

COURSE SYLLABUS

PERT Mathematics

Preparation for Florida's Postsecondary Education Readiness Test (PERT) Mathematics subtest

Learn. Apply. Grow.

Self-paced • Fully online • Mathematics test preparation

Course Identification

Item	Course Information
Course title	PERT Mathematics
Provider	EmpowerED Professional Learning
Course type	Independent test-preparation course; not a for-credit college course
Format	Self-paced, fully online; lesson content and assessments delivered through the LMS
Prerequisites	None
Estimated time	Approximately 18-27 hours; an estimate, not a minimum-time requirement
Materials	Paper and pencil; no materials need to be purchased
Course scope	Mathematics only; Reading and Writing are not covered

Course Description

PERT Mathematics is a self-paced preparation course designed to strengthen the mathematics skills associated with Florida's Postsecondary Education Readiness Test (PERT). The course rebuilds essential arithmetic where it supports later algebra, then develops skills in expressions, equations, inequalities, applied problems, polynomials, quadratics, coordinate geometry, and systems of equations.

The course is designed for high school students preparing for placement as well as adults returning to college who may need a structured mathematics refresher. Course practice items are original EmpowerED Professional Learning materials; they are not official, retired, or licensed PERT questions.

Audience

- Students who have been advised by a Florida institution to demonstrate mathematics readiness through the PERT.
- Students who elect to take the PERT for placement even when they may qualify for an exemption.
- Adult learners returning to college who want a structured review of foundational arithmetic and algebra.
- Learners who want mathematics preparation before discussing placement options with their institution.

Important Placement Note

Florida law and State Board rules provide placement-testing exemptions and multiple ways to demonstrate college readiness. A student who entered ninth grade in a Florida public school in 2003-04 or later and earned a Florida standard high school diploma, or who is serving on active duty in the U.S. Armed Services, is not required to take a common placement test for developmental-education placement at a Florida College System institution. Institutions may also use approved alternative methods. Students should confirm their individual status and placement requirements directly with the college they plan to attend.

Learning Outcomes

1. Evaluate algebraic expressions and compute accurately with signed numbers, fractions, order of operations, exponents, roots, factors, and percents.
2. Solve and verify linear equations and rearrange literal equations or formulas to isolate a specified variable.
3. Solve linear and compound inequalities and represent solution sets appropriately.
4. Apply ratios, proportions, percent reasoning, and algebraic modeling to applied problems.
5. Add, subtract, multiply, divide, simplify, and factor polynomial expressions.
6. Solve quadratic equations using factoring, square roots, and the quadratic formula, and interpret solutions in context.
7. Compute slope and intercepts, move among common forms of linear equations, and identify parallel and perpendicular lines.
8. Solve systems of two linear equations by substitution, elimination, and graphing and recognize one-, no-, and infinitely-many-solution cases.

Course Organization

Lesson	Title	Major Topics
1	Expressions, Exponents, and the Arithmetic Underneath	Signed numbers; order of operations; fractions; exponents; roots; factors; evaluating expressions; percents
2	Linear Equations and Literal Equations	Inverse operations; multi-step equations; variables on both sides; fractions/decimals; identities and contradictions; formulas
3	Inequalities and Applied Problems	Linear and compound inequalities; number lines; ratios; proportions; percent applications; word problems
4	Polynomials: Operations and Factoring	Exponent rules; polynomial operations; division; rational expressions; factoring
5	Quadratic Equations	Factoring; zero-product property; square-root method; quadratic formula; discriminant; applications
6	The Coordinate Plane and Systems of Equations	Slope; intercepts; forms of lines; parallel/perpendicular lines; systems by substitution, elimination, and graphing

Learning Sequence in Each Lesson

Each lesson combines direct instruction and fully worked examples with opportunities to practice. Arithmetic foundations are revisited where they are needed rather than isolated from the algebra they support. Optional supplemental videos may also be provided; these videos are enrichment resources and are not required for course completion.

Activities and Assessments

Component	Quantity	How It Works
Narrated lesson content	6	Self-paced instructional modules. Not graded for accuracy.
Practice sets	6	8 items each; untimed; immediate feedback; unlimited practice. Completion-focused.
Graded lesson quizzes	5	8 items each for Lessons 1-5; submit-then-review; 70% required to pass.
Cumulative final	1	40 items across all six lessons; submit-then-review; 70% required to pass.

Lesson 6 has no separate graded lesson quiz; its content is reinforced through the Lesson 6 practice set and assessed again on the cumulative final.

The 70% course-assessment threshold is an internal course standard. It is not equivalent to a PERT scaled score and does not predict a particular placement result.

Suggested Study Approaches

Paced option: approximately six weeks

Complete about one lesson per week. Work the examples on paper, complete the practice set, then take the graded quiz for Lessons 1-5. In the final week, complete Lesson 6, revisit weak practice sets, review lesson recaps, and take the cumulative final.

Intensive option: approximately two weeks

Complete the six lessons across roughly 10-11 days, reserve several days to redo practice without notes, then complete the cumulative final. This approach is most useful when a test date is close, but it should not replace working the examples and reviewing errors.

These are suggestions, not required schedules. Learners should adjust the pace based on prior knowledge and the time needed to understand the mathematics.

Completion Expectations

- Work through all six instructional lessons.
- Complete all six practice sets.
- Meet the course's passing requirement on each required graded lesson quiz.
- Meet the 70% passing requirement on the cumulative final.
- Use feedback and retakes, when available in the LMS, to address weak areas before moving on.

Technology, Accessibility, and Support

The course is delivered online through the learning management system. A current web browser and reliable internet connection are recommended. Learners who use assistive technology or need an accommodation should follow the accessibility and support procedures provided by the organization hosting the course. For EmpowerED Professional Learning course support, contact info@empoweredpl.com.

Independence and Disclaimer

PERT Mathematics is produced independently by EmpowerED Professional Learning. It is not affiliated with, sponsored by, endorsed by, or approved by the Florida Department of Education. Course materials do not guarantee a PERT score, placement decision, admission outcome, or exemption. Testing policies, placement practices, fees, scheduling, identification requirements, and retake rules may vary by institution and should be confirmed directly with the testing institution.

Verified References

- Florida Department of Education. Demonstration of College Readiness (Formerly Common Placement Testing/PERT).
<https://www.fldoe.org/schools/higher-ed/fl-college-system/academics/common-placement-testing.shtml>
- Florida Administrative Code, Rule 6A-10.0315. Demonstration of Readiness for College-Level Communication and Computation.
- Florida Department of Education. PERT Student Study Guide.
- Valencia College. PERT and assessment information (used only to corroborate locally administered calculator/test-day practices).

Research verification date: September 11, 2026.