

Training For The Professional Educator

Fernandina Beach FL 32034 630-877-4006
adventuresinedu@earthlink.net



We Offer

- Exciting courses for Teachers, Curriculum Planners, Administrators, and Coordinators.
- Self-Paced Online courses.
- Courses designed for teachers seeking certification renewal, lane advancement, and professional development.
- GRADUATE CREDIT is available for all courses through various universities.

"I greatly enjoyed the course. Thank you so much for making these courses available. They are just what I needed, wanted, and like! Thanks again!" –Math Teacher, PA



"Thanks, I am already using the info that I learned in my classrooms." --Teacher, CA

Registration for all courses is through Adventures In Education, Inc.

Courses are offered cooperatively through Various Universities and Adventures in Education, Inc.

Our Mission

- **Develop new, creative and interactive approaches to teaching.**
- **The question, "What is this stuff good for" is met head on.**
- **Engage in activities you can take back to your classroom and immediately apply.**
- **Instill an overall appreciation of the discipline and expose participants to the subtlety and variety of the many facets of teaching: problems, ideas, methods, solutions, etc.**
- **Establish the connection between the discipline and down-to-earth, concrete real-life problems.**
- **Activities prompt classroom discussion, generate lesson plans, and provide new ideas for instruction.**
- **If questions arise, the facilitator is only an email or a phone call away.**



For more information visit www.adventures-in-education.com, write to adventuresinedu@earthlink.net or call 630-877-4006.

Course Catalog

Online Courses - 2 Sem Credits / 3 Qtr Grad Credits

<p>5100-Teaching Mathematics Through Multiple Intelligences Gr K-5 Learn how to use activities and instructional games to develop key concepts in major strands of mathematics. Discover how easy it is to incorporate multiple intelligences into lesson plans. Use a collection of field-tested activities as a powerful resource for developing lessons that initiate the primary intelligences of all students, including special-needs students, and create effective patterns for classroom learning.</p>	<p>5138-Statistics with Microsoft Excel, Part I SF2 Learn to effectively use Excel and the Internet to teach statistics topics. Methods align with NCTM Principles and Standards for School Mathematics and Common Core State Standards. Cover basic Excel skills and explore topics such as generating random numbers, simulations, frequency tables, summary statistics, graphs and charts, linear regression, correlation, binomial distribution, normal distribution, z-values and t-values, hypothesis testing, and ANOVA. Research instructional implications for use of technology in the classroom. Engage in interesting real-world activities that you can immediately use to teach all students.</p>
<p>5104-Explore Math Connections! A Curriculum for All Students of the Millennium, Gr 4-9 Motivate and excite students with real-world activities you can immediately use in the classroom and align with NCTM Principles and Standards for School Mathematics and Common Core State Standards. Explore a rich assortment of hands-on and interdisciplinary activities that foster critical thinking and quantitative skills. Learn to develop activity-based lesson plans that motivate students with variable interests, experiences, and abilities.</p>	<p>5139-Statistics with Microsoft Excel, Part II SF2 Use intermediate Excel skills and the Internet to enhance instruction in the statistics classroom. Topics align with NCTM Principles and Standards and Common Core State Standards and include generating random numbers; sampling and creating number series; binomial, Poisson, and hypergeometric distributions; X² and F-distributions and tests; one/two-sample hypothesis testing; multiple regression and correlation; two-way ANOVA; permutations, combinations, percentiles, quartiles, and rank; and summary statistics. Examine national technology standards and relevance of technology in teaching and learning mathematics and statistics. Engage in interesting real-world activities that motivate all students.</p>
<p>5110-Creative Math! A Hands-On Approach to Teaching Math Through the Standards Gr 5-12 Actively involve students while aligning your classroom to the new math standards. Bring NCTM Principles and Standards for School Mathematics and new Common Core State Standards into your classroom using real-life activities and projects. Develop activity-based lesson plans that match the learning goals identified by the math standards and integrate them across the curriculum. Engage in interesting real-world activities that can immediately be used in the classroom to teach all students.</p>	<p>5140-Introduction to the TI-83+/84+ Calculator SF1 Introduce participants to a broad range of TI-83Plus and TI-84Plus graphing calculator functionalities. Gain confidence using graphing technology and learn to incorporate handheld technology in teaching mathematics. Methods align with the NCTM Principles and Standards for School Mathematics and Common Core State Standards. Engage in interesting hands-on activities you can immediately use to teach all students. Background in mathematics required. No previous calculator experience necessary.</p>
<p>5120-Quantitative Literacy Through the Standards; MS, HS, and COL SF3 Deal effectively and confidently with life's quantitative aspects. Develop conceptual understanding, problem-solving, decision-making, and analytical skills. Learn to use appropriate approaches and tools in formulating and solving real-world problems. Explore key mathematical ideas used in social studies, economics, science, and art. Examine a rich assortment of mathematical life-learning experiences that align with the NCTM Principles and Standards for School Mathematics and Common Core State Standards you can immediately use in your classroom. Integrate interdisciplinary units across the curriculum to teach a culturally diverse student population.</p>	<p>5141-Statistics with the TI-83+/84+ Graphing Calculator, Part I SF1 Learn Internet and TI-83+/84+ calculator skills for the statistics classroom. Explore topics, aligned with the NCTM Principles and Standards for School Mathematics and Common Core State Standards, such as summary statistics, weighted mean, linear regression, correlation, probability computations, stat plots, binomial distribution, normal distribution, central limit theorem, and generating random numbers. Learn to practice responsible use of graphing technology. Engage in real-world activities you can immediately use to teach all students.</p>

