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

1a. Submitted by the College of: PUBLIC HEALTH

Date Submitted: 8/11/2014

1b. Department/Division: Dept Of Biostatistics

1c. Contact Person

Name: Andrea Perkins

Email: andrea.perkins@uky.edu

Phone: 218-2021

Responsible Faculty ID (if different from Contact)

Name: Lin Yang

Email: lin.yang@uky.edu

Phone: 218-2248

1d. Requested Effective Date: Semester following approval

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

2. Designation and Description of Proposed Course2a. Will this course also be offered through Distance Learning?: Yes⁴

2b. Prefix and Number: BMI 734

2c. Full Title: Introduction to Biomedical Image Analysis

2d. Transcript Title:

2e. Cross-listing:

2f. Meeting Patterns

LECTURE: 45

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: This class aims to give students a broad overview of biomedical image analysis and imaging informatics. We will introduce the state-of-the-art knowledge to understand, develop, and apply existing methods and software to handle biomedical image data to extract quantitative matrices.

2k. Prerequisites, if any: None

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?: 25

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: Students from technology-oriented degree programs such as Biostatistics, Statistics, Computer Science, Biomedical Engineering as well as Health Science Colleges (e.g., biology, medicine, and pharmacy) will be of interest to develop basic introductory level of biomedical image analysis and imaging informatics.

8. Check the category most applicable to this course: Not Yet Found in Many (or Any) Other Universities ,

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?: No

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: Lin Yang

Instructor Email: lin.yang@uky.edu

Internet/Web-based: Yes

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? This course provides timely interaction between students and faculty through blackboard emailing, UK emails, Blackboard announcement, and discussion boards. In addition, AdobeConnect will be used to communicate with students on a live mode. Yes, this course syllabus conforms to the UK guidelines specific to the distance learning consideration.

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. All aspects of the class materials and instruction including textbooks, course goals, assessment of student learning outcomes will be the same as the course if offered in the classroom based setting.

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. Faculty will be circumspect to monitor plagiarism from online resources and among students, this aspect will be no different from the class-room setting. Password protected Blackboard portal will help retain the integrity and also enforce adherence to submission due dates through time stamping. In addition to stating the academic offense policies in the syllabus, the instructor will emphasize the policies during the beginning of the semester in a recorded session so students are given ample opportunity to familiarize themselves with what is considered plagiarism and what consequences they could face when resorting to academic dishonesty.

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? No

If yes, which percentage, and which program(s)? N/A

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? Students can interact with the faculty member through the live sessions or offline office hours or through phone calls; other ad hoc means of interactive Web based communication can be pursued within the weekly office hour slots. Students may borrow books from the library and utilize campus resources like students who would take the course in a classroom setting. Students will also be encouraged to take advantage of the DL library resources.

6. How do course requirements ensure that students make appropriate use of learning resources? The students are instructed to read research articles and book chapters in line with the weekly lessons defined. The video clips that are carefully chosen to supplement course lecture slides will be provided for further discussions. Practical exercise driven assignments will be given to students to achieve learning goals to assess/review essential contents in biomedical information retrieval.

7. Please explain specifically how access is provided to laboratories, facilities, and equipment appropriate to the course or program. All the readings assigned will be available based on free access or otherwise university licensed-articles. Learning tools and databases assigned for practical exercises will be available on a publicly accessible database, otherwise university licensed product through UK library system. Conventional homework that does not need any programming can be solved using the material (recordings and textbook) and written up using a Word processor.

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/>)? Yes. Additional resources for resolving technical issues are stated on the syllabus, including instructions to notify the instructor immediately.

