

General Education Common Graded Assignment: **Biology 100**
Research paper: Gender Verification in Sports

Exploring Biology is a general education course designed to assist students in the development of critical life skills. One of the goals of this assignment is to assess student competence for each of these objectives:

- I. **Written and Oral communication:** apply the scientific method to simple problems and identify areas of potential bias and its ethical implications (CCO2),
- II. **Critical Analysis and Reasoning:** explain diversity of species and within species (CCO7),
- III. **Information Literacy:** find, evaluate, use and cite valid sources in scientific reasoning and/or inquiry, and read and summarize information from basic biological publications (CCO3),
- IV. **Scientific and Quantitative or Logical Reasoning:** provide examples in which intellect, scientific method, and technology have been used to understand living things (CCO10),
- VI. **Local and Global Diversity:** explain how scientific advances in medicine, genetics, and biotechnology impact humans in different cultures and how these advances may affect personal decisions (CCO8).

ASSIGNMENT:

Gender verification at the elite level of competition is a controversial topic. The purpose is to detect male imposters who would potentially have an unfair competitive advantage over female athletes.

The reality of sex-determination is complex, and it has been used differently in sports throughout times with different degrees of unethical practices.

ASSIGNMENT INSTRUCTIONS:

Respond to the following in several well-written paragraphs using academic English:

1. **Find a case** in sports in between the years 1999-present that created a gender verification controversy (*women athletes that failed a chromosomal gender verification test*). In your answer include the following:
 - a. Name of the Athlete
 - b. Country and continent of origin of the athlete.
Include two maps: a political map of the country in which the name of the country is visible and a political map of the continent with the continent's name visible in one page.
Provide a proper citation with each image.
 - c. Sport event: name, place and year.
Include two maps: a political map of the country in which the name of the country is visible and a political map of the continent with the continent's name visible in one page.
Provide a proper citation with each image.

2. **Explain the controversy and reaction** answering the following questions:
- What was the reaction of the athlete's hometown/country when the news came out? Do you think the athlete's cultural environment was supportive? Why or why not? Support your answers with properly cited evidence.
 - If the athlete were from a different culture (for example your own culture), would the reaction be different? How? Explain.
 - Many athletes have attempted or committed suicide after their sex determination controversy was made public, questioning the ethics of such practice.

How is sex determination in sports done today?

Write at least one argument for sex determination testing in sports and at least one argument against the way sex determination testing in sports is done today.

How could these tests still be considered an unfair practice.

3. **Watch the following video:**

<https://www.biointeractive.org/classroom-resources/meiosis>

According to this video, explain in your own words why a person's sexual chromosomes and anatomy may not match. Explain how a female could be XY and a male could be XX according to the explanations in this video.

ASSIGNMENT SPECIFICATIONS:

- **Title page must contain:**
 - o Title
 - o Your student ID
 - o Deadline
- **Type in APA format using several paragraphs.** Content—not including pictures and references—should be between **2 to 4 pages**.
- Must be **double-spaced**, using 12-point font size, and standard margins for APA.
- Must include **all references in APA style**. Check your CCBC library for how to reference (<http://libraryguides.ccbcmd.edu/Citations>) or ask a librarian. CCBC Librarians are here to help you.

The following **reference list** must be included in the last page of the essay. Each reference cited, quoted, paraphrased or summarized in-text, must be included in the reference list:

- o The **Biology textbook** used in lecture
- o Other Biology books used (optional)
- o **All pictures and maps**
- o **Academically appropriate internet sources** (at least two)
- o **News resources** (at least one)

GRADING:

- This assignment will account for **10%** of the total course grade
- See attached rubric for details about how your essay will be graded.

SUBMISSION GUIDELINES:

- Due on _____. Assignments should be collected in the last 1/3rd of the semester.
- Electronic submissions should be made with the student's ID number (900 or 901#) as the file name through Blackboard. Student and instructor names should not appear on electronic submissions.