

**Faculty Council Meeting
April 9, 2014**

AGENDA

- I. Chair's Announcements
 - A. Minutes of Faculty Council Meeting held on March 26
 - B. Election results
 - C. Spring elections – nominations open
 - D. Update on AVP/Provost search
 - E. Update on Learning Management System Comparison Project
 - F. NAC&U Ambassador position
 - G. Report on Provost Council meetings

- II. Items for Business
 - A. CAP reports
 - a. Minor and Certificate Program in Professional Healthcare Preparation
 - b. Major and Minor in Healthcare Information technology
 - c. Interdisciplinary Program in Sports Studies (The final versions of this proposal will be available on the FC website before the meeting)
 - B. Proposal to create a new Faculty Council Committee on Revenue and Spending
 - C. Learning Management System Comparison Project
 - D. NAC&U Ambassador

- III. Committee Reports
 - A. Elections— David Shutkin
 - B. RTP—Tom Zlatoper
 - C. RSFD—Abdul Imam
 - D. Gender and Diversity—Sheila McGinn
 - E. Enrollment and Student Life—Dwight Hahn
 - F. Compensation—Marc Kirschenbaum
 - G. CAP—Barbara D'Ambrosia

- IV. Items for Faculty Meeting on April 23, 2014
 - A. CAP Reports
 - B. Committee on Finance and Compensation Annual Report

- V. New Business
 - A. ?

- VI. Adjourn

Chair's Announcements:

Election Results: Both the Protocol for Requesting Approval for New Academic programs and the proposals to recommend new procedures for transfer credit requests passed.

Spring Elections: Nominations for the spring elections will open on April 9, after the Faculty Council meeting, and close on April 24. Please encourage your colleagues to run. Note: The chairs of several Faculty Council Committees have indicated that they will not run for re-election (for FC Committee Chair). We will be looking for new chairs of CAP, RSFD, and FFCWRP. Please let me know if you are interested in chairing any FC Committee. You may also want to encourage people to run for Council with the intent of running for a FC Committee Chair position if they are elected to Council.

Provost/AVP Search: The three finalists for the Provost/AVP position will be on campus on April 21/22, April 24/25 and May 1/2. While on campus they will give a presentation and answer questions at an open forum for faculty and staff. There will also be a meeting with Faculty Council. Because of the impossibility of scheduling a meeting that everyone on Council can attend, the time will be chosen to ensure that the Chair, Vice-Chair and Secretary of Council can attend and all other members of Council are encouraged to attend if they are free. This is the procedure we followed for the HLC and it seemed to work quite well. I will try and arrange the schedule so that the untenured members of Council and members of Council who are on the Faculty Handbook Committee can attend because there will not be an opportunity for the AVP/Provost candidates to meet with the Untenured Faculty Organization or with the Faculty Handbook Committee.

The **Learning Management System Comparison and Hosting Project** is nearing completion. Faculty who have participated in this project indicate that they are likely to recommend a change because two of the alternatives to Blackboard are much superior to Blackboard. If a change is implemented, Blackboard will probably be supported through Spring 2015 and the new system will be introduced in Fall 2014 (so faculty will have a choice during the transition). Item IIC on the agenda is to introduce a discussion on the appropriate form for a faculty recommendation.

NCA&U Ambassador: I have included below a draft description of the position for Ambassador to the New American Colleges and Universities. Item IID on the agenda is to discuss whether FC should recommend an ambassador to the AVP.

Draft description of the role of Ambassador to NAC&U

Role and Responsibilities

The ambassadors would develop connections between campuses among the faculty, act as an ombudsperson to provide information, facilitate collaboration, and make sure faculty and students are aware of what NAC&U offers.

Specifically, the Ambassadors would:

- Attend the NACU Summer Institute.
- Report to their respective faculties about NACU conversations, activities, and initiatives.
- Facilitate campus participation in consortial initiatives, e.g., collaborative civic engagement projects. (It is understood that not every campus will participate in each initiative.)
- Bring ideas and proposals from campuses to the consortium for consideration.
- Work with the CAO to define campus priorities and responsibilities with respect to NACU projects.
- Promote the development of a faculty network across NACU institutions.

Number and Term of Ambassadors

- Each campus will determine how many ambassadors, how they are chosen, and their length of term. (Staggered terms would ensure continuity.)
- Some campuses might opt to include the chair of the faculty.
- Workload (course releases, stipend) would be determined by the individual campus.

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

To: Dr. Anthony R. Day, Chair, Faculty Council
From: Faculty Healthcare Advisory Committee
Re: A Proposal for a Minor and Certificate Program in Professional Healthcare Preparation
(AMENDED)

We respectfully submit the attached proposal for a minor and certificate program in Professional Healthcare Preparation. We thank the Committee on Academic Programs for their suggestions. The resubmission takes their comments into consideration.

This minor or certificate program is intended to complement the pre-health coursework and to better prepare a student intending to enter medical school or some other healthcare career. It offers a unique undergraduate track that will enhance John Carroll's special relationship with our dual admission partners, especially the Ohio University-Cleveland Clinic-John Carroll University medical agreements, as well as with other health partners or professional schools.

The proposal, which follows the new protocol, is outlined here.

1. Description and Purpose of the Program
 - A. National Context
 - B. Implications for Student Learning
 - C. Relevance to University Mission
 - D. Comparable Programs at Other Institutions and in the Geographic Area
 - E. Relationship to Other Programs at JCU
2. Program Curriculum
3. Organization and Administration
4. Implementation Timetable
5. Assessment
6. Letters of Support
 - University Budget Committee
 - Letter from Enrollment: Mr. Brian Williams
 - Letters of Support: Dr. Jeanne Colleran, Dr. Mike Martin, Dr. Kathy Lee

Respectfully submitted,

Dr. Kathy Lee, Director of Health Advising
Dr. Michael Martin, Chair, Biology Department
Dr. Erin Johnson, Department of Biology
Dr. Cyrilla Wideman, Department of Biology
Dr. James Lissemore, Department of Biology
Dr. John McBratney, Department of English
Dr. Dianna Taylor, Department of Philosophy
Dr. Denise Ben-Porath, Department of Psychology
Dr. Tracey Masterson, Department of Psychology
Dr. Helen Murphy, Department of Psychology

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

Dr. Jennifer Catellier, Department of Communications and Theatre Arts
Dr. George Lewandowski, Physician in Residence
Dr. Donald Cozzens, Writer in residence
Dr. Margaret Finucane, CSSA
Ms. Megan Dzuric, Student Affairs Health
Dr. Susan Long, Sociology and Population and Public Health
Dr. David Mascotti, Department of Chemistry
Dr. Daniel Palmer, MT and CS
Ms. Sara Stashower, Internship Director, CAS
Dr. Mary Beth Javorek, Counseling Center
Dr. Kathleen Manning , DEAS
Dr. Cece Brennan, DEAS
Dr. Nathan Gehlert, DEAS
Dr. Paula Britton, DEAS
Dr. Peifang Tian, Department of Physics
Ms. Allison West, SSD
Dr. Jeanne Colleran, Dean, CAS

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

1. Description and Purpose of Proposed Program

Purpose:

The landscape of health care is changing: with the Affordable Care Act, many more Americans – estimated in the millions – will be seeking health care. Increased longevity and population growth also add to the projected need for more --and differently trained --healthcare providers.

