THE UNIVERSITY *of* NEW MEXICO

BOARD OF REGENTS
ACADEMIC/STUDENT AFFAIRS & RESEARCH COMMITTEE

MEETING AGENDA

November 5th, 2015
1:00 PM
Roberts Room
Scholes Hall

UNIVERSITY OF NEW MEXICO BOARD OF REGENTS'
ACADEMIC/STUDENT AFFAIRS & RESEARCH COMMITTEE MEETING
Nov 5th, 2015 – 1:00 p.m.
Roberts Room, Scholes Hall

AGENDA

I. Call to Order

II. Approval of Summarized Minutes from Previous Meeting: **TAB A**

III. Reports/Comments:
    A. Provost's Administrative Report
       Chaouki Abdallah, Provost & EVP for Academic Affairs
    B. Member Comments
    C. Advisor Comments

IV. Action Items:

    A. **Approval of UNM Parent Association Bylaws Revision**   **TAB B**
       Daniel Perea , Acting President, UNM Parent Association

V. Information Items:

    A. **Global & National Security Policy Institute**   **TAB C**
       Emile Nakhleh, Coordinator, UNM National Security Programs

    B. **Update on Academic Plan – Faculty Strength**
       Chaouki Abdallah, Provost & EVP for Academic Affairs

VI. Faculty Presenter   **TAB D**
Dave Gutzler: "El Nino 2015: Is the drought over? Should I buy a season ski pass this winter?"

VII. Public Comment

VIII. Adjournment

Meeting Summary

Committee members present: *Regent Bradley Hosmer, Regent Ryan Berryman, Provost & Executive Vice President for Academic Affairs Chaouki Abdallah, Staff Council President Crystal Davis, Faculty Senate President Elect Pamela Pyle*

Regents' Advisors present: *ASUNM President Jenna Hagengruber, GPSA President Texanna Martin*

I.   Call to Order 1:05 p.m.

II.   Approval of Summarized Minutes from Previous Meeting:

Motion to Approve: *Regent Ryan Berryman*
Second: *Provost Abdallah*
Motion Passed

III.   Reports/Comments:
   A.   Provost's Administrative Report
        Chaouki Abdallah, Provost and Executive Vice President for Academic Affairs
        - In discussions with both Anderson and Engineering about interim deans assignments
        - Will possibly extend interim dean rolls for both Anderson & Engineering
   B.   Member Comments

Staff Council President Crystal Davis
        - Still working on tuition remission for staff members who go to CNM
        - UNM Staff as Students event on 10/9
        - Creating a plan to target staff that are a few credits shy of a degree & helping them graduate

   C.   Advisor Comments

ASUNM President Jenna Hagengruber,
        - Lottery Summit 10/2
        - Working on the "Semicolon Project" with Agora to raise awareness about suicide prevention

GPSA President Texanna Martin
        - SFRB hearings are coming up and student forums will be included in the process
        - Fall grant cycle will be closing in October
        - Food trucks will be back on campus helping to raise money for the summer scholarship

IV.   Action Items:
   A.   **Posthumous Degrees**
        See attached

Motion to Approve: *Regent Ryan Berryman*
Second: *Provost Abdallah*
Motion Passed

V. **Information Items:**

A. **UNM Master Plan Overview & Deferred Maintenance Update**
UNM 2020 Goal 1 Become a Destination University
Amy Coburn, University Architect
Jeff Zumwalt, PPD Director
- Deferred maintenance presentation given by Associate Vice President Chris Vallejos
- Presentation slides can be viewed online http://provost.unm.edu/Board-of-Regents.html
- Discussion and overview of campus master plan
- Included an in depth look at the goals of the master plan
- Discussion about creating a formal master plan process that would include an annual report received by ASAR & approved by the Facilities & Finance committee
- Overview of deferred maintenance
- Statements about how UNM's deferred maintenance compares to other schools

B. **Academic and Fiscal Planning**
ASAR Goal 6.1 Continue Development of an Academic Plan
Chaouki Abdallah, Provost and EVP for Academic Affairs
- Presentation attached
- Overview of the academic plan including goals, demographics, outcomes and activities
- Discussion of student success and degree roadmaps
- First year student experience
- Information about UNM's highest ranked programs

C. **LoboRespect Advocacy Center**
UNM 2020 Goal 1 Become a Destination University
UNM 2020 Goal 3 Promote Institutional Citizenship
Tomas Aguirre, Dean of Students
- Presentation slides can be viewed online http://provost.unm.edu/Board-of-Regents.html
- Introduction of Lisa Lindquist who will be the center's director
- Overview of the center's operating scope
- Center will open on 9/25

VI. **Public Comment - None**

VII. **Adjournment 3:25 p.m.**
Motion to Approve: *Regent Ryan Berryman*
Second: *Provost Abdallah*
Motion Passed

DATE: September 3, 2015

TO: Operations Committee of the Faculty Senate

FROM: Jennifer Thacher, Ph.D., Chair
               Senate Graduate & Professional Committee

RE: Posthumous Degree

At its September 3, 2015 meeting the Senate Graduate & Professional Committee voted
to approve a request to grant a posthumous degree to Corlan Keller (100260933). Please
see the attached memo from Rikk Murphy, Graduate Program Coordinator, Department
of Psychology, detailing this request for Mr. Keller.

The Senate Graduate & Professional Committee's approval is based primarily on the two
conditions specified in the faculty handbook relative to the granting of posthumous
degrees. Mr. Keller had completed the coursework required for the degree and his
academic record is in good standing. Therefore, we request that the Faculty Senate
support the awarding of a posthumous Master of Science to Corlan Keller. We also
request that this item be put on the Senate's agenda at the earliest convenience.

Thank you.

Attachment

To: Robben Baca, Academic Affairs Specialist

From: Rikk Murphy, Graduate Program Coordinator

Date: 23 July 2015

RE: Posthumous degree for Corlan Keller-100260933

The Department of Psychology requests the University of New Mexico grant a posthumous Master of Science in Psychology degree to Corlan Keller, a graduate student who passed away earlier this summer. Mr. Keller had completed all of the reequired coursefork for the degree, submitted his thesis proposal to the department, and had conducted and completed his research for his thesis at the time of his death. He was expecting to defend his thesis this fall and his mentor, Dr. Eric Ruthruff, fully expected Mr. Keller to defend it successfully.

Corlan was the first in his family who had achieved a four-year degree. His family, the department, and I would greatly appreciate the University granting him this one final milestone.

Slide 1

Office of the Provost

Review and Update of the Academic Plan

Chaouki Abdallah
Provost & Professor of Electrical & Computer Engineering

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Slide 2

Office of the Provost

Academic Plan Highlights

- **Goals:** Student success, faculty strength.
- **Challenges:** Demographics, Students' preparation, Financial limitations, Uncertain paths.
- **Activities:** Investments, A comprehensive set of interventions starting before a student joins UNM, and continuing after they graduate.
- **Outcomes:** Measurable outcomes, and corrective actions along the path.

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Slide 3

Office of the Provost

The Why and What of Student Success

- **Why Don't Student Succeed?**
  - Not prepared academically
  - Path to graduation too confusing
  - Financial reasons
  - Social reasons
- **What are we doing to make them succeed?**
  - Pre-institutional interventions
  - First year intervention
  - Continuous monitoring and intervention (academic and social)
  - Clarifying path (degree maps, 120 SCH)
  - Need-based financial aid
  - Challenge and reward (honors, innovation academy)
  - Extended Universities, Distance Learning, MOOCs for non-traditional Students.
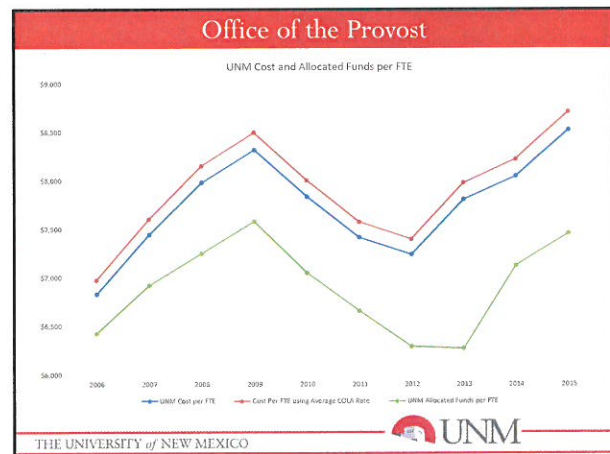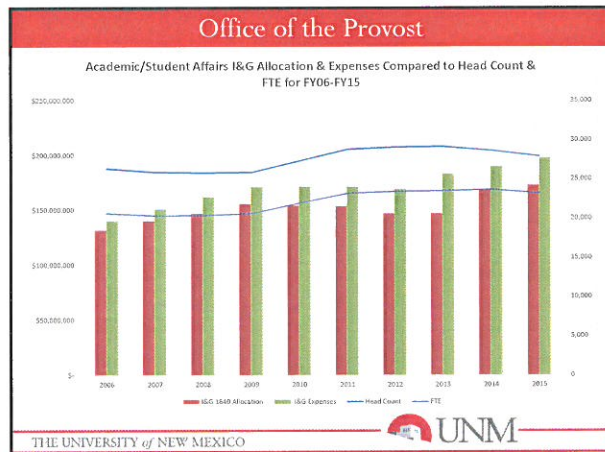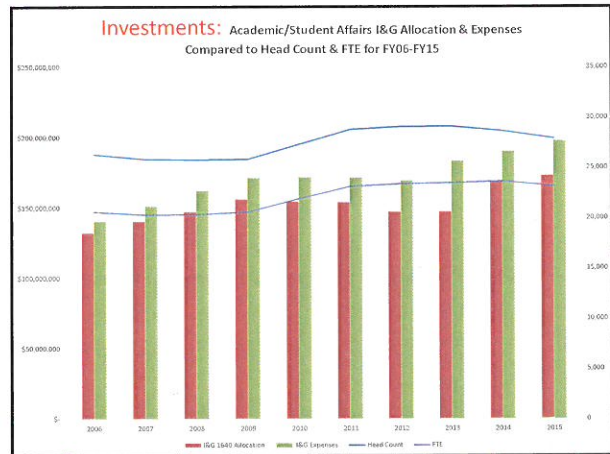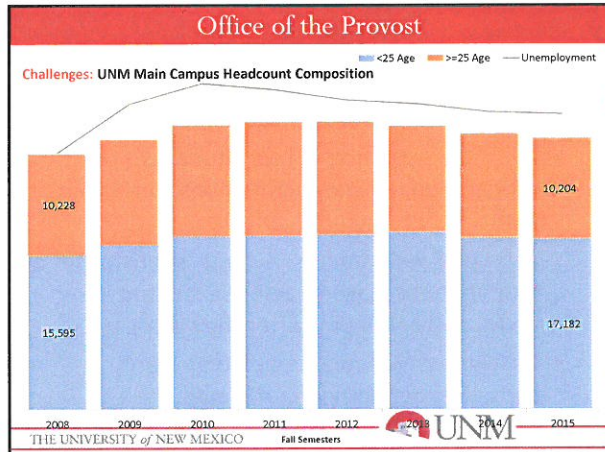
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Slide 4
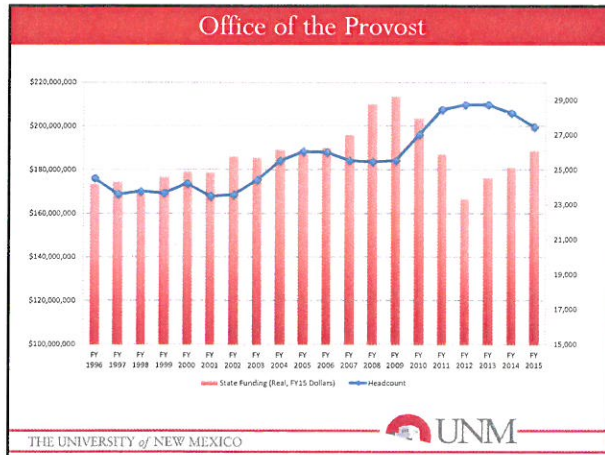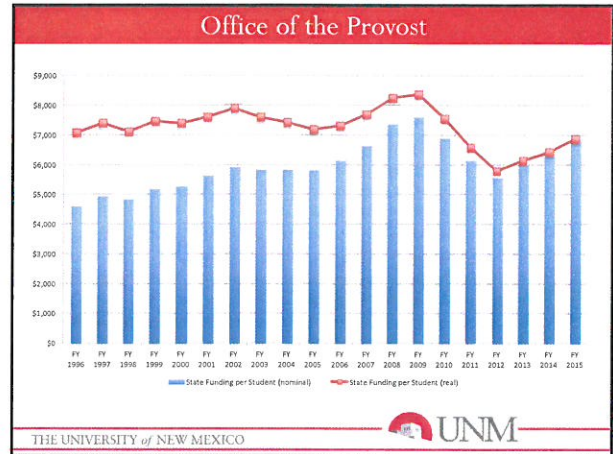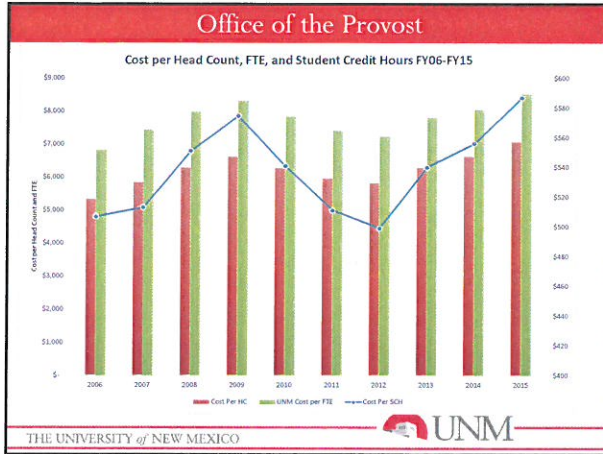
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Demographic Challenges

Academic Year	Race/Ethnicity Total	American Indian/Alaska Native	Asia Paicifc/Islander	Black non-Hispanic	Hispanic	White non-Hispanic	Public Total	Non-Public Total	Total Public & Non-Public
2010-11	18,482	2,079	262	404	9,818	5,919	18,511	1,308	19,819
2011-12	17,929	2,037	267	441	9,567	5,617	18,141	1,249	19,389
2012-13	17,759	1,843	289	437	9,619	5,572	18,040	1,221	19,260
2013-14	17,365	1,746	342	414	9,420	5,443	17,678	1,163	18,841
2014-15	17,334	1,692	389	401	9,370	5,482	17,761	1,155	18,916
2015-16	17,562	1,772	348	389	9,656	5,398	18,057	1,071	19,128
2016-17	18,245	1,868	386	432	10,137	5,422	18,753	1,003	19,756
2017-18	18,385	1,823	343	455	10,263	5,501	18,872	1,003	19,875
2018-19	18,779	1,873	382	431	10,440	5,653	19,222	964	20,186
2019-20	18,753	1,936	387	448	10,536	5,446	19,230	895	20,124
2020-21	18,875	1,905	436	420	10,525	5,589	19,316	863	20,180
2021-22	19,147	2,002	378	403	10,710	5,654	19,643	958	20,601
2022-23	19,647	2,040	460	478	11,155	5,514	20,045	978	21,023
2023-24	20,450	2,145	524	508	11,668	5,605	20,843	1,003	21,845
2024-25	20,947	2,053	489	516	12,058	5,831	21,268	1,012	22,279
2025-26	20,595	2,108	504	484	11,875	5,623	20,956	997	21,953
2026-27	19,777	2,058	455	509	11,428	5,327	20,141	967	21,108
2027-28	19,039	1,888	495	488	10,934	5,235	19,353	929	20,282

Knocking at the College Door (2012) WICHE.

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Cost per Head Count, FTE, and Student Credit Hours FY06-FY15

Cost per Head Count and FTE

Cost Per HC | UNM Cost per FTE | Cost Per SCH

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State Funding per Student (nominal) | State Funding per Student (real)

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State Funding (Real, FY15 Dollars) | Headcount

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The Cost of Education to the State

	FTE 2014	I&G FY2015	Funding/FTE
NMT	1,820	$27,508.30	$15,114.45
NMSU	12,930	$118,112.50	$9,134.76
UNM	23,173	$189,147.90	$8,162.43
ENMU	4,032	$27,540.20	$6,830.41
NMHU	2,627	$28,195.60	$10,733.00
NNMC	865	$10,853.70	$12,547.63
WNMU	2,408	$17,102.60	$7,102.41
Total	47,855	$418,460.80	$8,744.35

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Slide 1

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Summary of Activities

- **Degree Pathways for UNM Students** – http://degrees.unm.edu
- **Early Start Programs** – Summer prior to entry for lower-scoring students.
- **First-year Redesign** – JNGI Foundations of Excellence-based.
- **Advising Restructuring** – Intended majors advised in colleges = 350:1 uniform advising ratio across campus. For undecided students, meta-major pathways. New transition advisors.
- **Curriculum Review** – Took curriculum reform leadership role in creating 120 credit hour degree programs, starting in 2013.
- **Remediation Reform** – No remedial courses at UNM, based on Complete College America recommendations.
- **Gateway Course Redesign** – English and Math using Stretch (co-requisite model, JIT help) and Studio Models, and better placement.
- **Student Analytics** – Enhanced use of student data in decision making.
- **Student Tracking** – Progress tracking relative to degree plans. Tuition block encourages 15 credit hour schedules.

