

RECEIVED

APR 24 2014

OFFICE OF THE
SENATE COUNCIL**1. General Information**

1a. Submitted by the College of: MEDICINE

Date Submitted: 11/18/2013

1b. Department/Division: Physiology

1c. Contact Person

Name: Ok-Kyong Park-Sarge

Email: okps@uky.edu

Phone: 8593236067

Responsible Faculty ID (if different from Contact)

Name:

Email:

Phone:

1d. Requested Effective Date: Semester following approval

1e. Should this course be a UK Core Course? No

2. Designation and Description of Proposed Course

2a. Will this course also be offered through Distance Learning?: No

2b. Prefix and Number: PGY 401G

2c. Full Title: Human Reproduction, Technology, and Society

2d. Transcript Title:

2e. Cross-listing:

2f. Meeting Patterns

LECTURE: 3

OTHEREXPLAIN: exams

2g. Grading System: Letter (A, B, C, etc.)

2h. Number of credit hours: 3

2i. Is this course repeatable for additional credit? No

If Yes: Maximum number of credit hours:

If Yes: Will this course allow multiple registrations during the same semester?

2j. **Course Description for Bulletin:** The objective of this course is to cultivate a student's curiosity in the field of human reproductive biology, modern technological advancements such as contraception, assisted reproduction and stem cell research, and the social, economic, and ethical challenges and issues they create. Class topics will include basic reproductive processes from gametogenesis, fertilization, pregnancy, and embryogenesis, issues that may hamper reproductive successes, and technological advancements in reproductive medicine such as contraceptives, assisted reproductive technologies, prenatal genetic diagnosis, and stem cells. The social impacts of current and future reproductive medicine will also be discussed.

2k. **Prerequisites, if any:** Elementary Physiology (e.g., PGY206) or Biochemistry (BCH 401G) or consent by the instructor

2l. **Supplementary Teaching Component:**

3. **Will this course taught off campus?** No

If YES, enter the off campus address:

4. **Frequency of Course Offering:** Spring,

Will the course be offered every year?: Yes

If No, explain:

5. **Are facilities and personnel necessary for the proposed new course available?:** Yes

If No, explain:

6. **What enrollment (per section per semester) may reasonably be expected?:** 50

7. **Anticipated Student Demand**

Will this course serve students primarily within the degree program?: No

Will it be of interest to a significant number of students outside the degree pgm?: Yes

If Yes, explain: This course will serve a variety of student populations who are interested in medicine or reproductive technologies, as well as students who are curious about social impact of Assisted Reproductive Technologies (ART).

8. **Check the category most applicable to this course:** Traditional – Offered in Corresponding Departments at Universities Elsewhere,

If No, explain:

9. **Course Relationship to Program(s).**

a. **Is this course part of a proposed new program?:** No

If YES, name the proposed new program:

b. **Will this course be a new requirement for ANY program?:** No

If YES, list affected programs:

10. **Information to be Placed on Syllabus.**

a. **Is the course 400G or 500?:** Yes

b. The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable, from **10.a** above) are attached: Yes

Distance Learning Form

Instructor Name:

Instructor Email:

Internet/Web-based: No

Interactive Video: No

Hybrid: No

1. How does this course provide for timely and appropriate interaction between students and faculty and among students? Does the course syllabus conform to University Senate Syllabus Guidelines, specifically the Distance Learning Considerations?

2. How do you ensure that the experience for a DL student is comparable to that of a classroom-based student's experience? Aspects to explore: textbooks, course goals, assessment of student learning outcomes, etc.

3. How is the integrity of student work ensured? Please speak to aspects such as password-protected course portals, proctors for exams at interactive video sites; academic offense policy; etc.

4. Will offering this course via DL result in at least 25% or at least 50% (based on total credit hours required for completion) of a degree program being offered via any form of DL, as defined above?

If yes, which percentage, and which program(s)?

5. How are students taking the course via DL assured of equivalent access to student services, similar to that of a student taking the class in a traditional classroom setting?

6. How do course requirements ensure that students make appropriate use of learning resources?

7. Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program.

8. How are students informed of procedures for resolving technical complaints? Does the syllabus list the entities available to offer technical help with the delivery and/or receipt of the course, such as the Information Technology Customer Service Center (<http://www.uky.edu/UKIT/>)?

9. Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? NO

If no, explain how student enrolled in DL courses are able to use the technology employed, as well as how students will be provided with assistance in using said technology.

