

SCI 115 – Assignments and Rubrics

Assignment 2: Gene Technology

Due Week 8 and worth 120 points

Gene technology carries with it social and ethical implications—many of which engender personal views and discussion.

Select one (1) of the following biotechnology topics to write about:

- Genetically modified crop plants
- Genetically modified microorganisms
- Genetically modified animals
- Personal genomics and / or personalized medicine for humans
- Gene therapy

Write a four to six (4 to 6) page paper on your chosen topic. Organize your paper into sections corresponding to the following requirements:

1. Biological basis. Describe the technology. Discuss what it accomplishes. Elaborate on the scientific principles that make this technology possible. Your goal in this section of the paper is to show the instructor that you understand the underlying science behind the technology. Describe how exactly the technology works. Discuss the biological principles that underlie this technology.
2. Social and ethical implications. Without disclosing your personal view about this technology, provide an analysis of its social and ethical implications. State the ethical concerns apparent in the use of this technology. Discuss the benefits and risks. Your goal in this section is to look at all sides of the issue. In the next section, you will give your opinion.
3. Personal viewpoint. In the previous section, your goal was to be as objective as possible, to look at all sides of the issues. In this section, your goals are to give a personal opinion about the technology and provide a justification of that opinion.
4. Use at least three (3) quality resources in this assignment, in addition to the course text. **Note:** Wikipedia and similar Websites do not qualify as quality resources. The body of the paper must have in-text citations that correspond to the references. Integrate all sources into your paper using proper techniques of quoting, paraphrasing and summarizing, along with proper use of in-text citations to credit your sources.

Your assignment must follow these formatting requirements:

- Be typed, double spaced, using Times New Roman font (size 12), with one-inch margins on all sides; citations and references must follow APA or school-specific format. Check with your professor for any additional instructions.
- Include a cover page containing the title of the assignment, the student's name, the professor's name, the course title, and the date. The cover page and the reference page are not included in the required assignment page length.

The specific course learning outcomes associated with this assignment are:

- Examine DNA structure, and function, gene expression, and control.
- Discuss the various applications of genomics and biotechnology.
- Use technology and information resources to research issues in biology.
- Write clearly and concisely about biology using proper writing mechanics.