

**Using Patterns to Developmental Algebraic Thinking (online)**  
**Course#**F09.PRDV.79217COA One credit

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**Description:** Focuses on the introduction of algebraic thinking in the classroom. Content includes the study of patterns, variables, equations, and functions as they impact the classroom mathematics. Participants will also locate and evaluate resources for classroom use in integrating algebraic thinking.

**Note:** This course is designed for elementary through high school teachers.

**Course Objectives:**      **Students will...**

- Examine Patterns in Word Problems
- Use Excel to help students visualize patterns
- Develop lesson plans for teaching mathematical patterns

**Week One:** Word Problems with Patterns

**Week Two:** Using Excel to help teach Algebraic Patterns

**Week Three:** Moving from patterns to formulas

**Week Four:** Final Lesson Plan.

### **Grading**

Your grade will be determined by the following assignments:

- I. Reading Reflections: The reflections will be graded on a scale of 1 to 10.

II. Projects: A rubric will accompany each project.

\*\*Late assignments will be marked down a letter grade for every three days they are late.

**Additional Notes:** Students select the literature that is appropriate for their grade level.

## Technical Requirements:

The following is recommended by Framingham State College: To be successful in an online course you will need access to an Internet-ready computer (PC or Mac) with high-end capacity in terms of speed and RAM.

We recommend at least 500-600 MHz and 64 MB RAM and that students use Microsoft Internet Explorer as their Internet Browser. (Explorer is available for FREE download at [www.microsoft.com](http://www.microsoft.com).) When working at home, most online students find that a 56K modem provides very acceptable Internet access. Cable or DSL will work faster. For some courses, students will need to install Windows Media Player, to take advantage of online streaming video tutorials and course materials, or download Adobe Acrobat to view readings from the Web. These applications are available for free at the web sites listed below. If additional tools are needed to complete an assignment, instructors will provide the necessary information within their Blackboard course site.

Windows Media Player

<http://microsoft.com/windows/windowsmedia/en/download/default.asp>

Adobe Acrobat Reader

<http://www.adobe.com/products/acrobat/readstep.html>

New in Blackboard 6 Students participating in the real time chat feature of Blackboard are required to download a Java Applet the first time they access the Lightweight or Virtual Classroom feature. This application is free and available within the Blackboard course site.

When you turn in work, please include your name and assignment number at the beginning. If you are turning in group work, please make sure everyone's name is on the top of the paper.