

# SCIENCE/MATH APPLICATIONS FOR NUTRITION/EXERCISE

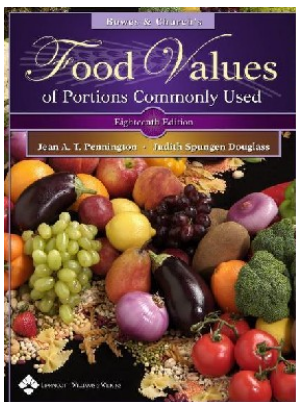
**COURSE REGISTRATION/TIME/PLACE:** West Virginia University (WVU), **Web Course** (VISTA platform), CI 692I, Section 7DA, CRN 71402, **Summer II 2005, first 3 weeks (July 5-21)**. Course is on-line except required live attendance on WVU campus for **one** class session, July 5 or 6 (your choice), 1-5 pm. **Email instructor [jim.rye@mail.wvu.edu](mailto:jim.rye@mail.wvu.edu) no later than July 1** with attendance choice (July 5 or 6) and to learn location of that class session. WVU on-line registration and course schedule: <http://www.arc.wvu.edu/courses>

**COURSE DESCRIPTION:** CI 692I is an innovative web-based graduate course for **grade 4 through secondary** teachers of science or mathematics. The focus is to integrate nutrition and physical activity content, which is highly applicable to students' lives, into science and math teaching. Content facilitates **inquiry-based** instruction and will be related to **WVCSOs**. Topics include:

- **pedometers** as technology tools for fun, fitness, physics, and statistics;
- **food composition** as a data source for proportional and algebraic reasoning, exploring relationships and variability, examining physical properties of matter, and initiating the study of energy transformation;
- **MS Excel™** as a technology tool to understand variables/experimental design, develop/use equations for data analysis and problem solving, and create/communicate with graphic representations;
- **human energy expenditure data** for a variety of physical activities to hone skills in measurement and unit conversion and contrast with energy intake data;
- **energy balance** as a current concept for “science in personal and social perspectives” that has a variety of mathematical applications.

**TECHNOLOGY NEEDS:** Include an Internet connection (broadband is better than dial-up) and a computer that has sufficient memory and speed to facilitate learning/communicating in an on-line environment; PowerPoint™, Adobe Acrobat Reader™, Excel™ and word processing software; skills to word process, organize electronic correspondence and files, use a web browser/search Internet, do email (includes attachments), read PowerPoint™ and Adobe Acrobat™ (.pdf) files.

## REQUIRED TEXT AND READINGS:



Pennington, J., & Douglass, J. (2004). *Bowes and Church's Food Values of Portions Commonly Used*. 18<sup>th</sup> Edition. Philadelphia: Lippincott, Williams & Wilkins. Text available at WVU College Bookstore.

All others are on-line and include readings from:

- *School Science and Mathematics*
- *The Science Teacher*
- *Environmental Health Perspectives*
- Institute of Medicine and Surgeon General
- Centers for Disease Control and Prevention
- President's Council on Physical Fitness and Sports