, 112, 341.  
Art History (ART)  
Communication (COMM) If COMM 242 is used to fulfill credits in Area 1, it cannot also count in Area 5.  
History (HIST)  
Humanities (HUMA)  
Music (MUS)  
Philosophy (PHIL)  
Technical Communication (TC), except TC 321, 420, 422  
Theater (THEA)  
Foreign Languages (SPAN, FREN, GERM) Other languages may be counted only if they are listed or approved by the CLASS Department

Area 6: Additional Courses from Area 4 or Area 5 (6 credit hours)

NOTE: Students who plan to pursue a career or graduate studies that require a Bachelor of Science degree are advised to pursue another degree program at New Mexico Tech.

## Associate of General Studies

*Minimum credit hours required—61.*

A two-year certificate, Associate of General Studies, may be awarded after completion of 65 credit hours of course work approved by the CLASS department chair and the student's AGS academic advisor with a grade-point average of 2.0 or above.

Fulfillment of the Institution's residence credit requirement (30 credit hours) must also be met.

- To be admitted into the program for this degree, the candidate must meet with the CLASS department chair and the AGS academic advisor, who will be approved by the CLASS department chair, to create an AGS Academic Career Plan that will be on file with the Registrar.
- Any changes to this AGS Academic Career Plan must be approved by the CLASS department chair and the student's AGS academic advisor; these changes will be on file with the Registrar. The certificate will be awarded only after completion of the above requirements and completion of the AGS Academic Career Plan and after petition to the Vice President for Academic Affairs.
- Completion of the General Education Core Curriculum listed below.

### General Education Core Curriculum for the Associate of General Studies (AGS)

#### Area 1: Communications (9 credit hours)

ENGL 111 -- ENGL 111 is waived for students who scored 27 or higher on the ACT English Test or 610 or higher on the SAT Critical Reading Test. These students must take ENGL 112, ENGL 242 and ENGL 341 to fulfill the required 9 credit hours in this area. These students must take both COMM 242 and ENGL 341 to fulfill the required 9 credit hours in this area.

ENGL 112 – *Prerequisite:* ENGL 111 or equivalent course passed with a grade C or better.

**COMM** 242 or

ENGL 341 – *Prerequisites:* ENGL 111 and 112 or the equivalent with a grade C or better and at least junior standing.

#### Area 2: Mathematics (3 credit hours)

MATH 101  
MATH 103  
MATH 104  
MATH 105

#### Area 3: Laboratory Sciences (8 credit hours)

Any 100-Level EARTH Course and Lab  
 BIOL 111 & 111L – *Corequisite*: CHEM 121.  
 BIOL 112 & 112L – *Prerequisite*: BIOL 111.  
 CHEM 109 – *Prerequisite*: MATH 103  
 CHEM 121 & 121L – *Prerequisite*: MATH 103 or equivalent, passed with grade C or better.  
 CHEM 122 & 122L – *Prerequisites*: CHEM 121 and 121L *Corequisite*: MATH 131  
 PHYS 121 & 121L – *Corequisite*: MATH 131.  
 PHYS 122 & 122L – *Corequisite*: MATH 132.  
 ES 110 & 110L – *Corequisite*: MATH 103. ES 111 & 111L – *Corequisite*: MATH 131.  
 CSE 113 – *Corequisite*: MATH 103 or equivalent.  
 Engineering (ChE, CE, EE, ENVE, MATE, METE, ES, MENG, ME, PETR)

#### Area 4: Social Sciences (6 credit hours)

Anthropology (ANTH)  
 Economics (ECON)  
 Political Science (PS)  
 Psychology (PSY)  
 Social Sciences (SS)  
 Women's and Gender Studies (WGS)

#### Area 5: Humanities (6 credit hours)

English (ENGL), except 103, 111, 112, 341.  
 Art History (ART)  
 Communication (COMM) If COMM 242 is used to fulfill credits in Area 1, it cannot also count in Area 5.  
 History (HIST)  
 Humanities (HUMA)  
 Music (MUS)  
 Philosophy (PHIL)  
 Technical Communication (TC), except TC 321, 420, 422  
 Theater (THEA)  
 Foreign Languages (SPAN, FREN, GERM) Other languages may be counted only if they are listed or approved by the CLASS Department

#### Area 6: Additional Courses from Area 4 or Area 5 (6 credit hours)

### Minors

The CLASS Department offers several minors to explore a field of study in more detail.

