

**IPSE 2004-2005 Course and Module Development Grant Program
Proposal Cover Page**

Applicant's Institution and Campus:		
University of Southern Indiana		
Number (if applicable) and Title of <u>Course</u> or Module:		
HP457: Ethics, Genetics, Biotechnology and Society		
Programmatic Priority (see section III of RFP; check one)		
<input type="checkbox"/> a. wider availability of challenging classes in high school <input checked="" type="checkbox"/> b. improved and/or expanded teacher professional development opportunities <input type="checkbox"/> not applicable		
Project Director's Name:	Email Address:	Campus Address:
Kevin J. Valadares, PhD	kvaladar@usi.edu	School of Nursing and Health Professions 8600 University Blvd. Evansville, IN 47712
Project Director's Title:	Phone Number:	
Assistant Professor of Health Services/Administration	(812) 461-5277	
Grants/Contracts Contact Name:	Email Address:	Campus Address:
Peggy Harrel, PhD	pharrel@usi.edu	Graduate Studies and Sponsored Research 8600 University Blvd. Evansville, IN 47712
Grants/Contracts Contact Title:	Phone Number:	
Director, Graduate Studies and Sponsored Research	812-465-7015	
Date by which course or module will be made available:	Project Start Date:	Project End Date:
January 2006	Feb. 1, 2005	June 30, 2006
Amount Requested from IHETS/IPSE:	Amount of Institutional Match:	
\$20,000	\$23,060	
Signature of Project Director:		Date:
_____		_____
Name of Authorizing Administrator:	Title of Authorizing Administrator:	
Nadine Coudret, EdD	Dean, School of Nursing and Health Professions	
Signature of Authorizing Administrator:		Date:
_____		_____
For IHETS Use Only		
Signature of Institutional IPSE Representative:		Date:
_____		_____

Indiana Partnership for Statewide Education Course Development Proposal

Abstract:

The attached proposal requests funds to design, develop, implement, and evaluate a three-credit-hour, Internet course: HP457: Ethics, Genetics, Biotechnology and Society as well as create a 5 module Continuing Relative Unit program drawn from the credit course to support Secondary school science teachers professionals and in their teaching.

The explosion of Genomics and Biotechnology advances in the last decade has proved to be an exciting new dimension of research and application for medicine and health care. Coupled with the scientific endeavors, an understanding of the issues and concerns surrounding the ethical and societal implications of genetics and biotechnology is needed in the forms of informed knowledge and dialogue. Since these scientific advances have widespread effect on society, the ethical and society deliberations should occur among a variety of stakeholders.

The target population for credit course is enrolled students majoring in a health related, science-based or liberal arts field. However, students from other majors will also benefit from the experience of the course. The course will be taught online over the course of a 15-week academic semester. Students are expected to engage with the course materials on a regular basis with the expectation of nine contact hours per week.

Along side the credit bearing course, a 5 module Continuing Relative Unit program will be created out of the main course materials, specifically for Secondary school science teachers who incorporate Genetics related information into their curriculum. The module will allow them to receive credit toward licensure renewal and to incorporate the content of the program into their teaching. Total projected expenses for this project are \$43,060. A grant of \$20,000 is requested from the IHETS/IPSE Course Development Grant Program. The University of Southern Indiana will contribute \$23,060 as an institutional match.

Project Narrative

1. Market Analysis (Need, Audience, and Demand)

In October 1990, the U.S. Department of Energy and the National Institutes of Health formally launched the Human Genome Project (HGP). The goal of the project was to map and identify the estimated 100,000 genes that determine every human being's genetic inheritance. The project was completed in 2003 with the sequence and analysis of the human genome working draft published in the April 2003 issues of *Nature* and *Science*.¹

On a State level, Indiana is a formidable leader in Genomics (the study of genes and their functions) and biotechnology research and applications. Initiatives such as the Indiana Genomics Initiatives (INGEN), Biocrossroads, and the State Genomics plan geared toward childhood diseases demonstrate that Indiana-based programs are revolutionizing medicine, health care and public health. While the availability of biotechnological advances and a reference human DNA sequence is a milestone toward understanding how humans evolve, these endeavors have launched society into a spirited public debate concerning the social and ethical implications of these discoveries. In a sense, since genetics research and biotechnology applications are rapidly becoming relevant and common topics of discussion, their relationship to society must be explored.