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Slide 2

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Pathways to Success – Degrees Roadmaps

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Slide 3

Office of the Provost

Roadmaps – Where Students Start

Slide 4

Office of the Provost

UNM/CNM Agreement

- CNM previously taught introductory studies courses for UNM students on the UNM campus:
  - **ISE 100 – Essay Writing** (Prerequisite for ENGL 101)
  - **ISM 100 – Algebraic Problem Solving** (Prerequisite for Math 101)
  - **ISR 100 – Reading and Critical Thinking**

- Offered on a CR/NC basis only.
- UNM receives the Tuition and Fees.
- CNM receives the Instructional and Instructional

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ISE 100 Enrollments
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ISM 100 Enrollments
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ISR 100 Enrollments
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Efficiency – 120 Credit Hour Degrees
Program Credit Hours By College
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First-year Redesign – Components

- New Student Orientation Redesign.
- Restructured first-year communications.
- Remediation Reform.
- MaLL and English Stretch & Studio.
- Financial Competency Curricula in First-Year Seminars.
- Doubled Number of FLCs.
- Student One-Stop: Student Academic Success Office.
- Center for Teaching Excellence.
- Volunteer Academic Coaching Program.
- LoboAchieve – standard campus-wide advising tool and early alert system.

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Office of the Provost
UNM Math Emporium

- The UNM Math Emporium implementation is called the Math Learning Lab (MaLL).

- The MaLL is located on the first level of the Centennial Science and Engineering Library, in a redesigned collaborative learning space consisting of:
  - Class: 126 seats/workstations.
  - Assessment center: 15 seats

- UNM's Intermediate Algebra course was redesigned to use the MaLL.

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Office of the Provost
UNM Intermediate Algebra

- Intermediate Algebra is the first math course for many UNM students (~2500 students/year).

- Previously, one path to math core:

  Math 120 → Math 121, Math 129 or Stat 145

- Redesign, created two paths to math core:

  Math 101,102 → Math 129 or Stat 145
  Math 101,102,103 → Math 121

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Office of the Provost
College Algebra & UNIV 101

- ALEKS is being used to better place students.

- A number of sections of Math 121 (College Algebra) are now using the MaLL.

- UNIV 101 (Quantitative Reasoning) is using the ALEKS:
  - An 8-week ISM 100 course, followed by a late-starting 8-week Math 101 course.
  - 40 students this semester have already accelerated out of UNIV 101 into Math 101.
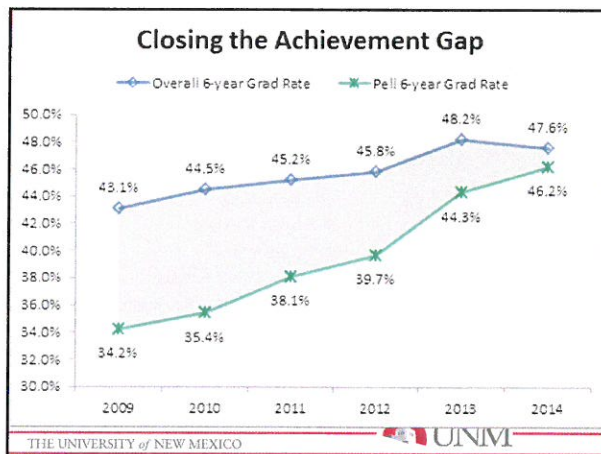
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Slide 1

Outcomes

As compared to Math 120, students who complete intermediate algebra via the MaLL:

- Earn higher grades in intermediate algebra.
- Are far less likely to drop out of intermediate algebra.
- Perform at least as well in Math 129 and Stat 145.
- Perform significantly better in Math 121.

Slide 2

Closing the Achievement Gap

Overall 6-year Grad Rate — Pell 6-year Grad Rate

Overall 6-year Grad Rate: 2009: 43.1%, 2010: 44.5%, 2011: 45.2%, 2012: 45.8%, 2013: 48.2%, 2014: 47.6%

Pell 6-year Grad Rate: 2009: 34.2%, 2010: 35.4%, 2011: 38.1%, 2012: 39.7%, 2013: 44.3%, 2014: 46.2%

Slide 3

Cohort Analytics

The cohort analytics application utilizes Degree Plans and will dramatically improve our student success capabilities:

This application will enable:

- Advisors, chairs, deans and administrators to track the progress of relevant student cohorts relative to academic progress.
- Earlier insights into various metrics the regents, president, provost have asked us to track. E.g., accurately project the number of students who will graduate in four years (tuition free final semester) and to offer them required classes when needed.
- Accountability: Set and track program- and college-level success targets, measure advising efficacy.
- More accurate graduation rate projections (years in advance, rather than months in advance of required reporting).

Slide 4

Cohort Analytics

The application involves the integration of a number of information systems, deployed in the cloud:

- Student Data Mart – student progress data (FERPA applies).
- Degree Requirements and Degree Plans databases.
- Reasoning Engine – reasons over the aforementioned data stores.
- CAS Authentication and Authorization.
- Analytics and Interactive Dashboard Framework.

Slide 1

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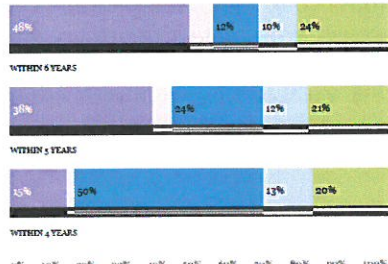### Highly Ranked Programs

- **Nationally high ranking programs (US News last year)**
  - #2 in Rural Medicine
  - #5 in Nursing-Midwifery
  - #5 in Photography
  - #7 in Family Medicine
  - #9 in Primary Care
  - #11 in Law Clinical Training
  - Many other highly ranked Engineering, Science, Humanities, and Arts Programs.
- **Nationally respected faculty**
  - Latest Member of NAS (Professor Crown)
  - Winner of 2011 US best teacher (Professor Shepherd)

UNM

Slide 2

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First-Time Full-Time Students Starting Fall 2008

Number of students: 3,148

roll over each bar for detail data

WITHIN 6 YEARS: 46% | 12% | 10% | 24%

WITHIN 5 YEARS: 36% | 24% | 12% | 21%

WITHIN 4 YEARS: 15% | 50% | 13% | 20%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

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Slide 3

Office of the Provost

Tuition & State Appropriation per Student Credit Hour (SCH) Compared to Cost per SCH

State Appropriation per SCH, $213.52

Tuition $300.52/SCH
Tuition per SCH, $300.52

Actual cost: $574.72

Total Cost per SCH,[VALUE]

Total per SCH   Total Cost per SCH

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Slide 4

Office of the Provost

Return on Investment (Economic)

- Since 2011, we invested $18,000,000 new money in the Academic enterprise.
- According to Workforce solutions, Five years of graduation, around 60% of UNM's graduates are working in NM and making an average of $47,000. there are around 4,600 of them/year.
- This is a return of $216,000,000/year in salaries.
- Our activities have resulted in an increase of 400 degrees awarded per year or $18,000,000/year.
- The benefits (economic and otherwise) continue to accrue to the State, and to the families.

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Bylaws of the University of New Mexico Parent Association

Article I – Formation, Name and Location

The University of New Mexico Board of Regents has established, within a Memorandum of Understanding, the recognition of an affiliated organization. The name of the organization is "The University of New Mexico Parent Association", hereinafter called the "Association". Its principal office shall be located at the University of New Mexico, Albuquerque, New Mexico.

Article II – Statement of Purpose

The Association is an organization whose purpose is to support and promote the interests of parents of students of the University of New Mexico (UNM).

Article III – Membership

The membership will be comprised of all parents and guardians of current and former students of the University of New Mexico.

Ex-officio members – The following persons shall serve as non-voting ex-officio members of the Board of Directors and shall be invited to all regular meetings and functions of the Association's Board of Directors. Ex-officio members are not required to be the parent or legal guardian of a current or former student of the University of New Mexico.

-The Provost or staff designate;
-Vice President of Student Affairs or staff designate;
-Dean of Students or staff designate;
-Vice President of Enrollment Management or staff designate;
-Vice President for Equity and Inclusion or staff designate;
-Two (2) Faculty representatives (whose primary role is in the classroom), appointed by the President of the Faculty Senate;
-A representative appointed by the University President;
-President of ASUNM or designate; and
-President of GPSA or designate.

Article IV – Mission

The mission of the Association is to:

1. Promote student success and academic excellence
2. Engage parents in the university's mission and goals
3. Assist parents to play a supportive role in student education
4. Provide a forum for networking with other UNM parents

Article V – Roles

The roles of the Association are:

1. Support – for parents as they embrace the transition of their children into university life and adulthood.
2. Communication – to help ensure that parents have timely and accurate information about UNM through facilitating two-way communication.
3. Connection – to other UNM parents and to the university's vast array of services.
4. Outreach – to parents who live both locally and afar.
5. Spirit – that provides parents with meaningful, energizing, and enjoyable opportunities to become a vital part of the UNM Community.

Article VI – Board of Directors

Section 6.1 Number of Directors: The Board of Directors of the Association shall consist of at least nine (9) Voting Members. They are comprised of the Officers and Directors at Large.

Section 6.2 Quorum: A simple majority of the Voting Members of the Board of Directors shall constitute a quorum for the transaction of business, except herein otherwise provided. The act of a majority of the members present at a meeting at which a quorum is present shall be the act of the Board.

Section 6.3 Terms of Office: Directors shall serve a term of two (2) years. Directors shall serve staggered terms to balance continuity with new perspective.

Section 6.4 Vacancies: Any vacancy occurring in the Board of Directors may be filled by the affirmative vote of the majority of the Board from candidates presented from the Nominating Committee. A Director elected to fill the vacancy shall be elected for the unexpired term of his/her predecessor in office.

Section 6.5 Removal: The Board may remove any Officer or Director for cause by majority vote of all Directors then in office, at any regular or special meeting of the Board. This action shall be preceded by the following: 1) no less than 5 current Board Members must draft a letter specifying the cause of proposed removal, 2) this letter shall be sent to subject Board Member(s) by registered mail no less than 10 days prior to a regular or special meeting where action will be taken, 3) the agenda must provide for subject Board Member(s) to state their defense.

Article VII – Officers of the Board of Directors

Section 7.1 There shall be five (5) Officers of the Board of Directors: President, President Elect, Treasurer, Secretary and Immediate Past President. Except as provided herein, the roles and qualifications of these Officers shall be determined by the Board in its policies.

Section 7.1a President: The President shall be responsible to call and preside at Board meetings of the Association. The President or their Board Member Designee shall represent the

Association at open meetings of the Board of Regents or any other meeting. The President shall nominate Chairs of the standing committees with the approval of the Association Board. The President shall prepare an annual State of the Association report, to be approved by the Association Board, presented at the Association annual membership business meeting and forwarded to the President of the University. The President shall perform all duties incident of the office of President and have such powers and duties as assigned by the Board.

Section 7.1b President-Elect: In the absence of or at the request of the President, the President Elect shall perform the duties of the President. In the event the President is no longer able to perform the duties of the office of President, the President-Elect shall assume the office for the remainder of the term.

Section 7.1c Treasurer: The Treasurer shall keep and maintain all financial records of the Association consistent with general fiscal policy of the University. The Treasurer shall prepare financial reports for each regularly scheduled Board Meeting.

Section 7.1d Secretary: The Secretary shall be responsible for documenting minutes of all Board meetings and official acts of the Board of Directors.

Section 7.1e Immediate Past President shall serve in an advisory capacity to the Board of Directors and as chair of the Nominating Committee.

Section 7.2 Nomination and Election: The Nomination committee shall present a slate of Officers to the Board of Directors. The Board will vote "For" or "Against" the slated candidate for each position. Officers shall be elected by a simple majority of the Board of Directors and begin their term at the beginning of the fiscal year.

Section 7.3 Terms of Office: The term for each Officer shall be the one-year period commencing with the beginning of the fiscal year. No single individual may be elected for more than two (2) consecutive one-year terms in any single office.

Article VIII- Meetings

Section 8.1 The Board shall meet at least three (3) times per academic year, including a meeting to be held within two months following the start of fall semester. Additional Board meetings can be called as needed by any member of the Board provided they have the agreement of 2 additional Board members and with a minimum of a two (2) week notice. Regular meeting attendance and participation by directors and officers is vital to the Board's mission and is required. Absence for two (2) consecutive meetings will be reviewed by the Officers of the Board and, if deemed appropriate, directors or officers may be removed from office.

Section 8.2 The Association shall conduct a meeting of the general membership annually.

Section 8.3 Notice of meetings: Written notice of the general membership and other regular meetings of

the members shall state the date, time and place of the meetings and may be sent electronically no less than fifteen (15) days before the meeting to each member's provided e-mail address.

Article IX- Elections

Section 9.1 The Nominating Committee of the Association shall consist of five members. The Immediate Past President shall serve as chair and member, the Board of Directors shall appoint one member of the Board other than the Immediate Past President and the Immediate Past President shall appoint three additional members from the general membership. The Chair shall work with the Board of Directors to convene the Nominating Committee not later than the end of the fall term.

Section 9.2 Nominations: Any regular member of the Association may be nominated for election to the Board of Directors. No nomination shall be made without the consent of the nominee.

Section 9.3 Elections: The Nominating Committee will submit a list of nominees to the Board at least thirty days prior to the spring meeting of the Board. The Board will vote "For" or "Against" the slated candidate for each position. Directors shall be elected by a simple majority of the Board of Directors and begin their term at the beginning of the fiscal year.

Article X- Committees

Section 10.1 Establishment and Operation of Committees: The Board of Directors shall establish such committees and task forces as advisable to assist the fulfilling the mission of the Association without compromising the Board's authority and in keeping with the policies established by the Board.

Section 10.2 Standing Committees: Standing committees of the Board of Directors shall be Nominating, Volunteer Development (Recruitment and Membership), Bylaws, Scholarship, Legislative, Communication and Finance Committees. These committees shall operate in accordance with the roles and policies established by the Board. The President shall appoint committee chairs.

Article XI – Fiscal Year

The fiscal year of the Association shall extend from July 1 through June 30.

Article XII – Rules of Order

The rules of order in the current edition of Robert's Rules of Order shall govern the conduct of all meetings of the Association except where they may be in conflict with these Bylaws or other policies adopted by the Board of Directors.

Article XIII – Amendments

Proposed amendments to these established Bylaws may be made at a regular meeting by a two-thirds vote of all Directors then in office, provided that notice of the proposed amendment(s), together with a copy thereof, shall be distributed to each Director at least fifteen (15) days prior to the meeting at which

the amendment is to be considered. Any proposed amendment(s) shall become effective upon approval by the UNM Board of Regents.

Article XIV – Indemnification

The University of New Mexico Parent Association shall indemnify its Directors, Officers, employees and volunteers to the fullest extent permitted by the law of the State of New Mexico.

Article XV – Dissolution

In the event of the dissolution of the Association, for whatever cause, its assets will be distributed to the University of New Mexico Foundation for UNM Student Scholarships.

Article XVI – Miscellaneous

No part of the activities of this organization shall be devoted to participation in any political campaign on behalf of any candidate for public office.

Notwithstanding anything herein, all activities and policies of the Association shall conform to University of New Mexico Policies as approved by the Board of Regents.

The undersigned members of the Executive Committee of the UNM Parent Association certify that these Bylaws of the UNM Parent Association were adopted by the Board of Directors at their regularly held meeting on September 17, 2015.

_____   _____
President UNM Parent Association   Immediate Past President

_____   _____
Secretary UNM Parent Association   Treasurer UNM Parent Association

These Bylaws of the UNM Parent Association were approved at a regularly called meeting of the Board of Regents on the ____ day of _____, 2015.

By: _____   Date_____
The Regents of the University of New Mexico
President of the Board

Revised 9/2015

Bylaws of the University of New Mexico Parent Association

Article I – Formation, Name and Location

The University of New Mexico Board of Regents has established within a Memorandum of Understanding, the recognition of an affiliated organization. The name of the organization is "The University of New Mexico Parent Association", hereinafter called the "Association". Its principal office shall be located at the University of New Mexico, Albuquerque, New Mexico.

Article II – Statement of Purpose

The Association is an organization whose purpose is to support and promote the interests of parents of students of the University of New Mexico (UNM).

Article III – Membership

The membership will be comprised of all parents and family members of current and former students of the University of New Mexico.

