# 7. PRODUCTION OF TEACHING MATERIAL

#### 2006

- 1. <u>Physics 4341 Electromagnetism</u>, co-development of lecture notes and powerpoint presentations to teach Phys 4341 with Dr. Harold Slusher, summer 2006.
- 2. <u>Electromagnetism</u>, lecture notes and powerpoint material for PHYS 5341, 52 pages, Spring 2006.

#### 2005

- 3. <u>Physics 3331 Thermal Physics</u>, Co-development of lecture notes and powerpoint presentations to teach Phys 3331 in support to new faculty Dr. Tunna Baruah, Fall 2005.
- Middle School Physics, Powerpoint material for a two-day workshop for UTEP's MSP Staff Developers, Dec. 2005.
- Advanced Statistical Mechanics, lecture notes and powerpoint material for PHYS 5361, 71 pages, Fall 2005.
- 6. <u>Lecture Notes: "Reacciones de Iones Pesados"</u>, prepared for a workshop for graduate physics majors held at The Universidad Nacional Autónoma de México, on June 27-8, 2005, published in "Notas, IV Escuela Mexicana de Física Nuclear", Eds. A.F. Aguilera, E. Hernandez, and J. Hirsch, Universidad Nacional Autónoma de México, 2005, Pp. 1-13, http://www.teorica.fisica.unam.mx/escuela-2005/.
- 7. <u>Deepening Science Knowledge for High School Physics Teachers</u>. Printed and Powerpoint material for a two-day bilingual workshop for teachers, 20 pages, July, 2005.
- 8. <u>Physics for Pre-K and K Students Bilingual Seminar for Teachers.</u> Printed and Powerpoint material for a bilingual seminar for teachers, 80 pages, June, 2005.

### 2004

9. "Bohr Model Spectroscopy: in-class demonstration for PHYS 3325, Modern Physics, with Pre- and Post-Exams and Activity Guide", J. Morales, and J. A. López, Fall 2004.

#### 2003

10. Survey of Modern Physics, web and powerpoint material for teaching PHYS 3325, fall 2003.

# 2002

11. "Alpha-Pixe: In-class demonstration for PHYS 3325, Modern Physics, with Pre- and Post-Exams and Activity Guide", J. A. López, J. Morales, and M. Borunda, Fall 2002.

### 2001

- 12. "Planck's constant: Revision of Pre- and Post-Exams and Activity Guide", for teaching PHYS 3325, Fall 2001.
- 13. <u>"PHOTOELECTRIC EFFECT</u>: Pre- and Post-Examinations and Activity Guide" for teaching PHYS 3325, Spring 1999.
- 14. "Compton scattering: Revision of Pre- and Post-Exams and Activity Guide", for teaching PHYS 3325, Spring 2001.
- 15. "<u>Termodinámica nuclear</u>", chapter two in a book for senior level course on nuclear physics, published by Universidad Nacional Autónoma de México Press, Mexico City, April, 2001.

### 2000

16. "Lecture notes on phase transitions in nuclear matter", J. A. López and C. O. Dorso, World Scientific Publishing Co., Singapore, October, 2000, ISBN 981-02-4007-4. Book for graduate level course on nuclear physics, was in World Scientific's Best Seller list in year 2001, and was adopted in the Spring of 2001 as a textbook in Caen, France.

### 1998

- 17. "ZEEMAN EFFECT: Pre- and Post-Examinations and Activity Guide", for teaching PHYS 3325, Fall 1998.
- 18. "BLACK-BODY RADIATION: Pre- and Post-Examinations and Activity Guide", for teaching PHYS 3325, Fall 1998.
- 19. "COMPTON SCATTERING: Pre- and Post-Examinations and Activity Guide", for teaching PHYS 3325, Spring 1998.

### 1007

- 20. "THE RUTHERFORD/COMPTON EXPERIMENT: Pre- and Post-Examinations and Activity Guide", for teaching PHYS 3325, Spring 1997, tested in Fall 97.
- 21. "THE STERN GERLACK EXPERIMENT: Pre- and Post-Examinations and Activity Guide", for teaching PHYS 3325, Fall 1997.

22. "THE DAVISSON GERMER EXPERIMENT: Pre- and Post-Examinations and Activity Guide", for teaching PHYS 3325, Fall 1997.

#### 1996

- 23. "THE FRANK-HERTZ EXPERIMENT: Pre- and Post-Examinations and Activity Guide", for teaching PHYS 3325, Fall 1996.
- 24. "<u>Universo Almanaque Celestial 1996</u>", published by McDonald Observatory of the University of Texas, 1/1/96. Contributed as technical editor.
- 25. "<u>Universo Almanaque Celestial 1997</u>", published by McDonald Observatory of the University of Texas, 1/1/96. Contributed as technical editor.

# 1994

- 26. "<u>Universo" Compact Disks</u> Audio material for general audiences. Pressed monthly describing the skies for many high schools and radio stations in the United States. Pressed by UT Austin/McDonald Observatory since the Fall of 1994. Contributed as technical editor. Since the Fall of 1994 to date.
- 27. "Experiments For General Physics 4104", J. A. López, Published by Burgess International Group, 1994. 1993
- 28. "Experiments For General Physics 4103", J. A. López, Published by Burgess International Group, 1993.