Minor descriptions were disbursed in the 2009-2011 Catalog under their

All Minors:

*Minimum credit hours required*

#### Minor in Technical Communication

Minimum credit hours required – 18

The following courses are required:

- TC 151 (3)

designation headings. The example below is typical:

– 18

*Restriction: If a student takes more than one minor in the CLASS Department, only six (6) credit hours of one minor may be applied towards another minor.*

*Additional requirements as listed under each minor*

### Hispanic Studies

*The following courses are required:*

One of the following sequences (6)

- SPAN 113 and 114, Elementary Spanish I and II
- SPAN 113N and 114N, Spanish for Native Speakers

An additional 12 credit hours in any topic relevant to Hispanic Studies with the consent of the minor advisor

### History

*The following courses are required:*

A 100-level history course sequence (6)

Twelve (12) additional credit hours in history courses. Of these 12 credit hours, six (6) credit hours may be taken in art history or music surveys

Students taking the History minor are strongly encouraged to take the 12 additional credit hours from as wide a variety of topics as possible.

### Literature

*The following courses are required:*

18 credit hours in ENGL literature courses

### Philosophy

*The following courses are required:*

PHIL 231, Western Philosophy  
Fifteen (15) additional credit hours in philosophy courses

With the consent of the minor advisor, of these 15 credit hours, six (6) credit hours may be taken in

upper-division courses that have a substantial philosophical focus and content.

**Technical Communication**

*The following courses are required:*

TC 151 (3)

TC 202 (3)

TC 211 (3)

Nine (9) additional credit hours of TC courses

**General Education Core Curriculum Information**

The courses offered through the CLASS Department fulfill four areas (Area 1, 4, 5, and 6) required for the Bachelor of Science. Additional Social Sciences are offered through the Psychology Department (PSY courses) and the Management Department (ECON courses).

Area 1 – Communications	ENGL 111, 112, 341
Area 4 – Social Sciences	ANTH Anthropology PS Political Science SS Social Science WGS Women’s and Gender Studies
Area 5 - Humanities	ART Art History COMM Communication ENGL English (except ENGL103, 111, 112, 341) FREN French GERM German HIST History HUMA Humanities MUS Music (except Performance Ensembles) PHIL Philosophy SPAN Spanish TC Technical Communication (except TC 321, 420, 422)
Area 6	Additional Courses from Area 4 or 5

**Anthropology Courses:**

*The following courses may be used to fulfill Area 4: Social Sciences of the General Education Core Curriculum (page 87).*

ANTH 101, Introduction Cultural Anthropology, 3 cr, 3 cl hrs

An introduction to the science of Cultural Anthropology, its terminology, theory practice and subject matter. Students are encouraged to engage with other cultures to find similarities and connections, not differences and separation. Studies human beings, their social and cultural institutions, beliefs, and practices around the world and next door, creating a medley of adaptations to common problems.

**ANTH 120, Social Thought, 3 cr, 3 cl hrs**

From Machiavelli and Marx to Steinem and Foucault, this course explores some of the major historical and contemporary theoretical works and authors in selected social sciences. The focus is on the cultural framework in which these thoughts emerged and the impact they had on society. (Same as WGS 120 and SS 120)

**ANTH 302, Food and Culture, 3 cr, 3 cl hrs**

Food is more than just nutrition; in every culture, past and present, food is central to building and maintaining economic and political systems, social relationships among family members and between friends and enemies, religious taboos, ethnic identities, and gender norms. The trade in food stuffs is at the heart of colonization and globalizations; the lack of food is at the heart of labor migrations and horrors of malnutrition and starvations; and the science of food causes biogenetic engineering to choose between creating profit for some or life for many. This class examines these issues, ranging from seemingly universal meals to mass •produced hamburgers, and counting the human, animal, and environmental costs of each.

**ANTH 303, Race and Ethnic Relations, 3 cr, 3 cl hrs**

An overview of most “racial” and ethnic groups of Americans. Provides a theoretical framework to explore their histories and critical current issues and a space to enjoy the advantages of a multicultural philosophy. Focuses on the heterogeneous character of all ethnic groups, especially in regard to gender and class; attempts to define common issues that can only be solved in unison.