The proposed minor and certificate in Professional Healthcare Preparation is intended to assist a student who wishes to enter the medical field to be more fully knowledgeable about and prepared for the challenges and rewards of this career. It is meant to complement the student's academic major and related coursework in pre-medical studies. It helps to prepare the student dispositionally, practically, and ethically to become a competent and compassionate care-giver.

The minor and certificate are available to any student wishing to enter the field of healthcare, but it provides specific opportunities for students admitted in John Carroll's dual admission medical agreements. In the past two years, JCU has entered into dual admission agreements with Lake Erie College of Medicine (for 20 seats) and Ohio University Heritage College of Osteopathic Medicine (10 seats). These agreements guarantee that upon admission to JCU, a student is guaranteed a seat in the medical, pharmacy, or dental program at LECOM and or the medical program at OU. We anticipate an increase in enrollment applications because of these agreements.

We continue to seek out other agreements, and we are in the process of approaching the medical schools at Jesuit Universities for preferred admissions.

The certificate or minor will become part of the student's official transcript.

A. National Context: Projection

One analysis, that the Association of American Medical Colleges predicts a shortage of 130,000 physicians by 2025.¹ And according to a 2012 analysis completed at Georgetown University's Center on Education and the Workforce, the healthcare economy is expected to grow at twice the rate of the national economy between now and 2020 and will create an additional 5.6 million jobs over those eight years. The report further notes that the demand for a post-secondary education for the bulk of the new healthcare jobs will grow faster than other fields except STEM and jobs in Education. In all, 82 percent of all jobs created in the next eight years will require some form of post-secondary education and training, or 4.6 million of the 5.6 million jobs created.

The requirements for the certificate and minor have been informed by "Building the Future: Educating the 21st Century Physician," the report of the Blue Ribbon Commission for the Advancement of Osteopathic Medical Education. This report assesses the evolving U.S. health care environment and its future needs, and it articulates the new knowledge and capacities for the primary care physician.

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

B. Implications for student experience and learning in healthcare

The scholarship around healthcare provision in the coming decades is substantial, but there is little dissent among the major professional organizations about issues of shortage, changes in delivery methods, and the need to re-think healthcare preparation. These national trends are reason enough to evaluate how we are preparing our students who wish to enter healthcare. But three other reasons also motivate this proposal: first, that John Carroll is located in a city where the major industry has become health care. Second, as we have expanded our partnerships, advising, and experiential opportunities, we also need to look at the curriculum. Third, we have developed a close connection with Ohio University College of Osteopathic Medicine and the Cleveland Clinic. This minor is well-suited to support students entering any health field, but especially medical school.

C. Relevance to University Mission

The academic mission of the university will be enhanced by offering a program that draws on the essence of the Jesuit mission to be “persons for others in service.” With an emphasis on scholarly engagement, academic excellence, spiritual attunement and service to others, the program will continue the Jesuit tradition of mind and spirit in service to others. The potential for recruiting more students is strong.

The minor or certificate in Professional Healthcare Preparation will offer courses which address the skills, capacities, and dispositions that a Health Care Professional will need in the near future. It will:

- complement the major a student is pursuing in his or her pre- health care preparation;
- round out scientific knowledge with other competencies needed to be a competent, ethical, and committed care giver;
- allow CAS to be a distinguished undergraduate pre-health program; and
- enable CAS to pursue more dual admission agreements programs,

D. Comparable Programs in similar institutions or in the geographic area

Cleveland State University offers a B.S. major in Health Sciences. This major (53 hours) is attached to five specialization tracks (such as podiatric medicine or physical therapy). It is not a minor and does not offer the experiential opportunities.

Nationally, the University of Vermont has developed a “Premedical Enhancement Program” with a focus on Primary care in collaboration with the University of Vermont’s medical school.

Daemen College in Amherst, New York offers a B.S. in Health Studies, and some of the learning outcomes are similar to this proposal; however, the institution has professional studies rather than a liberal arts orientation.

E. Relationship of the proposed minor and certificate to other health programs at JCU

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

John Carroll University is particularly well-suited to provide undergraduates with excellent preparation in health care and to do so in an innovative manner that takes into account emerging professional needs. Our distinguished history of preparing excellent medical and other health professionals is the result of an excellent and dedicated science faculty and of our strong liberal arts core. More recently, this distinguished history has been enhanced by other programs and initiatives.

Expanding health care programs is one of the College's top strategic priorities. We wish to recruit and retain more students who want to prepare for careers in healthcare, and we hope to increase the opportunities for them to gain admission to graduate and professional programs. To these ends, we have : 1) improved healthcare advising, 2) established a Faculty Health Professions Advisory Board, 3)cultivated more external partnerships, 4) begun to build more internships and an endowment to support internships and research.

1. Established Pre-Health Advising Office, with a full time director, a secretary and a Physician in Residence.

Dr. Kathy Lee, Ph.D. (Biology) directs the Pre-Health office. She teaches an Introduction to Health Care Professions course (with invited speakers), manages the HPAC faculty group to assist students in making applications, works with the Young Alumni group, advises current students, and speaks to future students. She works with the Dean of the College to explore and obtain other opportunities, such as dual admission agreements, preferred seats, and research and internship possibilities.

Dr. George Lewandowski, M.D. '77 serves as JCU's physician in residence. In addition to advising students, working to secure special professional relationships, he also teaches courses. An oncologist, he recently co-taught a course on Death and Dying with Professor Dianna Taylor in Philosophy.

Dr. Robert Hostoffer, D.O.'78 is an immunologist in private practice and a member of the John Carroll University's Board of Trustees. A widely-published researcher, he also serves on numerous professional boards. He serves as the chief medical consultant for developing professional programs.

2.The Faculty Health Professions Advisory Board

Convened by the Dean of the College of Arts and Sciences, this advisory group includes members from across the University who are actively involved in some aspect of health care. This group is responsible for interdisciplinary program development, for making suggestions about services for our students, and for helping to gain partnerships and experiential opportunities for JCU students. This is the group advancing this proposal.

