

**//Jessie T. Dowdy, Ed.D**  
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## EDUCATION

May 2005

**Doctor of Education**, Secondary and Higher Education  
*Texas A&M - Commerce, Commerce, TX*

Dissertation: Relationship Between Teachers' College Science Preparation and Their Attitudes  
Toward Science

December 1990

**Master of Science**, Chemistry - Chemical Physics  
*Washington State University, Pullman, WA*

Thesis Title: Raman Spectroscopic Analysis of Thin Film Phthalocyanine Metal Devices

May 1988

**Bachelor of Science**, Engineering Physics  
*Abilene Christian University, Abilene, TX*

Summer 1984

**General Coursework**  
*Colorado Mountain Community College, Glenwood Springs, CO*

June 1983

**High School Diploma**  
*Glenwood Springs High School, Glenwood Springs, CO*  
*Member of Top 10 in Graduating Class of over 120*

## EXPERIENCE

Sep 1993 - Present

**Professor of Physics and Chemistry**  
*Northeast Texas Community College (NTCC), Mount Pleasant, TX*

Permanent Faculty Position

NTCC follows a flat administration structure. Each faculty member reports directly to the Executive Vice-President of Instruction. The Executive Vice-President of Instruction reports directly to the President. Because of the flat structure, faculty members take on some of the responsibilities normally handled by a Dean, or Chairperson. The physics department contains only one faculty member; thus, as that faculty member, the additional duties include, but are not limited to: 1) initiating budget requests, 2) managing budgets, 3) course scheduling, 4) determining departmental course offerings, 5) coordinating between departments, 6) adjunct instructor issues, 7) use of building space, 8) coordinating departmental dual credit, 9) hiring and managing lab personnel, 10) equipment maintenance issues, 11) Dealing with Reductions in Budgets and Resources, 12) Administration of Grants, 13) Articulation Agreements, and other duties as assigned or needed.

#### Courses Taught at NTCC

- PHYS 1401 General Physics I (Algebra/Trigonometry Based)
- PHYS 1402 General Physics II (Algebra/Trigonometry Based)
- PHYS 2425 Advanced Physics I (Calculus Based)
- PHYS 2426 Advanced Physics II (Calculus Based)
- CHEM 1411 General Chemistry I (Scientific and Pre-Professional)
- CHEM 1412 General Chemistry II (Scientific and Pre-Professional)
- CHEM 1405 Introductory Chemistry I (Nursing and Health Professions)
- CHEM 1407 Introductory Chemistry II (Nursing and Health Professions)
- TECM 1303 Technical Math (Automotive Emphasis)

#### Courses Developed, and then Taught for NTCC

- PHYS 1411 Introduction to Astronomy (Now Stars and Galaxies)
- PHYS 1415 Introduction to Physical Science I (Developed for Education Majors)
- PHYS 1417 Introduction to Physical Science II
- PHYS 1415 Online
- PHYS 1415 Hybrid (50% class and 50% online)

September 1990 - May 1993

#### **Assistant Professor of Physics**

*Abilene Christian University, Abilene, TX*

Temporary Position as Sabbatical Replacement for Three Different Professors in the Physics Department

#### Courses/Responsibilities

- Astronomy, over 250 students per class
- General Physics (Algebra / Trig based)
- Coordinated Teaching Assistants for Labs in both classes

September 1988 - May 1990

#### **Teaching Assistant**

*Washington State University, Pullman, WA*

- Teaching Assistant for General and Physical Chemistry Labs.

May 1988 – June 1988

#### **Research Assistant**

*Los Alamos National Laboratory / ACU, Los Alamos, NM*

- General Duties Related to Preparing for Linear Accelerator Experiment

May 1987 - August 1987

#### **Research Assistant**

*Sandia National Laboratory, Albuquerque, NM*

- Class Q Clearance Obtained for work on Classified Research during the Outstanding Student Summer Intern Program

September 1986 - May 1988

**Lab/Research Assistant**

*Abilene Christian University, Abilene, TX*

- Calculus Based Physics and General Physics Lab Teacher. Research work involving Auger and X-ray Photoelectron Spectroscopy.

December 1982 – August 1983

**Nursery Worker / Sales**

*Glenwood Floral, Glenwood Springs, CO*

- Transplanted Plants, Prepared Soil, Sales, Delivery and Planting in Aspen

June 1977 – August 1982

**General Laborer**

*Glenwood Fencing, Glenwood Springs, CO*

- Installed Chain Link or Wood Fencing

## **PRESENTATIONS / PARTICIPATION / ADMINISTRATION**

2009/2010

- Nominated by the President of NTCC as the Piper Award Representative from NTCC. Each Institution in Texas may nominate only one teacher per year for this very prestigious award. Awards for the 15 Piper awards occur in the Spring of 2010.

1993 – Present

- Texas Community College Teachers Association
- Some Committee work

1993- Present

- Obtained Charter and acted as Sole advisor for SPS since its inception as a student organization at NTCC.
- Spring 2008 Recognized as the SPS chapter in the State of Texas and New Mexico (zone 13) with the highest membership. Achieving this honor is quite remarkable considering SPS zone 13 contains essentially every two-year college, four-year college, and major university in both states.

