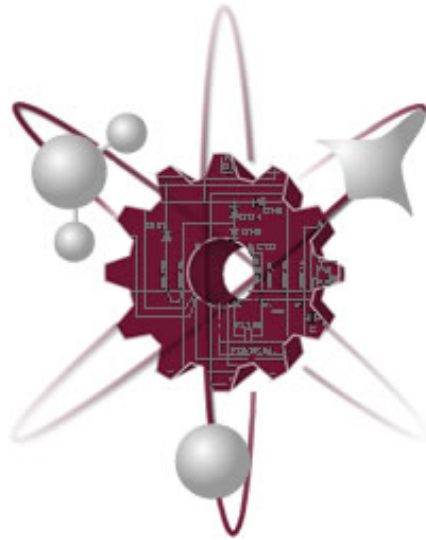


# Appendix D: Institutional Summary

## Engineering Physics

Bachelor of Science in Engineering Physics



## Self-Study Report

New Mexico State University



Programs are requested to provide the following information.

### The Institution

- a. New Mexico State University  
Las Cruces, NM 88003-8001  
USA  
505-646-0111  
www.nmsu.edu
- b. Dr. Barbara Couture, President.
- c. This self-study report was prepared and submitted by Dr. Heinz Nakotte, Chair of the Engineering Physics Program Committee, Department of Physics.
- d. **New Mexico State University** has been accredited by the Commission on Higher Education of the North Central Association (NCA) of Colleges and Schools since 1926, except for a brief period in 1940-1941. Since 1963, the institution has held preliminary to full accreditation status at the doctoral level. At our last general visit, New Mexico State University was once again reaccredited for the maximum period possible (10 years). At that time, the institution was commended for the contributions made by faculty and staff to teaching, research, and service; effective administration; and the significant increase in the quality and quantity of research during the past decade.

The **College of Engineering** is accredited by:

- Accreditation Board for Engineering and Technology- Technology Accreditation Commission (date of first accreditation: 1968)
- Accreditation Board of Engineering and Technology- Engineering Accreditation Commission (date of first accreditation: 1938)

### Type of Control

*Description of the type of managerial control of the institution, e.g., private-non-profit, private-other, denominational, state, federal, public-other, etc*

New Mexico State University (NMSU) is a comprehensive state-funded land-grant institution of higher learning, Overall responsibility for the university resides in an autonomous Board of Regents appointed by the governor of the state and confirmed by the state Senate. The board delegates authority for the internal management of the institution to the president. The faculty elects a Faculty Senate, which has legislative jurisdiction over policies affecting the academic mission of the university.

New Mexico State University is dedicated to teaching, research, and service at the undergraduate and graduate levels. NMSU is a NASA Space Grant College, a Hispanic-serving institution and is home to the only Honors College in New Mexico. NMSU provides learning opportunities to a diverse population of students and community members at five campuses, a

satellite learning center in Albuquerque, cooperative extension offices located in each of New Mexico's 33 counties, 13 research and science centers and through distance education.

### **Educational Unit**

*Describe the educational unit in which the program is located including the administrative chain of responsibility from the individual responsible for the program to the chief executive officer of the institution. Include names and titles. An organization chart may be included.*

Engineering Physics is one of the programs located within the Department of Physics. The Department of Physics is part of NMSU's College of Arts & Sciences, but Engineering Physics is an engineering degree, administered by NMSU's College of Engineering. The organization of the entire institution is shown in Diagram D.1, and the organization within the College of Engineering are shown in Diagram D.2.

The Physics Department Head is Dr. Stefan Zollner, and the Chair of the Engineering Physics Program Committee is Dr. Heinz Nakotte. The Department of Physics offers graduate (M.S. and Ph.D.) and undergraduate (B.S. and B.A.) degrees in physics, in addition to the B.S. in Engineering Physics, which is the focus of this Self-Study Report and being reviewed for re-accreditation.