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

3. Developed More External Partnerships

JCU-CCF Lerner Biomedical Humanities Faculty

This group of faculty in English, Philosophy and Theology and Religious Studies co-teach biomedical humanities and ethics at the Cleveland Clinic Lerner School of Medicine. At John Carroll, these faculty assist in preparing courses that will address subjects such as patient care, ethics, medical writing, etc. Dr. John McBratney, English, convenes this group.

Dual and Preferred Admissions

We have signed MOUS for dual admission to Lake Erie College of Medicine in medicine, dentistry and pharmacy. Twenty seats will be reserved for JCU students to choose to study in any of these fields at one of the three LECOM campuses: Erie, PA; Greensburg, PA and Brandenton, FL. Students are accepted into the program upon admission to JCU though an approval process that involves both parties. Upon maintaining a specific GPA and meeting other requirements, the JCU student can choose between a 3 plus 4 or 4 plus 4 program at ECOM

We also have signed a Dual Admission agreement to Ohio University Heritage College of Osteopathic Medicine. OU will reserve ten seats for JCU students at one of its three campuses: Athens, Columbus, or Cleveland (South Pointe Hospital). South Pointe is also associated with CCF. We see this agreement at the beginning of a distinctive relationship with Ohio University Heritage College of Osteopathic Medicine, Cleveland Clinic, and John Carroll University. In addition to signing the dual admission agreement with Ohio University heritage Osteopathic college, we have had discussions with Dean Ken Johnson, the Dean of the Medical School, with Dr. Robert Juhasz, President of Southpointe, and with Dr. Isaac Kiersten, Dean of Medicine at the Cleveland branch of OU at Southpointe. We have discussed enlarging the relationship to consider team-teaching, minority recruitment, and shadowing opportunities. The proposed Curriculum will enhance the relationship with OU-CCF.

Both of these programs are osteopathic programs. While the certificate and minor are designed to appeal to a number of professional programs including all osteopathic medical schools, nursing programs, and others, the certificate/minor will allow students to understand dimensions of primary care health. This is an important distinction as we work with osteopathic programs and other primary care health provision. D.O. in primary care (as well as M.D.'s) must possess a wide skill set that allows them to manage their own practices often alone, often in under-served areas. In addition, primary care doctors are the first point of patient care, and thus we wish to make our students aware of the medical "home" model.

Early Assurance Agreement with Ursuline College of Nursing.

JCU-CWRU Anesthesiology Assistants

We are in conversation with medical schools in the Chicago area for dual admissions particularly with Loyola University Stritch College of Medicine.

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

Internships and Endowment for Student Research and Internships in Sciences and Health

We have developed numerous internships and other modes of experiential learning with area institutions. We have paid summer research positions at CCF; we have paid internships in autism, healthcare information system, and eating disorders. We are in further discussion with University Hospital and Saint John's Hospital.

CAS has a new endowment to support student research and internships in science and health. At present, this endowment can support about 5-7 students per summer, but it is a priority to grow the endowment.

2. Program Curriculum: Minor and Certificate Requirements

Curricular Requirements for a minor in Professional Healthcare Preparation

The minor will require 7 courses (18 hours): one from each of the 7 categories. Students must complete two requirements (1 & 2) in the experiential coursework.

Curricular Requirements for a certificate in Professional Healthcare Preparation

The certificate program will consist of 5 courses (12 credit hours). Students must take course A and B for the certificate. Students then choose 3 more three-credit courses from any of the remaining categories. Of those remaining three courses, two must come from different categories. Courses may be taken in any sequence as long as pre-requisites are met. Students meet the experiential requirement through #1; shadowing.

A. AR 121 Survey of Healthcare Professions (1 credit)

Required for minor and certificate

Purpose: The purpose of this requirement is to allow students to explore different professions within the healthcare field and to introduce them to the various services of the pre-health advising program.

Description: The course is conducted seminar style and will feature speakers representing various healthcare professions to provide informational lectures and construction of an individual development plan (IDP) that students can use to assess their strengths and weaknesses and to keep track of their progress toward reaching their goal of gain entry to professional school.

Capacity: Currently we offer one section of the course, taught by Kathy Lee for about 20 students, once per year. In the first year of the program, we would adjust the cap. Dr. Lee prefers to take this approach since the course features between 12- 14 guest speakers. As

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

demand for the minor or certificate increases, we would offer another course in the spring semester, taught by Dr. Lee.

Cost: None. We do not offer honoraria for speakers.

B. AR 122 Introduction to Health Care: the Context of Care-giving (2 credits)

Required for Minor and Certificate

NEW COURSE

This course will introduce students to a variety of subjects, including: osteopathic medicine and allopathic medicine; the model of the medical home; issues in the future of primary care health; dispositions for the effective care-giver, remaining current in the healthcare field, how to attain shadowing and mentoring opportunities; professional conduct.

Course Director: Dr. George Lewandowski, MD. Guest speakers may be part of the course.

Dr. Lewandowski will develop the course syllabi and teach one section each semester

Cost:

Course Development Stipend (4000)

Adjunct Stipend (\$4000 per course per instructor)

C. Understanding the Patient (3 credits)

Students may choose one of the following courses:

SC270: "Healers, Patients, and Cultural Competence"

Pre-req: Soc 101

Exploration of medical encounters in social and cultural context, including illness as metaphor, diagnostic categories as cultural classifications, healer-patient relations, the role of family and community in health-seeking and compliance, cross-cultural practice of medicine, and the meanings and limitations of "cultural competency". Dr. Susan Long, Instructor

SCXXX Culture, Environment, and Global Health

Pre-req: SC 101

Study of patterns of disease and illness in relation to subsistence patterns and the natural environment; nutrition and life cycle effects of disease distribution; disease, economic development, and the epidemiological transition; cross-cultural and international medicine in global context (governmental, NGO, and private); current major global health problems.

Dr. Susan Long, Instructor. Variation of SC 370 "Medicine and Culture" as described by instructor.

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

PS 362 Health Psychology

No pre-req

Demonstrates and highlights how the biopsychosocial model can be applied to a multitude of populations—both healthy and ill—and contexts (e.g., disease prevention and treatment).

Currently taught by Professor Keary.

EN/PL Biomedical Humanities

Pre-req: EN 111 (Freshman writing or equivalent)

Course uses literary texts and films about illness and care to invite students to consider the many dimensions of health and wellness. Based on the curriculum offered by JCU instructors in collaboration with the Lerner School of Medicine. Could be team taught or individually taught. Instructors include: Professors McBratney, Metres, D. Taylor, Lauritzen, Moroney.

Cost: 2 Course Development Stipends (4000 each) over 2 years: one for the new or revised course in Sociology; one for Biomedical humanities course.

D. The Ethics of Care

The purpose of this requirement is to ask students to reflect on ethical issues in healthcare. Members of the Philosophy and Theology and Religious Studies would be instructors. Creative addition would be to invite the faculty in the medical ethics programs at Cleveland Clinic (or University Hospitals) to teach or team-teach. Two courses are readily available; there will be opportunity for others on the faculty to offer other courses.