Ex-officio members – The following persons shall serve as non-voting ex-officio members of the Board of Directors and shall be invited to all regular meetings and functions of the Association's Board of Directors. Ex-officio members are not required to be the parent or legal guardian of a current or former student of the University of New Mexico.

-The Provost or staff designate;
-Vice President of Student Affairs or staff designate;
-Dean of Students or staff designate;
-Vice President of Enrollment Management or staff designate;
-Vice President for Equity and Inclusion or staff designate;
-Two (2) Faculty representatives (whose primary role is in the classroom), appointed by the President of the Faculty Senate;
-A representative appointed by the University President;
-President of ASUNM or designate; and
-President of GPSA or designate.

1. Regular membership: The membership will be comprised of all parents and guardians of current and former students of the UNM.
2. Honorary membership: Any individual who has rendered outstanding service to UNM or to society as a whole may become an honorary member of the Association for life upon election as such by the Board of Directors. Honorary members shall be entitled to all rights and privileges of regular membership, excepting the right to hold office.

Article IV – Mission

The mission of the Association is to:

1. Promote student success and academic excellence
2. Engage parents in the university's mission and goals
3. Assist parents to play a supportive role in student education
4. Provide a forum for networking with other UNM parents

Article V – Roles

The roles of the Association are:

1. Support – for parents as they embrace the transition of their children into university life and adulthood.
2. Communication – to help ensure that parents have timely and accurate information about UNM through facilitating two-way communication.
3. Connection – to other UNM parents and to the university's vast array of services.
4. Outreach – to parents who live both locally and afar.
5. Spirit – that provides parents with meaningful, energizing, and enjoyable opportunities to become a vital part of the UNM Community.

Article VI – Board of Directors~~Management~~

Section 6.1 A Number ~~– Board~~ of Directors:

~~1.~~ ~~Membership –~~ the Board of Directors shall consist of at least nine (9) ~~and no more than 25 v~~Voting ~~m~~Members. They are comprised of the Officers and Directors at Large. ~~Each elected member of the Board of Directors shall be a parent or legal guardian of a currently enrolled UNM student.~~
~~a.~~ ~~Three persons to serve as officers of the Board to be elected by the Board:~~
~~i.~~ ~~President~~
~~ii.~~ ~~Vice President~~
~~iii.~~ ~~Treasurer~~
~~b.~~ ~~The Chair of each standing committee;~~
~~c.~~ ~~The Chairs of all Association recognized Parent Clubs; and~~
~~d.~~ ~~Ten (10) ex-officio members~~
~~2.~~ ~~Ex-officio members – The following persons shall serve as non-voting ex-officio members of the Board of Directors and shall be invited to all regular meetings and functions of the Association's Board of Directors. Ex officio members are not required to be the parent or legal guardian of a currently enrolled UNM student.~~
~~a.~~ ~~Executive Director of the Parent Association who shall serve as Secretary of the Association, appointed by the Vice President of Student Affairs;~~
~~b.~~ ~~Vice President of Student Affairs or staff designate;~~
~~c.~~ ~~Dean of Students or staff designate;~~
~~d.~~ ~~Vice President of Enrollment Management or staff designate;~~

Section 6.2 B Quorum: A simple majority of the Voting Members of the Board of Directors shall constitute a quorum for the transaction of business, except herein otherwise provided. The act of a majority of the members present at a meeting at which a quorum is present shall be the act of the board. – Executive Committee

The Executive Committee of the Board of Directors shall be established as follows:

Membership-

a.   The President of the Association

b.   The Vice President of the Association

c.   The Treasurer of the Association

d.   The Secretary of the Association (non-voting)

The Executive Committee shall plan and implement the Association's Annual General Membership meeting.

President- The President shall preside at all meetings of the Association and Board of Directors. The President shall perform all duties incident of the office of President and have such powers and duties as assigned by the Board. The President shall represent the Association at open meetings of the Board of Regents. The President shall nominate Chairs of the standing committees with the approval of the Association Board. The President shall prepare an annual State of the Association report, to be approved by the Association Board, presented at the Association annual membership business meeting and forwarded to the President of the University. The Association President will also, after consultation with the Executive Committee, provide input to the Vice President of Student Affairs on the performance of the Executive Director.

Vice President- In the absence of or at the request of the President, the Vice President shall perform the duties of the President.

Treasurer- The Treasurer shall keep and maintain all financial records of the Association consistent with general fiscal policy of the University. The Treasurer shall prepare financial reports for each full Board Meeting. The Treasurer shall provide a report of any audit of the financial records of the Association.

Secretary The Executive Director of the Parent Association shall serve as Secretary of the Association. The Executive Director shall be responsible for maintaining and preserving all non-financial records of the Association.

Section 6.3 C – Terms of Office: Directors shall serve a term of two (2) years. Directors shall serve staggered terms to balance continuity with new perspective.

1. All members of the Board of Directors except for ex-officio members shall serve for a two (2) year term beginning June 1; not to serve as a director for more than two (2) consecutive regular terms. An individual appointed to fill a Board of Director's position left vacant prematurely will be eligible to run for a regular two (2) year term. If a director's student leaves the University that director may continue to serve their full elected term.
2. Vacancy:
    a. Upon resignation, death or physical disability of the President before the expiration of office, the Board may elect an interim president or may appoint the Vice President to serve until the next election cycle.
    b. In the event that a vacancy occurs in the office of the Vice President or Treasurer, the President shall appoint a replacement to complete the unexpired term with the approval of the Board.

Section 6.4 Vacancies: Any vacancy occurring in the Board of Directors may be filled by the affirmative vote of the majority of the Board from candidates presented from the Nominating Committee. A Director elected to fill the vacancy shall be elected for the unexpired term of his/her predecessor in office.

Section 6.5 Removal: The Board may remove any Officer or Director for cause by majority vote of all Directors then in office, at any regular or special meeting of the Board. This action shall be preceded by the following: 1) no less than 5 current Board members must draft a letter specifying the cause of proposed removal, 2) this letter shall be sent to subject Board Member(s) by registered mail no lass than 10 days prior to a regular or special meeting where action will be taken, 3) the agenda must provide for subject Board Member(s) to state their defense.

Section D – Powers

The powers of the Association shall be vested in and exercised by its Board of Directors. Without limiting the generality of the foregoing, the Board of Directors shall have the power to:

1. Amend the Bylaws of the Association by a vote of not less than two-thirds of the voting members of the Board of Directors, subject to review and approval of the Board of Regents;
2. Determine qualifications for membership, subject to review and approval of the Board of Regents;
3. Elect all officers, directors of the Association and prescribe their duties, remove those officers and directors not fulfilling the obligations of their respective offices, and fill any vacancies for the unexpired term of any officer or director;

4. Take other such action as necessary to fulfill the program of the Association.

Section E – Quorum

A simple majority of the voting members of the Board of Directors shall constitute a quorum for the transaction of business, except herein otherwise provided. A quorum, once attained, shall continue until adjournment despite voluntary withdrawal of enough members to constitute less than a quorum. The act of a majority of the persons present at a meeting at which a quorum is present shall be the act of the Board.

Section F- Meetings

1. The Board will meet at least three times per Academic year, including a meeting to be held within two months following the start of Fall semester. Additional Board meetings can be called as needed by the President with a minimum of a two (2) week notice. Regular meeting attendance and participation by directors and officers is vital to the Board's mission and is required. Absence for two (2) consecutive meetings will be reviewed by the Executive Committee and, if deemed appropriate, directors or officers may be removed from office.
2. Minutes of each meeting of the Board of Directors shall be submitted to the Board of Directors within thirty days after such meeting.
3. The Association will conduct a meeting of the general membership annually to coincide with the Association's Fall Family Weekend event.
4. Notice of meetings: Written notice of the general membership and other regular meeting of the members shall state the date, time, and place of the meetings and shall be sent by e-mail no less than fifteen days before the meeting to each member's provided e-mail address. Written notice of special meetings of the members shall be sent by e-mail stating the date, time, place, and purpose of the meeting, not less than three days before the scheduled date of the special meeting.

Article VII – ElectionsOfficers of the Board of Directors

Section 7.1 There shall be five (5) Officers of the Board of Directors: President, President Elect, Treasurer, Secretary and Immediate Past President. Except as provided herein, the roles and qualifications of these Officers shall be determined by the Board in its policies.

Section 7.1a. President: The President shall be responsible to call and preside at Board meetings of the Association. The President or their Board Member Designee shall represent the Association at open meetings of the Board of Regents or any other meeting. The President shall nominate Chairs of the standing committees with the approval of the Association Board. The President shall prepare an annual State of the Association report, to be approved by the Association Board, presented at the Association annual membership business meeting and forwarded to the President of the University. The President shall perform all duties incident of the office of President and have such powers and duties as assigned by the Board.

Section 7.1b President-Elect: In the absence of or at the request of the President, the President-Elect shall perform the duties of the President. In the event the President is no longer able to perform the duties of the office of President, the President-Elect shall assume the office for the remainder of the term.

Section 7.1c Treasurer: The Treasurer shall keep and maintain all financial records of the Association consistent with general fiscal policy of the University. The Treasurer shall prepare financial reports for each regularly scheduled Board meeting.

Section 7.1d Secretary: The Secretary shall be responsible for documenting minutes of all Board meetings and official acts of the Board of Directors.

Section 7.1e Immediate Past President shall serve in an advisory capacity to the Board of Directors and as chair of the Nominating Committee.

Section 7.2 Nomination and Election: The Nomination committee shall present a slate of Officers to the Board of Directors. The Board will vote "For" or "Against" the slated candidate for each position. Officers shall be elected by a simple majority of the Board of Directors and begin their term at the beginning of the fiscal year.

Section 7.3 Terms of Office: The term for each Officer shall be the one-year period commencing with the beginning of the fiscal year. No single individual may be elected for more than two (2) consecutive one-year terms in any single office.

The Board of Directors shall appoint a Nominating Committee consisting of five members: one from the Board, three from the Association membership and the immediate past President. The immediate past President shall serve as chair of the Nominating Committee.

1. Nominations – Any regular member of the Association may be nominated for election to the Board Directors, either by the Nomination Committee or by submission of the nomination to the Association no later than thirty days prior to the spring meeting each year prior to a projected vacancy. No nomination shall be made without the consent of the nominee.
    a) The Nominating Committee shall publish an announcement of the nomination process in the Parent Association Newsletter or in such other manner as it may deem appropriate at or before the fall general membership meeting of each year prior to a projected vacancy.
    b) The Nominating Committee will submit the list of nominees to the Board at least thirty days prior to the spring meeting of the Board. The list shall include the names of all persons nominated by the Nominating Committee as well as the names of all persons otherwise nominated.

<div align="center">Article VIII- ~~Standing Committees~~Meetings</div>

Section 8.1 The Board shall meet at least three (3) times per academic year, including a meeting to be held within two months following the start of the fall semester. Additional Board meetings can be called as needed by any member of the Board provided they have the agreement of 2 additional Board members and with a minimum of a two (2) week notice. Regular meeting attendance and participation by directors and officers is vital to the Board's mission and is required. Absence for two (2) consecutive meetings will be reviewed by the Officers of the Board and, if deemed appropriate, directors or officers may be removed from office.

Section 8.2 The Association shall conduct a meeting of the general membership annually.

Section 8.3 Notice of meetings: Written notice of the general membership and other regular meetings of the members shall state the date, time and place of the meetings and may be sent electronically no less than fifteen (15) days before the meeting to each member's provided e-mail address.

Each standing committee is dedicated to one or more strategic activity of the Parent Association. Leadership of each standing committee shall be vested in a Chair. Individuals standing for the role of Chair agree to take on the accountability for organization and executing all aspects of that committee's major strategic activity. The Chair of each Standing committee must be a parent or guardian of a current enrolled UNM student. Chairs of Standing Committee will be nominated by the President of the Parent Association and approved by the Board of Directors. Each Committee Chair is a voting member of the Board.

- All Board members shall serve and participate on one of more committee of the choice.
- The President is considered a member of the all committees.
- The Board may appoint up to eight standing committees.
- Standing Committees shall meet before each general board meeting.

The standing committees consist of:

1. Volunteer Development (Recruitment & Membership)
   The members of the Volunteer Development committee recruit and organize volunteers to help with activities of all committees.
2. Bylaws and Elections
   The members of the Bylaw and Elections committee organize and facilitate elections, assist in writing and updating by-laws.
3. Fundraising
   The members of the Fundraising committee:
   - Organize and implement fundraising activities such as Parent Day at the Pit.
   - Identify private and corporate donors, working within UNM development office guidelines.
   - Solicit community donors in support of the Fall Family Weekend and other parent events.
4. Scholarships
   The members of the Scholarship committee:
   - Conduct the Parent Association scholarship solicitation, review and awards.
5. Programs & Services
   The members of the Program and Services committee plan, implement and participate in activities such as:
   - Summer Send Offs
   - Fall Family Weekend
   - The annual Parent Programs and Workshops
6. Hallmark Events
   The members of the Hallmark Events committee:
   - Implement the Holiday Ornament production and sales
   - Implement Annual Golf Tournament
   - Implement other Hallmark events as affirmed by the Board of Directors

<center>Article IX- Miscellaneous MattersElections</center>

Section 9.1 The Nominating Committee of the Association shall consist of five members. The Immediate Past President shall serve as chair and member, the Board of Directors shall appoint one member of the Board other than the Immediate past President and the Immediate Past President shall appoint three

additional members from the general membership. The Chair shall work with the Board of Directors to convene the Nominating Committee not later than the end of the fall term.

Section 9.2 Nominations: Any regular member of the Association may be nominated for election to the Board of Directors. No nomination shall be made without the consent of the nominee.

Section 9.3 Elections: The Nominating Committee will submit a list of nominees to the Board at least thirty days prior to the spring meeting of the Board. The Board will vote "For" or "Against" the slated candidate for each position. Directors shall be elected by a simple majority of the Board of Directors and begin their term at the beginning of the fiscal year.

1. ~~Fiscal Year: The fiscal pear of the Association shall extend from July 1 to and including June 30~~
2. ~~Political Activity: No part of the activities of this organization shall be devoted to participation in any political campaign on behalf of any candidate for public office.~~
3. ~~Termination of Dissolution: At the termination of dissolution of this organization, for whatever cause, all of its assets will be distributed to the University of New Mexico Foundation for UNM Student Scholarships.~~

<center>Article X- ~~Amendment to the Bylaws~~Committees</center>

Section 10.1 Establishment and Operation of Committees: The Board of Directors shall establish such committees and task forces as advisable to assist the fulfilling the mission of the Association without compromising the Board's authority and in keeping with the policies established by the Board.

Section 10.2 Standing Committees: Standing committees of the Board of Directors shall be Nominating, Volunteer Development (Recruitment and Membership), Bylaws, Scholarship, Legislative, Communication and Finance Committees. These committees shall operate in accordance with the roles and policies established by the Board. The President shall appoint committee chairs.

<center>Article XI – Fiscal Year</center>

The fiscal year of the Association shall extend from July 1 to June 30.

<center>Article XII – Rules of Order</center>

The rules of order in the current editon of Robert's Rules of Order shall govern the conduct of all meetings of the Association except were they may be in conflict with these Bylaws or other policies adopted by the Board of Directors.

<center>Article Xiii – Amendments</center>

Proposed amendments to these established Bylaws may be made at a regular meeting by a two-thirds vote of all Directors then in office, provided that notice of the porposed amendment(s), together with a copy thereof, shall be distributed to each Director at least fifteen (15) days prior to the meeting at which the amendment is to be considered. Any proposed amendment(s) shall become effective upon approval by the University of New Mexico Board of Regents.

Article XIV - Indemnification

The University of New Mexico Parent Association shall indemnify its Directors, Officers, employees and volunteers to the fullest extent permitted by the law of the State of New Mexico.

Article XV - Dissolution

In the event pf the dissolution of the Association, for whatever cause, its assets will be distributed to the University of New Mexico Foundation for UNM Student Scholarships.

Artilce XVI - Miscellaneous

No part of the activities of this organization shall be devoted to participation in any political campaign on behalf of any candidate for public office.

Notwithstanding anything herein, all activities and policies of the Association shall conform to University of New Mexico policies as approved by the Board of Regents.

~~These Bylaws may be altered, amended, or repealed by an affirmative vote of two-thirds of the members present at any regular or special meeting of the Board of Directors at which quorum is present. A notice shall be sent to the Director at least 15 days prior to the date set for the meeting at which the amendment is to be presented. An approved amendment shall be effective upon approval by the UNM Board of Regents.~~

The undersigned members of the Executive Committee of the UNM Parent Association certify that these Bylaws of the UNM Parent Association were adopted by the Board of Directors at ~~a special~~their regularly held meeting ~~held~~ on ~~this~~ _____.