Diagram D.1 – Institutional Structural Flowchart

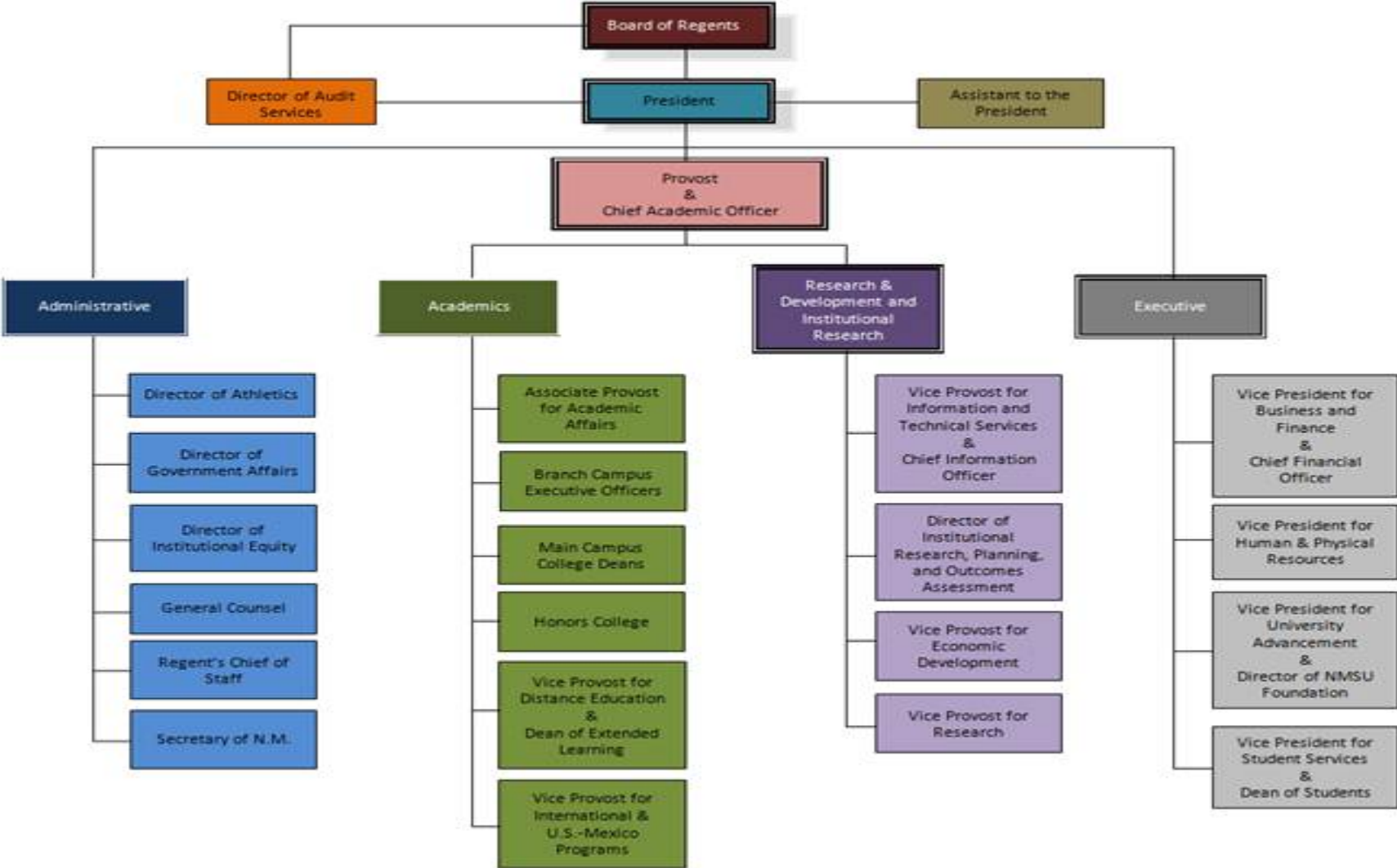
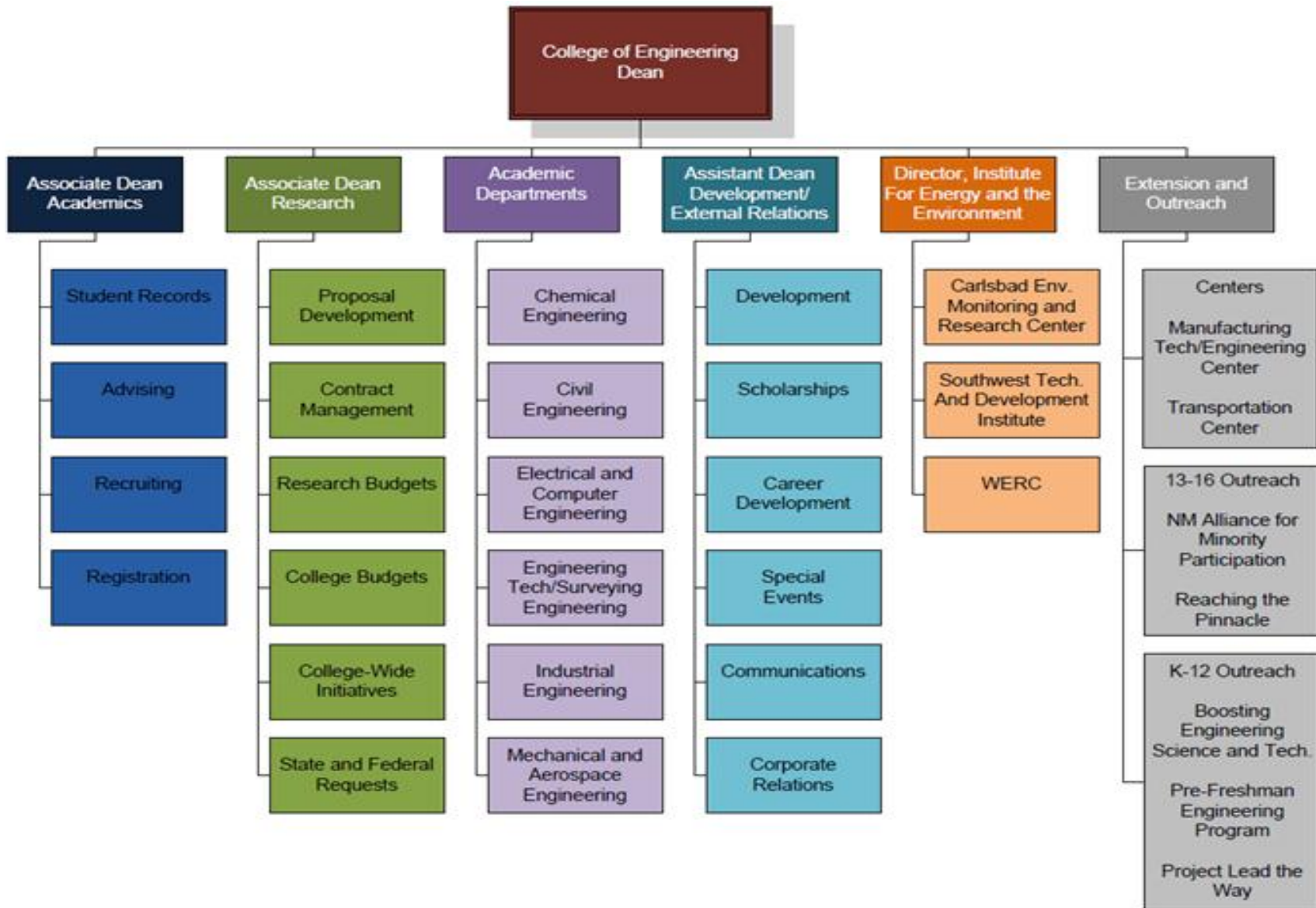