As an integral part of the HGP, a large portion of federal funding was set aside to anticipate, analyze, and address the ethical, legal, and social implications (ELSI) of the new advances in human genetics that resulted from the HGP. The current goals of the ELSI program are to improve the understanding of these issues through research and education, to stimulate informed public discussion, and to develop policy options intended to ensure that genetic information is used for the benefit of individuals and society. Among many, the following questions are being posed:

- Who should have access to our genetic information?
- How much should we be free to determine the genetic inheritance of our children?
- Are genes the common property of all humankind, or should the financial rewards of gene research go to individuals and companies who make genetic discoveries?
- How will increasing genetic knowledge affect our concepts of freedom and responsibility?

This IPSE course development proposal seeks to accomplish two simultaneous goals: (1) To create a new undergraduate level, 3-credit course. The primary objective of the course is for students to understand and contribute to the debates over the ethical and social significance of rapidly developing genetic information and biotechnological advances. The course is geared towards students majoring (or minoring) in a health related, science-based or liberal arts field. However, students from other majors will also benefit from the experience of the course. (2) To carve-out a 5 module section of the credit bearing course to be made available for Indiana Secondary school science teachers in the form of a Certification Renewal Unit (CRU) program, approved by the Indiana Professionals Standards board for licensure renewal. Specifically, the direct goal of the CRU module program is to provide teachers with the ability to give their students the opportunity to extend their understanding of genetics and biotechnology from a technological, ethical and social perspective. In effect, students should gain an appreciation of how these new advances effect the individual and community within a pluralistic society. The primary objective is for participants to earn 15 CRU credits by completing the 5 module application which will assist them in delivering genetics and/or biotechnology applications to their students.

Currently, there is a renewed interest in Ethics related courses at the University of Southern Indiana. An average of 70 students currently enroll in USI's current health care ethics course each semester. Approximately, one-third of the enrollment numbers are working health care professionals who are due to the nature of their work responsibilities, are increasingly familiar with biotechnology and genetic advances. The anticipated enrollment for the first offering is 20-25. The course will be offered once a year on an ongoing basis and twice if enrollment is adequate. A minimum of 10 students is required for the course to be offered. In addition, the anticipated enrollment in the CRU module program is 15-20 each year.

Many undergraduate students and secondary school teachers are challenged by work and family commitments to enroll in a face-to-face course, thus making the structure of an asynchronous, online format desirable. A cursory search of the Internet reveals that there is no organized online program addressing both the ethical and social parameters of genetics and biotechnology. As well, following a search of the Indiana College Network web site, there is no similar course currently offered online in the state.

2. Instructional Design and Delivery Plan

Course

The course emphasizes that ethical and societal dilemmas concerning genetic and biotechnology advance are drawn and ultimately decided upon within a pluralistic society. Models and principles of ethical justification among a diversity of cultures and belief systems are analyzed and applied to specific topics in order to produce cogent and debatable arguments that strengthen the field of applied ethics and the ability of students to think in a critical fashion.

The credit bearing course will consist of fifteen learning modules covering the following twelve topics: (1) Moral Arguments concerning scientific advances, (2) Privacy and Confidentiality, (3) Intellectual Property and Patenting, (4) Genetic Counseling and BRCA testing, (5) Pharmaceuticals and Direct to Consumer marketing, (5) Behavioral Genetics, (6) Genetic Discrimination/Racial Profiling, (7) Database usage, (8) Forensics, (10) Gene therapy and genetic enhancement, (11) Scientific Conduct and Peer Review, (12) Collective Social action and Individualism.

USI utilizes the Blackboard course management system as its base to deliver online education. All course modules will be available via Blackboard and presented in an asynchronous manner. Each module will be composed of a variety of interactive learning tools. A combination of macromedia authoring tools (i.e. Flash enhanced), multimedia video programs, and audio and video streaming testimonies of patients, health care providers, and industry stakeholders will be used to present the topics. The consistent infusion of macromedia will provide students with the opportunity to engage and reflect on the topics in a creative and practical atmosphere.