9. Will the course be delivered via services available through the Distance Learning Program (DLP) and the Academic Technology Group (ATL)? YES

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. N/A

10. Does the syllabus contain all the required components? YES

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

Instructor Name: Lin Yang

SIGNATURE|ALHAYS0|Andrea L Perkins|BMI 734 NEW College Review|20140319

SIGNATURE|CHAPPELL|Joseph Chappell|BMI 734 ZCOURSE_NEW Approval Returned to Dept|20140425

SIGNATURE|ZNNIKO0|Roshan N Nikou|BMI 734 NEW Graduate Council Review|20140425

SIGNATURE|ZNNIKO0|Roshan N Nikou|BMI 734 NEW Graduate Council Review|20140428

SIGNATURE|ALHAYS0|Andrea L Perkins|BMI 734 ZCOURSE_NEW Approval Returned to Dept|20140820

SIGNATURE|ALHAYS0|Andrea L Perkins|BMI 734 NEW College Review|20140811

SIGNATURE|ZNNIKO0|Roshan N Nikou|BMI 734 NEW Graduate Council Review|20140926

**UNIVERSITY OF KENTUCKY
COLLEGE OF PUBLIC HEALTH**

Last Modified: 2/05/2014

Course Syllabus

BMI 734:

**Introduction to Biomedical Image Analysis
Spring 2014**

Distance Learning Offering through Blackboard

Classroom and Meeting Hours

Online course materials posting date: New materials are made available every Mondays by 11:59pm, EST through Blackboard.

Online live sessions: During the semester, four three-hour online meetings will be conducted via UKY Adobe Connect facility during which students can ask questions about the course material or assessment (homework, assignments, etc.). This is in addition to email and phone.

Face to face meetings are not scheduled for this course. Course materials (slides, recordings) can be viewed offline and all assessment is also conducted through Blackboard submissions.

Contact information

Course Director:	Lin Yang, Assistant Professor
Web:	http://www.uky.edu/~lya227/
Office:	230D, Multidisciplinary Science Building
Telephone:	859-218-2248
E-mail:	lin.yang@uky.edu
	<i>(Note: Maximum response timeframe to your email should be within 48 hour.)</i>
Office Hours:	Wednesday afternoon (both physical and virtual) 1.00PM – 3.00PM

Course description

This class aims to give students a broad overview of biomedical image analysis and imaging informatics. We will introduce the state-of-the-art knowledge to understand, develop, and apply existing methods and software to handle biomedical image data to extract quantitative matrices. The topics in this class will include:

1. Introduction to biomedical image computing and imaging informatics.
2. A basic review of basic imaging modalities, such as X-ray, Computed Tomography, Magnetic Resonance, and Light Microscope including the whole slide scanning technology.
3. Introduction to imaging-based anatomy and physiology: respiration system, brain, breast anatomy and imaging, musculoskeletal system, cardiac system, urinary system, and GI system.
4. Information system and architecture, basic concepts like relational database and SQL searching language.
5. Basic biomedical image processing, such as biomedical image segmentation and registration, etc.
6. Basic disease model for prediction and prognosis.
7. Biomedical Imaging informatics (computer aided diagnosis, content based image retrieval, and basic knowledge for building a biomedical imaging informatics system).

8. Evaluation system including biostatistics study design and informatics evaluation.
9. Introduction to selected topics: Multicore Processor, Graphic Processing Unit, Cloud, and Grid.

Course rationale:

We live in a revolutionary age, witnessing the next-generation of medical image and information emerged in astounding volume and rich formats. Images and videos are currently used widely in biological research and medical clinical applications. Manual image analysis is extremely time consuming, labor intensive, prone to errors, and not reproducible. The end goal for this class is for you to not only learn the scope and importance of the fundamental principles of utilizing computers to analyze images automatically, but also get **hands-on** training in utilizing proper image analysis, imaging informatics tools, and software to solve computational image analysis problems. This class would be suitable for a broad spectrum of students from biostatistics, statistics, mathematics, informatics, computer science, electrical and computer engineering, biomedical engineering, and students, residents, fellows, and researchers from biology, pathology/radiology, and medicine, who are interested in learning how to utilize informatics and computational tools to analyze images (multiple dimensions, multiple modalities) in a quantitative, automatic, objective, fast, and high throughput manner.

Course prerequisites

- None.

Course objectives

- Obtain best practices in biomedical image computing for processing biomedical images to extract quantitative and automatic measurements.
- Apply the basic tools and software for building high throughput imaging informatics system
- Learn to collaborate with colleagues in the design, development, and implementation of research projects.

