Course Title	Reproductive Biology				
Course Code	BMS314				
Course Type	Compulsory				
Level	Bachelor (1st Cycle)				
Year / Semester	3rd Year / 5th Semester				
Teacher's Name	TBA				
ECTS	5	Lectures / week	3 Hours	Laboratories / week	None
Course Purpose and Objectives	This course will take a comprehensive look at the exciting process of reproduction by examining the role of hormones, the process of puberty, and the production of offspring. While a variety of species will be used to explain basic principles of the reproductive process, this course will focus on sexual reproduction by emphasizing mammalian, especially human, reproduction.				
Learning Outcomes	Upon successful completion of this course, students should be able to: • Demonstrate knowledge of the key steps in sexual determination and differentiation at chromosomal, gonadal, internal and external genitalia, and hypothalamic levels. • Describe the key gross and microscopic components of the human reproductive system. • Describe gametogenesis and structure of gametes and relate it to their function. • Demonstrate knowledge of key principles of reproductive endocrinology including: a) biosynthesis and chemistry of the different classes of hormones, b) mechanisms of action of hormones. • Demonstrate a detailed and comparative knowledge of the control of human reproduction. • Demonstrate a detailed and comparative knowledge of the physiology of pregnancy, parturition and lactation in humans • Evaluate the principles, merits and limitations of various forms of reproductive technology in use. • Describe the process of *in vitro* fertilization and evaluate advantages and disadvantages of the methodology used • Define different types of stem cells; comparison and applications				

<table>
<tr><td>Prerequisites</td><td>BMS111</td><td>Co-requisites</td><td>None</td></tr>
<tr><td>Course Content</td><td colspan="3">

Sexual Differentiation and Development
Male Gross Anatomy and spermatogenesis; Testicular Descent; Testicular Thermoregulation; Erection; Ejaculation.
Male Reproductive Endocrinology-Semen Physiology.
Overview of Female Reproductive Anatomy; Folliculogenesis.
Oogenesis; Atresia, Endocrine Control of Ovarian Function.
Female: Ovulation; Corpus Luteum Formation.
Prostaglandins and Role in Reproduction.
Puberty and the Menstrual Cycle.
Hypothalamus and pituitary; Neuroendocrine Control of Reproduction.
Sperm and Ova Transport; Sperm Capacitation and Acrosome Reaction; Fertilization
Early Embryonic Development and Maternal Recognition of Pregnancy
Gestation; Prenatal Development and Placentation.
Human Contraception and Human reproductive Technologies
In vitro fertilization techniques
Stem cells; types, comparison and applications (embryonic, adult, induced pluripotent stem cells)

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<tr><td>Teaching Methodology</td><td colspan="3">Face- to- face</td></tr>
<tr><td>Bibliography</td><td colspan="3">HUMAN REPRODUCTIVE BIOLOGY 4th edition, 2013, Jones

And Lopez, Academic Press: New York

Pathways to pregnancy and parturition. 2003. P.L. Senger. Current Conceptions, Inc.

Biology of Human Reproduction. 2002. Ramon Pinon, Jr. University Science Books.

Human Sexuality. 2003. Simon LeVay and Sharon M. Valente.

Sinauer Associates, Inc.</td></tr>
<tr><td>Assessment</td><td colspan="3">
<table>
<tr><td>Mid – Term Examination</td><td>30%</td></tr>
<tr><td>Final Examination</td><td>50%</td></tr>
<tr><td>Assignments</td><td>10%</td></tr>
<tr><td>Class Participation</td><td>10%</td></tr>
<tr><td></td><td>100%</td></tr>
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<tr><td>Language</td><td colspan="3">English</td></tr>
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