**ANTH 320, Anthropology of Sex and Gender, 3 cr, 3 cl hrs**

A survey of the varieties of sex and gender definitions and roles in historical and contemporary human cultures. The study of sex assignment, gender definitions and roles in their association to stratified or equitable access to economic, political, and ideological resources and monopolies. Exploration of the parallels and differences between gender, race, and class. Topics include: gendered division of labor, female and male socialization, violence against women as male entertainment and female punishment, gender universals and generalities. (Same as WGS 320.)

**ANTH 370, Nahuatl Mythology & Anthropology, 3 cr, 3 cl hrs**

A study of Native language, literature, and mythology of Central America. The class explores a specific Native literature in its own language and discusses an "American" worldview. Topics include the concept of a fragmented self and of multiple souls, of political community and redistribution, a quintesimal (5) and vigesimal (20) system of counting, sexuality, and the foundation of a Native philosophy. (Same as SPAN 370)

**ANTH 381, Qualitative Methods, 3 cr, 3 cl hrs**

An introduction to the primary methods used in long-term qualitative data gathering, such as participant observation and deep ethnography, and in short-term applied data collection, such as focus groups and life histories. A major focus is research conducted with organizations and their culture. Students will design and execute their own research projects. (Same as WGS 381 and TC 381)

## Art History Courses:

*The following courses may be used to fulfill Area 5: Humanities of the General Education Core Curriculum (page 87).*

ART 272, Art History, 3 cr, 3 cl hrs

Survey of art of the western hemisphere from prehistory to the 21st century. May incorporate an interdisciplinary approach. [NMCCNS ARTS 2113: General Education Area V]

ART 372, Issues in Art History, 3 cr, 3 cl hrs

*Prerequisite: ENGL 112 or consent of instructor*

Issues, topics, or specific periods in the visual arts. May incorporate an interdisciplinary approach. Topics may include, among others, Visual and Other Arts; Modern Art; Art and Science; Literature inspired by Art; Modern Art, Sci Fi, and Film. May be repeated for credit with different issues, topics, or periods.

## Communication Courses:

*The following courses may be used to fulfill Area 5: Humanities of the General Education Core Curriculum (page 87).*

<p><i>Change Designation and Title</i> ENGL 242, Speech, 3 cr, 3 cl hrs A study of the principles of speech; practice in the preparation and delivery of various types of speeches, classified according to function; practice in the basic skills of oral communication; the development of poise and self • confidence. [NMCCNS COMM 1113: General Education Area I]</p>	<p><b>COMM</b> 242, <b>Public Speaking</b>, 3 cr, 3 cl hrs A study of the principles of speech; practice in the preparation and delivery of various types of speeches, classified according to function; practice in the basic skills of oral communication; the development of poise and self • confidence. [NMCCNS COMM 1113: General Education Area I]</p>
<p><i>Change Designation</i> ENGL 360, Advanced Public Speaking, 3 cr, 3 cl hrs <i>Prerequisite: ENGL 242 or consent of instructor</i> Theory and practice of ethical and professional speech communication. Researching, writing and presenting professional presentations. Designing and using effective visuals, including posters and electronic presentation aids. Conducting group presentations and discussions, and ethical and cross • curriculum issues in historical, cultural and workplace context.</p>	<p><b>COMM</b> 360, Advanced Public Speaking, 3 cr, 3 cl hrs <i>Prerequisite: ENGL 242 or consent of instructor</i> Theory and practice of ethical and professional speech communication. Researching, writing and presenting professional presentations. Designing and using effective visuals, including posters and electronic presentation aids. Conducting group presentations and discussions, and ethical and cross • curriculum issues in historical, cultural and workplace context.</p>

## English Courses:

*The following courses (except ENGL 103, 111, 112, 341) may be used to fulfill Area 5: Humanities of the General Education Core Curriculum (page 87).*

The 2009-2011 Catalog lists all ENGL courses in numerical order. The new version (on the right) adds subheadings to organize ENGL by specialty.

Only courses with changes (word changes or removal) are shown in this column).

*CHANGE TITLE from “College English” to “College Writing: Exposition*

ENGL 111, College English, 3 cr, 3 cl hrs

*CHANGE TITLE from “College English” to “College Writing: Argument and Analysis*

ENGL 112, College Writing: Argument and Analysis, 3 cr, 3 cl hrs

*This course changes its designation from ENGL to COMM and its Title from “Speech” to “Public Speaking:”*

ENGL 242, Speech, 3 cr, 3 cl hrs

A study of the principles of speech; practice in the preparation and delivery of various types of speeches, classified according to function; practice in the basic skills of oral communication; the development of poise and self-confidence.

