OPEN NH Online Professional Education Network New Hampshire

Individual and District Cohort Registration

The regular cost to take a course as an individual with OPEN NH is $130. Early bird discounts of $10 for registrations prior to two weeks before the course start date are applied. District cohort online learning groups are encouraged. Schools, districts, or SAUs can register cohorts of teachers, which will result in a cost savings to the district while ensuring that individual teachers are enrolled as part of a supportive local cohort. **OPEN NH** offers different district cohort savings deals.

Registration	Teachers	Courses	Cost	Savings	Cost/Course
Individual	1	1	$130		$130
Early Bird	1	1	$120	$10	$120
District 2+2	4	Up to 2	$440	$80	$110
District Cohort	25	Up to 25	$2625	$625	$105

District Deals are non-refundable. Contact the **OPEN NH** Project Coordinator for more information. A new online registration system for individuals is available on the website. Details and District Cohort registration forms are provided on the OPEN NH website at www.opennh.org. Check the website for updates and details.

** Our instructors are specially trained in online professional development course facilitation by the Education Development Center as part of the e-Learning for Educators Initiative.*

** Not all courses are offered each session. Other Courses may also be appropriate for your professional development needs. The complete list of course descriptions and schedules are available online at www.opennh.org.*

Online Registration available in 2011. Credit Cards. Checks. Purchase Orders.

New Hampshire e-Learning for Educators

www.inacol.org www.thinkfinity.org

iNACOL International Association for K-12 Online Learning — *Member*

Thinkfinity | verizon foundation — *State Partner*

For More Information

Stan Freeda OPEN NH Project Coordinator
NH Department of Education
603.271.5132 sfreeda@ed.state.nh.us
Visit Open-NH on the web at: www.opennh.org

New Hampshire e-LEARNING FOR EDUCATORS

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Professional Development that Supports

Mathematics Instruction

OPEN NH e-LEARNING FOR EDUCATORS

Quality Professional Development at an affordable price

www.opennh.org

Convenient Course Delivery

Each course unit runs from Wednesday until the following Tuesday. The courses are divided into 7 units, beginning with an optional face to face orientation meeting and an online course orientation week. Weekly participation requires online readings, projects, tasks or assignments, and discussions. An internet connection is all that is required for access to the course. Because the courses are discussion driven, it is important to be present online regularly throughout the week and to participate in the discussions as they happen. Participants completing the course receive a certificate for 35 contact hours of course participation.

Courses Supporting Mathematics Instruction

MA-01 Getting Ready for Algebra by Using Virtual Manipulatives

This course will prepare teachers to use virtual manipulatives to help their students get ready for algebra. Participants will explore the 17 Algebra Readiness indicators developed by the SREB (Southern Region Education Board) and ETS (the Educational Testing Service), including the five "process" indicators and the twelve "content and skills" indicators. Participants will learn how they can use virtual manipulatives and other technologies to help their students gain proficiency in order to be successful algebra students. Participants will complete a technology enhanced classroom project for their students that is aligned to NCTM and state standards.

MA-02 Differentiating Instruction to Accommodate Learning Styles in Mathematics

Addressing the individual learning styles of students can be a challenge for teachers. The World Wide Web contains a vast number of resources to assist teachers in understanding and planning for the different avenues through which students learn best. Suitable for participants of all grade levels, this course will review a range of web sites providing information about learning theory related to learning styles and multiple intelligences, as well as resources to assist teachers in both identifying students' learning styles and intelligences and engaging students in activities which best suit those styles and intelligences.

MA-03 Using Patterns to Develop Algebraic Thinking

In this course for middle school teachers of mathematics, participants will explore the nature of algebraic thinking and develop strategies for encouraging the development of algebraic thinking in their students. Through readings, video clips, and examination of student work, participants will learn to: 1) recognize and build on opportunities for algebraic thinking in a variety of mathematics contexts; 2) analyze their students' algebraic thinking; and 3) pose questions that encourage the development of algebraic thinking. Participants will also produce a lesson plan that incorporates the key concepts of the course.

MA-04 Using Real Data in Math Classrooms

Technology tools and web-based materials provide important ways for math educators to meet local and national standards that emphasize problem solving and making connections between mathematics, other disciplines and the real world. This course will enable middle and high school math teachers the opportunity to explore a range of web-based resources and exemplary projects which utilize technology to support these goals. Participants will learn how to find sources of real data on the web and explore technology tools that help students model, analyze, visualize and make sense of these data.

MA-05 Using Technology in the Elementary Math Classroom

In this course, participants will explore technologies that can be used in elementary math instruction in kindergarten through sixth grade. Participants will review NCTM and state standards and examine the ways in which tools like virtual manipulatives, calculators, spreadsheet programs, online data sources, and applets can support these goals. In particular, the course will address ways in which technology can support elementary algebra, geometry, and data analysis standards. Participants will leave the course with complete lesson plans for integrating technology into instruction in their own classrooms.

MA-06 Using Models to Understand Fractions

This course provides an opportunity for teachers of grades 3 through 5 to explore how mathematical models can be used to promote a deep understanding of fractions and fractional relationships. This course offers alternative ideas for fraction instruction and is premised on the belief that students can come to understand fractions in a number of different ways. A variety of readings, applets, and videos form the content of this course, and participants are expected to share ideas with their online colleagues in the discussion forums.

MA-07 Algebraic Thinking in the Elementary School

This course will enable you to learn how to include opportunities in the upper elementary curriculum for children to think about basic algebraic concepts, and to appreciate the importance of algebraic thinking. You will read and discuss relevant research on the importance of algebraic thinking in elementary school instruction and explore a variety of problems that can be used with your students to develop their algebraic thinking.

MA-08 Proportional Reasoning

You will complete classroom tasks that illustrate ways to help your students develop stronger conceptual understanding about the components of proportional reasoning. You will explore both video and written examples of student work and will conduct a student interview in order to reflect on how students approach proportional reasoning and how to identify evidence of proportional reasoning among students. For the final project, you will create a lesson that targets a component of proportional reasoning and incorporates questioning techniques learned in the course.

MA-09 A Conceptual Introduction to Functions: Using Visual Models

In this course, you will learn strategies to help students in grades 6-8 develop a strong conceptual understanding of function through the use of several different visual models. You will become familiar with common student misconceptions related to functions, as well as classroom tasks that address these misconceptions. You will complete and create classroom tasks that will allow your students to make connections between multiple representations of functions and to explore both linear and non-linear functions. In addition, you will explore the use of technology in supporting student learning about functions and will learn to use an analysis tool to evaluate various online applets.

MA-10 Promoting Mathematical Discourse in Grades K-4

Ask a group of elementary school students to name a language, and chances are they will not reply “mathematics.” Yet from the time young children begin going to school, they are expected to discuss their mathematical thinking using the vocabulary, structures, and ideas of mathematics. In this module, participants will learn why communicating about mathematics is important for young students, as well as why it can be so difficult for them. They will consider how math and literacy instruction intersect in the elementary classroom, and explore ways of pushing students to explain their thinking beyond “I just know the answer.” Participants will learn questioning strategies that can help students communicate, justify, and defend their mathematical ideas, and watch videos of real classroom teachers using these strategies.

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