As well, for students to relate to and engage the content within an ethical and societal realm, frequent interaction with faculty, classmates and industry experts will occur within the form of discussion boards linked with WIMBA audio stream capabilities, online debating exercises, and a final project consisting of an orally driven, argument-based research paper delivered via audio stream to the class. Numerous case studies will be presented and analyzed in order to explore and scrutinize various frameworks for ethical decision making. Applying these frameworks to current and future genetic and biotechnology advances enhance the learning experience and the intellectual repertoire of students as they shape their own values. The variety of teaching and evaluation methods and the interaction among students and faculty will accommodate diverse learning styles.

CRU Module program

Five of the modules presented above will be restructured for use in the CRU module program. This will be accomplished with the aid of selected Secondary School faculty who will serve as consultants to the project. The consulting teachers will incorporate aspects specific to their curriculum into modules. In addition, interactive DVDs will be created and replicated for the Secondary School faculty that successfully complete the CRU module program. These DVDs are meant to enhance their teaching of the subject area.

3. Institutional Capacity and Commitment

The faculty and staff in the School of Nursing and Health Professions (SNHP) are experienced in developing and offering Internet courses. Currently, the SNHP offers five academic degree programs over the Internet, as well as several non-credit certificate programs. The faculty have expertise in the development of online courses and are supported in these efforts by a technology team that is housed in the SNHP. The technology team provides hardware, software, and instructional support for all of the School's online instructional efforts, including the capacity to video stream. As well, online courses use the Blackboard platform that is supported by the University's Instructional Technology Department (ITS). Aside from the requested expenses for this project, the SNHP, and ITS has the capabilities and resources to develop both the course and CRU modules for this project.

USI and the SNHP have a strong history of community involvement and are committed to promoting the delivery of quality health care to the citizens of the region and the state of Indiana. With the increasing role that genetic research and applications are being made in Southern Indiana and the State, this project seeks to expand upon the goals of the ELSI initiative through the dissemination and deliberation of topics that has the potential to affect society as a whole. The particular emphasis on providing Secondary School teachers with CRUs has the added benefit of having the topics of the project made available to generations of young students that will be directly impacted by the current genetic and biotechnology advances. The long-term commitment to health care and values-based education, in addition to the University's commitment of resources for online education, provides assurance that the course and CRU module program will continue to be supported by the University and made available to participants after completion of the grant period.

4. Utilization Potential

The 3-credit course will be available statewide as an ICN Internet-based course and will be included as an elective component of the Bachelor's Degree in Health Services program. It is also expected to be included as a required course in a proposed minor in Health Care Ethics option associated with this degree program. Currently 70 students enroll each semester in the USI health care ethics course available through the Indiana College Network. These students represent many different majors, including all nursing and health professions major, as well as social work, liberal arts and business.

The CRU module program for Secondary school teachers will also be offered as an online statewide initiative on a yearly basis. However, as interested grows, more offering course occur. The potential also exists to collaborate with and expand the CRU module program to for-profit and not-for-profit health related organizations (health care providers, technology industry) for continued professional development needs.

The project director has made many contributions to the MERLOT repository. As such, there is a definite willingness to submit individual course components to MERLOT.

5. Marketing plan

Target audiences will learn about the course through the ICN online catalog, USI bulletin, faculty advisors, SNHP materials including web pages, direct marketing, and announcements in publications of professional organizations. Information will also be communicated to other schools, and health care organizations. Target audiences for the CRU module program will learn about the program through USI web pages, direct marketing to high schools and through the Indiana Professionals Standards board, which administers CRU programs.