_____   _____

President UNM Parent Association   ~~Vice President UNM Parent Association~~

_____   _____

~~Treasurer UNM Parent Association~~   ~~Secretary UNM Parent Association~~

These Bylaws of the UNM Parent Association were approved at a regularly called meeting of the Board of Regents on the _____ day of _____, 2015.~~22~~

By: _____   Date_____

The Regents of the University of New Mexico

President of the Board

11.5.15

UNM Board of Regents Academic and Student Affairs and Research Committee

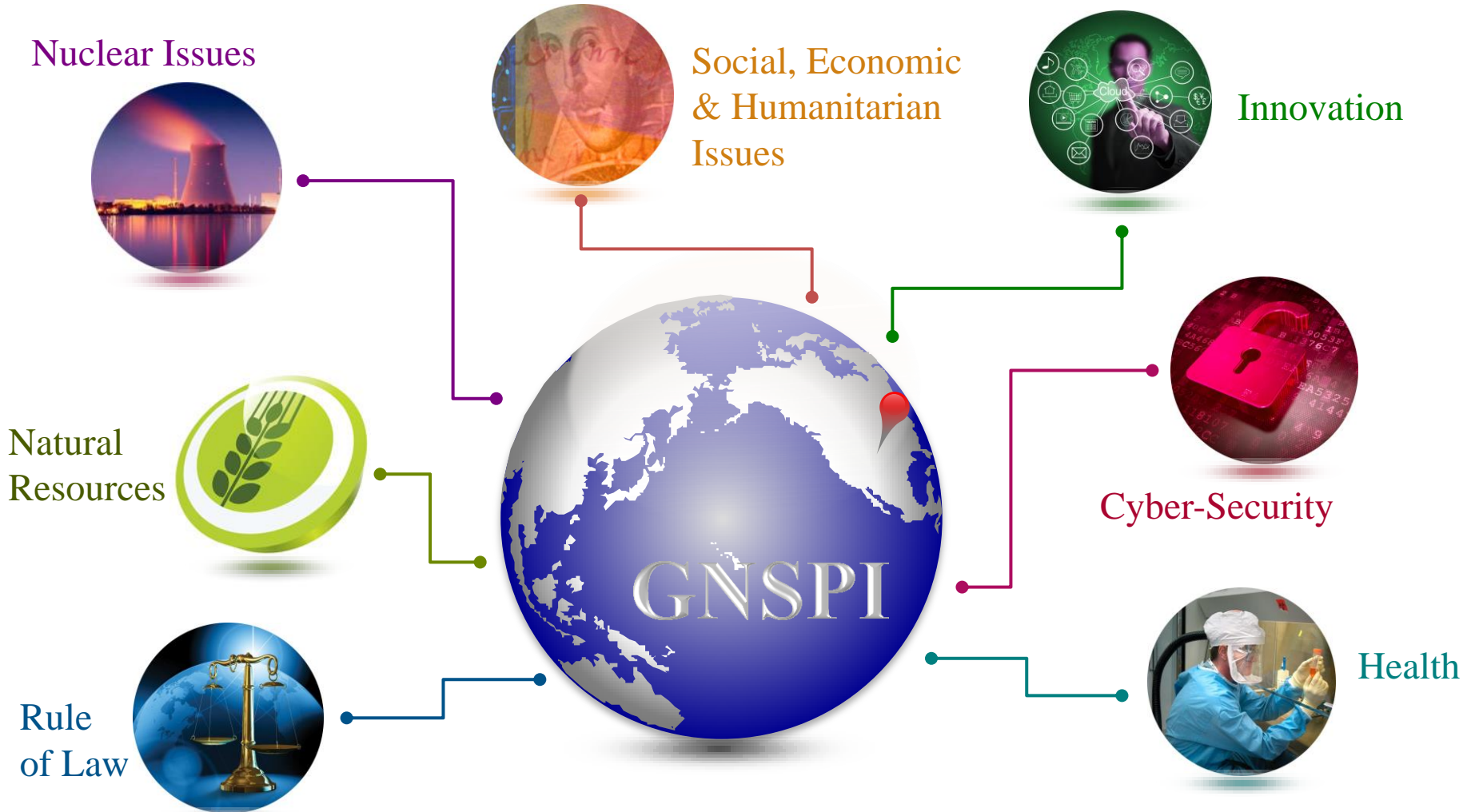UNM | *Global & National Security Policy Institute*

Why have a conversation about global and national security in higher education?

Global and national security, broadly defined, in a rapidly changing world with interconnected economies and technologies is a fundamental concern in the 21st century

- UNM rich programs in many disciplines related to national security

- Collaborative research with DOE national laboratories

- UNM is in a strong position to launch a coordinated educational and research national security program to train our future leaders and enhance our graduates competitive edge in the market place

UNM | *Global & National Security Policy Institute*

Global & National Security, Broadly Defined:
An Interdisciplinary Model

Nuclear Issues

Social, Economic & Humanitarian Issues

Innovation

Natural Resources

Cyber-Security

Rule of Law

Health

GNSPI

UNM | Global & National Security Policy Institute

3

Key Recommendations

Establish a UNM university-wide, sustainable, interdisciplinary Global and National Security Policy Institute (GNSPI)

- Enhance UNM standing across the country in National Security

- Help UNM compete for funding & institutionalize collaboration with the national labs, national security industry, and other academic institutions

- Report to UNM senior leadership

Key Recommendations

Establish an interdisciplinary non-traditional, module-based, MA in Global and National Security

- Long weekend team taught modules over 1-2 years

- Primarily students from the workforce

- Modules include international regimes, environmental security, nuclear policy, law, global, natural resources, health, human and cyber security

Key Recommendations

- Establish an interdisciplinary undergraduate National Security Certificate (Already in Place)

- Establish an interdisciplinary graduate National Security Certificate (Preliminary Stages)

Key Recommendations

Positive Responses from New Mexico Scientific Community

- Sandia & Los Alamos national labs: Possible team teaching and joint hires

- Raytheon, Northrop-Grumman: Excited about hiring more UNM graduates & developing learning opportunities for their workforce

Other Major Universities with National Security Programs:
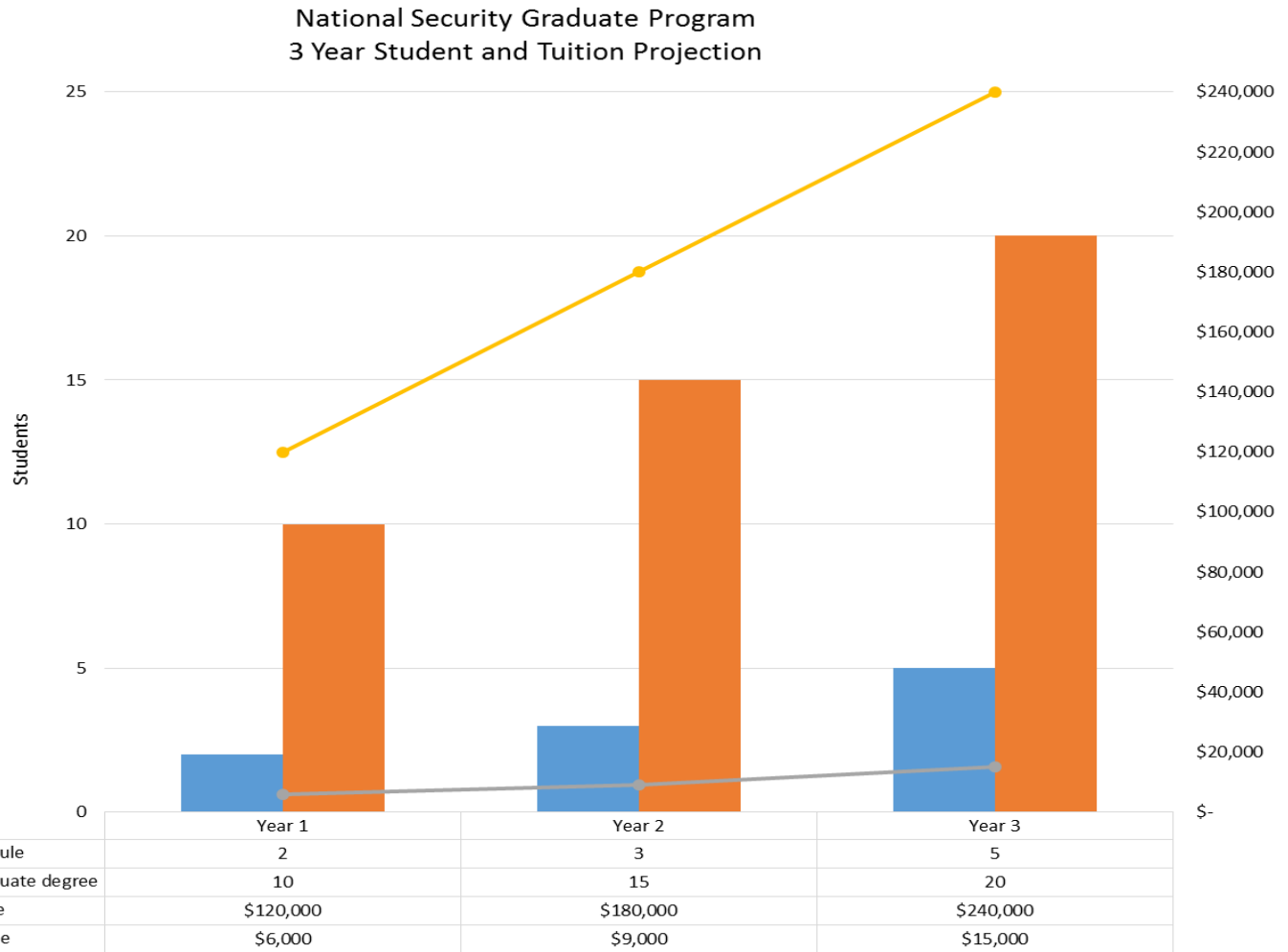
- East Coast: Harvard, MIT, Princeton, Tufts, Johns Hopkins, Georgetown, GW, etc.

- West Coast: Stanford, UCLA, Arizona, Colorado, Denver, etc.

- Others: Chicago, Illinois, Ohio, Georgia, Texas, etc.

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Projected Revenue and Expenses

	Year 1	Year 2	Year 3
Revenue			
Tuition Revenue-			
Per module	$ 6,000	$ 9,000	$ 15,000
Per graduate degree	$ 120,000	$ 180,000	$ 240,000
Other Revenue-			
UNM Subsidy	$ 150,000	$ 100,000	$ 100,000
External Support	$ 50,000	$ 50,000	$ 50,000
Total Revenue	**$ 326,000**	**$ 339,000**	**$ 405,000**
Expenses			
Salary Expense-			
Faculty	$ -	$ -	$ 100,000
Temporary Faculty	$ 48,000	$ 72,000	$ 96,000
Director	$ 50,000	$ 50,000	$ 50,000
Staff Support	$ 40,000	$ 40,000	$ 40,000
Fringe Benefits	$ 27,000	$ 27,000	$ 57,000
Operating Expense-			
Supplies	$ 1,000	$ 1,500	$ 1,500
Equipment	$ 3,000	$ 4,000	$ 5,000
Other (travel, taxes, etc.)	$ 25,000	$ 27,500	$ 30,000
Administrative Overhead	$ 12,600	$ 18,900	$ 25,500
Total Expenses	**$ 206,600**	**$ 240,900**	**$ 405,000**
Net	**$ 119,400**	**$ 98,100**	**$ -**

- Initial investment in GNSPI by UNM, national labs and national security business community

- Proposed tuition rates are comparable to UNM professional graduate programs and competitive to other National Security programs

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8

National Security Graduate Program
3 Year Student and Tuition Projection

	Year 1	Year 2	Year 3
Students per module	2	3	5
Students per graduate degree	10	15	20
Tuition per degree	$120,000	$180,000	$240,000
Tuition per module	$6,000	$9,000	$15,000

National Security Report

**Prepared for the
UNM Board of Regents
Academic and Student Affairs and Research Committee**

**by Dr. Emile Nakhleh
Coordinator, UNM National Security Programs**

11.5.15

National Security Report

Submitted to
Dr. Chaouki Abdallah
Provost, University of New Mexico

Submitted by
Dr. Emile Nakhleh
Coordinator, UNM National Security Programs

June 30, 2015

Key Recommendations

1. Establish a UNM university-wide, sustainable, interdisciplinary Global and National Security Policy Institute (GNSPI), with its own brand, to be housed in the office of the UNM Provost.

2. Establish an interdisciplinary Undergraduate National Security Certificate, along the lines of the existing National Security and Strategic Analysis (NSSA) Certificate, approved by the Faculty and Regents in 2014 and currently housed in University College.

3. Establish an interdisciplinary Graduate National Security Certificate, to be housed in the Graduate Studies Office.

4. Establish an interdisciplinary, non-traditional (long weekend modules) MA in National Security, to be housed in the Graduate Studies Office.

Background

Following a series of discussions with the UNM Provost Chaouki Abdallah and Associate Provost Greg Heileman in the fall of 2014 about the rich, albeit discrete, national security programs offered at UNM, the Provost appointed me to explore UNM programs, courses, research, and projects, which could relate to national security, broadly defined, and recommend whether they should be placed under a broad umbrella with its own brand. The appointment was prompted by the fact that UNM offers a wealth of programs and courses related to national security, including international relations, foreign policy, public policy, the humanities, social sciences, engineering, computer science, cyber security, management, technology, leadership, human geography, health sciences, law, conflict and conflict resolution, and political economy.

Given the strength and breadth of the UNM existing programs in this area, the diversity of our students, and the collaborative research with the national labs—particularly Sandia and Los Alamos—UNM, as the flagship institution of higher education in New Mexico, is in a strong position to launch coordinated educational and research programs that would be integral to our nation's physical, human, and cyber security. Such programs would promote the development of fundamental theories, advanced analysis, and novel methods and technologies, as well as provide our students and non-traditional students from the workforce (the national labs and national security corporations, including, among others, Raytheon, Northrop Grumman, and Applied Research Associates) with the knowledge, skills, and opportunities necessary to successfully compete for careers in national security. Furthermore, the diversity of the UNM student body will bring to the national security mix language and cultural expertise and understanding, which would help our future leaders better interact with leaders from other cultures and societies.

After I was appointed in November to coordinate these programs, I held a series of individual meetings with UNM academic leaders, ranging from President Bob Frank to deans, department chairs, professors, and program directors. As a Senior Adviser to the National Security Studies Program, together with Jim Tegnelia, I held several meetings with the NSSP director, Frank Gilfeather, and members of the NSSP advisory committee. I also met with Regent Brad Hosmer and with the Chancellor of the UNM School of Medicine, Paul Roth. By early January 2015, I had met with every dean and department chair. A vast majority of the UNM academic leaders I met were enthused about the initiative, and several said, "How come you waited so long?" Once "national security" was explained as a much wider area of research and teaching than intelligence, many began to view the initiative as win-win for the students, the faculty, and the university as a whole.

UNM National Security Committee

Following the myriad of meetings, which constituted the first stage of the initiative, I recommended to the Provost to appoint a high-level committee that would represent the entire university—School of Medicine, School of Law, Anderson School of Management, School of Engineering, and College of Arts & Sciences. The UNM National Security Committee, which the Provost appointed in January 2015, consisted of one Dean, one Associate Dean, six department chairs, and five professors. I chaired the committee and moderated its meetings. Half way in the semester, Bob Miller, Chair of the Biology Department, was replaced by Professor Dave Hanson (Appendix I) The committee met bi-weekly on Fridays from late January until late June. Toward the end, we also met with five representatives from Sandia National Laboratories, Raytheon, Northrop Grumman Corporation, and Applied Research Associates (ARA).

The Committee was given the following tasks:

- Identify the national security-related courses and programs in different departments and colleges that students could take in addition to their discipline majors as a certificate or a minor. Once a student takes some of these courses, on the undergraduate or graduate level and fulfill their Certificate or minor requirements, a Certificate or a minor in national security would be so indicated on the student's degree. The national security program should be interdisciplinary.

- Recommend a name and a brand of the umbrella entity and how to identify it. What is important is that such an entity should be university-wide—Arts & Sciences, Engineering, Anderson, Law, and Health Services—and should not be identified with any one department, college, or discipline.

- Recommend where such an entity should be housed. Again, the housing of

the national security entity should signal to the UNM community that it is a university entity that transcends existing stovepipes.

- Explore the possibility of establishing a non-traditional Masters degree in National Security, which would be offered to students from the New Mexico labs, national security-oriented corporations, and State and Federal Government offices in the area. Regular UNM students could also enroll in this degree program. The UNM Executive MBA degree might offer a useful model for the proposed Masters in national security.

Guest Reactions

As the committee meetings were winding down, we invited senior representatives from Sandia National Labs and the national security community in Albuquerque to hear their views on the UNM national security initiative. In response to our presentation about the establishment of a national security program at UNM (Institute, certificates, minors, and a non-traditional masters degree), the representatives from Sandia, Raytheon, Northrop Grumman, and ARA generally endorsed the UNM approach and made several important points.

- They strongly supported the UNM national security initiative and the establishment of a National Security Institute at UNM and would be happy to serve on its Advisory Board.