<p>5131-Multiple Intelligences and Brain-Based Learning in the Mathematics Classroom Using materials based on Gardner's multiple intelligences theory, review related research and apply the theory to teaching situations. Discover the instructional implications of the latest brain research and theories and how they relate to best practices for teaching mathematics. Using a large collection of field-tested activities, develop lessons that initiate the primary intelligences of each student, including special-needs students and adult learners, and create effective patterns for learning math. Combine theory and practice to create exciting and motivating mathematical experiences.</p>	<p>5142-Statistics with the TI-83+/84+ Graphing Calculator, Part II SF1 Learn advanced TI-83+/84+ graphing calculator and Internet skills relevant to teaching and learning of statistics. Explore topics, aligned with the NCTM Principles and Standards for School Mathematics and Common Core State Standards, such as generating random numbers, Poisson and geometric distributions, normal and t-distributions, one-sample confidence intervals and hypothesis testing (z- and t-test, proportions), linear and median regression analysis, and two-variable summary statistic. Learn to practice responsible use of graphing technology. Engage in interesting real-world activities you can use immediately to motivate all students.</p>
<p>5144-Algebra I with the TI-83+/84+ Graphing Calculator SF1 Learn to use the TI-83+/84+ calculator to teach mathematical concepts in basic algebra, intermediate algebra, and algebra I curriculum. Investigate the connection between multiple intelligences and technology. Engage in real-world activities that you can immediately use in the classroom to teach all students and align with Common Core State Standards. Understand scientific notation, functions and graphs, recursion, linear, quadratic and exponential growth, basic trigonometry, one-variable statistics and data plots, central tendency, data collection activities, and matrices for solving systems of linear equations.</p>	<p>5152-Pre-Calculus with the TI-83+/84+ Graphing Calculator, Part I SF1 Learn TI-83+/84+ graphing calculator skills for the pre-calculus classroom. Methods align with NCTM Principles and Standards for School Mathematics and Common Core State Standards. Engage in real-world activities you can immediately use in the classroom. Understand functions, inverses, transformations, composition of functions, absolute-value functions, polynomials, inequalities, logarithms, power and exponential functions, piecewise functions, systems of equations, trig functions and identities, periodic data, polar graphs, parametric equations, curve fitting, conic sections, complex numbers, vectors, velocity graphs, data analysis, and other topics.</p>
<p>5145-Algebra II with the TI-83+/84+ Graphing Calculator SF1 Learn new and innovative ways to effectively teach algebra using the TI-83+/84+ calculator. Engage in real-life activities aligned with NCTM Principles and Standards and Common Core State Standards that you can immediately use in algebra I and II classrooms. Research instructional implications of technology use for teaching mathematics. Explore topics in the secondary mathematics curriculum, including functions (linear and quadratic) and relations, transformations, log and exp functions, factoring polynomials, min/max problems, data analysis, regression and correlation, stat plots, curve fitting, matrices, trigonometry, finance, polar graphs, fractals, and simple programming.</p>	<p>5153-Pre-Calculus with the TI-83+/84+ Graphing Calculator, Part II SF1 Learn to use TI-83+/84+ to teach important mathematical concepts in pre-calculus curriculum. Engage in real-world activities immediately applicable for teaching all pre-calculus students. Methods align with NCTM principles and standards and Common Core State Standards. Research national technology standards and explore instructional implications for classroom technology use. Understand step, piecewise, and composite trig functions; polar conics; hyperbolic solutions to mixture problems; log transformations; median-median regression; vectors, catenaries, vector forces, and inclined planes; rate of change and tangent lines; sequences and series; and problem-solving.</p>
<p>5147-Trigonometry with the TI-83+/84+ Graphing Calculator SF1 Learn new and creative ways to effectively teach trigonometry concepts using the TI-83+/84+ graphing calculator with methods that align with NCTM Principles and Standards for School Mathematics and Common Core State Standards. Engage in hands-on activities you can immediately use in the trigonometry classroom to teach all students. Explore topics such as angle measures, solutions of right and oblique triangles, trig and circular functions and their graphs and inverses, trig identities and equations, polar graphs, linear and angular velocity, complex numbers, data analysis, and modeling.</p>	<p>5160-Environmental Studies with Math Applications; MS, HS, and COL Explore the interdisciplinary connection between math and environmental studies. Use real-world data and research to develop analytical and quantitative skills and gain confidence interpreting current environmental trends. Discuss global warming, CFC production, carbon dioxide emissions, greenhouse gases, pollution, recycling, endangered species, tornadoes, volcanoes, and severe weather. Discover real-world activities, aligned with the NCTM Principles and Standards for School Mathematics and Common Core State Standards, you can immediately use in the classroom. Create exciting lessons and implement meaningful activities that motivate students with variable interests, experiences, and abilities.</p>

