



Features that make it easy for students to learn

- Content is structured in manageable segments moving from simple to complex.
- Topics unfold in logical sequence with helpful examples, illustrations and reviews.
- Text is clear and concise with a simple vocabulary and well-defined industry terms.
- Course competencies are reinforced in a variety of ways, including classroom and lab activities, role plays and case studies, field trips to manufacturing sites, and learning from guest speakers from local companies.



BioWork Units of Study

Unit 1. *Your New Job*. Orientation to the process manufacturing industries.

Unit 2. *Working Safely*. Basic safety attitudes and approaches.

Unit 3. *Building Quality into the Product*. Say what you do and do what you say.

Unit 4. *Measuring Process Variables*. The metric system and variables critical to controlling processes.

Unit 5. *Transforming Matter*. Basic chemistry for process technicians.

Unit 6. *Learning the Nuts and Bolts*. Process manufacturing equipment, systems, and plant utilities.

Unit 7. *Controlling the Process*. Basic principles of feedback control systems.

Unit 8. *Maintaining Sterile Processes*. Working in aseptic manufacturing environments.

Unit 9. *Growing Living Cells*. Bioprocess manufacturing principles and operations.

BioWork is taught only through North Carolina Community Colleges. Check with your local college for availability.

BioWork can be taught to the public through Continuing Education or customized as part of an industrial training package. Selected units can be taught based on company or employee needs.

Companies participating in the development of *BioWork* include

Eisai
Bayer
Biogen
Diosynth
Ajinomoto
Novozymes
Stockhausen
Corn Products
Wyeth-Lederle
GlaxoSmithKline
Burlington Research
E. I. DuPont de Nemours
NovoNordisk Pharmaceuticals
DSM Catalytica Pharmaceuticals

For further information regarding *BioWork*, contact The North Carolina Biotechnology Center Education and Training Program at (919) 541-9366 or the North Carolina Community College BioNetwork at (919) 807-7183.