PL 316 BIOETHICS (3 cr.)

Prereq: PL 101

Examination of current theoretical and practical implications of medical care and biotechnology. Specific topics include death and end-of-life care; organ transplantation; genetic mapping and testing; aging and dementia; fertility and reproduction; access to health care; patient rights; and the role of the physician.

XX 200 Department Designation to be determined for the following course:

“The Call of Medicine” Students will discuss the dual meaning of a medical vocation: exploring it as a calling that goes beyond possession of technical skills, to one that also includes membership in a moral community that professes broader obligations, and thereby more complex responsibilities. Text material will be grounded in bioethics, health systems, diversity and disparities, and narrative and art. Practitioners and scholars whose work focuses on those areas will join our discussions. Course to be developed with JCU faculty and CCF –Lerner Biomedical Humanities faculty (Dr. Martin Kohn, Ph.D. Molly Wimbiscus, M.D.) and with OU-CCF faculty.

Cost: Stipend for teaching “Call of Medicine.” (\$4000 per instructor—2 instructors)

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

E. Communication in Healthcare Settings

CO 200 Interpersonal Communication 3 cr.

Pre-req: CO 100

How people establish, maintain, and alter relationships with friends, strangers, work associates, and family members in professional, personal, cross-cultural, and social media contexts.

Discussion and application to professional and personal settings of theories of interpersonal communication, the role of self-awareness and culture, perception, diversity, verbal and nonverbal messages, listening, conflict, power, and ethics in relationships. *Designated sections to include module on healthcare settings. These sections would be by permission and students in the minor or certificate would be given priority.*

Course would be developed and taught by Dr. Jennifer Catellier who has specialized in health care information in her doctoral research.

CO 399: Healthcare Communications 3cr.

Pre-req. Co 100

Examines communication issues that influence patient attitudes and behaviors about health. This includes public understanding of health and science information as well as patient and provider relationships and interactions. Implications for risk communication, health campaigns and health marketing will also be discussed. This course would be offered by Dr. Jennifer Catellier and would receive a different numerical designation if proposal is passed.

EN 300 Advanced Writing: Medical Science Writing 3cr.

Pre-reqs: EN 103, 104/112; or EN 111, 112; or EN 114 or 116; or placement out of first-year English as determined during new student orientation.

Emphasis on writing for specialized audiences.

Course currently offered by adjunct Laura Greenwald.

F. Managing Healthcare (3 credits)

Our medical advisors have impressed on us the need for some skills in the areas of small business management or information technology.

MN Course

This course is a variant on a small business practices course that has already been offered. We propose to develop a course with some particular attention to health care practices in collaboration with BSOB.

Healthcare Information Course NEW

Since we are proposing a major in healthcare information (and already have a track), we believe it is possible for our students to take a more basic course than the one already offered (CS 312 Healthcare Information Technology). We have approved a search for an additional faculty member in healthcare technology, so we anticipate some capacity there. We imagine a course that explores development, tools, and technology specific to healthcare information, and which

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

includes electronic medical records, HIPPA issues, DICOMM standard for storage and manipulation of medical issues .

G. Elective courses pertinent to Health Care (3 credits)

SC 273 Public Health in U.S. Society (3cr)

Pre-req SC 101

Introduces basic concepts of public health and explores major public health issues in the United States. Central focus on health disparities regarding who becomes ill and inequalities of access to treatment due to stereotypes, racism, and social class.

SC 275 Family Violence (3cr)

Pre-req: SC 101

Social causes of violence in the family, especially dynamics of child and spouse abuse. Review of current research with attention to measures for preventing family violence and treating its effects.

SC 285 Aging, Health and Society (3cr)

Pre-req: SC 101

Interdisciplinary overview of aging with special attention to the impact on the individual, family, and society. Experiential learning and review of current research findings with emphasis on successful aging and health promotion.

SC 295 Sociology of Death and Dying (3cr)

Pre-req. SOC 101

Death and dying from a life-cycle perspective, including pain, grief, bereavement, and widowhood.

SC 315 Sexuality and Sexual Behavior (3cr)

Pre-req: SC 101

Social scientific examination of human sexuality, including biological, social, cultural, and psychological aspects throughout the life course. Topics include sexual identity, expression, and variation; sources of beliefs and attitudes about sexuality; the influence of changing gender roles and norms; and the social, psychological, and health consequences of sexual behaviors.

SC 385 Poverty, Welfare and Social Justice in the U.S. (4 credits)

Pre-req: SC 101 and one additional SC course

Critical examination of poverty and welfare reform; the underlying causes, consequences, and people who are affected. Highlight is an applied research project where students develop and conduct a program evaluation for a nonprofit agency serving the poor in inner-city Cleveland. Service learning component required.

BL 260 Poverty and Disease (3cr)

Pre-reqs: BL 155-158. Three hours of lecture per week.

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

Global and U.S. poverty; public health; epidemiology; U.S. health disparities, e.g., diabetes, obesity, HIV/AIDS; global health disparities, e.g., HIV/AIDS; tuberculosis, malaria; evolutionary factors in chronic and infectious disease; ethical issues in public health.

BL 240 Epidemiology (3cr)

Pre-reqs: BL 155-158 or grade of B or higher in BL 112-112L; grade of C or higher in MT 122, MT 228, MT 229 or EC 208. Three hours of lecture per week.

Basic epidemiological principles, concepts, and methods used in surveillance and investigation of global and domestic health-related events; discussion of historical and current examples from epidemiologic studies; focus on populations living in resource-limited settings.

PS 226 Drugs and Behavior (3cr)

Pre-req: PS 101 or BL 155

Introduction to the field of psychopharmacology, with special emphasis on the relationship between drugs and human behavior. Topics include history, routes of administration, absorption, distribution, metabolism, excretion, and adverse effects of psychoactive drugs. Students intending to follow the neuroscience concentration must take PS 426, not PS 226.

PS 381 Eating Disorders (3cr)

Pre-req. PS 101

Focus on anorexia nervosa, bulimia nervosa, and binge eating disorder. How psychologists diagnose and treat those with an eating disorder. Also, etiological models of eating disorders that focus on genetic/biological, environmental, and socio-cultural (e.g. media) influences. Medical complications associated with eating disorders and the role of the physician, dietician, and nutrition in addressing these issues.

PS 407 Psychology of Autism (3 cr)

Pre-req: PS 101

For students interested in learning more about individuals with autism spectrum disorders. Focus on the characteristics and incidence of autism, and the implications for children's learning, behavior and ability to process information. Student will explore the latest research on potential causes, best practices for assessment and intervention, areas of impairment, as well as current issues related to autism services

PS 426 Psychopharmacology (3 cr)

Pre-req: PS 326 or BL 155. Not open to those with credit in PS 226.