6. Evaluation plan

A variety of experts will review the course content and materials for validity and appropriateness. These include professionals with backgrounds in medical ethics, genetics, and pharmaceutical applications. In addition, an ongoing review of the CRU module component by a Secondary school teacher advising group is required. An online evaluation tool (Survey Monkey software) will be used for course and faculty evaluation at the end of the semester. Evaluation items chosen will address quality of instruction and interaction with faculty and other students; satisfaction with instructional methods and pacing, technology reliability and functionality, and overall course; effectiveness of learning activities; clarity of materials and directions; and relevance of the content. Learning outcomes will be measured by a variety of activities as described in the Instructional Design and Delivery plan. They include: Online discussion activities, online debating exercises, research assignments and argumentative papers. Data will be collected during and at the end of the course. Using the online evaluation software, the School grants management coordinator, and Project Director will compile and analyze the data. The program will be revised as needed based on evaluation results.

7. Project schedule.

Timeline	Project Item
February–August 2005	<ul style="list-style-type: none"> • Develop Course Modules and Evaluation Materials • Involve selected secondary school teachers as consultants in specific CRU module creation
August 2005	<ul style="list-style-type: none"> • Submit course materials to USI Curriculum committee for approval (for Spring 2006 semester)
September 2005 (ongoing)	<ul style="list-style-type: none"> • Market course and CRU module program respectively.
October 2005	<ul style="list-style-type: none"> • Upload course to Blackboard for Spring 2006 Semester
January-May 2006	<ul style="list-style-type: none"> • Initial course offering
March 1, 2006	<ul style="list-style-type: none"> • Submit first project report
May 2006	<ul style="list-style-type: none"> • Analysis of Course evaluation data
May 2006	<ul style="list-style-type: none"> • Create DVDs for CRU module program
May-June 2006	<ul style="list-style-type: none"> • Initial CRU Module offering
June 30, 2006	<ul style="list-style-type: none"> • Submit second project report

8. Key Development Personnel

Kevin Valadares, PhD – Assistant Professor of Health Services/Administration will be Project Director. Dr. Valadares has both an educational and professional background in health care ethics and currently presents on a wide variety of ethics topics in regional and national settings. He currently serves on two area ethics committees at regional medical centers. He has taught online since 2001 and has developed numerous health services courses at the undergraduate and graduate level. His abbreviated CV is included in the appendix. Dr. Valadares will have primary responsibility for the development, teaching, and evaluation of the course.

Richard Wire - Computer Support Technician for the School of Nursing and Health Professions will assist faculty in the design/development of specific macromedia applications for each course module.

Jon Reidford - Coordinator of Computer and Internet Services for the School of Nursing and Health Professions will assist faculty in preparing materials and uploading course requirements to Blackboard.

Keith Kennedy - Coordinator of Instructional Broadcasting for the School of Nursing and Health Professions will assist faculty in the design/development of multimedia presentations and facilitate video streaming.

Mary Lindsey – Coordinator of Student Activities and Grants Management for the School of Nursing and Health Professions will design literature materials, provide instructional support for the development of the modules, and coordinate the CRU module delivery with Secondary School faculty.

IPSE 2004-2005 Course and Module Development Grant Program
Budget Form

Project Title: Ethics, Genetics, Biotechnology and Society

Institution: University of Southern Indiana

Project Director: Kevin J. Valadares, PhD

Grants/Contracts Contact Person: Peggy Harrel, PhD

Grants/Contracts Telephone Number: 812-465-7015

Project Start Date: February 1, 2005 **End Date:** June 30, 2006

Projected Expenses	IHETS/IPSE	Institutional Match	Other Funding	Totals
Salaries and Wages:	\$9,413	\$16,915		\$26,328
Fringe Benefits:	\$4,209	\$5,145		\$ 9,354
Consulting Services:	\$2,500	\$0		\$2,500
Supplies and Expenses:	\$1,628	\$1,000		\$ 2,628
Travel:				- 0 -
Other Direct Costs:	\$2,250	\$0		\$2,250
Totals:	\$20,000	\$23,060		\$43,060

Budget Narrative

IPSE/IHETS Grant Requests

The grant will provide reassigned time for one faculty member, computer, network broadcasting, instructional technology, and student activities staff in addition to stipends, equipment and software and supplies.

