

**NSF ATE DUE 0603308**  
**Biotechnology Curriculum Development and Dissemination Project**  
**Goals and Activities Report**

**Goal 1:** Develop courses to expand life and agriculture sciences that will provide students with a unique opportunity to utilize scientific discovery procedures to understand modern animal genome biotechnology.

Activities:

- Course development: two courses have been developed and will be piloted fall 2007 term: “*Introduction to Bioscience*” which is a five-credit science course at State Fair Community College, and a four-credit science course at Iowa Lakes Community College and Northeast Iowa Community College. “*Introduction to Ethics*” has been enhanced through utilization of emerging biology and agriculture-based case studies and current events.
- A third course, *Introduction to Bioscience II*, has been developed and will be piloted at State Fair Community College and Iowa Lakes Community College spring 2008 term.
- Integration of the courses varies by partner community colleges.
  - Iowa Lakes piloted the *Introduction to Ethics* course spring 2007 term.
  - Iowa Lakes and Northeast Iowa Community College plans to pilot the *Introduction to Bioscience* course fall 2007 term.
  - State Fair Community College will pilot the *Introduction to Biotechnology I* course fall 2007 term and *Introduction to Biotechnology II* course spring 2008.
  - Southeastern Community College will integrate elements of the course into existing curriculum, as documented by syllabus and course activities outlined and submitted to the project administrative team for inclusion in project year two report.
- Baseline project data by term (fall 2006, spring 2007) has been identified at each partner college, and potential partner high school. Data will be analyzed and added to project year one reports by July 31, 2007.

**Goal 2:** Encourage students to investigate career possibilities in the animal-biotech industry.

Activities:

- Industry employment projection and wage surveys have been sent out to biotechnology-related companies in Iowa, Minnesota, Missouri and South Dakota (target areas for partner colleges). Responses will be used to create a brochure outlining biotechnology career pathways. The brochure may be printed prior to the Summer Institute. A copy of the brochure will be uploaded to the project web site and included in the annual project report.
- Informational displays for college career fairs and summer 2007 summer orientations will include informational brochure identified previously.
- Iowa Lakes project faculty will present biotechnology career opportunities at a career fair (April 4, 2007) on the Emmetsburg campus (10<sup>th</sup> and 11<sup>th</sup> graders). An informational display will also be set up. 856 students are registered to attend the event. Students attending the career session will complete interest profile cards and event evaluation.
- In Iowa, rising 9<sup>th</sup> grade students draft a career pathway and register for high school courses. The informational brochure will be sent to area guidance counselors, which will help support student enrollment (and continued enrollment) in math and science.

**Goal 3:** Provide professional development opportunity for secondary teachers and college faculty that will enable them to better instruct and advise students to explore life science careers.

Activities:

- National Biology Teacher Association Conference, October 2006, Stacie Cornwall attended the conference and will present a session at the Summer Institute.
- National Science Foundation ATE PI Conference, October 2006, Neal Williamsen, Marvin Carlson, LaRoy Brandt, and Jolene Rogers attended the conference, project displays and student exhibits.
- Renewable Fuels Association National Conference, February 2007, Cal Christensen (*Agriculture Professor*) and David Peterson (*Biomass Energy Processing Program Coordinator*) attended the conference and will present a session at the Summer Institute.
- Summer Institute will be hosted on the Iowa Lakes Community College Emmetsburg Campus June 19-21. Registrations are still being received. To date, 26 secondary and community college agriculture and life science instructors will attend.
- Biotechnology I instructor course will be held on the Iowa Lakes Emmetsburg Campus June 18-20. Michael Zeller, Biotechnology Education Outreach Center Director will teach this one credit, graduate-level course.
- Biotechnology II instructor course will be held on Iowa Lakes Emmetsburg Campus June 20-22. Michael Zeller, Biotechnology Education Outreach Center Director will teach this one credit, graduate-level course.

**Goal 4:** Disseminate project results to a national audience through professional conferences and publications.

Activities:

- Will establish a project website <http://www.iowalakes.edu/nsfbiotech>. The web site will also be featured under the quick links option and will be “announced” on the Iowa Lakes home page in May and June (annually) to provide easy access for instructors interested in learning more about the summer conference and resource materials. The website has been developed by a student and the webmaster is reviewing it, to assure it meets with ADA requirements and the links work correctly. The website is anticipated to be live by April 15, 2007.