10. Does the syllabus contain all the required components? NO

11. I, the instructor of record, have read and understood all of the university-level statements regarding DL.

Instructor Name:

SIGNATURE|SHO222|Sharon Howard|PGY 401G NEW Dept Review|20131118

SIGNATURE|MRWH224|Melissa R Wilkeson|PGY 401G NEW College Review|20140124

SIGNATURE|ZNNIKO0|Roshan N Nikou|PGY 401G NEW Graduate Council Review|20140212

SIGNATURE|JMETT2|Joanie Ett-Mims|PGY 401G NEW Undergrad Council Review|20140424

Courses	Request Tracking
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New Course Form

https://myuk.uky.edu/sap/bc/soap/rfc?services=

Generate R

[Open in full window to print or save](#)

Attachments:

ID	Attachment
Delete 2720	PGY 401G Syllabus.pdf

Upload File

Select saved project to retrieve...

(*denotes required fields)

1. General Information

- a. * Submitted by the College of: Submission Date: 11/18/2013
- b. * Department/Division:
- c.
 - * Contact Person Name: Email: Phone:
 - * Responsible Faculty ID (if different from Contact): Email: Phone:
- d. * Requested Effective Date: Semester following approval OR Specific Term/Year ¹
- e.
 - Should this course be a UK Core Course? Yes No
 - If YES, check the areas that apply:
 - Inquiry - Arts & Creativity
 - Inquiry - Humanities
 - Inquiry - Nat/Math/Phys Sci
 - Inquiry - Social Sciences
 - Composition & Communications - I
 - Composition & Communications - II
 - Quantitative Foundations
 - Statistical Inferential Reasoning
 - U.S. Citizenship, Community, Diversity
 - Global Dynamics

2. Designation and Description of Proposed Course.

- a. * Will this course also be offered through Distance Learning? Yes ¹ No
- b. * Prefix and Number:
- c. * Full Title:
- d. Transcript Title (if full title is more than 40 characters):
- e. To be Cross-Listed ² with (Prefix and Number):
- f. * Courses must be described by at least one of the meeting patterns below. Include number of actual contact hours² for each meeting pattern type.

<input type="text" value="3"/> Lecture	<input type="text"/> Laboratory ¹	<input type="text"/> Recitation	<input type="text"/> Discussion
<input type="text"/> Indep. Study	<input type="text"/> Clinical	<input type="text"/> Colloquium	<input type="text"/> Practicum
<input type="text"/> Research	<input type="text"/> Residency	<input type="text"/> Seminar	<input type="text"/> Studio
<input type="text"/> Other	If Other, Please explain:		exams
- g. * Identify a grading system:
 - Letter (A, B, C, etc.)
 - Pass/Fail
 - Medicine Numeric Grade (Non-medical students will receive a letter grade)
 - Graduate School Grade Scale
- h. * Number of credits:
- i. * Is this course repeatable for additional credit? Yes No
 - If YES: Maximum number of credit hours:
 - If YES: Will this course allow multiple registrations during the same semester? Yes No

j. * Course Description for Bulletin:

The objective of this course is to cultivate a student's curiosity in the field of human reproductive biology, modern technological advancements such as contraception, assisted reproduction and stem cell research, and the social, economic, and ethical challenges and issues they create. Class topics will include basic reproductive processes from gametogenesis, fertilization, pregnancy, and embryogenesis, issues that may hamper reproductive successes, and technological advancements in reproductive medicine such as contraceptives, assisted reproductive technologies, prenatal genetic diagnosis, and stem cells. The social impacts of current and future reproductive medicine will also be discussed.

k. Prerequisites, if any:

Elementary Physiology (e.g., PGY206) or Biochemistry (BCH 401G) or consent by the instructor

l. Supplementary teaching component, if any: Community-Based Experience Service Learning Both3. * Will this course be taught off campus? Yes No

If YES, enter the off campus address:

4. Frequency of Course Offering.

a. * Course will be offered (check all that apply): Fall Spring Summer Winter

b. * Will the course be offered every year? Yes No

If No, explain:

5. * Are facilities and personnel necessary for the proposed new course available? Yes No

If No, explain:

6. * What enrollment (per section per semester) may reasonably be expected? 50

7. Anticipated Student Demand.

a. * Will this course serve students primarily within the degree program? Yes No

b. * Will it be of interest to a significant number of students outside the degree pgm? Yes No

If YES, explain:

This course will serve a variety of student populations who are interested in medicine or reproductive technologies, as well as students who are curious about social impact of Assisted Reproductive Technologies (ART)

8. * Check the category most applicable to this course:

Traditional – Offered in Corresponding Departments at Universities Elsewhere

Relatively New – Now Being Widely Established

Not Yet Found in Many (or Any) Other Universities

9. Course Relationship to Program(s).

a. * Is this course part of a proposed new program? Yes No

If YES, name the proposed new program:

b. * Will this course be a new requirement ^a for ANY program? Yes No

If YES ^a, list affected programs:

10. Information to be Placed on Syllabus.

a. * Is the course 400G or 500? Yes No

If YES, the *differentiation for undergraduate and graduate students must be included* in the information required in 10.b. You must include: (i) identify additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR

b. * The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-level grading differentiation if applicable 10.a above) are attached.

^a Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.
^b The chair of the cross-listing department must sign off on the Signature Routing Log.

!!! In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. Laboratory meeting, generally, is two hours per week for a semester for one credit hour. (from SR 5 2.1)
!!! You must also submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.
!!! In order to change a program, a program change form must also be submitted.

Rev 8/09

Submit as New Proposal Save Current Changes

PGY 401G
Human Reproduction, Technology, and Society
3 credit hours

COURSE DIRECTOR:

Dr. Ok-Kyong Park-Sarge
MN502A Chandler Medical Center
okps@uky.edu
323-6067

PARTICIPATING FACULTY:

Ok-Kyong Park-Sarge, Ph.D.
Kevin Sarge, Ph.D.

Physiology
Biochemistry

okps@uky.edu
kdsarge@uky.edu

TIME:

TBA (e.g., 4-5:15 PM Tuesdays and Thursdays)

PLACE:

TBA

OFFICE HOURS:

as often as necessary: by appointment

COURSE DESCRIPTION:

The objective of this course is to cultivate a student's curiosity in the field of human reproductive biology, modern technological advancements such as contraception, assisted reproduction and stem cell research, and the social, economic, and ethical challenges and issues they create. Class topics will include basic reproductive processes from gametogenesis, fertilization, pregnancy, and embryogenesis, issues that may hamper reproductive successes, and technological advancements in reproductive medicine such as contraceptives, assisted reproductive technologies, prenatal genetic diagnosis, and stem cells. The social impacts of current and future reproductive medicine will also be discussed.

PREREQUISITES:

Elementary Physiology (e.g., PGY 206) or Elementary Biochemistry (e.g., BCH 401G) or consent by the instructor

STUDENT LEARNING OUTCOMES:

After completing this course, the student will be able to:

1. Describe physiological processes in human reproduction and sex differentiation.
2. Discuss the concepts of life and personhood in relation to embryogenesis.
3. Evaluate scientific bases of contraceptives and their impact on society.
4. Identify causes of infertility and discuss scientific bases of assisted reproduction.
5. Describe reproductive technologies and critically assess their impact on society.
6. Discuss the potential of stem cells for treating genetic diseases and the ethical issues involving frozen embryos, left over from in vitro fertilization, as a source for stem cell research.

COURSE MATERIAL:

1. Handbook of Assisted Reproductive Technology by Kattygnarath T-V et al., Procrea Cliniques, Canada, 2013
2. Essential Reproduction by Johnson MH, 7th Edition, Wiley-Blackwell Press, 2013

COURSE GRADING:

Final grades in PGY 401G will be determined on the basis of:

1. Exams (60% of the final grade). There are three exams, each of which is worth 20% of the final grade. These exams are designed to test each student's ability to recall and comprehend the presented class material, as well as to analyze, synthesize, and apply the material to more complex reproductive issues.
2. Homework assignments (40% of the final grade). A total 10 homework assignments (every three lecture periods) will be released on Blackboard at least 48 hours before they are due. Students will be required to use the assigned reading from news articles and journal articles on recent events that involve reproductive medicine for completing the assignments. Each assignment, worth 4% of the final grade, will include 4 short answer questions.
3. **Letter grades for undergraduate students** will be assigned according to the following scale of the final grades from 3 exams (60%) and homework assignments (40%).

A = 87.00-100.00
B = 77.00-86.99
C = 67.00-76.99
D = 57.00-66.99
E = less than 56.99

Mid-Term Grade: Mid-term grades will be posted in my UK by the deadline established in the Academic Calendar (<http://www.uky.edu/Registrar/AcademicCalendar.htm>).

