

HIBBING COMMUNITY COLLEGE COURSE OUTLINE

COURSE NUMBER & TITLE: BIOL 1610: Biology of Women

CREDITS: 3 (2 Lec / 1 Lab)

PREREQUISITES: None

CATALOG DESCRIPTION:

Study of the biological aspects of being a woman, from sex cell formation and sexual development through menopause and aging. Biological principles and scientific analysis of: menstruation and menopause; infertility; pregnancy and fetal development; genetics and biological sex differentiation. Students will also gain an historical perspective of women, the biology of gender differences, a multicultural perspective of women's health issues, including the importance of taking a responsible role in personal health care, pre-menstrual syndrome, birth control, sexually transmitted diseases, and cancers. Lab methods include scientific inquiry and analysis. Students will assess the strengths and limitations of scientific approaches toward understanding the biology of women and human behavior. Open to both women and men. MNTC goal area: (3) Natural Science and (7) Human Diversity

OUTLINE OF MAJOR CONTENT AREAS:

- I. Scientific method of investigation
- II. History and social context of women's issues
- III. Female Reproductive System
 - A. Structure
 - B. Function and Development
- IV. Male Reproductive System
 - A. Structure
 - B. Function
- V. Endocrine system
 - A. Endocrine Glands
 - B. Hormones
- VI. Basis of Biological Differences
 - A. Cells
 - B. Chromosomes and Genes
 - C. Cell Division (oogenesis)
 - D. Sex Determination
 - E. Chromosomal Disorders
 - F. Normal Sex Differentiation
- VII. Puberty
- VIII. Female Reproductive Cycle
 - A. Normal Function
 - B. Menstrual Problems and Treatment
 - C. Ovarian cycle
- IX. Mammary Glands
 - A. Structure
 - B. Function
 - C. Cancer

- X. Gynecological Exam
- XI. Gynecological Difficulties
 - A. Sexually Transmitted Diseases
 - B. Cancers
- XII. Human Reproduction
 - A. Fertilization
 - B. Implantation
 - C. Development
 - D. Pregnancy
 - E. Labor and Delivery
 - F. Postpartum concerns
- XIII. Problems of Fertility
 - A. Infertility
 - B. Assisted Reproductive Technology
 - C. Contraception
- XIV. Menopause

COURSE GOALS/OBJECTIVES/OUTCOMES:

Students will

1. relate information about women's biology published in popular media to course topics.
2. evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.
3. compare and contrast historical and cultural perspectives as they apply to the identity of women, especially as they have changed regarding health care issues.
4. identify the basic steps of the scientific method and relates how experiments and observations contribute to our current knowledge of women's biology.
5. analyze and demonstrate understanding of biological theories and principles of reproductive anatomy, physiology, social, and health issues of females.
6. collect data and perform basic statistical and graphical analysis to improve analytical and critical thinking skills.
7. communicate their research and/or current issues findings, analyses, and interpretations both orally and in writing.
8. define terms associated with the study of human reproductive anatomy and physiology.
9. explain sexual and reproductive anatomy and physiology of women and men.
10. describe how the brain, hormones, and endocrine glands are related to the female's reproductive cycle.
11. analyze and explain women's and men's reproductive health diseases or issues; including infertility, cancers, sexually transmitted diseases and infections.
12. demonstrate an awareness of the individual and institutional dynamics of unequal power relations between men and women in contemporary society
13. evaluate evidence presented as it pertains to gender-specific biological issues; make informed judgments about these issues.
14. analyze their own attitudes, behaviors, concepts and beliefs regarding diversity and bigotry.
15. describe and discuss the experience and contributions made by women in shaping American society and culture, with emphasis placed on discrimination, exclusion, and violence toward women.
16. identify and diagram the events of the ovarian cycle.
17. describe the stages of pregnancy and childbirth.

18. analyze the risk factors associated with breast cancer, methods of diagnosis and treatment.
19. judge the pros and cons of using ERT/HRT (Estrogen/Hormone Replacement Therapy).
20. explain what occurs in the process of fertilization and subsequent events that occur in human development.
21. evaluate reproductive technology methods and procedures for treating infertility in females and males.
22. know: the structure of DNA; the outcomes of mitosis and meiosis; autosomes and sex chromosomes; how karyotypes are used; disorders associated with chromosome number and structure
23. describe how the process of sexual differentiation occurs in XX and XY embryos.
24. demonstrate knowledge of cells as the basic structural and functional unit of the human organism.
25. outline the anatomical and physiological events that result in menopause.
26. incorporate sustainable practices as they relate to contraception, human health awareness and accessibility to resources.

MNTC GOALS AND COMPETENCIES MET:

Goal 3 - Natural Science

1. Demonstrate understanding of scientific theories.
2. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
3. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

Goal 7 - Human Diversity

1. Understand the development of and the changing meanings of group identities in the United States' history and culture.
2. Demonstrate an awareness of the individual and institutional dynamics of unequal power relations between groups in contemporary society.
3. Analyze their own attitudes, behaviors, concepts and beliefs regarding diversity, racism, and bigotry.
4. Describe and discuss the experience and contributions (political, social, economic, etc.) of the many groups that shape American society and culture, in particular those groups that have suffered discrimination and exclusion.

HCC CORE COMPETENCIES MET:

Working Productively and Cooperatively

Communicating Clearly and Effectively

Thinking Creatively and Clearly

Social/Civic Responsibility

STUDENT CONTRIBUTIONS:

The student is expected to prepare for classes, attend classes, attend all lectures and labs, participate in all class activities, complete everything on time, and request assistance if needed.

**STUDENT ASSESSMENT SHALL TAKE PLACE USING INSTRUMENTS
SELECTED/DEVELOPED BY THE COURSE INSTRUCTOR.**

**SPECIAL INFORMATION: (SPECIAL FEES, DIRECTIVES ON HAZARDOUS
MATERIALS, ETC.):**

This course may require use of the Internet, the submission of electronically prepared documents and the use of a course management software program. Students who have a disability and need accommodations should contact the instructor or Student Services at the beginning of the semester.

AASC APPROVAL DATE: July 15, 2014

REVIEW DATE: July 2019

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