Public Health Competencies for Statistics and Informatics

- Apply basic informatics techniques with vital statistics and public health records in the description of public health characteristics and in public health research and evaluation.
- Appreciate the importance of working collaboratively with diverse communities and constituencies (e.g. researchers, practitioners, agencies and organizations).
- Discuss the influences of social, organizational and individual factors on the use of information technology by end users.
- Collaborate with communication and informatics specialists in the process of design, implementation, and evaluation of public health programs.
- Use information technology to access, evaluate, and interpret public health data.
- Use informatics methods and resources as strategic tools to promote public health.
- Use informatics and communication methods to advocate for community public health programs and policies.

College of Public Health Competency- adopted from MPH Cross-cutting competency, 2013

- Organize and deliver effective written and verbal communications about public health activities using appropriate communication strategies to professionals, labor, industry, the general public and the media.
- Use evidence based principles and scientific knowledge effectively when involved in evaluation and decision-making in public health.

- Manage potential conflicts of interest encountered by practitioners, researchers, and organizations.
- Collaborate in interprofessional partnerships to implement organizational initiatives at the individual, organizational, and community level.

Student learning outcomes:

Upon completion of this course, the learner will:

- be able to understand a clear and theoretically-grounded definition of imaging informatics;
- be able to understand the widespread use of digital image with an emphasis on the areas of interest to the translational and clinical research community;
- be able to understand and use open source tools for radiology, pathology, and biology image processing, indexing, and retrieving, and
- be able to understand biomedical image analysis, basic computer vision, pattern recognition and machine learning terminologies with the focus of biomedical knowledge transfer.

Textbooks

(Required) Medical Imaging Informatics (Abbreviated as MII), Alex A. T. Bui and Ricky K. Taira, Springer, 2010 edition.

(Optional)

- PACS and Imaging Informatics: Basic Principles and Applications, H. K. Huang, Wiley-Liss, 2004
- Handbook of Medical Imaging Volume 1, 2 and 3, SPIE Press-International Society for Optical Engine, 2000
- Computer Vision: A Modern Approach, David A. Forsyth and Jean Ponce, Prentice Hall, 2002
- Pattern Recognition and Machine Learning, Christopher M. Bishop, Springer, 2006

Technology Requirements

Since this is a distance-learning course, students are required to have stable access to a computer and hence encourage students to own a personal computer (laptop/desktop is okay but tablets are not sufficient) according to these requirements:

<http://www.uky.edu/ukit/hardwareguide>

Furthermore, to fully participate in the distance learning experience students are also required to install the following software and acquire useful hardware:

<http://www.uky.edu/DistanceLearning/current/technology/techRegs.html>

Course requirements and learner evaluation

For those who take the class for credit, the following course assignments and midterm are required. Course grades will be based upon evaluation of the following activities:

Assignment and Midterm (60 points)

- Assignment #1 (10 points): Basic imaging modalities and imaging based anatomy
- Assignment #2 (10 points): Biomedical image analysis
- Assignment #3 (10 points): Basic disease model for prediction and prognosis
- Assignment #4 (10 points): Class presentation

- Midterm (20 points): Close book midterm exam
- Final exam (40 points) will be a competitive team project. Students will be separated into several groups to work on one specific imaging analysis problem. Each group will test their biomedical imaging informatics system based on the other group's proposed testing data and instructor's testing images. The training data will be provided in advance.

Special notes:

- Assignment submission: all assignments are to be submitted to me at lin.yang@uky.edu by each assigned date (normally Wed 11:59pm, EST).

Assignment Criterion

For each assignment, there will be problems and programming assignments. For a full credit, students are required to finish the problems section to make sure they understand the contents and programming section.

