Physiology of Sexual Reproduction

HAPS Institute Graduate Credit Course
BI 698 offered in conjunction with Alverno College

Instructor:
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Description of this Course:
Structures responsible for human sexual reproduction and their functions. This course provides the participant with the fundamentals of human reproductive physiology and insight into current directions of reproductive research advances. Matriculating participants will display a deeper understanding of the mechanisms that govern fertilization, pregnancy and parturition at the molecular and cellular level. Moreover, the matriculating participant will be exposed to, have analyzed and explored the current scientific literature in the basic reproductive sciences.

Course Objectives:

1. Participants will develop a detailed model describing the structures of male reproductive anatomy and integrating the physiological function of these structures with the molecular mechanisms governing gamete development, maturation, storage, and activation, including:
   a. The sexual response and sexual behavior
   b. Seminal plasma
   c. The oviduct, sperm reserve and capacitation
   d. Fertilization
   e. Implantation and the uterus
   f. The placenta
   g. Parturition
2. Participants will apply this knowledge to teaching reproductive physiology:
   a. Use of open-source internet resources to explore the cellular and molecular mechanisms governing sexual reproduction, fertilization, implantation, and parturition.
b. Relationships between the separate organs and how they interact and communicate to promote fertilization, pregnancy and parturition.
c. Compare and evaluate current themes in human sexual reproductive physiology.

3. Participants will develop a college-level A&P or Physiology lecture that demonstrates mastery of the material by the participant, enhances the undergraduate course that the participant instructs by appropriately integrating key concepts into the classroom material, and exhibits a broader understanding of the key molecular and cellular concepts as they relate to the human sexual reproductive physiology.

**Evaluation:**
Students will be assessed on their understanding of the material presented through the required readings on a biweekly basis through an online written assignment and ongoing project progression. Final assessment will include a peer-review of the finished project during the HAPS annual conference.

All HAPS-I courses follow grading policies on a "credit / no credit" basis. Like many progressive graduate programs, HAPS-I does not use letter grades in our courses. However, a "credit" grade is equivalent to a letter grade of B or better.

A "credit" grade is earned by satisfactorily accomplishing a set of specific goals (at a "B" level or better) as outlined in this course syllabus and in the online course material as determined by the course faculty.

**Course Schedule:**

<table>
<thead>
<tr>
<th>Dates</th>
<th>Subject</th>
<th>Other notes:</th>
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<tbody>
<tr>
<td>8/18 – 8/31</td>
<td>Sexual response and behavior</td>
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<tr>
<td>9/01 – 9/14</td>
<td>Seminal plasma</td>
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<tr>
<td>9/15 – 9/28</td>
<td>The oviduct, sperm reserve, and capacitation</td>
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<td>9/29 – 10/12</td>
<td>Fertilization</td>
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<td>10/13 – 10/26</td>
<td>Implantation and the uterus</td>
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<td>10/27 – 11/09</td>
<td>The placenta</td>
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<tr>
<td>11/10 – 11/29</td>
<td>Parturition</td>
<td>(Thanksgiving)</td>
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<tr>
<td>11/30 – 12/05</td>
<td>Final Project Assessment</td>
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**Required Course Materials:**
Internet access, Adobe Acrobat Reader, Powerpoint or similar presentation software