[NMCCNS COMM 1113: General Education Area I]

#### Writing Program Courses:

ENGL 103, Pre-College English, 3 cr, 3 cl hrs

The basics of writing: sentence types, structure, and construction; topic sentences, paragraph development and coherence; the complete essay; grammar, usage, and punctuation. Prepares students for ENGL 111. (*Does not fulfill the English portion of the General Education Core Curriculum, page 87.*)

ENGL 111, College Writing: Exposition, 3 cr, 3 cl hrs

The essentials of academic prose; techniques and mechanics of writing well; rhetorical strategies. [NMCCNS ENGL 1113: General Education Area I]

ENGL 112, College Writing: Argument and Analysis, 3 cr, 3 cl hrs

*Prerequisite: ENGL 111 or equivalent course passed with a C or better*

A continuation of ENGL 111 with critical reading and writing; writing arguments; library research paper. [NMCCNS ENGL 1123: General Education Area I]

NEW MEXICO INSTITUTE OF MINING AND  
TECHNOLOGY

FACULTY SENATE MEETING

Tuesday, December 7, 2010

Workman 101

Minutes

1. Dr. Stone called the meeting to order directly after the Institute Senate concluded; approximately 4:40p.m.
2. Dr. Stone called for approval of the minutes of November 2, 2010. It was moved, 2<sup>nd</sup> and the motion passed.
3. Announcements. a.  
Registrar  
Sara Grijalva announced the grades for fall semester are due at midnight, Dec 19<sup>th</sup>. At that time Banner will be shut down in order to update the system with the new grades.
- b. Student and University Relations  
Melissa Jaramillo-Fleming Introduced Berta Gutierrez, Director of Upward Bound, math and science program. Based in Albuquerque, they host summer programs on the NMT Main campus. This serves as a college prep program targeting low income and special needs high school students throughout New Mexico. Ms. Gutierrez reported the tutoring program has shown measurable improvements to participant's grade point averages. Ms. Gutierrez asked for faculty involvement of at least 1 hour a month. Further information will be provided to the faculty.
4. Committee Reports. a.  
Benefits Committee  
Dr. Harrison, chair, reported the committee has been meeting regarding health care plan changes. They are working with Vice President, Lonnie Marquez. The committee will be inviting Mr. Marquez to speak to the Faculty Senate. The committee is researching combining the NM Tech health plan with other New Mexico universities or using a commercial insurance provider.
5. Old Business.  
None
4. New Business.
  - a. Council of Chairs November –  
Dr Gerity invited the specific chairs to put forth their catalogue changes for consideration:

Civil and Environmental Engineering

Dr. Richardson moved for changes to the curriculum allowing for an additional course of basic science.

## New Requirement

All civil engineering students must take an additional course in basic science from an area other than chemistry and physics. The following courses are approved to fulfill this requirement:

BIOL 111 (3), General Biology

ERTH 101 (3), Earth Processes

ERTH 120 (3), Introductory Oceanography

ERTH 130 (3), Spaceship Earth

ERTH 140 (3), Water in the Rise and Fall of Civilizations

ERTH 150 (3), The Catastrophic Earth: An Introduction to Natural Hazards

Students are not required to take the accompanying lab unless it is required by the program (biology or earth sciences).

Comment

The program criteria for civil engineering was recently modified by the American Society of Civil Engineers (ASCE) to require that students take a course from an additional area of basic science (in addition to chemistry and physics). It is recommended that students take a course from one of the following fields: biology, geology (earth sciences), and ecology. Since NMT does not offer freshman-level courses in ecology, no ecology courses were listed to fulfill the basic science requirement. If additional basic science courses are available in the future, then they could be added to the list, assuming that they fulfill the ASCE civil engineering program criteria.

He was asked to read the options as offered for basic science requirements and explained this change is driven by the ABET requirements that are subsequently driven by the professional societies. Dr. Richardson explained these are in addition to the existing requirements of physics and chemistry. Basic science is being defined as non-engineering based courses. This change applies to the lectures but not the corresponding labs. Determining there was no further discussion, Dr. Stone called for a vote and the motion passed.

## Civil and Environmental Engineering

Dr. C. Richardson moved to drop rock mechanics. The course will remain as an approved elective but will no longer be included in the list of Basic Science options. There was no discussion. The motion passed.