<p>5150-College Algebra with the TI-83+/84+ Graphing Calculator SF1 Learn TI-83+/84+ calculator skills for college algebra. Methods align with NCTM Principles and Standards for School Mathematics and Common Core State Standards. Research national technology standards and explore instructional implications for technology use. Engage in real-world activities you can immediately use to teach all students. Understand real and complex numbers; relations, functions, and inverse functions; linear and quadratic higher-degree polynomials; rational, absolute value, piecewise functions and their graphs; linear and non-linear inequalities; composite functions, exp and log functions; matrices; conic sections; sequences and series; finance, modeling, and problem-solving.</p>	<p>5010-Business Statistics: Data Analysis with Microsoft Excel SF2 Learn to effectively use spreadsheet functions and data analysis tools of Microsoft Excel to analyze, summarize, and interpret quantitative and qualitative business data. Develop skills to put information and data to work to make informed business decisions. Engage in hands-on activities you can immediately use to teach all students. The following topics are covered: Spreadsheet basics; graphs, charts, and plots; frequency tables; descriptive and summary statistics; percentiles, quartiles, and ranking; combinations, permutations, and binomial probabilities. Methods align with ISTE National Educational Technology Standards.</p>
<p>5210-Science and Math Through the Standards; HS & COL Increase student understanding of science and math concepts. Explore a variety of inquiry-based, hands-on life, physical, health, and earth science activities designed to motivate a diverse student population. Stimulate students with varied interests, experiences, and abilities by implementing real-world activities in their environments to help them achieve higher science and math competency. Using the national science standards, NCTM Principles and Standards for School Mathematics and Common Core State Standards as frameworks for instruction. Acquire skills to implement the inquiry approach to teaching math and science.</p>	<p>5231-Science and Math Through Multiple Intelligences and Brain-Based Learning; MS, HS & COL Discover instructional implications of the latest brain research/theories and their relationship to best practices for teaching inquiry-based science and mathematics. Review Gardner's multiple intelligences theory and apply to your teaching. Develop lessons that initiate each student's primary intelligences and create effective patterns for learning in the science and math classroom through a rich assortment of real-world activities in life science, physical science, health science, and earth science. Combine theory and practice to create exciting and motivating life-learning experiences for today's young students and adult learners.</p>
<p>NEW! 5146-Algebra I with TI-Nspire Technology; HS & COL TI-Nspire technology is a powerful tool for cultivating algebraic reasoning skills. Explore classroom-ready Algebra I activities to teach all students and align with Common Core State Standards. Topics covered are scientific notation, functions and graphs, linear, quadratic and exponential growth, basic trigonometry, one-variable statistics and data plots, central tendency, data collection activities, and matrices for solving systems of linear equations. Evaluate and reflect on current TPACK research to make effective use of technology in support of student learning.</p>	<p>5202-Prepare Your Students for the Math College Placement Test Learn tools to help college-bound students prepare for the math college placement test (CPT). Gain insight into current assessment and placement practices at community colleges, colleges, and universities; the various types of CPTs currently used; and remediation trends and their impact on students' educational advancement. Identify content knowledge required to gain access to college-level math, discover the challenges students face during test taking, and learn strategies to improve students' outcomes. Design an action plan to help students of diverse educational and multicultural background improve their college success.</p>