Diagram D.2. Organizational Chart of the College of Engineering



## Academic Support Units

*List the names and titles of the individuals responsible for each of the units that teach courses required by the program being evaluated, e.g., mathematics, physics, etc.*

### Department of Mathematics

Dr. Joseph Lakey, Academic Department Head

Email: [jlakey@nmsu.edu](mailto:jlakey@nmsu.edu)

Phone: (575) 646-3901

### Department of Chemistry and Biochemistry

Dr. Michael Johnson, Academic Department Head

Email: [mjohnson@nmsu.edu](mailto:mjohnson@nmsu.edu)

Phone: (575) 646-3627

### Department of Mechanical & Aerospace Engineering

Dr. Ian Leslie, Academic Department Head

Email: [ileslie@nmsu.edu](mailto:ileslie@nmsu.edu)

Phone: (575) 646-2335

### Department of Chemical Engineering

Dr. Martha Mitchell, Academic Department Head

Email: [martmitc@nmsu.edu](mailto:martmitc@nmsu.edu)

Phone: (575) 646-3422

### Department of Electrical & Computer Engineering

Dr. Satish Ranade, Academic Department Head

Email: [sranadd@nmsu.edu](mailto:sranadd@nmsu.edu)

Phone: (575) 646-3704

## Non-academic Support Units

*List the names and titles of the individuals responsible for each of the units that provide non-academic support to the program being evaluated, e.g., library, computing facilities, placement, tutoring, etc.*

### NMSU Library

Dr. Elizabeth A. Titus, Dean

Email: [etitus@nmsu.edu](mailto:etitus@nmsu.edu)

Phone: (575) 646-1508

### Information and Communication Technology

Dr. Shaun H. Cooper, Associate Vice-President, Information Technologies

Email: [socooper@nmsu.edu](mailto:socooper@nmsu.edu)

Phone: (575) 646-6030

### Career Services

Steven Salway, Director

Email: [ssalway@nmsu.edu](mailto:ssalway@nmsu.edu)

Phone: (575) 646-1631

**Math Success Center**

Dr. Larry Hughes, Director

Email: [lhughes@nmsu.edu](mailto:lhughes@nmsu.edu)

Phone: (575) 646-2145

**Reaching the Pinnacle (RTP)**

Randy Larry, Director

Email: [rlarry@nmsu.edu](mailto:rlarry@nmsu.edu)

Phone: 575 646-2994

**Security Technology Center**

Program Director: Prof. Michael Morrell

Location: Engineering Complex III, Room 389

Email: [mgm@nmsu.edu](mailto:mgm@nmsu.edu)

**New Mexico Alliance for Minority Participation (NM-AMP)**

Program Director: Dr. Ricardo Jacquez

Location: Engineering Complex I, Room 106

e-mail: <http://www.nmsu.edu/~nmamp/index.htm>

**New Mexico Space Grant Consortium**

Program Director: Dr. Patricia Hynes

Location: Sugarman Space Grant Building

e-mail: [http://www.nmspacegrant.com/about\\_us.php](http://www.nmspacegrant.com/about_us.php)

**GRASP (Gaining Retention and Achievement for Students Program)**

Program Director: Dr. Patricia Hynes

Location: Sugarman Space Grant Building

e-mail: [http://spacegrant.nmsu.edu/NMSU/fac\\_dev/grasp.html](http://spacegrant.nmsu.edu/NMSU/fac_dev/grasp.html)

**Teaching Academy*****Director: Dr. Tara Gray***

Location: Milton Hall Room 50

<http://www.teaching.nmsu.edu/People/contact.html>

The Teaching Academy supports teachers, enhances learning, and builds community for NMSU educators through training, mentoring, and networking. The Teaching Academy offers:

- Workshops
- Classroom observations
- IDEA course evaluations
- Scholarships to teaching conferences
- Short courses (Teaching Scholars, Peer Coaching, Team Mentoring, Publish & Flourish, and Writing Groups)

The Teaching Academy reaches faculty and staff through 8,000 hours of training per year. At NMSU, 50% of faculty members on the Las Cruces and Doña Ana campuses participate in at least one Teaching Academy event each year. The Teaching Academy has been tasked to:

- Make Teaching Academy events more readily available to community campuses via video-streaming.
- Establish a Teaching Expo that features teaching innovations and scholarship of teaching and learning.
- Work to establish a working group of faculty on the scholarship of teaching and learning.
- Ensure that guidelines are written for all teaching awards on campus.
- Ensure that teaching and learning are more explicitly included in the next *Living the Vision* statement.

The Teaching Academy has several main initiatives besides those described above:

- Short courses
  - Peer Coaching: Teachers Helping Teachers in Classroom or Distance Education
  - Publish & Flourish: Become a Prolific Scholar
  - Writing Groups
  - Team Mentoring for Faculty New to NMSU
  - Team Mentoring for Graduate Assistants Who Teach a Class or Lab
- Classroom visitations
- Teaching conferences
- Online Newsletters

### **ADVANCE Program**

Science Hall Room 289

Director: Pamela J. Hunt, M.A.