Grading Criterion

Grade Distribution:

<i>Points</i>	<i>Letter grade</i>
100-90	A
89-80	B
79-70	C
0-69	E

Instructor expectations

1. I expect you to submit papers using proper English grammar, syntax, and spelling. You are encouraged to use spell check and grammar check prior to submitting your written work. The Writing Laboratory is available to anyone who may need assistance. Grammar, syntax, and spelling will account for 10% of the grade for written work.
2. I expect (and encourage) you to provide honest and timely feedback regarding the content and process of this course throughout the semester.
3. I expect you during the semester to interactively engage via Blackboard with the other students and the instructor.
4. I expect you to share in the responsibility for making this course an enjoyable and beneficial learning experience.
5. This is a graduate-level course that requires you to study at least 3 hours a week for one credit course like this one. You may need less time, but be prepared for the fact that some weeks may be busier than others.
6. I expect you to log into BB course homepage to access course announcement, course information, assignment submission, and communication with your fellow classmates.

Academic honesty

Academic honesty is highly valued at the University. You must always submit work that represents your original words or ideas. If any words or ideas used in a class assignment submission do not represent your original words or ideas, you must cite all relevant sources and make clear the extent to which such sources were used. Words or ideas that require citation include, but are not limited to, all hard copy or electronic publications, whether copyrighted or not, and all verbal or visual communication when the content of such communication clearly originates from an identifiable sources. 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. All incidents of cheating and plagiarism are taken very seriously at the University of Kentucky, and there are specific policies and procedures in place to prosecute them. See S.R. 6.3.0 (PDF) for the exact Senate Rules regarding academic offenses.

Accommodations

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, submit to me a Letter of Accommodation from the Disability Resource Center. If you have not already done so, please register with the Disability Resource Center for coordination of campus disability services available to students with disabilities. Contact Jake Karnes via email at jkarnes@email.uky.edu or by telephone 859-257-2754. You may also visit the DRC website for information on how to register for services as a student with a disability:

<http://www.uky.edu/StudentAffairs/DisabilityResourceCenter/>

Religious Observances

Students will be given the opportunity to make up work (typically, exams or assignments) when students notify their instructor that religious observances prevent the student from completing assignments according to deadlines stated in this syllabus. Students must notify the course instructor **at least two weeks prior to such an absence** and propose how to make up the missed academic work.

Inclement weather

The University of Kentucky has a detailed policy for decisions to close in inclement weather. This policy is described in detail at http://www.uky.edu/PR/News/severe_weather.htm or you can call (859) 257-1754.

Late work policy

Late home works will not be accepted unless arranged with the instructor under extenuating circumstances as allowed by the excused absences policy.

Excused absences policy

Attendance, excused absences and make-up opportunities for this course will conform to the course policies established by the Office of Academic Ombud Services as found at www.uky.edu/Ombud/policies.php

Technical Requirements (Adopted from Distance Learning Recommendation)

"In order to have a successful educational experience in distance learning courses, there are minimum technology requirements that should be met. The University of Kentucky strongly recommends that each student purchase a personal computer. To review minimum recommendations and guidelines for your computer click [here](#).

University of Kentucky distance learning students are also encouraged to acquire the following hardware, software, and Internet connection to ensure that all systems used by distance learning courses will function properly."

Go to the link at: <http://www.uky.edu/DistanceLearning/current/technology/techReqs.html> to test your network speed and other necessarily technology requirements for this class.

Information on Distance Learning Library Services

Available at: <http://libraries.uky.edu/dlls>

Carla Cantagallo, DL Librarian, (859) 218-1240

Email: dlldservice@email.uky.edu

DL Interlibrary Loan Service: http://libraries.uky.edu/page.php?lweb_id=253

Contact information for:

TASC <http://www.uky.edu/ukit/atq/tasc>

Information Technology Customer Service Center <http://www.uky.edu/ukit/>

Technical Issues

Students should contact the instructor (via email) and the UKIT help desk in case they are unable to access the materials (<http://www.uky.edu/UKIT>, 859-218-HELP) so that issues can be resolved in a timely fashion and homeworks can be submitted on time.