- They thought UNM with its rich programs across different disciplines and colleges and its proximity to the national labs could over time become nationally known as a university with a recognized national security program.

- They were excited at the prospect of hiring more UNM students trained in this program and of sending more of their employees to study at UNM national security programs, especially at the masters degree level.

- They supported the establishment of a non-traditional masters degree in national security, broadly defined, that would consist primarily of a series of long weekend concentrated modules in different fields. They look to these modules to provide their employees with a broader context in policy, law, the humanities, and social sciences, which would enhance their employees' understanding of the cultures and leadership decision-making in countries they interact with. They thought a series of graduate interdisciplinary modules over one-two years, offered across long weekends, with commensurate number of graduate credit hours, should satisfy the requirements of a professional masters degree in national security. They liked the idea of having some of their professionals team-teach some of these modules with UNM faculty.

- They emphasized the need for a sustained institutional commitment to the national security initiative—administratively and financially. A "branded" entity, such as MIT Seminar XX1, would differentiate UNM from other schools by what it plans to offer in national security, broadly defined. By emphasizing nuclear technology, policy, treaties, and laws, for example, and highlighting its proximity to the national labs (Sandia, Los Alamos, and the Air Force Research Lab), the UNM national security programs would become more nationally known and more attractive to students from out of state.

- They recommended that the program be friendly to professional workers and aim at helping these professionals understand government and international policies and cultures related to defense businesses. They believed that continuing education, intellectual stimulation, and broadening thinking aspects are key to working professionals at the labs and other defense industries.

- In a recent email, a senior representative from Northrop Grumman made several key points about the UNM national security initiative: a) "The potential for UNM is very exciting and will ultimately move the University into a new level of expertise that meets Industry's needs;" b) Although "many institutions provide basic technical and engineering skills, few give graduating students insights into the geopolitical, economical and international perspectives, and how they relate to the products that we develop;" c) "Northrop Grumman believes that the technical solution to a problem is just a part of the way forward on providing our customers high quality products or services;" and d) "Success completion of your goals will certainly better prepare UNM students to allow them to quickly integrate themselves into our various complex programs."

Establishment of a Global and National Security Policy Institute at UNM

Rationale

UNM offers a wealth of programs and courses related to national security, including in health sciences, law, technology management, engineering, biology, computer science, foreign policy, public policy, the humanities, social sciences, leadership, human geography, anthropology, and political economy. Given the strength and breadth of these programs, the diversity of UNM students, and the collaborative research with DOE national labs, UNM is in a strong position to launch a coordinated educational and research initiative that could contribute to the nation's physical, human, and cyber security.

- The GNSPI will provide UNM traditional and non-traditional students with the knowledge, skills, and opportunities necessary to successfully compete

for careers in national security, broadly defined. Certificates, minors, and degrees in national security would enhance our students' competitive edge in seeking employment in government and in the private sector. The envisioned national security architecture would also make UNM more known nationally and more competitive for national and international research, teaching, and training grants.

- In response to comments from the national security community, the name and brand of the envisioned Institute should reflect an organic connection between domestic and global national security policy, issues and concerns. This should give the Institute flexibility of course content and modes of delivery and would not limit the study of security only to nation-states but to non-state actors, non-governmental organizations, communities, different cultures, As the United States interacts with other nations, and as American educational, scientific, and national security corporations reach out to the rest of the world, a global national security institute at UNM would be the right vehicle to bring UNM into the national security field while taking into consideration global normative, social, economic, technological, and cultural and political change.

Scope and Mission

To succeed, the Global and National Security Policy Institute must have its own "brand" to identify it as a national security entity within the State of New Mexico and nationally and at the same time differentiate it from other institutions. The UNM Institute's proximity to DOE national labs with their emphasis on nuclear matters—both technical and policy aspects—should help it forge a deep and recurring relationship with the national security community, which would help in the training and employment of its graduates and in attracting non-traditional student and faculty from the local community and nationally. The GNSPI must also have a sustained, institutional commitment by UNM and its partners to national security in research, teaching, education, and training. This initiative is a win-win for UNM students, faculty, and the institution as a whole; it will certainly help nurture a deeper, long-term partnership between UNM, the labs, and the national security business community. Geographic proximity and commonality of purpose underscore the natural foundation of this collaboration. Although UNM colleges, schools, and departments will continue to be responsible for the quality and integrity of the courses and programs, which would fulfill the requirements of the national security undergraduate and graduate concentrations, minors, and degrees, the GNSPI will coordinate and streamline these programs and connect them to potential research and training funding sources. As things presently stand, students outside specific departments that offer national security related programs are not readily aware of them and do not benefit sufficiently from them.

- The GNSPI's "value added" lies in its ability to bring together all the national security-related courses and programs in a coherent whole under a national security brand, which would be of value to the entire institution. Working with appropriate departments, the GNSPI will make sure these courses and programs are interdisciplinary in content and approach, combining the sciences, the legal and business environment, the social sciences, and the humanities, especially, languages, cultural values, and historical narratives. As such, the GNSPI is uniquely situated to oversee the interdisciplinary nature of course offerings and to streamline them for the benefit of the UNM community.

- This collaboration would allow UNM faculty and lab scientists and technology experts to team-teach graduate modules in specific fields, including, for example, non-proliferation policy, international agreements, social and cultural policies, technology transfer and management, and law.

- The DNI-funded National Security Studies Program (NSSP) would be housed in the GNSPI and would work jointly with the new Institute to make the current and envisioned national security certificate and minor available to students. In conjunction with other departments and schools, the GNSPI will work directly and cooperatively with other national security-related degree programs—for example, cyber security, information assurance, law, health, and food and water resources.

- The GNSPI will work jointly with other UNM entities and leaders in leading the UNM deepening relationship, including at the managerial level, with the national labs, the Department of energy, and other federal and state government departments focusing on national security.

- The GNSPI will be the formal entity within the University that projects UNM to the State of New Mexico and to the rest of the country as an institution of higher learning with national security programs and expertise whose graduates are qualified to compete for national security positions in government, the labs, and the private sector.

Operational Principles

The UNM national security program would be grounded in partnering across the UNM campuses, schools, and departments beyond the constraints of stove piping and turf, and in employing an interdisciplinary approach and collaborative research methodologies. Creative complementarities, not debilitating competitiveness, would guide the UNM approach to national security, which would benefit current students and attract new students—both traditional students as well as students from the workforce.

- The diversity of the UNM student body should bring to the national security mix, in addition to scientific expertise and advanced research and analytics, language and cultural understanding, which would help our future leaders better interact with leaders from other cultures and societies.

- The GNSPI would foster an environment for experts from UNM, the national labs, and the private sector to participate as students and teachers in uniquely designed learning graduate modules, which would expand the horizons and contexts in which our scientists and future leaders operate.

- This collaborative environment, in addition, would encourage students and researchers to analyze the rising and ever changing national security threats and examine national workforce needs in the areas of security policy, legal environment, health sciences, cyber security and intelligence collections and analysis. It would advance the development of fundamental theories, advanced analysis, and new methods and technologies.

Administration

A senior director with faculty status and an administrative assistant would manage the GNSPI. It would also have a high-level Advisory Board consisting of senior representatives from UNM, the national labs, and the national security corporations in Albuquerque and the wider New Mexico community. The Advisory Board would be assisted by a "Coordinating Committee" of faculty and outside representatives to help design graduate certificates and modules for a non-traditional masters degree in national security. The leadership role of the "Founding Director" will be critical to the success (or failure) of the Institute. The budget would cover the expenses of the director and the administrative assistant.

- It is imperative that at least initially the GNSPI be housed somewhere on the "Seventh Floor," and report to the Office of the Provost, perhaps under the direction of one of the Provost's key associates. Ultimately the Provost might decide to move the Institute to a new UNM-wide yet to be created. The central point here is that the Institute should have the imprimatur of the President, the Provost, and Chancellor of the Medical School and Health Sciences, and that it should be viewed as a UNM entity above stove pipes and departments, and not part of any specific department, school, or college.

As an expression of this envisioned long-term partnership, the University, the labs, and the national security business community would be called on to collectively provide the necessary resources (seed money) to establish the GNSPI and its certificate and degree programs. Once the University makes a budgetary commitment to the Institute, it is hoped the outside national security community would match it. Although most of the courses are already being provided at the university, the necessary expenses for the first three years (director, assistant,

instructional support, advertisement, community meetings, grant-seeking administrative support, etc.) would total approximately $400,000 by year 3. Student tuition should generate enough income to defray most of these costs. For example, six students have already earned the national security undergraduate certificate in the first year. We expect the number to rise to 10-15 per year. Similar or greater numbers would be expected for a graduate certificate with revenues more than covering expected added costs.

Once established, the envisioned non-traditional masters degree in national security should attract a good number. The table below illustrates the projected income and expenses during the first three years of the program.

	Year 1	Year 2	Year 3
Revenue			
Tuition Revenue-			
Per module	$ 6,000	$ 9,000	$ 15,000
Per graduate degree	$ 120,000	$ 180,000	$ 240,000
Other Revenue-			
UNM Subsidy	$ 150,000	$ 100,000	$ 100,000
External Support	$ 50,000	$ 50,000	$ 50,000
Total Revenue	**$ 326,000**	**$ 339,000**	**$ 405,000**
Expenses			
Salary Expense-			
Faculty	$ -	$ -	$ 100,000
Temporary Faculty	$ 48,000	$ 72,000	$ 96,000
Director	$ 50,000	$ 50,000	$ 50,000
Staff Support	$ 40,000	$ 40,000	$ 40,000
Fringe Benefits	$ 27,000	$ 27,000	$ 57,000
Operating Expense-			
Supplies	$ 1,000	$ 1,500	$ 1,500
Equipment	$ 3,000	$ 4,000	$ 5,000
Other (travel, taxes, etc.)	$ 25,000	$ 27,500	$ 30,000
Administrative Overhead	$ 12,600	$ 18,900	$ 25,500
Total Expenses	**$ 206,600**	**$ 240,900**	**$ 405,000**
Net	**$ 119,400**	**$ 98,100**	**$ -**

Once the GNSPI is established and becomes self-sustained, it would work closely with UNM schools and departments, and with the labs and the national security community, to apply for research and educational grants and to have joint faculty hires in national security. This could lead down the road to hiring full-time faculty in national security in different fields of specialization, in cooperation with departments and colleges across campus.

- The Advisory Board and the Coordinating Committee would assist the director and administrative assistant in working closely with UNM colleges, schools, and departments to manage the undergraduate and graduate certificates and minors and other national security programs as well as develop and supervise a masters degree in national security, broadly defined. The GNSPI will also work with the New Mexico national security business community, the State of New Mexico, and the federal government to secure research and educational grants.

Undergraduate National Security Certificate

The interdisciplinary Undergraduate National Security Certificate (UNSC) is expected to deepen students' expertise and competitive edge in seeking employment upon graduation. It may be earned by successful completion of a prescribed program of study as described in Appendix II below for students also earning an undergraduate degree at UNM. The certificate, which is currently housed in University College, is designed to provide specific knowledge and competencies to complement and extend the student's undergraduate degree and to provide exposure to a range of topics in the interdisciplinary field of national security and strategic analysis. Those competencies include knowledge of international policy and global cultural contexts, proficiency with analytical tools, and the ability to apply both in practice. The capstone course involves a demonstration of competency by the student through a coherent and critical analysis activity and academic paper based on their individual academic path and range of classes. Until the GNSPI is established, the current NSSA certificate and the proposed UNSC will continue to be supervised by Professor Frank Gilfeather and offered out of University College (National Security Studies Program, 3019 Mesa Vista Hall; e-mail: gilfeath@unm.edu). If a minor in national security is adopted, it too will remain in University College until the GNSPI is established.

Graduate National Security Certificate

During the first year of its existence, the GNSPI's Advisory Board and Coordinating Committee are expected to finalize the work on a graduate certificate in national security. Such a certificate will initially be housed in the office of Graduate Studies.

Two types of Certificate programs could be developed. The first, and easiest to accomplish, would be an ***add-on program*** designed to give graduate students in established disciplines additional training that would prepare them for work in national security related positions. Coursework would cover topics such as international regimes and systems governing finance, banking, trade, technology, and security cooperation; international conflict and conflict resolution; civil wars and terrorism; comparative politics, law, and history; and foreign languages and cultures. The goal would be to provide students in technical fields, as well as those

in the humanities and social sciences, with a solid understanding of the contexts in which national security threats and countermeasures develop, as well as techniques for analysis of risk and policy effectiveness.

A second type of certificate program would be a ***stand alone certificate*** aimed at enhancing the skill sets of established professionals in technical, defense related fields, who need a broader understanding of international and comparative political factors, policy-making processes, and social-scientific analytical techniques that relate to the need for, and management and impact of, technologies. This would serve a constituency similar to that of a potential masters degree program, but with lesser requirements in terms of hours of coursework. To serve the intended audience, this certificate would need to be delivered to the extent possible through evening and weekend offerings, perhaps supplemented to a limited degree by online offerings. Program design would stress interdisciplinary approaches.

Masters Degree in National Security

Representatives from national laboratories and defense industries in New Mexico have expressed strong interest in a masters degree that would prepare personnel who already hold advanced degrees in engineering and physical sciences fields to have a stronger understanding of the broader strategic, political/institutional, and cultural contexts in which defense, security, and technology policies are made, implemented, and have effects. Because many of the scientists and engineers who need this training are employed full-time, there is particular interest in a delivery format that is minimally disruptive of regular work obligations, perhaps following the model of the Anderson School of Management's Executive MBA program. That format concentrates classroom time over a limited number of very intensive long weekends, with home assignments in between, and is therefore more feasible for students holding regular professional positions. The committee is mindful of the time required for the review and approval process for new degrees at UNM. We note with interest the existence of an "International Security and Foreign Relations" substantive specialty within the Master of Public Policy program that already is in the final stages of state-level review, and to which the MPP program hopes to begin admitting students for August 2016. Discussions will need to be held with MPP leadership to determine whether an "executive" format—or at least steps in that direction--could be developed, and if so what the resource and program design requirements would be.

Pending the implementation of a specialized or adapted graduate degree program in national security analysis, the stand-alone certificate program described above could be an initial step, providing a more limited package of coursework related to international and comparative politics, international law, technology and policy, and comparative international history and culture.

Both the certificate and degree programs could be well served by development of interdisciplinary modules that draw on multiple perspectives to address such issues as international systemic risks, impact and management of technological change, and the interface of institutions and cultures.

Once established, the Institute's Advisory Board and Coordinating Committee would develop the national security graduate certificate and the masters degree program in cooperation with UNM schools and department and with the national security labs and industry.

The non-traditional masters degree in national security will incorporate a series of modules delivered in one-two years across long weekends (Wednesday-Saturday or Thursday-Sunday). Following are a few examples of such modules:

International Regimes of Innovation: Offered by the Finance, International, Technology, and Entrepreneurship (FITE) Department, this module would focus on international competitiveness as a basis for economic and, therefore, national security. Competitiveness has elements of technology development and innovation, infrastructure in all of its forms, financial capabilities to develop and execute such activities and many other interrelated factors. The module will cover:
a) International regimes of innovation and resultant economic activities;
b) technology, R&D and other contributions to innovation in civilian and military products and services; c) international agreements and cooperation and their effect on competitive activities; d) financial systems and their effect on economic and national security and on competitive activities; and e) other related areas.

International Regimes: Somewhat overlaps with the above module, but without the emphasis on innovation, this module would focus on international interactions that take place under the frameworks of rules, institutions, regulatory frameworks, and accepted practices that are referred to in the aggregate as international regimes. Regimes combine elements of international law, international organization, norms, and administrative and bureaucratic systems. Often multiple regimes have bearing on a given set of issues and interactions. This module would require faculty contributions from law, political science, management, economics, and possibly other departments.

Environmental Security: Only recently have US agencies begun to take seriously the importance of environmental factors, including climate change, in shaping national security. This module would combine contributions from Earth and Planetary Sciences, Political Science, Economics, and Geography and Environmental Studies to assess the scope of challenges to human and economic security, as well as risks of conflict, associated with environmental stresses. Topics would include the extent or projected climate, physical, and ecological changes; economics of climate change impacts, adaptation, and mitigation; scope of population displacements; infrastructural requirements of climate adaptation; and empirical analysis of the impact of environment on civil and international conflict.

Nuclear Policy and How the Legislative and Executive Branches Function: Most graduates of UNM and most New Mexico employees have a scant knowledge of how Washington works. Some courses on how the executive and the legislative branches function would be good for both undergraduates and graduates as well as employees of the high tech community might be interested. This module should help explain nuclear policy for technical people who are employed in the labs and the national security community.

The Rule of Law: This module would explore the domestic and international legal constraints on nations and non-state actors during times of war or crises. Topics would include: constitutional law (such as the authorities assigned to the branches of the federal government over foreign affairs), criminal law (such as the essential elements of criminal offenses, including terrorism), national security law (such as the authority of the Executive and the role of the judiciary in times of war), international law (such as the war crimes and genocide), international human rights (such as protections for refugees and minority groups), and domestic preparedness (such as the roles of federal and state agencies in the event of a natural or man-made disaster).