Online Courses – 3 Sem Credits / 5 Qtr Grad Credits

<p>8101: Statistics and Technology Integration SF2 Acquire skills and knowledge to teach and learn in the digital age. Use modern technology as a means to improve the construct of statistical knowledge. Analyze current mathematics education research on pedagogical approaches to teaching and learning statistics using handheld and spreadsheet technology. Examine and critique lesson design units for topics such as descriptive statistics, probability distributions, linear regression and hypothesis testing. Design instructional units that foster development of analytical skills and increase problem solving ability of all statistics students. Content aligned with ISTE Standards.</p> <p>Prerequisites: Basic computer, Microsoft Excel and TI83/84Plus graphing calculator skills are required.</p>	<p>8102: Topics in College Algebra and Graphing Technology SF1 Strengthen understanding of mathematics and use technology as a means to enhance the construct of mathematical knowledge. Research current pedagogical approaches and implications of teaching mathematics with handheld technology. Examine and critique lesson design units for topics such as linear functions, quadratic, polynomial functions, exponential and logarithmic functions; curve fitting; and matrices. Design instructional units that foster development of analytical skills and increase problem solving ability of all college algebra students. Content is aligned with ISTE National Educational Technology Standards.</p> <p>Prerequisites: Basic computer and TI83/84Plus graphing calculator skills are required.</p>
<p>8103: Topics in Trigonometry and Graphing Technology SF1 Deepen understanding of trigonometry concepts and use graphic technology as a means to improve the construct of mathematical knowledge. Analyze current mathematics education research on pedagogical and andragogical approaches to teaching and learning with technology. Examine and critique lesson units for topics such as basic and composite trig functions, trig identities, polar graphs, and periodic modeling. Design lessons that foster development of analytical skills and increase problem solving ability of all students. Content aligned with ISTE National Educational Technology Standards.</p> <p>Prerequisites: Basic computer and TI83/84Plus graphing calculator skills are required.</p>	<p>8104: Topics in Analytic Geometry & Calculus and Graphing Technology SF1 Deepen understanding of analytic geometry and calculus concepts and use technology as a means to improve the construct of mathematical knowledge. Analyze current mathematics education research on the complex relationship between technology, pedagogy and mathematical content within the framework of TPACK. Emphasis is on recursive, piece-wise, and absolute-value functions, parametric equations, conics, rate of change, vector forces, derivatives, and Riemann sum. Examine and critique existing lessons to design effective learning environments and experiences for all students. Content aligned with ISTE Standards.</p> <p>Prerequisites: Basic computer and TI83/84Plus graphing calculator skills are required.</p>
<p>8105: Linear Regression Models and Modern Technology Acquire skills and knowledge to teach and learn in the digital age. Use graphic calculator and spreadsheet technology as a means to improve the construct of mathematical knowledge. Analyze current mathematics education research on ICT-Assisted PBL. Examine and critique lesson design units for topics such as linear, piece-wise linear, log-linear, multiple and median-median regression, correlation and multicollinearity. Develop new learning practices that foster development of analytical skills and increase problem solving ability of all students. Content aligned with ISTE Standards.</p> <p>Prerequisites: Basic computer, Microsoft Excel and TI83/84Plus graphing calculator skills are required.</p>	<p>8106: Mathematical Modeling and Digital Learning SF1 Apply algebraic concepts to develop mathematical models and deepen understanding of mathematical content knowledge. Emphasis is on non-linear models, supported by use of graphic technology, and effective communication of quantitative concepts and results.</p> <p>Analyze current mathematics education research on teaching and learning with ICT. Examine and critique existing instructional units for topics such as logarithmic, log-linear, exponential, hyperbolic, power, periodic and parametric models and design effective learning environments and experiences for all students. Content aligned with ISTE National Educational Technology Standards.</p> <p>Prerequisites: Basic computer, Microsoft Excel and TI83/84Plus graphing calculator skills are required.</p>