Effects of psychotropic drugs on behavior, cognitive functioning, and emotion, with an emphasis on both psychotherapeutic agents utilized in the treatment of biochemical abnormalities associated with various psychopathologies and drugs of abuse.

Special topics courses as submitted

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

3. Experiential Requirements

Some of these requirements are credit-bearing.
Most require application and acceptance.

1. Certificates and minors must complete a shadowing and students must spend a minimum of 40 hours shadowing no less than two health care providers. (0 credit)

2. Minors only must participate in one of the following activities. These positions are by application and students must meet specified requirements for placement. These activities are meant to be the equivalent of a 3 credit course. The experience will become part of the student's individual development plan that they will submit to the Director. To reach the equivalent of a 3 credit class, the activities may be spread across several semesters. More information about each option will be made available on the website.

Options:

- A. Research at external site or at JCU with faculty member.
- B. Internship at an approved site.
- C. Participation in medical immersion trip sponsored by JCU or other approved sponsor.
- E. Participation in Summer Field Experience.
- F. Service Learning related to health arranged via CSSA-must be a full semester

4. Organization and Administration of Program

The Minor and Certificate in Professional Healthcare preparation will be overseen by Dr. Kathy Lee, the Director of the Pre-Health Program. Dr. Lee reports to the Dean of the College of Arts and Sciences.

Currently the Pre-Health Advising Office has a part-time secretary. After the first three years, the level of support will be re-evaluated to see if there is need for a full-time secretary. Other support will be provided by Integrated Marketing, Enrollment, and Career Services.

Faculty Advisory Board: The Faculty Healthcare Advisory Board, which meets twice each semester, will make recommendations about curriculum, professional relationships, program development, external expertise, student research and internships, and assessment.

Physician Advisory Board: An advisory board of JCU medical professionals will be assembled by the Dean of the College of Arts and Sciences with the collaboration of Drs. Hostoffer, Lewandowski, and Lee, and with the expertise of the Advancement Division. While not directly charged with oversight responsibilities, we will look to this group for guidance and for professional relationships.

Declaration of Intent: Students must register with Dr. Kathy Lee, Director of Pre-Health Advising, to participate in the certificate or minor. Students should register as early as possible but no later than the first semester of their junior year.

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

Program Information will be added to the Pre Health Advising website and the College of Arts and Sciences websites. Integrated Marketing and Communications will prepare a paper information sheet that is standard for all of the college's programs.

Enrollment and IMC will market the new program and recruit students in connection with our dual admissions agreements.

5. Implementation timetable

If the proposal is accepted, we would begin to implement it in Fall 2014 or Spring 2015.

1. The administrative structure is in place.
2. Course B will need to be developed as soon as possible.
3. While other courses need to be developed, there are enough in place that the certificate and minor can begin in Fall, 2014.
4. The experiential opportunities are already in place.

6. Assessment Plan

Learning Outcomes – Program Level Students completing the program will be able to begin to:

- A. Demonstrate an understanding of healthcare as a healing art;
- B. Promote patient-centered understanding and respect;
- C. Integrate leadership and ethical perspectives with the practice of medicine;
- D. Communicate effectively to patients and peers;
- E. Manage practical and business aspects of health care.

Methods of Assessment

Program Level

As part of the AR 121 and AR122, students will complete an initial assignment that indicates the student's knowledge about the range of healthcare professions (AR 121) and the components of health care, especially primary health care (AR 122). In order to finish the minor or certificate, each student will submit a portfolio of one piece of work from each category via a blackboard site. To finish the certificate or minor, the student will write a brief essay describing how his/her understanding of healthcare or osteopathic primary care has been deepened through their coursework. This portfolio will be reviewed according to a rubric established by Dr. Lee. This project will serve to synthesize student learning from the previous coursework and will serve as an overall assessment of student success at the program level.

Course Level

- A. Courses in each of the categories C. D. E. F. must address at least one of the learning outcomes listed above, specify that focus in the syllabus, and indicate which assessment tools will be employed to evaluate student learning.

Professional Healthcare Preparation: A Proposal to John Carroll University Faculty Council's Committee on Academic Programs

- B. Courses in the elective categories do not have to specify these outcomes on syllabi, but students will be asked to address their learning in these courses through the portfolio process.

Faculty will need assistance in developing assessment tools. With Dr. Kugler and Dr. Dean, we will provide assistance in developing appropriate assignments or other means of evaluating learning.

Program Evaluation and Review

After three years, the certificate and minor will be reviewed by a committee composed of members of the faculty advisory board and invited external health professionals.

Key Indicators of Program Success:

1. Increased acceptance to professional schools correlated to participation in the minor or certificate.
2. Positive feedback from partner schools on preparedness of JCU students, again correlated to participation in the program.
3. Indication of student satisfaction via exit interviewers.
4. Increased choice of the minor or certificate.
5. Feedback and data elicited through the HPAC process.
6. Review of entire cycle of portfolios once every three years.

¹ Association of American Medical Colleges. Physician shortages to worsen without increases in residency training.
(https://www.aamc.org/download/150584/data/physician_shortages_factsheet.pdf).

March 18, 2014
Barbara D'Ambrosia, Chair
Faculty Council Committee on Academic Policies
Campus Mail

Dear Barbara:

At its February 24, 2014, meeting, The University Budget Committee reviewed the proposal for a Minor and Certificate Program in Professional Healthcare Preparation. While charged with reviewing the budgetary aspects of the proposal, the UBC also discussed the educational merits of the program. Kathy Lee and Jeanne Collier summarized the purpose of the program, namely, to give students interested in the healthcare professions, especially primary care, a broad preparation for medical school and other postgraduate education in a variety of healthcare areas. In addition to the benefits to individual students, the program will also help JCU obtain more articulation agreements with medical schools. Overall the UBC was impressed by the program as detailed in the sixteen-page proposal, which is supported by the twenty-six faculty and academic administrators whose names are listed therein.

Using the faculty-approved "Protocol for Requesting Approval of a New Academic Program" as a guide, the UBC reviewed the estimated costs for the first three years of the program as well as the estimated revenues for the same period of time. As you can see in the proposed budget, the cost estimates include salary and fringe benefits for part-time faculty (who will be the primary instructors in the program), some course development, part-time staff salary and fringe benefits, and an operating budget. In UBC's opinion, the estimated expenses are reasonable for a program of this kind and consistent with previously approved programs of a similar nature. The projected revenues are based on speculative but modest numbers of incremental students in the first three years at the current average net tuition revenue for each student. After incurring operating losses in the first two years, the program is projected to realize a modest profit in the third year.

