

Online CONFICHEM conference, January 27, 2004 - February 10, 2004

## Teaching Science to Everyone

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[Dr. Wier's homepage](#)

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### Abstract

Five years ago the general education requirements for undergraduates at St. Bonaventure University underwent a major revision; our faculty replaced distribution requirements with a fixed set of required courses in a newly created [Clare College](#). The new science requirement, Clare 102, was called "Inquiry in the Natural World" consisting of a lecture (3 credits) and a lab (1 credit). The course uses an historical approach to examine key developments in Physics, Chemistry, and Biology. The emphasis is on the scientific process, i.e. how science attempts to advance. Clare 102 is the only science course that non-science majors must take at the University. Learning objectives, active learning exercises, and pre- and post-course testing are incorporated in the course design. Eight semesters of experience later, we review what worked and what did not work.

Dr. Wier was the Clare 102 course coordinator during its first year of existence (fall 1999 & spring 2000); he has taught a lecture section of the course four times. Dr. DiMattio has been the course coordinator since fall 2000; he has taught a number of lecture and lab sections.

We are using the Spring 2003 version of the course for most of the specific examples.

Links to official descriptions of Clare 102 as adopted by our Faculty Senate: [short](#) and very [long](#) versions.

### [Clare 102 Lecture](#)

When a student registers for a given lecture section, she is given the choice of two lab sections. (Each lab section holds a maximum of 16 students. The lab exercises are

designed for groups of two or four students.) The 32 students in a given lecture section are well acquainted with at least half the students in their class from a common lab experience. Likewise, the students in a given lab section have the same lecture instructor and the resulting common conceptions (or misconceptions) on any given topic. This familiarity also aids group work in the lecture section .

[Clare 102 Lab](#)

[The Faculty Role](#)

[Assessment](#)

[Future Developments](#)