Other Info

Graduate Credit: Graduate credit is available for each course through various universities.

Credit Equivalency: Quarter graduate credits transfer to semester hours according to the institution's semester equivalency. Most colleges/universities/districts convert quarter graduate credits to semester graduate credits using a factor of 2/3, i.e. 3 quarter graduate credits are equivalent to 2 semester graduate credits.

Course Design

2 Sem Grad / 3 Qtr Grad Credit COURSES – Self-Paced and Online

Scope: Project-Based with Some Research

- Focus is on real-life, hands-on projects you can immediately use in your classroom.
- Perform some research.
- Continuous enrollment, i.e. sign up any time, and complete within 12 months.
- Gain the knowledge you need to meet the challenges of your classroom at your own pace and on your own schedule.
- Curriculum does NOT require any presentation or application of the material in the classroom while taking the course.
- All assignments can be completed on your own and outside the classroom.
- If questions arise, [the facilitator is only an email or a phone call away.](#)

3 Sem Grad / 5 Qtr Grad Credit COURSES – Self-Paced and Online

Scope: Research-Based with Project Applications

- Focus is on mathematics education research and present findings via scholarly research papers.
- Continuous enrollment, i.e. sign up any time and complete within 12 months.
- Complete, examine and critique existing hands-on projects.
- Delivery is fully online.
- Submit assignments anytime between start and end date.
- Courses provide a highly interactive learning environment.
- Asynchronous student/student and student/teacher interaction.

Cost

	2 Sem Grad / 3 Qtr Grad Credits	3 Sem Grad / 5 Qtr Grad Credits
Tuition	\$440	\$660
Grad Credit Fee	Varies by University	Varies by University
Special Fee SF	SF1 \$40 TI Textbook, SF2 \$50 Excel Textbook, SF3 \$40 Quant Lit Textbook	



For more information visit www.adventures-in-education.com, write to adventuresinedu@earthlink.net or call 630-877-4006.



TRAINING FOR THE PROFESSIONAL EDUCATOR

Tel 630-877-4006 adventuresinedu@earthlink.net

FAQ

Question 1: Are you an accredited institution?

Courses are offered cooperatively through various universities which are accredited institutions.

Question 2a: How do I register?