I. Salaries, Wages, Fringe Benefits (Personnel):

a) Kevin Valadares, Project Coordinator (Course Development & Delivery)

Wages (.30 FTE Salary) = \$17,695

Fringe benefits (38.05%) = \$6,733

Rationale: 0.30FTE represents 6credit contact hours for Course development and delivery)

b) Richard Wire, Computer Support Technician (Twelve hours of macromedia application development for each of the 15 learning modules)

Wages 180 hours x \$11.88 = \$2,138

Fringe benefits (30%) = \$642

c) Jon Reidford, Coordinator of Computer and Internet Services (Ten hours of development and uploading time for each of the 15 learning modules).

Wages 150 hours x \$15.93 = \$2,290

Fringe benefits (30%) = \$717

d) Keith Kennedy, Coordinator of Instructional Broadcasting (Ten hours of multimedia development and video streaming support for each of the 15 modules).

Wages 150 hours x \$16.71 = \$2,507

Fringe benefits (30%) = \$752

e) Mary Lindsey, Coordinator of Student Activities (Two hours a week x 52 weeks for the development of marketing materials and literature, mailings, and coordination of CRU module program.

Wages 104 hours x \$16.33 = \$ 1,698

Fringe benefits (30%) = \$ 510

II. Consulting Services

Stipends for Secondary School Teachers involved in specific CRU module creation

5 modules @ \$500 each = \$2,500

III. Supplies and Expenses

Fuji S7000 6 Megapixel Digital Camera = \$379

Macromedia Director Studio MX 200 (with Educational Discount) = \$249

Materials/literature development/printing/mailing = \$2000

IV. Other Direct Costs (Media Support through USI Instructional Technology)

Production and Development of CRU-associated DVDs

Rate 75 hours x \$30 = \$2,250

Institutional Match

Salaries, Wages, Fringe Benefits (Personnel):

USI will provide \$16,915 for salaries and \$5,145 for fringe benefits.

Supplies and Expenses:

USI will provide \$1,000 for supply expenses.

**IPSE 2004-2005 Course and Module Development Grant Program
Statement of Institutional Support**

Proposal Title:

Ethics, Genetics, Biotechnology and Society

Project Director Name and Title:

Kevin J. Valadares, PhD – Assistant Professor of Health Services/Administration

Department Name:

School of Nursing and Health Professions

Institution (and Campus):

University of Southern Indiana

I have reviewed the above-named proposal and believe it to be a well-conceived project likely to succeed and consistent with the long-term goals and mission of my department/college/campus. Should this project be funded by IHETS, my department/college/campus is committed to working with the project director to ensure its success.

Carol Hermes, MA			
Name of Department Head	Signature		Date

Nadine Coudret, EdD

Name of Academic Dean (or Equivalent)

Signature

Date

Karen H. Bonnell, PhD

Name of IPSE Representative

Signature

Date

* All three signatures are required.

Appendix: Biographical Sketch

Name: Kevin J. Valadares, PhD

Title: Assistant Professor of Health Services/Administration

Education:

Institution and Location	Degree	Year Conferred	Field of Study
University of Ottawa, Canada	B.A.	1992	Liberal Arts
University of Ottawa, Canada	BSoc.Sci	1993	Leisure Studies/Recreology
Saint Louis University	MHA	1995	Health Administration
Saint Louis University	PhD	2003	Health Care Ethics

Professional Experience:

2001-Present	Assistant Professor	University of Southern Indiana, Evansville, IN
1995-2001	Manager/Director	St. Louis University Hospital, St. Louis, MO

Online Courses Taught:

Graduate Level

MHA 625 Marketing & Competitive Strategies
 MHA 624 Applied Economic Analysis in Health Care
 MHA 621 The Health Services System
 MHA 632 Administration of Health Care Organizations

Undergraduate Level

HP 211 The Health Care Delivery System
 HP 496 Marketing for Health Care Organizations
 HP 431 HIM and Quality Improvement in Health Care
 HP 456 Ethics and Health Care in a Pluralistic Society
 HP 411 Health Care Management
 HP 498 Current Concepts in the Health Professions

Professional Presentations:

The Power of Audio Streaming in Engaging Students in Library Research, with Phillip Orr and Beth Thompson, Eighth Annual Nursing and Health Professions Educator Conference, University of Southern Indiana, Evansville, IN, October, 2004.