COURSE SCHEDULE

- Posting dates for course materials: Every Wednesdays by 11:59pm, EST.
- MIDTERM EXAM: Wednesday, 3/12/2014, 3-5.30pm, EST
- FINAL EXAM: Wednesday, 04/30/2014, 3-5.30pm, EST
- All assignments should be submitted by each assigned dues (normally Wed 11:59pm, EST).
- Supplementary readings will be posted as needed.

Date	Topic	Readings	Assignment Dues
01/15 Wed	Introduction to biomedical image computing and imaging informatics	MII chapter 1	<ul style="list-style-type: none"> • Course syllabus and Blackboard course homepage should be fully understood!
01/22 Wed	(Lesson 1) A basic review of basic imaging modalities, such as X-ray, Computed Tomography, Magnetic Resonance, and Light Microscope including the whole slide scanning technology	MII chapter 2	
01/29 Wed	(Lesson 2) Introduction to imaging-based anatomy and physiology: respiration system, brain, breast anatomy and imaging, musculoskeletal system, cardiac system, urinary system, and GI system	MII chapter 2	
02/05 Wed	(Lesson 3a) Information system and architecture, basic concepts like relational database and SQL searching language.	MII chapter 3 and 4	<ul style="list-style-type: none"> • Assignment #1: Basic imaging modalities and imaging based anatomy
02/12 Wed	(Lesson 3b) Information system and architecture, basic concepts like relational database and SQL searching language.	MII chapter 3 and 4	
02/19 Wed	(Lesson 4a) Basic biomedical image processing, such as biomedical image segmentation and registration	MII chapter 5 and instructor selected research articles	
02/26 Wed	(Lesson 4b) Basic biomedical image processing, such as biomedical image segmentation and registration	MII chapter 5 and instructor selected research articles	
03/05 Wed	(Lesson 4c) Basic biomedical image processing, such as biomedical image segmentation and registration	MII chapter 5 and instructor selected research articles	<ul style="list-style-type: none"> • Assignment #2: Biomedical image analysis
03/12 Wed	(Midterm Exam)		
03/19 Wed	(Lesson 5a) Basic disease model for prediction and prognosis	MII chapter 7, 8, 9	

03/26 Wed	(Lesson 5b) Basic disease model for prediction and prognosis	MII chapter 7, 8, 9	
04/02 Wed	(Lesson 6a) Biomedical Imaging informatics (computer aided diagnosis, content based image retrieval, and basic knowledge for building an biomedical imaging informatics system)	instructor selected research articles	<ul style="list-style-type: none"> • Assignment #3: Basic disease model for prediction and prognosis
04/09 Wed	(Lesson 6b) Biomedical Imaging informatics (computer aided diagnosis, content based image retrieval, and basic knowledge for building an biomedical imaging informatics system)	instructor selected research articles	
04/16 Wed	(Lesson 7) Evaluation system including biostatistics study design and informatics evaluation.	MII chapter 10	
04/23 Wed	(Lesson 8) Introduction to selected hot topics: Multicore Processor, Graphic Processing Unit, Cloud, and Grid.	MII chapter 3.3 and instructor selected research articles	<ul style="list-style-type: none"> • Assignment #4: Class presentation
04/30 Wed	Final project demo and technical report		



Center for Clinical and
Translational Science (CCTS)

Center for Clinical and
Translational Science
UK Chandler Medical Center
Pavilion H
800 Rose Street, Room C300
Lexington, KY 40536-0293
www.ccts.uky.edu

May 29, 2014

Stephen W. Wyatt, DMD, MPH
Dean
College of Public Health
111 Washington Avenue, Room 112
CAMPUS 0003

Dear Dean Wyatt:

The NIH CTSA program places great value on biomedical informatics research and training programs. For CTSA's, from a training perspective, informatics, bioinformatics and clinical/informatics content and courses for professional and academic doctoral, as well as professional and academic masters students are major priorities. Every aspect of the health sciences, from basic research, to clinical care to community based outcomes studies, will continue to be dependent on the analysis of data and the translation of data into information, and thus it is critically important that we train the next generation of clinicians and researchers in informatics. The UK Center for Clinical and Translational Science (CCTS), as part of the NIH CTSA network, has been building courses for students on our campus. The proposed courses are part of the CCTS plan to build toward an academic degree offering in biomedical informatics. In addition, the courses will also be available to professional doctoral students in Medicine and Pharmacy, and will be available for inclusion in certificate programs on our campus. These courses have potential beyond our campus; Medical schools at Marshall University, East Tennessee State University and the University of Pikeville are exploring arrangements to access these courses for their students.