Drop Course

ME 422 (3), Rock Mechanics

Comment

ME 422 will become an approved elective for CE students. It is not a requirement of the ASCE civil engineering program criteria that students take a course in rock mechanics, and the course is not a prerequisite for any other course in the curriculum.

## Earth and Environmental Science

Earth and Environmental Science, Volcanology courses – R. Aster moved for inclusion of two courses in the Volcano studies. He explained these courses were inadvertently left off of previous catalogue changes. There was no discussion and the motion passed.

ERTH 451, Volcano Geophysics, 3 cr, 2 cl hrs, 1 lab hr

Prerequisites: EARTH 356, MATH 283

Offered on demand

An overview of geophysical tools and techniques used for monitoring and scientific study of active volcanoes. Focus on seismology, infrasound, geodesy, and optical

remote sensing mostly from ground-based perspectives and related satellite techniques. EARTH 451 and GEOP 551 share lecture and lab work, but GEOP 551 is graded separately and additional graduate-level work is required.

EARTH 455, Volcano Geophysical Field Methods, 1-6 hrs

Prerequisites: Consent of  
Instructor Offered on demand

An intensive field and lab computer-based class to teach the principles of hardware installation, data collection, digital signal processing, and analysis of geophysical data in an active volcanic environment. Studies will be grounded in seismic data acquisition and may also include infrasound, geodesy, thermal and gas sensing surveys.

EARTH 455 and GEOP 555 share lecture and field work, but GEOP 555 is graded separately and additional graduate-level work is required.

## Psychology

M Samuels moved for inclusion of the Swing Dance course. There was no discussion. The motion passed.

P R 153C Swing Dance 1 cr, 2 cl hrs

Introduction to swing dancing including East Coast Swing, Lindy Hop and Charleston

### b. Graduate Council (attachment)

Dr. Westpfahl moved for the following changes:

## CLASS Department:

COMM 560 Professional Public Speaking, 3cr, 3 cl hr

Prerequisite: Consent of Instructor

Theory and practice of ethical and professional speech communication. Research, writing and presenting professional presentations. Designing and using effective visuals, including posters and electronic presentation aids. Conducting group presentations and discussions about ethical and cross-curriculum issues in an historical, cultural and workplace context. Design, schedule and present a formal research colloquium.

TC 511 Persuasive Communication, 3 cr, 3cl hr

Prerequisite: consent of Instructor

Instruction in theories and practices of effective persuasive communication. Course content will include extensive audience analysis and planning, drafting, and revising persuasive documents, with a heavy emphasis on funding and research proposals, for targeted audiences.

SS 501 Interdisciplinary Problem Solving, 3cr, 3 cl hr

Prerequisite: Graduate Standing or Consent of Instructor

An introduction to the Theory of Inventive Problem Solving (TRIZ), including techniques for problem definition, functional modeling, and concept generation. Emphasis on qualitative, interdisciplinary approaches to technical problems. Application of TRIZ skills to graduate student peers' design and/or experimental problems.

There was no discussion and the motion passed.

Earth and Environmental Science:

Catalog Changes

HYD 543 – Prerequisite Change –

Ecohydrology, 1 cr, 1 cl hr – Prerequisite:

ERTH 440 – Interactions between terrestrial

plants and water, nutrients, and light resources in semiarid environments. Ecohydrological processes, dynamics, and simple numerical models.

GEOP 547 – Course

Number Change to GEOP

551 – Volcano

Geophysics, 3 cr, 2 cl hrs, 1lab hr. –

Prerequisites: graduate standing, Offered on Demand.

This course provides an overview of geophysical tools and techniques used for monitoring and scientific study of active volcanoes. Subject material will focus on seismology, infrasound, geodesy, and optical remote sensing mostly from groundbased perspectives and related satellite techniques.

ERTH 451 and GEOP 551

share lectures and lab work, but GEOP 551 is graded separately and additional graduate level work is required.

There was no discussion and the motion passed.

c. Anti-Bullying Committee

Dr. Stone asked a committee be formed through the administrative body of the institution to develop a policy for handling the bullying on campus. He clarified that according to Elias Hernandez, Director of Affirmative Action, the concern is mostly about student on student bullying.

d. Numerous motions were made to adjourn. It was seconded and voted on unanimously at approximately 4:59

Respectfully submitted,

Cathi VanFleet