

ELPT 1225
National Electrical Code I

Western Texas College

- I. Course Information - ELPT 125 National Electric Code I
- II. Required Textbooks
 - A. Book: NFPA 70: National Electric Code (NEC) Handbook, 2014
Edition Author: Mark W. Earley ISBN: 978-1455905447
- III. Pre-requisites - None
- IV. Course Description - This course will examine the content, format, rules, and calculation used in the National Electric Code (NEC) for wiring design, protection, methods, and materials.
- V. Student Learning Outcomes
 - A. Analyze sections in the NEC that pertain to electrical installations
 - B. Calculate the size of conductors, boxes, raceways, and overcurrent protective devices for branch circuits supplying electrical equipment
 - C. Calculate conductors, overcurrent protection, and service equipment as applied to building services
 - D. Compute the size of branch circuits, feeders, and equipment for motors
- VI. Grading Policy - All required work must be turned in on time. Assigned outside work is due at the beginning of the next class period. Late work is accepted at a 10 point deduction per day late.
 - A. Midterm Exam.....25%
 - B. Final Exam.....45%
 - C. Quizzes.....20%
 - D. Participation.....10%
- VII. Midterm Exam - The midterm exam will consist of multiple-choice questions and have a few short-answer responses. The material on the test will cover material from the first two units.
- VIII. Final Exam - The final exam will be comprehensive in nature and will cover material from all units.
- IX. Quizzes - Four quizzes will be given throughout the semester over the articles. The lowest score of the four quizzes will be dropped.
- X. Participation - Participation will be based on the assigned reading material discussion. Reading the material is mandatory and will allow for students to discuss the topics successfully.
- XI. Student Attendance - Class attendance will be taken weekly. Students shall coordinate anticipated absences with the instructor. The attendance policy established by the College will be applied in determining student attendance. *This includes the reporting of three hours of unexcused absences to the Counseling Center by the instructor and an administrative drop for repeated attendance policy violations.*
- XII. Conduct and Academic Dishonesty - Students will come to class prepared to participate in the learning process and that part of this preparation will include the

demonstration of mature and purposeful behavior. The College Code of Conduct and College Academic Integrity Policies will be followed with no exceptions.

- XIII. Dropping Class - Students may drop or add classes from pre-registration through the regular registration day without a fee. In order to drop a class after the regular registration date, a student must obtain a Drop Form from the Counseling Office, have the instructor of the class he or she is dropping sign the form, and take the form to the Registrar's Office and pay the \$5 fee that is required.
- XIV. Disability Policy - Any student who requires special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, you may contact 325-574-7622.

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| Unit 1 | <p>Week 1</p> <p>Article 100 – Definitions</p> <p>Article 110 – Requirements for Electrical Installations</p> <p>Article 200 – Use and Indemnification of Grounded (Neutral) Conductors</p> <p>Week 2</p> <p>Article 210 – Branch Cirucuits</p> <p>Article 215 - Feeder Circuits</p> <p>Article 220 – Branch Circuit, Feeder, and Service Calculations</p> <p>Week 3</p> <p>Article 225 – Outside Branch Circuits and Feeders</p> <p>Article 230 – Services</p> <p>Article 240 – Overcurrent Protections</p> <p>Week 4</p> <p>Articles 250 – Grounding and Bonding</p> <p>Articles 285 – Surge Protective Devices</p> <p>Articles 300 – General Requirements for Wiring Methods and Materials</p> |
| Unit 2 | <p>Week 5</p> <p>Article 310 – Conductors for General Wiring</p> <p>Article 312 – Cabinet</p> <p>Article 314 – Outlet, Device, Pull, and Junction Boxes, Conduit Bodies, Fittings, and Manhole Enclosure</p> <p>Week 6</p> <p>Article 320 – Armored Cable (Type AC)</p> |

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| Unit 3 | <p>Week 9 Article 350 – Liquid tight Flexible Metal Conduit (Type LFMC) Article 352 – Rigid Polyvinyl Chloride Conduit (Type LFMC) Article 356 – Liquid tight Flexible Nonmetallic Conduit (Type LFNC) Week 10 Article 358 – Electrical Metallic Tubing (EMT) Article 362 – Electrical Nonmetallic Tubing (ENT) Article 376 – Metal Wireways Week 11 Article 380 – Multi-outlet Assemblies Article 386 – Surface Metal Raceways Article 388 – Surface Nonmetallic Raceways</p> |
| Unit 4 | <p>Week 12 Article 392 – Cable Trays Article 393 – Low Voltage Suspended Ceiling Power Distribution Systems Article 400 – Flexible Cords and Flexible Cables Week 13 Articles 402 – Fixture Wire Articles 404 – Switches Articles 406 – Receptacles, Cord Connectors, and attachment Plugs Week 14 Article 408 – Switchboards, switchgear, and panelboards Article 410 – Luminaires, Lampholders, and lamp Article 411 – Lighting System Operating at 30 V or Less and Lighting Equipment Connected to Week 15 Article 422 - Applications Article 430 - Motors, Motor Circuits, and Controllers Article 445 - Generators Articles 450 - Transformers</p> |

Last Modified: September 19, 2017