Global Health and Human Security: This module combines the diverse fields of public health and preventive medicine, environmental studies and international law in exploring the challenges of population health in globalized world settings. Topics include bioterrorism, pandemic preparedness, epidemiological surveillance of emerging infectious diseases, non-communicable and neglected tropical diseases, social determinants of health, structural violence and the critical roles of governments, business and non-profit organizations in providing transformative leadership.

Emergency Preparedness for Mid-Level Managers: This module provides an overview of the dynamic world of natural and human generated disasters. Course material covers the various phases of the disaster cycle, ranging from the pre-event phrase through the post-impact emergency response and longer-term recovery periods. Topics include the phases of emergency management; governance and organizational structure, disaster theory, case study of historical disasters, humanitarian assistance and the roles of military, social and economic dimensions of disasters, vulnerability, risk and protective factors, mitigation and environmentalism.

Thinking Ahead for Emergency Response: This module leads learners through the process of analyzing and assessing data frameworks and their usefulness in the immediate aftermath of natural or human generated disasters. Course material addresses data complexity, data accessibility, integration of environmental and infrastructural data at different scales, and the variability of data needs in dynamic and time-sensitive contexts. As a case study project, learners focus on a hypothetical

disaster scenario and assess the existing data frameworks that are currently available to emergency response teams within a given spatial extent. After completing this analysis, learners additionally conceptualize a framework for data collection, coordination and sharing that would improve response times and/or decision-making.

Homeland Security and Global Problems: This module provides learners with a broad, up-to-date and interdisciplinary overview of health and human security in the 21st century. Course materials cover making connections to world issues of inequality, work and trade, gender and family, access and success in education, crime, war and states of terror, democracy and human rights, ethnicity and religion, ecology, sustainability and urbanization, poverty and population health, technology and energy.

Fundamentals of Cybersecurity: This module covers the fundamental concepts associated with assuring the security of networked computing systems. Key security building blocks including authentication, authorization, encryption and public key infrastructure will be introduced. It also considers the differences between threats and vulnerabilities, and provides a categorization of cybersecurity attacks. Key industry and governmental security standards will be presented, and fundamental principles associated with securing a system will be articulated. Finally, the module will consider how emerging technologies impact the design and implementation of security system architectures.

Data Science: This course provides an overview of the key concepts associated with data science. Students will learn how to analyze data in order to gain insights and support data-informed decisionmaking. First, a background on data modeling and ingestion will be provided. This will include data "munging", that is, the cleaning, sampling, and manipulation of raw data in order to prepare it for analyses. The module will also discuss data structures and database systems that support data analytics over large data sets and statistical analyses, regression, classification and prediction as applied to big data. Finally, the module will consider effective means for presenting analytics results, including discussion of data visualization, dashboards and visual analytics architectures.

Understanding Resource Conflict: This module focuses on key concepts in natural resource management, highlighting historical and contemporary case studies of resource-based conflict. Topics include: paradigms for understanding the human-environment relationship, scales of environmental governance, the special complexity of water as a fluid resource, resource dependence, the "resource curse," intersections of political systems with resource control, and predicted scenarios for various natural resource futures including climate change.

Appendix I: Committee Members

1	Steve Burd	Professor	Anderson
2	Jim Cheek	Professor	Health Sciences
3	Christos Christodoulou	Associate Dean	Engineering
4	Michalis Faloutsos	Chair	Computer Science
5	Kate Krause	Dean	Honors
6	Maria Lane	Chair	Geography & Env Studies
7	Alex Lubin	Chair	American Studies
8	Rob Miller/Dave Hanson	Chair, Professor	Biology, Biology
9	Walter Putnam	Chair	Modern Languages
10	Dawinder (Dave) Sidhu	Professor	Law
11	Bill Stanley	Chair	Political Science
12	Jim Tegnelia	Senior Adviser	NSSP
13	Emile Nakhleh	Coordinator and Moderator	

Appendix II: Undergraduate National Security and Strategic Analysis Certificate Requirements
(Courses from UNM Catalog)

Undergraduate national security certificates may be earned by successful completion of a prescribed program of study as described below for students also earning an undergraduate degree at UNM.

Application to the Program

Students interested in the NSSA or UNSC Undergraduate National Security Certificate program must complete the application found at nssp.unm.edu and be accepted prior to enrolling in the gateway course, Introduction to National Security and Strategic Analysis (LAIS 309). Coursework earned prior to admission to the Certificate program will count toward Certificate requirements, if the coursework meets other Certificate requirements as described below. A new requirement: Philosophy 156: Reasoning and Critical Thinking is a prerequisite for entry into the program.

A student's program of studies must satisfy the following requirements and be pre-approved by the NSSP Faculty Committee one year prior to graduation. Students must complete one of the tracks described below or a pre-approved course of study.

An **approval form** is available on line and must be submitted to the NSSP office Mesa

Vista 3019 before the end of the semester in which the student is enrolled in Introduction to National Security and Strategic Analysis. Address questions to the NSSP Program Director, Professor Frank Gilfeather.

To earn the Undergraduate National Security Certificate, the student must:

1. Complete or have completed a baccalaureate degree at UNM.

2. Take a 3-credit course, Introduction to National Security and Strategic Analysis, or a pre-approved alternate course.

3. Take 9 credit hours of classes in groups A and B below with at least 3 credits from each group.
   - Group A - Political/Social Analysis
   - Group B - Quantitative Analysis
   - See additional discussion below in Courses in Group A and B for each approved track.

4. Complete a field analysis or research analysis project related to national security, strategic analysis or intelligence analysis as at least a 2-credit independent study course. Complete either a or b below as part of this requirement.
   a. An analysis paper based on work in an approved internship or
   b. An analysis paper based on an independent and faculty directed research project.

5. Take at least 3 semesters of a foreign language or demonstrate equivalent competency in a foreign language, or three additional courses in Group B.

Shared Credit Hours between Undergraduate Certificates and Degrees

As long as courses taken for the NSSA/UNSC certificate fall within the prescribed time limits for an undergraduate degree, the University allows shared course work between undergraduate certificates and a baccalaureate degree. If the student completes the certificate in conjunction with an undergraduate degree program, the student may use courses from the certificate course work toward an undergraduate degree as long as the courses are approved as part of the degree and as part of the Certificate.

Courses in Group A and B
Courses are not offered each year and some courses are topics or seminar courses. For topics and seminar courses, the National Security Faculty Committee requires approval of a specific topic. Other courses can substitute for these courses upon approval of the student's program by the committee. To encourage an interdisciplinary approach, at most 3 credits per department are allowed in each of

Group A and B. Only one course can be taken at the 100-200 level. Students need to be aware that many courses require one or more prerequisites, which may or may not count towards the Certificate, thus effectively increasing the credit hours needed to earn the Certificate.

TRACKS

Health Security (infectious disease, human bioterrorism)
- Intro, capstone and languages courses (see 2, 4, and 5 above)
- Group A: All courses below followed with HS
- Group B: All courses below followed with HS

Resource Security (water, climate)
- Intro, capstone and languages courses (see 2, 4, and 5 above)
- Group A: All courses below followed with RS
- Group B: All courses below followed with RS

Energy and Food Security (crop security, sustainability, agricultural terrorism)
- Intro, capstone and languages courses (see 2, 4, and 5 above)
- Group A: All courses below followed with EFS
- Group B: All courses below followed with EFS

Other tracks should be included in policy/international relations; humanities; technology transfer and management

Group A:
AMST American Studies
    309 T: Globalization and Social Movements (HS, RS, EFS)
        American foreign Policy and the Middle East (course number and title?)
BIOL Biology
    405 Ecosystem Dynamics (HS, RS, EFS)
    419 T: Global Change Biology (HS, RS, EFS)
    419 Topics in Interdisciplinary Science (requires approval per topic) (HS, RS, EFS)
SUST Sustainability
134 Creating a Sustainable Future: Intro to Environment, Social, and Econ Health
434 Synthesis of Sustainability Perspectives and Innovations (RS, EFS)
CE Civil Engineering
    491 ST: Sustainability Engineering (RS, EFS)
EPS Earth and Planetary Science
    436 Climate Dynamics (HS, RS, EFS)
GEOG Geography
    352 Global Climate Change (HS, RS, EFS) (Also offered as EPS 352)
    461/561 Environmental Management (HS, RS, EFS)

-- 464/564 Food and Natural Resources (HS, RS, EFS)
  466/566 The City as Human Environment (Also offered as EPS 352) (HS, EFS)
ECON Economics
  421 Latin American Economics (HS, RS, EFS)
  423 Topics in Latin American Development (HS, RS, EFS)
  424 International Trade (RS, EFS)
  429 International Finance (RS, EFS)
ANTH Anthropology
  339 Human Rights (HS, RS, EFS)
  340 T: Conservation, Environment & Indigenous People (HS, RS, EFS)
AFST Africana Studies
  397 T: Global Health Policy (HS, EFS)
  397 T: Philosophy of Islamic Law   (HS, RS, EFS)
HIST History
  428 Women, War and Revolution   (HS, RS, EFS)
  473 Indigenous Peoples of Latin America (HS, RS, EFS)
  350 Modern U.S. Military History, 1900 to Present (HS)
CJ Communication and Journalism
  314 Intercultural Communications (HS, RS, EFS)
  317 International Cultural Conflict and Community Building (HS, RS, EFS)
  334 Political Communication (HS, RS, EFS)
SOC Sociology
  461 Social Dynamic of Global Change (HS, RS, EFS)
SOC 221: Documenting Globalization and Human Rights [Global Issues]
SOC 306: Peace and Conflict
SOC 307: Nonviolent Alternatives
SOC 331: Social Movements
MGMT Business/Management
  328 International Management (RS, EFS)
  420 Management in Latin America (RS, EFS)
  421 International Entrepreneurship (RS, EFS)
  422 Mexican Economy Markets (RS, EFS)
  474 International Financial Mgmt
ME Mechanical Engineering
  217 Energy, Environment and Society (RS, EFS)
POLS Political Science
  240 International Politics (HS, RS, EFS)
  340 Topics in International Politics. (HS, RS, EFS)
  341 International Conflict and Cooperation. (HS, RS, EFS)
  342 American Foreign Policy (HS, RS, EFS)
  346 International Political Economy (HS, RS, EFS)
  355 Central American Politics (HS, RS, EFS)
  356 Political Development in Latin America (HS, RS, EFS)
  357 Russian and Eurasian Government and Politics (HS, RS, EFS)
  329 Introduction to African Politics (HS, RS, EFS)
  340 Topics: International Organizations (HS, RS, EFS)

340 Topics: Insurgency (HS, RS, EFS)

442 International Peacekeeping and Conflict Resolution (HS, RS, EFS)

443 International Politics of Climate Change (HS, RS, EFS)

496 Seminar: International Relations (HS, RS, EFS)

NVSC Naval ROTC

331 Evolution of Warfare

MLSL Army ROTC

402 Leadership in a Complex World (HS, RS, EFS)

AFAS Air Force ROTC

400 National Security Affairs/Preparation for Active Duty

Computer Science 151 Computer Programming for Non-Majors

Religious Studies 457: Seminar in Islamic Tradition

Group B:

ECON Economics

408 Economic Forecasting Methods: A Time Series Approach

ANTH Anthropology

372 Analytic Methods in Anthropology (HS, RS, EFS)

BIOL Biology

351   General Microbiology (HS, EFS)

351L General Microbiology Laboratory (HS, EFS)

410 Genome and Computational Biology (HS, EFS)

419 T: Bioenergy (RS, EFS)

419 T: Modeling Infectious Disease (HS, EFS)

419 Topics in Interdisciplinary Science (requires approval per topic) (HS, RS, EFS)

444 Genomes and Genomic Analysis (HS, EFS)

445 Biology of Toxins (HS, EFS)

446L Laboratory Methods in Molecular Biology (HS, RS, EFS)

450 General Virology (HS, EFS)

456 Immunology (HS, EFS)

460 Microbial Physiology (HS, RS, EFS)

471 Plant Physiological Ecology (RS, EFS)

478 Plant Physiology (RS, EFS)

482L Parasitology (HS, EFS)

490 Biology of Infectious Organisms (HS, EFS)

495 Limnology (RS, EFS)

496L Limnology Laboratory (RS, EFS)

GEOG Geography

381L Introduction to Geographic Information Systems (HS, RS, EFS)

483L/583L Remote Sensing Fundamentals. (HS, RS, EFS)

484L/584L Applications of Remote Sensing)

485L Internet Mapping (HS, RS, EFS)

486L Applications of GIS (HS, RS, EFS)

487L Spatial Analysis and Modeling. (HS, RS, EFS)

488L GIS Concepts and Techniques (HS, RS, EFS)
STAT Statistics
   All (probably too general, HS, RS, EFS likely for many)
CS Computer Science
CS 293. Social and Ethical Issues in Computing.
CS 444/544. Introduction to Cybersecurity. (3)
CS 595 Introduction to Data Mining (3)
CS 595 Computer Network Modeling
CS 423. Introduction to Complex Adaptive Systems. (3)
CS 429 / 529. Introduction to Machine Learning. (3)
MGMT Business/Management
   329 Data Management (HS, RS, EFS)
 CE Civil Engineering
   352 Computer Applications in Civil Engineering (RS, EFS)
   354 Probability and Statistics in Civil Engineering (RS, EFS)
   491/492 Special Topics in Civil Engineering (RS, EFS)
   493 Special Topics – Honors (RS, EFS)
 CHNE Chemical and Nuclear Engineering
   451/452 Senior Seminar
   491/492 Undergraduate Problems
   499 Selected Topics
 ECE Electrical and Computer Engineering
   491 Undergraduate Problems
   493 Honors Seminar
   495 Special Topics
 ME Mechanical Engineering
   461/462 Special Topics
   463 Undergraduate Honors Thesis

Appendix III: 3 Year Student Enrollments and Tuition Projections

National Security Graduate Program
3 Year Student and Tuition Projection
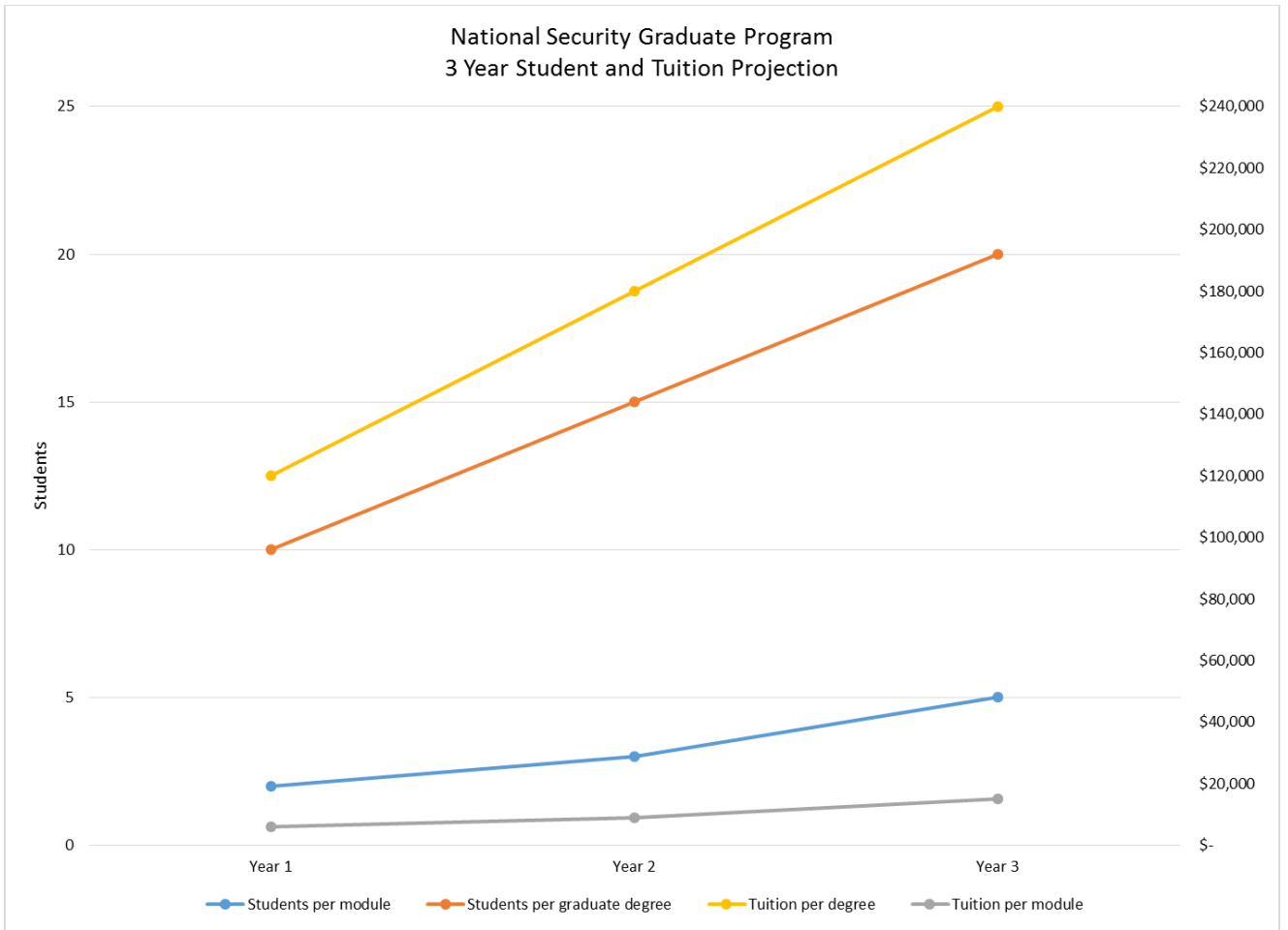
Student Projections	Year 1	Year 2	Year 3
Students per module	2	3	5
Students per graduate degree	10	15	20

Tuition Projection	Year 1	Year 2	Year 3
Tuition per module	$ 6,000	$ 9,000	$ 15,000
Tuition per degree	$ 120,000	$ 180,000	$ 240,000

Tuition Rates	Year 1	Year 2	Year 3
Rate per module	$ 3,000	$ 3,000	$ 3,000
Rate per graduate degree	$ 18,000	$ 18,000	$ 18,000

Update on Academic Plan – Faculty Strength
Chaouki Abdallah, Provost & EVP for Academic Affairs

Presentation to be added

El Niño 2015

Provost's Wednesday Communiqué – September 30, 2015

On Bullets, Storytelling and Teaching: A faculty colleague sent me this article from the Guardian that highlighted the limitations of using PowerPoint and, more specifically, the limitations of using bullet-points to deliver lectures.