The UBC finds the budget to be reasonable and appropriate, and also commends the proposers for the educational quality of the Minor and Certificate program and the likely benefit it will provide our students who aspire to careers in healthcare. The UBC voted (9 in favor, 0 opposed, 1 abstention) to ask me to write to you to report that it finds the proposed Minor and Certificate Program in Healthcare Preparation to be reasonable and that it recommends it to you and to the Faculty for approval.

Please do not hesitate to contact me if you have any questions.

Sincerely,

John T. Day
Provost and Academic Vice President
Chair, the University Budget Committee

February 17, 2014

Dr. Anthony Roy Day, Chair, Faculty Council

Dr. Barbara D'Ambrosia, Chair, CAP

John Carroll University

Letter of Support for Professional Healthcare Preparation

Dear Professor Day and Professor D'Ambrosia,

I am writing to strongly support the approval of the minor and certificate in Professional Healthcare Preparation.

In the past four years, the College of Arts and Sciences assiduously and rigorously has pursued opportunities in healthcare. It was a clear decision: our science faculty has long provided excellent pre-medical and pre-health training, and our many distinguished alumni in healthcare attest to this area of academic strength. As the landscape of healthcare changes, it presents us with more opportunities to strengthen our curriculum – and our reputation – in healthcare. As the proposal notes, we have dramatically improved our support for students through our pre-health advising program, and we have benefitted from the support and advice of two physicians to help us be more forward-looking. We have developed exciting new partnerships, especially our dual-admission agreements.

The proposal will further benefit our students by offering coursework that will complement their science study. It will give them skills they need throughout their health careers, and it will provide them with a broader view of patient care and health management. With its emphasis on ethics and caregiving, it will help us to graduate students who have reflected carefully on important questions of health, dignity, access, and compassion. We can be very proud of that.

The program will also make our students more competitive as they apply to professional schools. We believe it will help attract enrolling students. We have already discussed elements of the proposal with our partners, and they are enthusiastic about it.

Let me specifically address some concerns raised by CAP in their first review of the proposal, and some other issues that have occurred to me and to Dr. Kathy Lee in our recent conversations. These are the:

1. Proposal's Development;
2. Competition with other minors in the University;
3. Added dimension it will bring to our Healthcare Partnerships;
4. Enrollment possibilities; and
5. Budget

We have added these comments to the revised proposal, but I thought it would be clearer if I addressed them here.

1. Proposal's Development

This proposal has been formed and influenced by; 1) conversations with medical professionals, 2) literature and conversations with medical school educators; and 3) JCU faculty who serve on the Faculty Healthcare Advisory Committee. This consultation has resulted in a forward-looking proposal which directly responds to predicted health care needs.

Dr. Robert Hostoffer, D.O., and Dr. George Lewandowski, M.D. have offered us their expertise as medical professionals. Through their guidance and active support, Dr. Lee and I have met with the Deans of Medicine at Lake Erie College of Medicine and the Ohio University Heritage College of Osteopathic Medicine. We have dual admission agreements with these two osteopathic colleges that allows for up to 30 students to be guaranteed a seat at LECOM or OU in medicine, pharmacy, or dentistry. These partnerships have appeared on the University's home page.

Dr. Hostoffer is a leader in osteopathic professional organizations. He has introduced us to the important elements of preparing a primary care professional—the key focus of osteopathic medicine. The admissions dean at OU also shared with us the preliminary draft of a “blue ribbon” report on osteopathic medical education,

With this information and guidance, the Faculty Advisory Healthcare Committee, of which Dr. Lewandowski and Dr. Lee are members, were able to develop this proposal which complements pre-health science education and which offers a holistic approach to the skills and dispositions needed to be an effective, ethical, and compassionate care giver.

In sum, the proposal has benefitted immensely from professional advice and direction. As the proposal notes, it is a unique program, and we anticipate that its passage will better prepare our students for their health careers, attract new students, and strengthen our partnerships.

2. Competition with other JCU minors

We do not anticipate that this minor and certificate will draw students away from the minor in Population and Public Health or from other minors.

First, we have modified the second required course, AR 122, so that there is no significant duplication or overlap between this minor and the Population and Public Health Minor. Secondly, this minor is less content-focused than the Population and Public Health Minor or other minors: it would not, for example, be good preparation for graduate school in public health. Third, the survey of healthcare professions course (AR 121) has included a speaker on public health, and students would be advised to minor in this area if that is their chief interest.

Dr. Lee and I asked Mr. Brian Williams to provide information about the number of students pursuing healthcare professions who pursued minors in addition to their science majors. In particular, we were interested in knowing if the new minor would conflict of “siphon off” students from other programs. The date he provided suggests that this program will not conflict with another. Mr. Williams found that of the 98 HCAP UG students enrolled between 2012 and 2014, 82% (80) did not pursue any minor. Of the 18 students who did pursue a minor, the numbers were broken down as follows: Population and Public Health: 5 students; Spanish, East Asian Studies, Philosophy, Leadership: 2 students in each minor; Biology, Latin, Forensic Behavioral Science, Sociology, and Chemistry: 1 student in each minor.

It is possible that the approval of this minor will affect the Sociology Department more than other departments, if this trend persists. Should this be the case, I would speak with the chair of the department about the capacity issues.

3. Strengthening our healthcare partnerships.

The dual admission agreement with Ohio University presents some interesting areas for expanded collaborations because our students may elect to do their medical studies at South Point Hospital on Warrensville Center Road. Drs. Lee, Hostoffer, Lewandowski, and I have already met with the president of the hospital (JCU graduate, Dr. Robert Juhasz), with the Dean of Medicine (Dr. Issac Kiersten), and we have discussed more areas for conversation. In particular, we are discussing increased recruitment of minority students and the possibility of team-teaching courses. This program can enhance this partnership significantly.

We are also attempting to broaden our partnerships with other Jesuit Medical schools. Our first conversation will be with Loyola University of Chicago. The emphasis on the ethics of caregiving is appropriate to Jesuit medical schools, and should we be successful in working collaboratively, we can augment this minor's curriculum with a course that is specifically Ignatian.

4. Enrollment and Recruitment

Dr. Lee and I asked Brian Williams to assist us with understanding the potential for new student enrollment. We found his response to CAP's statement "that this minor will not attract noticeable numbers of new students to the university" to be helpful.

Mr. Williams notes that: " While the goal of such a program is not job placement, reality is that the health care and social assistance industry is expected to generate the largest number of jobs, 5.6 million, at an annual rate of 3.0 percent between now and 2020 -- the most dramatic growth compared to any sector in the country. Student demand follows these trends as students will seek internship and experiential opportunities and ways to contextualize their fields of study. Healthcare field, an aging population, etc., this minor explores many paths that will directly resonate with prospective students and is quite appropriate to the strengths of our region, and the growing focus on healthcare in our city, and the partnerships our faculty are creating." He notes, further that "A healthcare minor from the recruitment perspective is an interesting opportunity. The course work of this proposal could enrich a sociology major, a business major, a philosophy major, and any other. There are many ways this minor represents more than a "pre-med" minor or certificate and could help students think about pharmaceutical, health care administration, nursing home administration, and so many other vocational opportunities related to health care. Just as leadership, entrepreneurship and other minors on campus add a relevant context to a major, healthcare can do the same."