<http://www.advance.nmsu.edu/People/contact.html>

Housed within the Teaching Academy, the ADVANCE Program serves all faculty members, especially underrepresented faculty, through training, mentoring, and networking to enhance diversity and build community at NMSU. ADVANCE has the following initiatives:

- ADVANCing Leaders Program
- ADVANCE Mentoring Program
- Promotion and Tenure (P&T) Workshops
- Department Head Training
- Provide up to seven Department Head Trainings per year.
- Host two P&T workshops to 50 participants per event.
- Recruit twelve participants for ADVANCing Leaders drawn from all colleges.
- Host six ADVANCE Mentoring events per year and expand to the College of Education.
- Maintain targets for Department Head trainings, P&T programs, and ADVANCing Leaders.
- Host six ADVANCE Mentoring events per year and expand to the College of Health and Social Services.
- Maintain targets for Department Head Training, P&T programs, and ADVANCing Leaders.
- Host six ADVANCE Mentoring events per year and expand to the College of Business and the Library.



## **Credit Unit**

*It is assumed that one semester or quarter credit normally represents one class hour or three laboratory hours per week. One academic year normally represents at least 28 weeks of classes, exclusive of final examinations. If other standards are used for this program, the differences should be indicated.*

New Mexico State University uses the above indicated definitions for credit units. Both, Spring and Fall semesters, deliver at least 14 weeks of classes each.

## **Tables**

*Complete the following tables for the program undergoing evaluation.*

**Table D.1. Engineering Physics Enrollment and Degrees Awarded**

Academic Year		Enrollment						Degrees Awarded			
		Undergraduate					Graduate	Associates	Bachelors	Masters	Doctorate
		Freshman	Sophomore	Junior	Senior	Total	Total				
Fall 2011/Sp 2012	Full Time	5	8	8	10	31		4			
	Part Time	0	0	1	3	4					
Fall 2010/Sp 2011	Full Time	6	6	10	11	33		4			
	Part Time	0	0	1	1	2					
Fall 2009/Sp 2010	Full Time	7	9	1	8	25		1			
	Part Time	0	1	0	1	2					
Fall 2008/Sp 2009	Full Time	4	5	6	8	23		3			
	Part Time	0	0	0	0	0					
Fall 2007/Sp 2008	Full Time	1	5	2	5	13		2			
	Part Time	1	0	1	0	2					

**Notes:**

Enrollment numbers are fall term enrollment for the academic year; degrees awarded are fall and spring terms of academic year; counts include ALL majors, regardless of primary or secondary majors; full-time/part-time status is based on all hours enrolled by the student, regardless of the campus of enrollment

**Table D.2. Personnel -Bachelor of Science in Engineering Physics**

Year <sup>1</sup> : <u>2011/2012</u>	HEAD COUNT		FTE <sup>2</sup>
	<i>FT</i>	<i>PT</i>	
Administrative <sup>3</sup>	0	1	0.5
Faculty (tenure-track)	13	2	14
Other Faculty (excluding student Assistants)	0	2	1
Student Teaching Assistants	14	3	15.5
Student Research Assistants	13	3	14.5
Technicians/Specialists	1	1	1.5
Office/Clerical Employees	2	0	2
Others <sup>4</sup>	4	2	5

<sup>1</sup> Data on this table should be for the fall term immediately preceding the visit. Updated tables for the fall term when the ABET team is visiting are to be prepared and presented to the team when they arrive.

<sup>2</sup> For student teaching assistants, 1 FTE equals 20 hours per week of work (or service). For undergraduate and graduate students, 1 FTE equals 15 semester credit-hours (or 24 quarter credit-hours) per term of institutional course work, meaning all courses — science, humanities and social sciences, etc. For faculty members, 1 FTE equals what your institution defines as a full-time load.

<sup>3</sup> Persons holding joint administrative/faculty positions or other combined assignments should be allocated to each category according to the fraction of the appointment assigned to that category.

<sup>4</sup> Specify any other category considered appropriate, or leave blank.

Data are reported for Fall 2011 (Sept. 1<sup>st</sup>).

Graduate teaching and research assistants work 20 hours per week.

Specialist: 1 FTE lab coordinator/instructor (MS in EE)

Specilist: one graudate student for IT support (20 hours per week)

Others: Reseach faculty, postdocs, technicians not paid by departmental I&G funds

Administrative: Department Head with 50% teaching load.