➤ Big El Niño happening
  ➤ Already observed, expected to persist
➤ Effects on Southwestern climate
  ➤ Positive anomalies in snowpack, precipitation, streamflow
➤ Sampling and forecast uncertainties
➤ Assessment of ski ticket purchase decision

Winter Seasonal Outlook
[10/15/2015; updated monthly by NOAA]
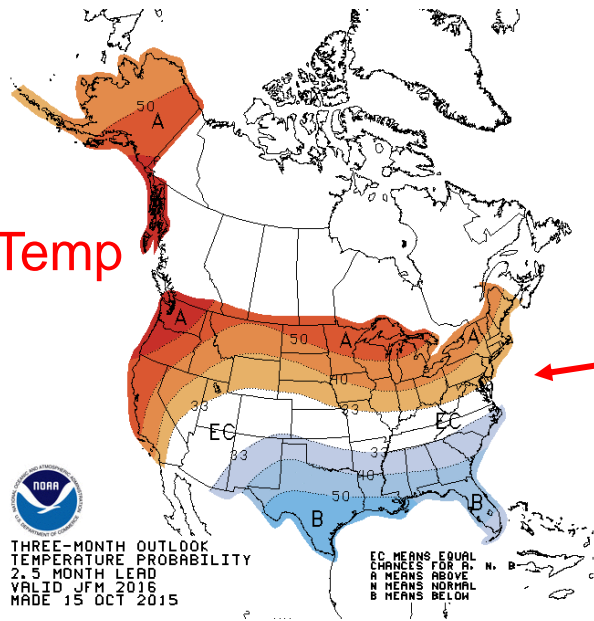
colored regions show where the odds are enhanced for **Above / Below / Near** the 30-year average for a particular three-month season (here **January-March 2016**)

Temp

Precip
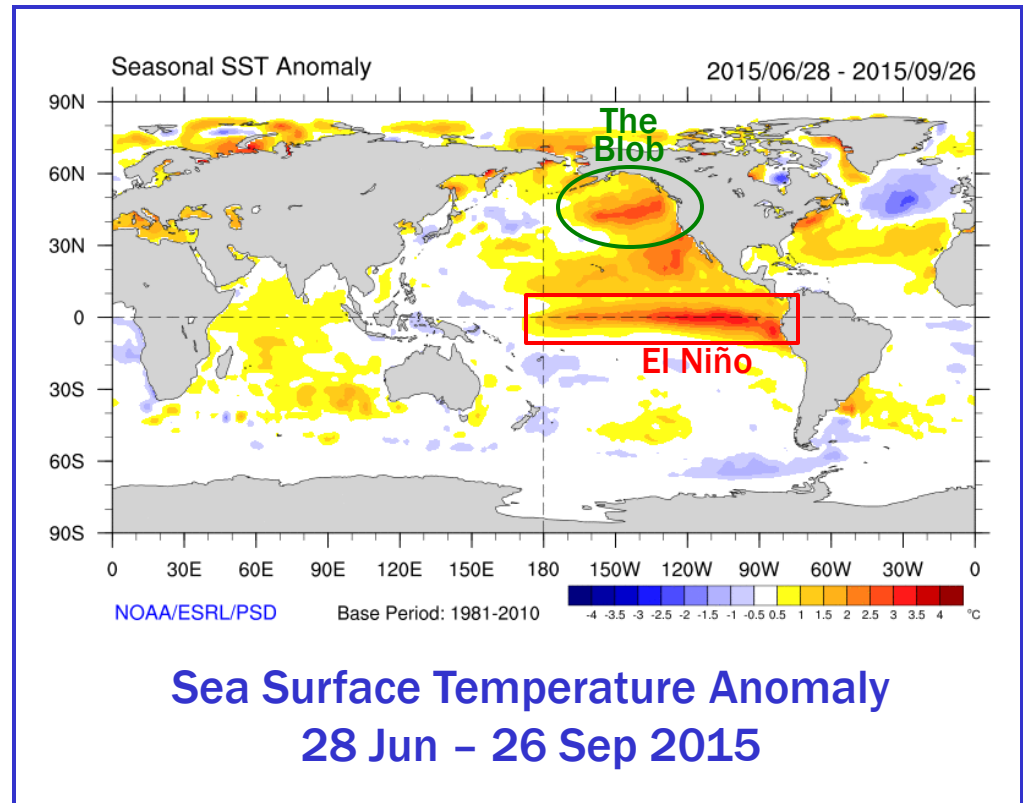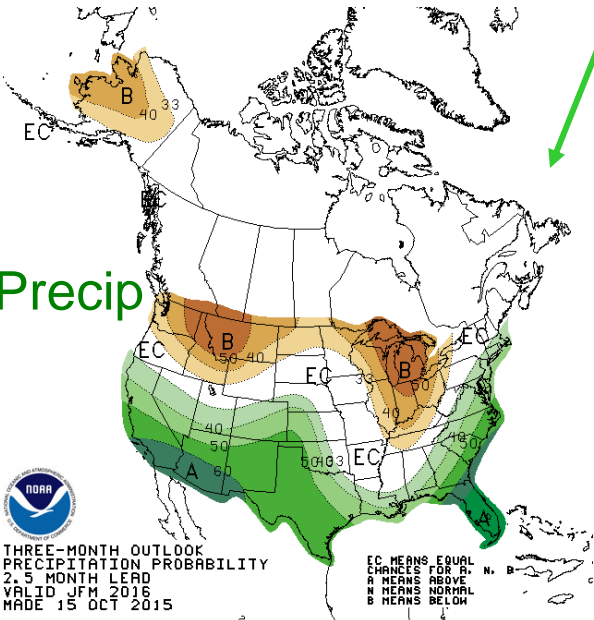
Sea Surface Temperature Anomaly
28 Jun – 26 Sep 2015

El Niño, Jet Streams and Streamflow in NM Rivers

FIG. 1. Mean total spring flow in the Gila River and the Pecos River during La Niña, medial, and strong El Niño years. Bars indicate two standard errors.
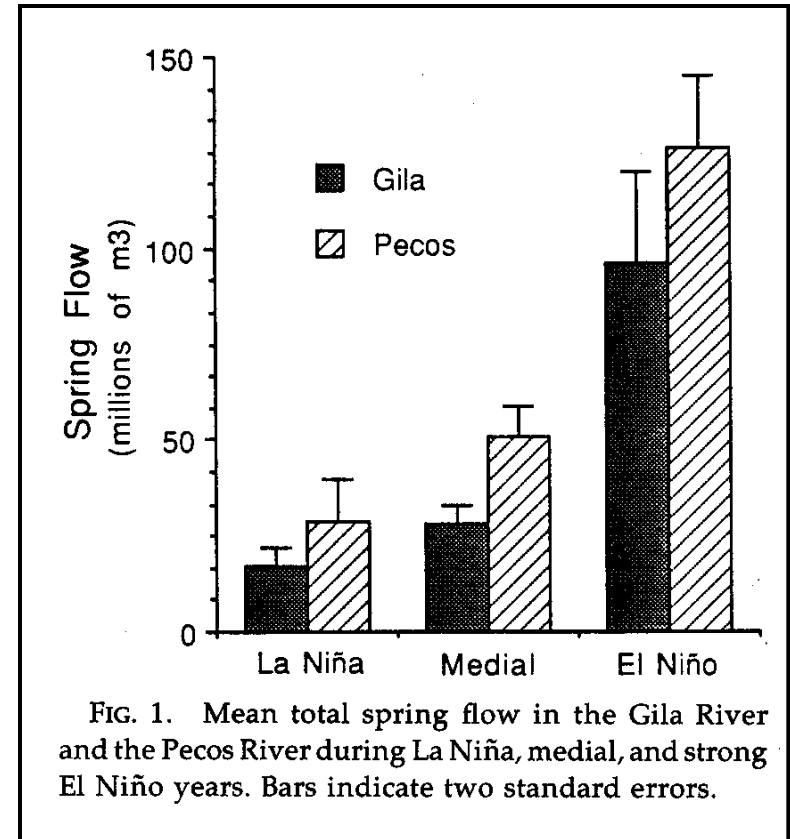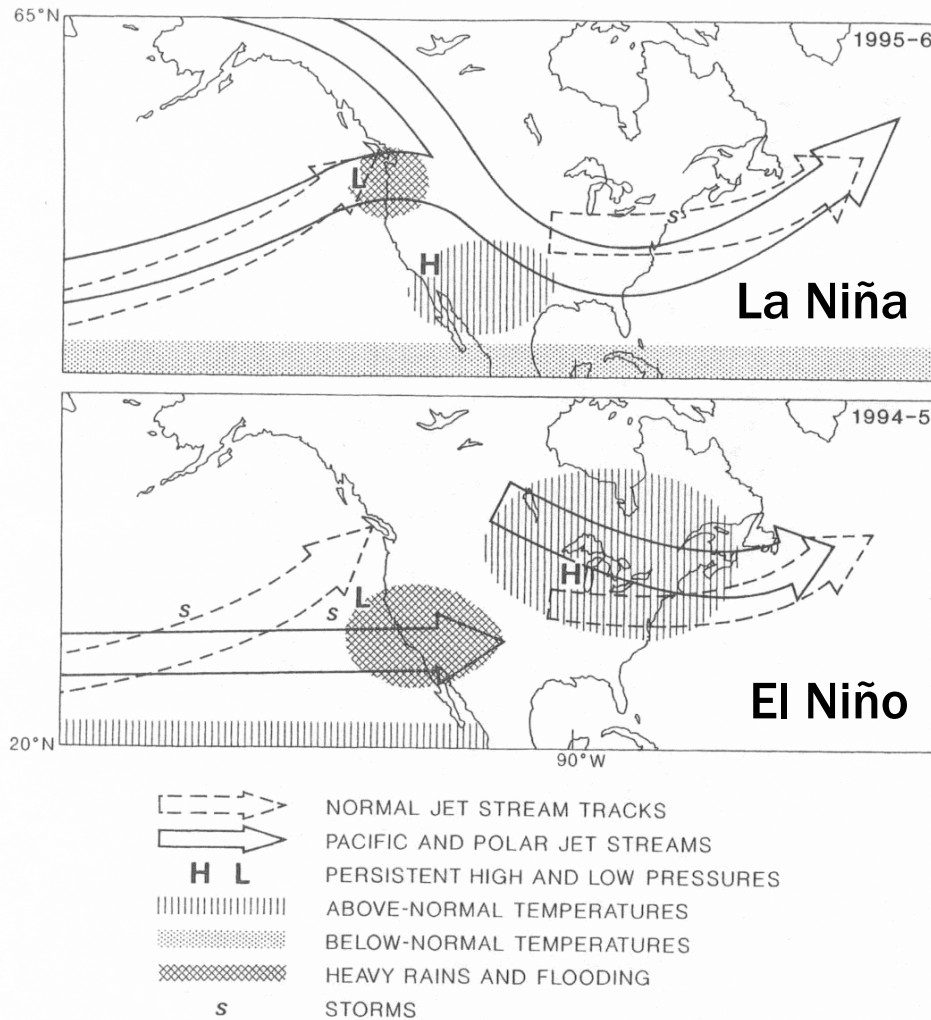
Molles & Dahm (1990)

Barry & Chorley Figure 10.13

Pacific Decadal Oscillation

"warm" phase; AK salmon ↑ PNW salmon ↓

"cold" phase; AK salmon ↓ PNW salmon ↑

Pacific Decadal Oscillation (PDO)
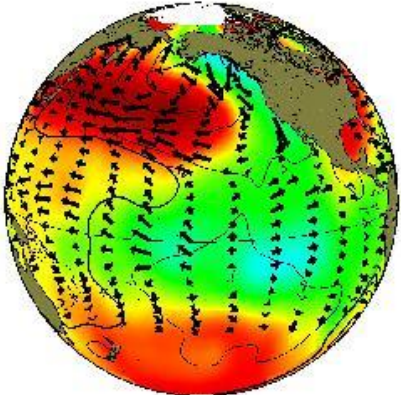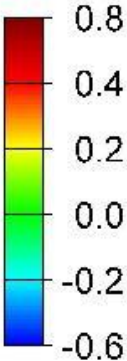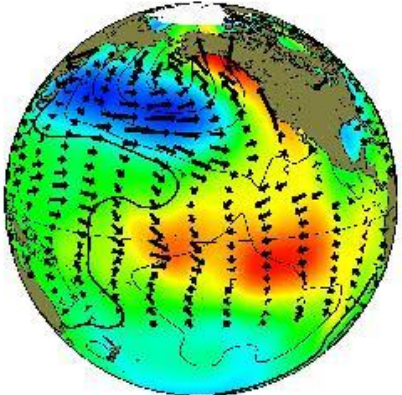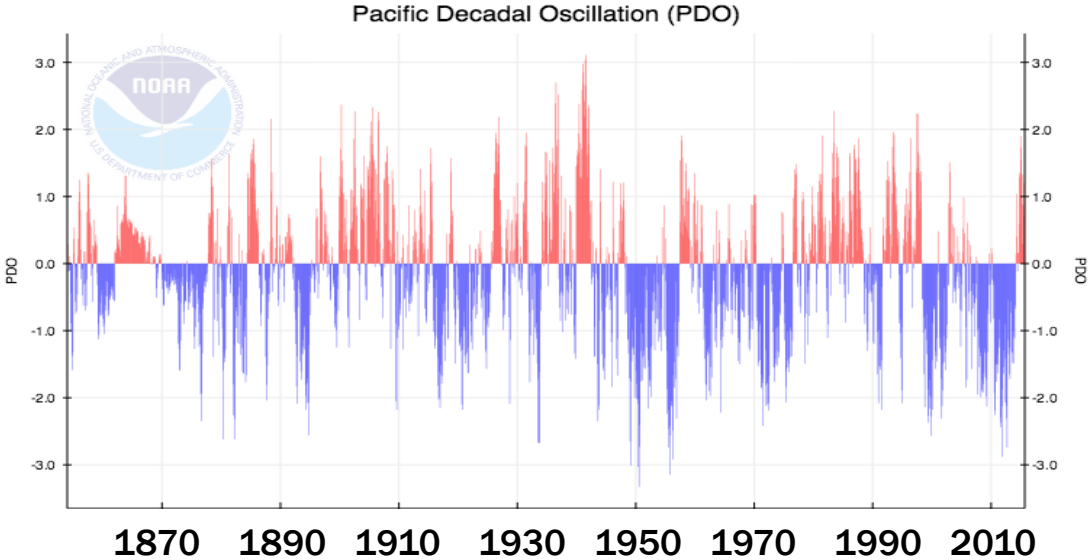
Mantua et al. (1997)

Decadal modulation of ENSO predictability by PDO

Pre-1977 (PDO negative)