To this end, our marketing liaison, Mr. Josh Tyshianey has already developed informational materials about our pre-health opportunities to be used in recruiting.

Our dual admission agreements will certainly generate more interest in JCU as an excellent pre-health school, and our excellent science faculty will continue to offer the high-caliber instruction needed for medical school. But this minor adds another dimension of learning that is about the professional context, the skills, and the dispositions needed to be the kind of healthcare professional that embodies the highest standards of care. Since it also connects students to the services of our pre-health advising office, it has, perhaps like the Honors Program, an aspect of support and community.

6. Budget and Capacity

Mr. David Wong has prepared a more formal budget, and this will be submitted separately. In terms of the strain that this minor will put on faculty and departments, I would make the following observations:

AR 121 and 122 will be offered by Dr. Lee and Dr., Lewandowski, with the addition of healthcare professionals. Having Dr. Lewandowski on our pre-health staff (for which he receives only travel expenses) has been of enormous benefit to students and expanding his role will improve our program. He has a terrific rapport with students and wide associations in the medical community. These courses will feature invited professionals—an instance of the “high impact” approach to instructional excellence. The speakers invariably grow more supportive of our students and provide more opportunities for experiential learning.

Of the remaining courses, 4 are new, while others are revisions of existing courses. The wholly new courses are one in Category C (SC 270), one in Category D (XX 200), and two in Category F (Healthcare Information Systems and the Management Course). Strictly speaking, none of these courses is absolutely new—some version has already existed, but these four require some focused development. Course development stipends will be budgeted, and in the case of Category F, I have already approved a search for a specialist in healthcare information, and this course could be part of that curricular portfolio.

We will also offer stipends for course re-development.

In sum, I believe that we have the faculty capacity to offer this curriculum. Its use of adjuncts is appropriate; indeed, it introduces a broad range of health specialists to our students. Where there is a strain on departments, I will be in conversation with the department chair. Since this level of analysis takes place at the dean’s level, I do not think it is necessary to supply a letter from the president. CAS will be making hires over the next three years.

Finally, I would like to say something about competition. Baldwin Wallace has also attained dual admission seats to OU, and they have already issued a press release making some of the claims that we are also making about our healthcare curriculum. Please see the following link: http://www.bw.edu/news/primary_care_program/. I know our science faculty and our curriculum to be more demanding, but the fact remains that we must be more nimble in delivering excellent new programs and work to gain greater public visibility.

For these reasons, I hope that the members of CAP see the great value of this program and will endorse it to the faculty.

Thank you for your consideration.

Sincerely,

Jeanne Collieran

Dean

College of Arts and Sciences

March 13, 2014

Barbara K. D'Ambrosia, Ph.D.
Chair, Committee on Academic Policies
John Carroll University

Dear Barbara:

I am writing to indicate my support for the proposed undergraduate minor and certificate in Professional Healthcare Preparation. I understand my role in this process is to provide some commentary on the role of assessment in this proposal

To start, the proposed is consonant with our mission and strategic initiative to create an integrative learning experience for all students by means of high-impact education practices. With a foundation in the liberal arts, this program appears to be well-suited to helping students to achieve within the context of our academic learning goals for learning. Furthermore, the proposal indicates that learning goals have been identified for the minor, which will provide a good foundation for the development of an assessment plan. In particular, their indication that they will use a student portfolio tool for assessment will provide an excellent source of evidence for both the program and for students. I look forward to the opportunity to work with Dr. Lee to further develop course-level learning goals, build a curriculum map, and develop a complete assessment plan if the proposal is accepted.

Do not hesitate to contact me at x1972 or kdean@jcu.edu if there is additional information or perspective that I can provide that might inform your deliberations.

Best,

A handwritten signature in black ink, appearing to read 'Kathleen Lis Dean', with a long horizontal flourish extending to the right.

Kathleen Lis Dean, Ph.D.
Assistant Provost for Institutional Effectiveness



December 6, 2013

Pre-Health Professions

20700 NORTH PARK BOULEVARD
UNIVERSITY HEIGHTS, OHIO 44118-4581
WWW.JCU.EDU

Roy Day
Chair, Faculty Council
Barbara D'Ambrosia
Chair, Committee on Academic Policies

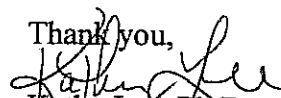
Dear Roy, Barbara, and Council Members,

This letter is put forth to support the proposal submitted by Dr. Jeanne Collieran for the development of a minor and certificate program in Professional Healthcare Preparation. This program was created for several reasons:

- 1) The healthcare industry, both in education and delivery, is evolving due to shifting demographics, governmental policy reform, advances in technology, and changes in healthcare management. As educators, we cannot ignore these facts and we cannot allow our students to be ignorant of them.
- 2) There will be a significant shortage of health care providers, specifically primary care physicians, in this country within the next decade. This program will provide insight into healthcare delivery and give students the foundations for compassionate care. While the program has strong roots in osteopathic medicine preparation, it has the breadth and flexibility to benefit students interested in pursuing any healthcare field. This represents a substantial portion of our student body.
- 3) This program will increase John Carroll University's visibility and garner recognition for a unique approach to healthcare preparation for undergraduates. We have developed relationships with two osteopathic medical schools, Lake Erie College of Osteopathic Medicine and Ohio University's Heritage College of Osteopathic Medicine, whereby seats have been reserved for John Carroll students. We are working on additional affiliation agreements with other medical schools, both allopathic and osteopathic, and other tertiary healthcare educational institutions. This program will allow for additional affiliations with tertiary educational and healthcare delivery centers.
- 4) This program will support John Carroll University's mission and train students to be leaders in service and scholarship. Prospective students and their parents are looking for these types of programs; this will increase enrollment and retention of qualified undergraduates.

This proposal was developed in collaboration with medical professionals and the Faculty Health Professions Advisory Board. The combination of coursework with experiential requirements will complement the pre-requisite courses required by most healthcare programs and give our students pragmatic skills and the fundamentals for their future careers as empathic, compassionate caregivers.

Please do not hesitate to contact me if you have any questions or need additional information. I can be reached by phone at (216) 397-4491 or email at: klee@jcu.edu.

Thank you,

Kathy Lee, Ph.D.