See www.adventures-in-education.com.

Question 2b: Why pay Graduate Credit Fee?

You have two options:

(a) If you register **WITH** graduate credit:

An **Official Transcript** can be requested upon completion of course from the respective university/college.

(b) If you register **WITHOUT** graduate credit:

You will receive a Letter of Completion and a **Certificate of Completion** from

Adventures In Education, which states the course, grade, clock hours, and term course was taken.

Note: An official transcript will NOT be available, only a certificate of completion from Adventures In Education.

Question 3: Credit Applicability

Teachers generally apply the graduate credit toward certificate renewal, state continuing education requirements and/or lane change requirements, advancement on the salary scale, promotions within their school or toward teacher recertification. Due to the variation in requirements among colleges/school districts, it would be best if you contacted the appropriate individual at your school district/college to confirm the application, transfer and conversion of credits. This will assure that all questions are answered to your and your school's satisfaction.

If you wish to apply the credit toward graduate mathematics requirements/elective credits for eligibility to teach college-level mathematics consult with the respective college/university **PRIOR** to enrolling for credit. It is the discretion of the respective educational institution to apply these credits and the responsibility of the student to verify acceptance of these credits toward this requirement prior to enrollment.

If you wish to apply the credit toward an advanced degree, consult with your academic advisor/college to verify the course will apply to your program prior to enrolling for credit.

Question 4: Credit Conversion

Most colleges/universities convert quarter graduate credits to semester graduate credits using a factor of 2/3, i.e. 3 quarter graduate credits are equivalent to 2 semester graduate credits. We STRONGLY suggest that you contact the appropriate individual at your school/college to confirm the transfer and conversion of graduate credits. This will assure that all questions are answered to your and your school's satisfaction.

Question 5: Course Transcripts

Official transcripts are available upon completion of the course provided you registered for graduate credit.

Question 6: How much time do you have to complete a course?

From time of registration you are allotted ONE YEAR to complete the course.

Question 7: When are courses offered?

Courses are offered all year long. See www.adventures-in-education.com for details.

Question 8: Prerequisites and other requirements?

Prerequisites: A bachelor's degree from an accredited institution.

There are no other prerequisites or requirements except completion of the course within the specified time frame. No meetings are scheduled for any of our courses as they are online courses. The curriculum of our courses does not require any presentation or application of the material in the classroom while taking the course. All assignments can be completed on your own and outside the classroom.

Question 9: Do you offer a Degree?

If you wish to apply the credit toward an advanced degree, consult with your academic advisor/college/university to verify the course will apply to your program prior to enrolling for credit.

Question 10: Is Financial Aid Available?

Fed Financial Aid is only available for course work used toward a degree or endorsement or license, and the student has to be officially admitted.

Question 11: About the Instructor and AIE

Adventures In Education, Inc. (AIE) is an organization dedicated to the advancement of excellence in teaching. Our primary objective is to provide unique and self-paced online learning courses in Math, Science and Technology that enable professional educators to immediately apply the skills they acquire. The approach taken is new, unique, and extremely effective. Courses are aligned with standards for teachers to renew a teaching license, advance their salary and meet professional development requirements in their state.

Elisabeth (Liz) Knowlton is the facilitator for all courses. She received her BS in Mathematics and MS in Mathematics with Emphasis in Statistics from Northern Illinois University, and her PhD from Northcentral University. She has over 25 years teaching experience at the college level.

Liz also taught a variety of workshops for elementary and secondary teachers for Professional Development and provided In-Service training for elementary and secondary teachers for school districts in the Chicago area and volunteered at the local grade school. Over the years she

attended numerous elementary, secondary and post secondary school mathematics workshops/courses and authored several books.

Other accomplishments: Passed Actuarial Exams 100, 110, and 120; Bilingual German/English; Actuarial Analyst for Allstate Re and Statistical Consultant for Abbott Laboratories.



For more information visit www.adventures-in-education.com, write to adventuresinedu@earthlink.net or call 630-877-4006.