Post-1977 (PDO positive)
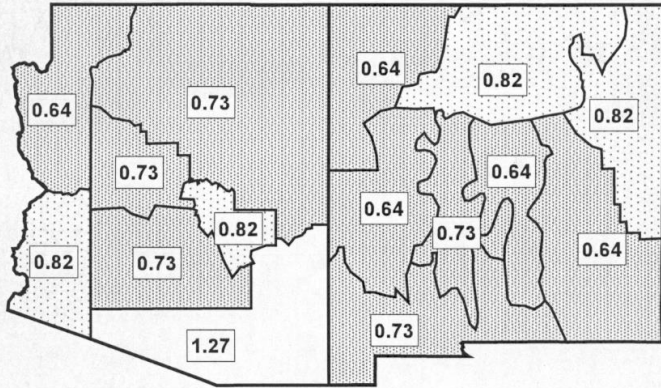
Dry winter following JAS La Niña (good predictability pre-77; *none post-77*)
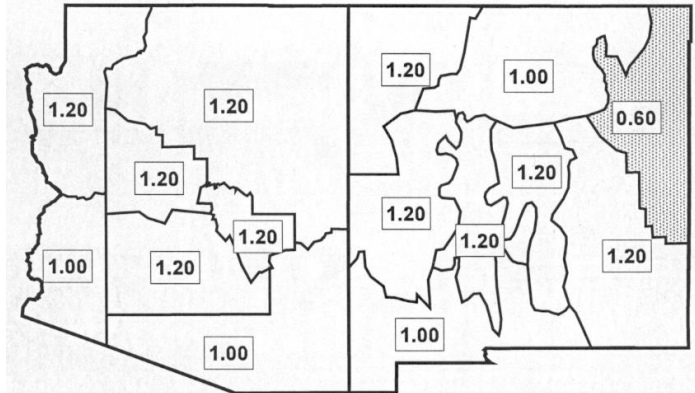
Wet winter following JAS El Niño (good predictability post-77; *none pre-77*)

Gutzler, Kann and Thornbrugh* (2002)
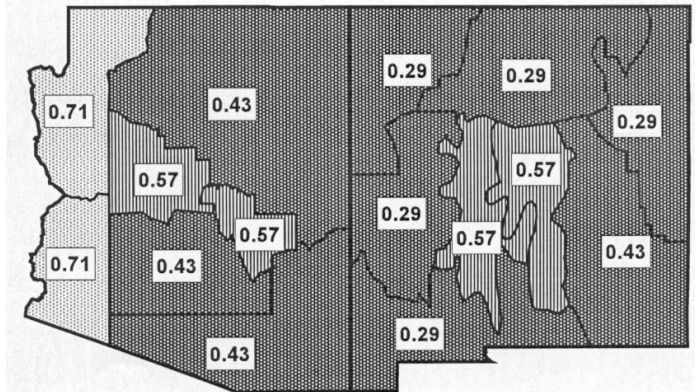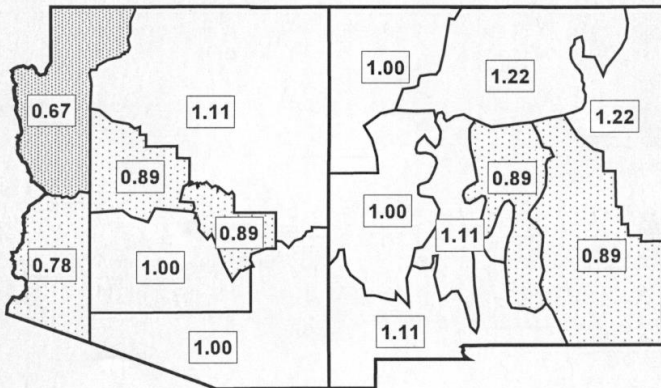
New Mexico Precipitation: 1941

New Mexico Statewide Precipitation
Annual (Calendar Year)
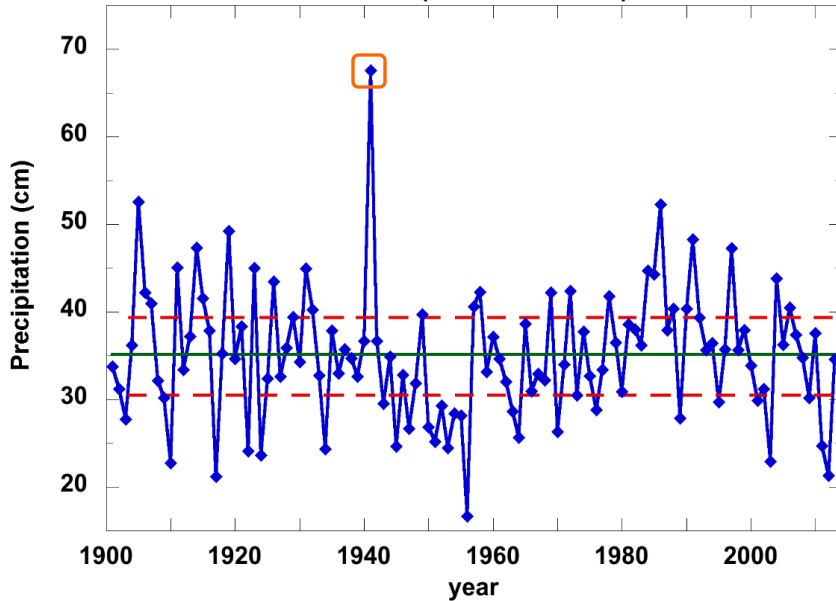
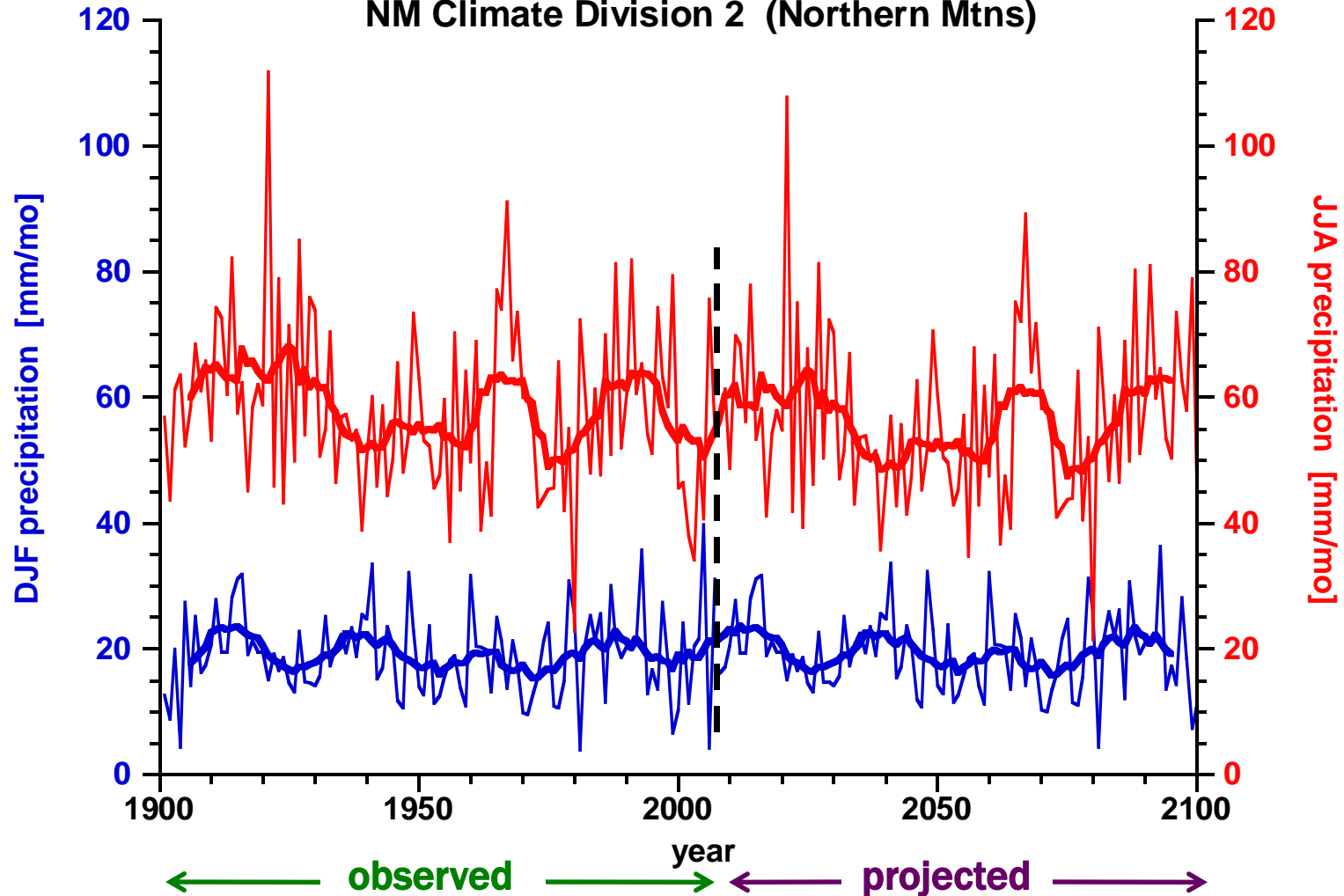### 1901-2000 Statewide Monthly Precipitation Statistics
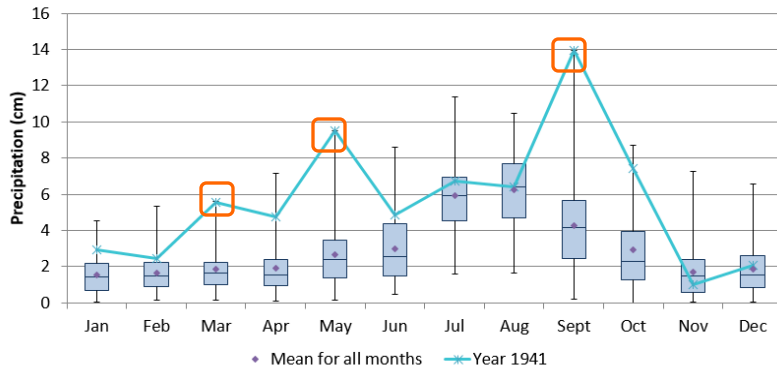
1941 ocean temp anomaly
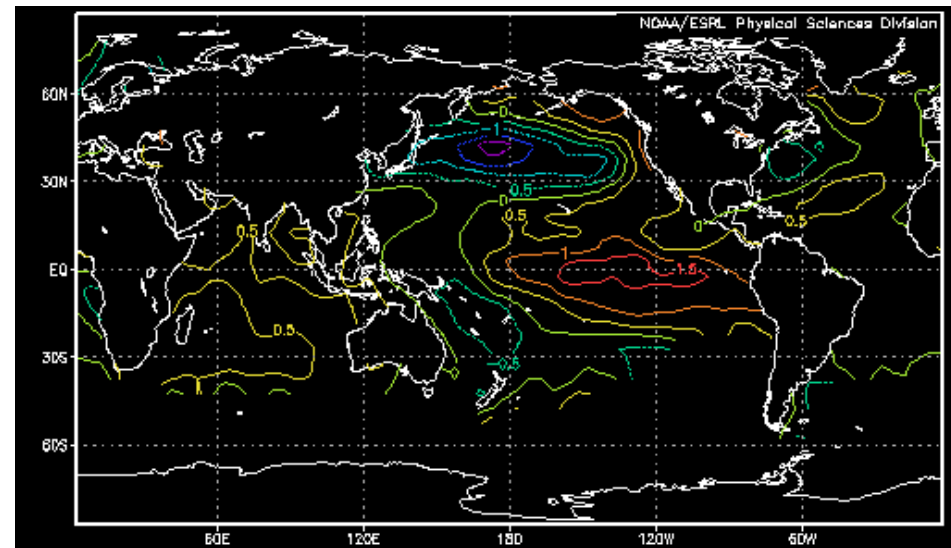
Big El Niño, no Blob
record positive PDO

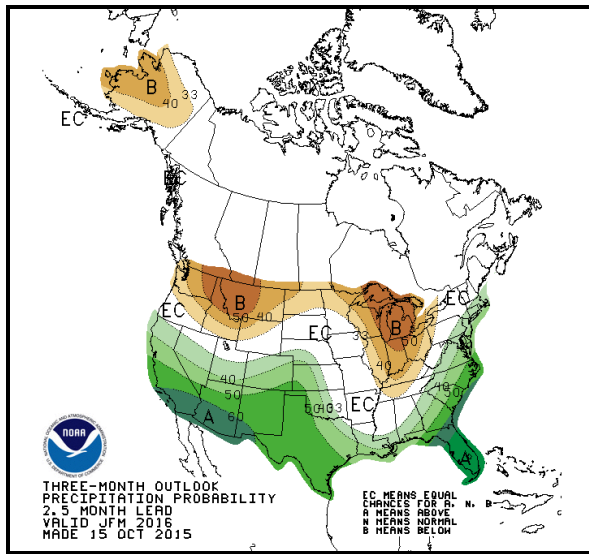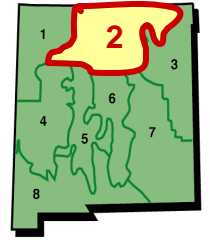**Gutzler, Sullivan* and Kann (2015)**

So What About That Ski Pass?
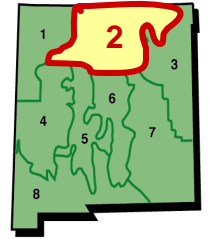
(d) **Precipitation   20th Century obs + A1B trend**
NM Climate Division 2 (Northern Mtns)

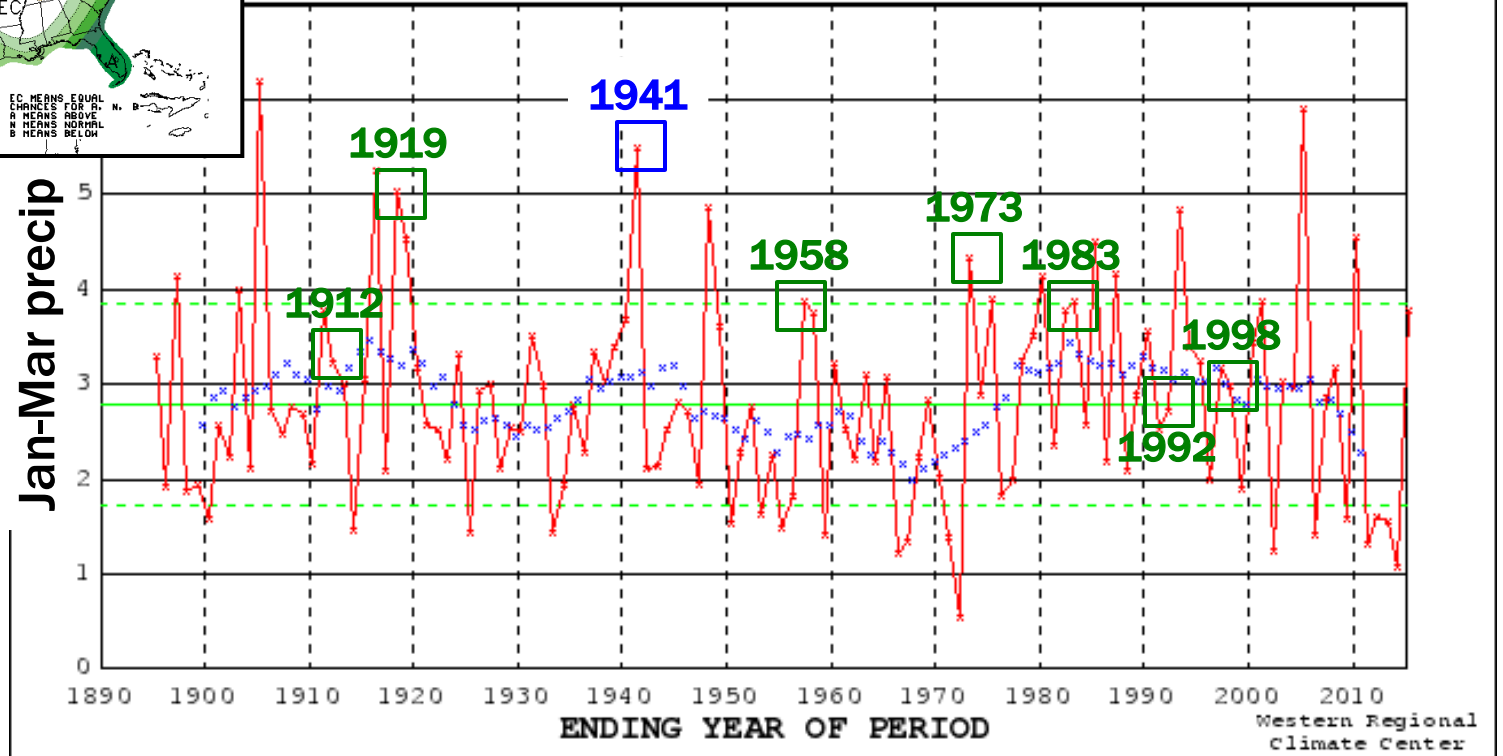← ── observed ── → ← ── projected ── →

Gutzler & Robbins* (2011)

So What About That Ski Pass?

Northern Mountains Division, New Mexico   Precipitation (in.
Climate Division (02). 3 month period ending in March.

Not a bad bet; no sure thing