As the CCTS prepares for its next grant submission in 2015-2016, these courses are an important and strategic priority.

Sincerely,

A handwritten signature in black ink, appearing to read "Phillip A. Kern".

Phillip A. Kern, M.D.
Professor of Medicine, Division of Endocrinology
Director, Center for Clinical and Translational Sciences
Associate Provost for Clinical and Translational Science
Director, Barnstable Brown Diabetes and Obesity Center



June 6, 2014

Stephen W. Wyatt, DMD, MPH
Dean
College of Public Health
111 Washington Avenue, Room 112
CAMPUS 0003

Dear Dean Wyatt:

As you know, the PhD program in Epidemiology and Biostatistics is intended to be an integrative doctoral program which prepares future researchers who will have substantial quantitative preparation in the unique domains of these two disciplines. The essentially strong cross-training and mentoring nature of the program is intended to develop independent researchers skilled in designing and conducting studies, as well as analyzing and interpreting the results from an increasing variety of study designs.

As the current Chair of Academic Affairs, I recently reviewed the large complement of courses in bioinformatics, clinical informatics, information retrieval, and natural language processes that have been developed by our faculty in the Division of Bioinformatics. Many of these courses may be suitable electives for our doctoral students. As you are aware, there has been an intense demand for scientifically trained (subject matter) data analysts who can address the issues in conducting studies which include large amounts of complex data.

For epidemiologists and biostatisticians working in human genome epidemiology, statistical genetics, and related disciplines, the field will require a better understanding of the management and retrieval of information from these large datasets. Training in biomedical informatics will be appealing to some of our PhD students in Epidemiology and Biostatistics and will be encouraged by many of our program faculty.

Sincerely,

A handwritten signature in black ink that reads "STEVE BROWNING". The signature is written in a cursive style with a large, sweeping "S" at the beginning.

Steven R. Browning, PhD
Associate Professor, Director of Graduate Studies for the PhD
Department of Epidemiology
111 Washington Ave, Suite 209B
Lexington, Kentucky 40536-0003
(859) 218-2235
Phone: (859) 218-2235
E-mail: srbrown@pop.uky.edu

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Tele: (859) 218-2235
Fax: (859) 257-8811
www.ukcph.org/index.htm



UNIVERSITY
OF KENTUCKY

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111 Washington Avenue, Suite 220
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(859) 257-5678 Ext. 82100
Fax (859) 257-9862
www.mc.uky.edu/PublicHealth

June 6, 2014

Stephen W. Wyatt, DMD, MPH
Dean
College of Public Health
111 Washington Avenue, Room 112
CAMPUS 0003

Dear Dean Wyatt:

I am writing to offer my enthusiastic support for the new biomedical informatics courses that are being proposed to the Graduate Council. As you know, the Master of Science program in Clinical Research Design is intended to prepare practicing health care professionals and students pursuing a terminal degree (MD, PharmD, etc.) to conduct population based research. The program is targeted to students who wish to enhance their translational research skills and increase their knowledge of population-based health and clinical trials. MDs interested in an academic appointment will find that this degree program will make them competitive for the best positions, where research skills are becoming the norm. Of particular demand for medical researchers are effective uses of biomedical data, information, and knowledge for scientific inquiry, problem solving and decision-making motivated by efforts to improve human health.

Our MS program is designed to accommodate graduates of the Certificate in Clinical Research Skills offered in conjunction with the Center for Clinical and Translational Sciences, which strongly emphasizes and relies on biomedical informatics. The addition of these courses to the list of electives that Clinical Research Design students can choose will be extremely attractive to current students, and may perhaps entice prospective students to pursue the Graduate Certificate or degree program. The faculty proposing and teaching these courses are great partners in education and research and I look forward to strengthening existing ties through implementation of these courses. For these reasons, as Director of Graduate Studies for the MS program in Clinical Research Design, I fully support these new course proposals.