Dental Ethics Continuing Education Seminar. Indiana Health Professions Bureau, Illinois Board of Dentistry, Kentucky Board of Dentistry. University of Southern Indiana, Evansville, IN, September, 2004.

Health Care Ethics and the Operating Room Nurse. The Association of PeriOperative Registered Nurses. AORN, Evansville Chapter, Evansville, IN, May, 2004.

Partnerships through Streaming: Engaging Distance Education Students in Library Research, with Phillip Orr and Beth Thompson, IHETS/IPSE Partners Conference, Purdue University, West Lafayette, IN, April, 2004.

Debating Online: Engaging student as investigators and deliberators, The Fifteenth International Conference on College Teaching and Learning, Jacksonville, FL, March, 2004.

The Ethics of Consumerism in Health Care. Indiana Organization of Nurse Executives meeting, Evansville, IN, December, 2003.

Expectations Vs. Reality: The Promise, Perils and Outcomes of Online Learning in Hybrid and Distance Education Courses with Saxon Reasons and Michael Slavkin, The Ninth Annual Sloan-C International Conference on Asynchronous Learning Networks, Orlando, FL, November, 2003.

Strategies for Success with Online Testing to improve Student learning and Writing, with Jon Reidford, Seventh Annual Nursing and Health Professions Educator Conference, University of Southern Indiana, Evansville, IN, October, 2003.

Bioethics and Business Ethics: A Walk through the Maze. Deaconess Health System Annual Ethics Retreat, New Harmony, IN, May, 2003.

Assessment in Cyberspace: Strategies for Success with Online Testing to improve student learning, with Jon Reidford, 2003 IHETS/IPSE Partners Conference, Ball State University, Muncie, IN, April, 2003.

Discourse in Cyberspace: Multiple Uses of Online Discussion, Stop Surfing, Start Teaching: 2003 National Teaching Conference, Las Vegas, NV, February, 2003.

The Use of online discussion boards to improve student learning and writing, Seventh Annual Nursing and Health Professions Educator Conference, University of Southern Indiana, Evansville, IN, October, 2002.

Values-Based Health Care: Customer Service as Personhood and the Common Good, 30th Annual Conference of Value Inquiry, Medical College of Wisconsin, Milwaukee, WI, in April, 2002.

Organizational Ethics in Health Care: From the Bedside to the Boardroom, Plenary Speaker, 6th Annual Nursing and Health Professions Educator Conference, University of Southern Indiana, Evansville, IN, October, 2001.

Publications:

Valadares, K.J. 2003. The relevance of Distributive Justice in Health Care. *Journal of the Philosophy of Surgery and Medicine*. 1(3): 5-11.

Valadares, K.J. 2002. Organizational Culture in Health Care. *Journal of the Philosophy of Surgery and Medicine* 1(2): 13-19.

Valadares, K.J. "Managed Care and the Patient-Professional Relationship," *Journal on Medical Ethics*, Harvard Medical School Student Publication, Spring 2000.

Valadares, K.J. "Individualism vs. the Common good - Ethical issues on the technological imperative for Health Care," *Critical Reviews in Biomedical Engineering*, 26(5): 1998.

Mercier, Ronald, Magill, G., Valadares, K.J. "Catholic Social Ethics: Canadian and U.S. Models," *Proceedings from the Catholic Theological Society of America Annual Meeting*, 1998.

Publications/Features (Non- Peer Reviewed):

Featured in:

Hill, C. (2004, May). Questioning the Hybrid Model. *The Online Classroom*, Magna Publishers.

Johnson, E. & Elliot, P. (2004, March 7). Embryos in Limbo. *The Evansville Courier & Press*.

Wersich, C. (2004, March 1). USI Leads in Long Distance Learning. *The Evansville Courier & Press*.

Community

Member, Perinatal Ethics Committee, The Women's Hospital, 2002 –

Member, Ethics Committee, Health South Rehabilitation Hospital, 2004 -