March 2009

- Nominated and ran for President of Zone 13 Section of the American Association of Physics Teachers

5/19/2009

- Organized and Hosted at NTCC a Joint Meeting with Texas A&M University to develop a partnership in the Lewis Stokes - Minority Participation Grant.



10/2/2008

- Spearheaded and Authored Memorandum of Agreement Signed between the Presidents of Texas A&M University - Commerce and Northeast Texas Community College regarding Industrial Engineering.

9/27/2008

- NTCC - Worked Recruitment Booth at Titus County Fair

3/7/2008

- Presentation Entitled "Using SPS at the Community College Level to Develop a Science Road Show to Present to K-12 Schools" at the Texas Section and Zone 13 Joint Meeting of the: Texas Section of American Association of Physics Teachers (TSAAPT), Texas Section of the American Physical Society (TSAPS), and National Society of Hispanic Physicists
- Supervised/Coached Three NTCC students for their Presentations

3/12/2008

- NTCC High School Counselors' Appreciation Luncheon  
Key Note Address on "Math/Science and Engineering Preparation"

4/18/2008

- Participated in the Math/Science Articulation Conference Stephen F. Austin State University Nacogdoches, Texas

2006/2007

- Chair Title III Steering Committee at NTCC

10/26/2006

- Invited Speaker Phi Theta Kappa-Alfa Mu Chi

2005

- Editor, Introduction to Physical Science, Hughes. ISBN:1568705662

2004/2005

- Faculty Senate Historian

2003/2004

- Faculty Senate President

2002/2003

- Faculty Senate Vice-President

2001/2002

- Faculty Senate Parliamentarian

1995-1998

- NTCC - Member College Council  
College Counsel Included President, All Vice-Presidents,  
and Selected Faculty Members and Staff. Final review for all programs, schedules, etc. for  
the entire college.

1995/1996

- Faculty Senate Secretary

Fall 1993 Solicited and Obtained the original Charter for the Society of Physics Students  
(SPS) Chapter at Northeast Texas Community College from the National Organization in  
1993.

1992/1993

- Regional Director for University Interscholastic League (UIL) High School Science Test

6/14/1990

- Presentation at the American Chemical Society Joint 45th Northwest Meeting entitled "In Situ  
Vibrational Spectra of the Copper Phthalocyanin (CuPc) Imbedded Interface in Metal -  
Insulator - CuPc - Metal Diodes.

December 1980

- Active participant on State Championship Football Team (Nose-guard)

## **AWARDS / HONORS**

- April 2009 Chosen by NTCC Faculty as the Master of Ceremonies for Student Awards Banquet
- April 2005 NTCC Faculty Senate Award for Educational Excellence
- April 2004 Chosen by NTCC Faculty as the Master of Ceremonies for Student Awards Banquet
- 2001/2002 NTCC Faculty Senate Award for Outstanding Contributions to the Faculty Senate
- 4/22/1988 Fred J. Barton Physics Award, Abilene Christian University Top Physics Student from  
the Graduating Class
- 2/22/1986 Inducted into Alpha Chi National Honor Society

## **PUBLICATIONS**

Introduction to Chemistry I Lab Guide. 1997. ISBN 1-56870-241-8.

K. W. Hipps, Jess. Dowdy, J. J. Hoagland; Surface Raman spectra of a biased and buried ultrathin copper phthalocyanine layer. *Langmuir*, 1991, 7(1), pp 5-7.

Jess Dowdy, J. J. Hoagland, K. W. Hipps; Infrared and Raman spectroscopic study of ultrathin copper phthalocyanine films vapor deposited on oxidized alumina. *J. Phys. Chem.*, 1991, 95 (9), pp 3751-3755.

## **GRANTS**

10/9/2008 FORCE -- Facilitating Outreach and Recruitment for Computer Science and Engineering. Submitted to Texas Workforce Commission. \$230,700.00 Not Funded

9/3/2007 Science Road-Show -- Submitted to Texas Educational Agency State Engineering and Science Recruitment \$32,989.00 FUNDED

9/3/2007 SCIFI -- Science Fun Initiative. Submitted to Texas Educational Agency State Engineering and Science Recruitment \$32,999.00 FUNDED

4/15/2007 FLAMES -- Facilitating Learning through Articulation of Math, Engineering, and Science. Submitted to American Electric Power Foundation. \$85,667.00 FUNDED

4/26/2007 FLAMES -- Facilitating Learning through Articulation of Math, Engineering, and Science. Submitted to National Science Foundation, Department of Undergraduate Education, ATE Projects. \$149,961.00 Not Funded

8/20/2006 SCIFI -- Science Fun Initiative. Submitted to Texas Educational Agency State Engineering and Science Recruitment \$32,999.00 FUNDED

8/20/2006 Science Road-Show -- Submitted to Texas Educational Agency State Engineering and Science Recruitment \$32,989.00 FUNDED

9/1/2005 Science Road-Show -- Submitted to Texas Educational Agency State Engineering and Science Recruitment \$25,000.00 FUNDED

9/7/2004 Science Road-Show and SMART Girls Conference -- Submitted to Texas Educational Agency State Engineering and Science Recruitment \$54,879 FUNDED