Sincerely,

David M. Mannino, M.D.
Professor and Chair
Department of Preventive Medicine and Environmental Health
Director of Graduate Studies, Masters of Science in Clinical Research Design
University of Kentucky College of Public Health

Department of Pulmonary, Critical Care, and Sleep Medicine
University of Kentucky College of Medicine

Perkins, Andrea L

To: Miroslaw Truszczyński
Subject: RE: Support for BMI courses

From: mirektruszczyński@gmail.com [<mailto:mirektruszczyński@gmail.com>] **On Behalf Of** Miroslaw Truszczyński
Sent: Wednesday, July 16, 2014 9:46 AM
To: Perkins, Andrea L
Cc: Nagarajan, Radha; KIM, SUJIN; Wray, Johanna (JoJo)
Subject: Re: Support for BMI courses

I reviewed the proposals for the new biomedical courses BMI 633, 730-735. I find them useful to candidates for the Informatics Certificate, pursued typically by 2-4 students per year.

I support their approval.

Mirek Truszczyński
Director, Informatics Certificate

Brothers, Sheila C

From: Brothers, Sheila C
Sent: Tuesday, September 17, 2013 1:42 PM
To: Schroeder, Margaret
Cc: mary.arthur@uky.edu; Bailey, Paula D; michael.baker@uky.edu; Browning, Steven R; Childs, Paul D; Griffith, William S; Iahiane, Hsain; Karan, P P; loconnor@uky.edu; Wilhelm, Ronald J; Williams, John C
Subject: SAPC Cmte Items_Five Held Over from 2013-14

Good afternoon, Margaret. There are five proposals under the purview of SAPC that were held over from 2013-14. Below is a description of each, along with information about why it was held over and the contact person for the proposal.

The proposals are not attached here, but they are posted at the committee's website:
http://www.uky.edu/Faculty/Senate/committees_councils/standing_committees/academic_programs.htm.

It would be best to have the SAPC's review of these items completed by November, so they can move to Senate Council, the Senate, and the Board of Trustees (if necessary). Please let me know when any of these items are ready to move on. The items below are ordered oldest to newest.

1. Proposed New Graduate Certificate in Advanced Horticulture (contact person – Robert Geneve)

This was reviewed by the SC on March 24, 2014. The proposal was returned to SAPC for deliberation on the following two issues: clarify the relationship of the proposed new certificate to those students currently enrolled in the Masters of Science in Integrated Plant and Soil Sciences; and address the issue of offering a certificate by faculty who do not have joint graduate faculty status at UK

2. Proposed Suspension of BS Spanish (Alan Brown)

This item was reviewed by the SC on 10/7/2013. The proposal was returned to SAPC for deliberation on the following three issues: clarification of requirements for dual degrees and double majors; the number of science majors who go on to earn the BS Spanish; and if a requirement can be added to the BS Spanish such that it must be combined with a second major, due to the BS Spanish requirement of 60 hours of science courses. In short, the SC was concerned that suspending the BS Spanish will negatively affect students in the sciences who may want to combine their science degree with a Spanish degree.

3. Proposed Suspension of Master of Arts in Theatre (contact person – Nancy Jones)

This item has not left the SAPC. My understanding is that SAPC requested a rationale for the suspension from the contact person, but it has not been forthcoming.

4. Proposed Suspension of Graduate Certificate in Health Administration (contact person – Sharon Lock)

This proposal BLAH BLAH BLAH

5. Proposed New Undergraduate Certificate in Geographic Information Systems (Jenny Rice)

This item has not left the SAPC. My understanding is that SAPC requested additional information about the proposal from the contact person, but it has not been forthcoming.

If you have any questions or requests, please don't hesitate to let me know.

Thank you,
Sheila

Sheila Brothers
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