4. **Letter grades for graduate and post-baccalaureate students** will be assigned according to a different grading scale. All graduate and post-baccalaureate students are expected to complete 3 one-page essays for additional evaluation. Students will be given 3 case scenarios for which they must complete their written responses. These written responses will be evaluated for merit and graded on three levels: super (=1% of final grade), adequate (=0.5% of final grade), and poor (=0% of final grade). In essence, this additional graduate and post-baccalaureate student-specific evaluation pushes the maximum of the final grade to 103% [exams (60%), homework assignments (40%), and essays (3%)].

Letter grades for graduate and post-baccalaureate students will be assigned according to the following scale of the final grades.

A = 90.00-103.00
B = 80.00-89.99
C = 70.00-79.99

E = less than 69.99

COURSE POLICIES:

Attendance Policy: Attendance is mandatory.

Excused Absense: Students may be excused for absences according to S.R. 5.2.4.2 that defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit "reasonable cause for nonattendance" by the professor.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused or unexcused) per university policy.

Verification of Absences: Students may be asked to verify absences in order for them to be considered excused. Senate Rule 5.2.4.2 states that faculty have the right to request "appropriate verification" when students claim an excused absence because of illness or death in the family. Appropriate notification of absences due to university-related trips is required prior to the absence.

Make-up Examinations policy: In the rare instance when a student misses an exam due to a documented illness or emergency for any legitimate reason, as determined by the University regulations, a make-up exam may be administered at the earliest convenient time. Make-up exams may consist of Essay or Oral questions. It is the responsibility of the student to contact the course director as soon as possible if a make-up exam is requested.

Submission of assignments: Students will be required to submit their responses to discussion questions at the end of each discussion sessions. Any assignment a student turns in may be submitted to an electronic database to check for plagiarism.

Accomodations due to disability: If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (Room 2, Alumni Gym, 257-2754, email address: jkarnes@email.uky.edu) for coordination of campus disability services available to students with disabilities.

Class Behavior, Decorum and Civility: Students are expected to maintain a level

of dignity and respect towards faculty, staff, and fellow students. Students are expected to value differences among all members of our academic community. Conversely, all students have the right to take reasoned exception and voice opinions contrary to those offered by the instructor and/or other students according to University Senate Rules. Equally, a faculty member has the right -- and the responsibility -- to ensure that all academic discourse occurs in a context characterized by respect and civility. Acceptable decorum and civility does not include attacks of a personal nature or statements denigrating another on the basis of race, sex, religion, sexual orientation, age, or national/regional origin.

Academic Integrity: Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: <http://www.uky.edu/Ombud>. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Part II of *Student Rights and Responsibilities* (available online <http://www.uky.edu/StudentAffairs/Code/part2.html>) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work that a student submits as his/her own, whoever that other person may be.

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization,

content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).

Tentative Course Schedule

Meeting #	Topics
1	Introduction: sex, genetic drift, and modern reproductive medicine
2	Overview of meiosis and pre-implantation (zygote to blastocyst)
3	Embryonic stem cells and Embryogenesis (blastocyst to birth)
4	Aneuploidy and chromosomal aberrations to human diseases
5	Male gamete production (spermatogenesis), delivery and activation: Male reproductive track
6	Sperm number and quality in semen
7	In vitro manipulation of sperm (cryo preserved sperm and enrichment and activation of sperm), in vitro sperm production
8	Libido, Viagra, performance-enhancing drugs, and andropause
9	EXAM 1
10	Oogenesis in vivo: oocyte in follicles: maturation and ovulation
11	Folliculogenesis and menstrual cycle: hormones
12	Oocyte quality and reserve
13	In vitro Folliculogenesis and cryo preserved oocyte/ovarian tissues
14	Sex steroid hormones: changes in female reproductive track
15	Intercourse, fertilization, implantation, and pregnancy
16	Contraception: History and controversies Science behind contraceptive methods
17	Abortion: History and controversies
18	EXAM 2

19	Infertility as a disease: identification of causes
20	Overview of Assisted Reproductive Technologies
21	Structural abnormalities and imbalanced hormones
22	Artificial insemination and surrogate partners
23	In vitro fertilization
24	Gamete donors and surrogate mothers: an embryo with 3 parents
25	Parental and prenatal Genetic Diagnosis Technologies
26	Therapeutic stem cells: development, uses, and sources
27	Sex differentiation: sex selection
28	Biology behind gender identity
29	Biology behind sexual preference
30	EXAM 3