Director, Pre-Health Professions

December 9, 2013

Anthony Roy Day, Ph.D.
Professor of Physics
John Carroll University
aday@jcu.edu

Barbara K. D'Ambrosia, Ph.D.
Professor of Mathematics
John Carroll University
bdambrosiajcu.edu

Dear Colleagues,

It is a pleasure to provide a letter supporting adoption of an academic minor/certificate program in Primary Health Education. Since 2009, while still a practicing physician, I was fortunate to become re-engaged with the John Carroll Health Professions educational community. Graduating from John Carroll as an Honors' Program Chemistry major in 1978 prepared me for medical school and a fulfilling career as a Gynecologic Oncologist. Through informal interactions with friends of my son Chris (JCU 2010, Boler School), I became aware of opportunities to share my medical experiences while learning more about the challenges of 21st century health education. By participating in the 2009-10 faculty Prehealth working group, I acquired a more comprehensive perspective of John Carroll's role in health education, and was rewarded with the opportunity to interact closely with an engaged faculty and energizing students. In 2012, I gratefully accepted Dean Jeanne Colleran's offer to serve as Physician-in-residence and assist Prehealth Program Director Dr. Kathy Lee in a multifaceted approach to reinvigorate the John Carroll University Prehealth community.

The proposed academic minor in Primary Health Education represents the direct collaboration of a diverse and inspiring group of over 20 John Carroll faculty and staff. Its development incorporated the vision of a number of alumni – but none more prominent or involved than Dr. Robert Hostoffer (JCU '81) D.O. Dr. Hostoffer's service on John Carroll's Board of Directors and his active involvement in local, regional and national Osteopathic medical education provided JCU with unique, clear and timely insight into a rapidly-changing medical environment. Through frequent meetings and regular electronic communications, the Faculty Health Advisory Committee focused upon an ambitious but achievable goal – the construction of a course of study that would respect the importance of the liberal Core, the integrity of a science-heavy Prehealth curriculum, the practical needs of students preparing application dossiers for competitive career paths and the knowledge that true career success will be judged far in the future and against the yardstick of creating “men and women for others.”

Visions seem boundless, yet realities frequently intrude that can hinder implementation of any noble project. The committee resisted the urge to merely reshuffle John Carroll's rich curriculum, but wisely modeled the new initiative using the clay of existing, successful courses. Many of the participating faculty saw new roles for classes that they had offered, and suggested program-directed revisions that would fit into the vision of John Carroll's 2015 dramatic Core Curriculum initiatives. With an eye toward the future, a new course – developed and taught largely by physician-educators or other health care providers – will attempt to unify disciplines including sociology, psychology, political science, epidemiology and business practices into a currently-muddled concept known as “The Medical Home.” Other requirements will include options where the student will create a personalized pathway from:

1. Management Courses –offering a practical exposure to health information technology, electronic medical recording or small business management
2. Patient and Public Health Issues -incorporating sociology, psychology and humanities
3. The Caregiver – presenting a critical exposure to the ethics, morality and spirituality and leadership skill set needed to flourish as a “caring” health care provider
4. Healthcare communication – providing advanced preparation the unique challenges inherent to an expanded US and world health system.

Critically, each participant will be required to complete and evaluate their growth in an approved extramural health experience. These extracurricular activities are viewed as a necessary component for a successful application to health professional schools. Logically, it should also allow each student to better discern their own suitability for a chosen field.

While student growth and transformation should remain the primary focus of new programming, adoption of the undergraduate minor in primary Health would produce several valuable by-products. Interaction between faculty members from different disciplines - natural and social sciences, arts and humanities and business - may help each teacher better prepare hi/her students for a world where collaboration walks next to personal expertise on the pathway to success. Faculty from other institutions will be drawn into discussions with our own. Examining long-standing world challenges from fresh viewpoints can only serve to enrich each faculty member individually and the University as a whole. Put more simply, participation in a multi-disciplinary program might catalyze an interaction that will serve to overcome some conceptual barrier. By asking Primary Health students to complete an experience away from the university, we must be prepared to go there ourselves, at least in spirit. And by further opening our doors, we must be willing to engage interested health professions faculty and alumni. The mutual benefits will be far-reaching.

As a result of guidance from the involved faculty and administrators, the implementation of the Primary Care minor/certificate program can realistically be achieved without marked expenditures of time, facilities or financial resources. The argument can be made that the program may directly touch only a small number of John Carroll students, yet the intangible benefits noted above are priceless. Additionally, its success would serve a model upon which similar programs could be developed to further increase regional and national interest in our institution, and prepare future JCU students for their lives outside our walls in other professions or other educational pursuits.

Respectfully submitted,

George Lewandowski, M.D.
Physician-in-residence
John Carroll University
glewandowski@jcu.edu or lewandowski.george@gmail.com

Department of English
February 18, 2014

Dr. Barbara D'Ambrosia, Chair
Committee on Academic Policy
Campus

Dear Barbara,

As Chair of the English Department, I am writing in support of Dr. Jeanne Colleran's proposal to CAP to establish a Professional Healthcare Preparation minor and certificate program. I understand that CAP feels that letters would be welcome from chairs of departments involved in teaching courses in the PHP program.

I know that one of CAP's main concerns about the PHP proposal is that, with the addition of another minor and certificate program to the undergraduate curriculum, the university's teaching ranks might be stretched to a degree that causes concern. Since, under the proposal, the English Department would be asked to offer two of the courses in the PHP curriculum—EN 299, "Biomedical Humanities," and EN 300, "Advanced Writing: Medical Science Writing"—CAP may wonder how the addition of this minor and certificate program will affect the department's ability to meet its instructional commitments. On this issue, let me make two points, both of which should allay CAP's concerns.

First, any number of faculty members in the English Department—including Phil Metres, Maryclaire Moroney, and I—would be prepared to teach EN 299. We are all faculty members who have taught in the Medical Humanities Program as part of Case Western Reserve University School of Medicine's Lerner Program at the Cleveland Clinic. What we would offer in EN 299 is some version of what we all have taught at CCF. In addition, I am planning to ask several other faculty members from the department (Jean Feerick and Debby Rosenthal) to teach in the Medical Humanities Program; these are all presumably faculty members who could teach EN 299, too. Finally, the Philosophy Department could also offer this course because two faculty members of that department—Dianna Taylor and Mariana Ortega—have also participated in the Medical Humanities Program. John Carroll does not lack faculty members to teach this course.

Second, Laura Greenwald, an adjunct faculty member, teaches EN 300. She is a trained and experienced professional in the field of medical science writing, having worked for several years as Communications Manager of the Education Institute at the Cleveland Clinic and having written and published *Eye of the Beholder*, a book about patients who have undergone facial transplants. With Laura as the instructor of record, we have offered this course three years running as part of the English Department's new Professional Writing track. In other words, we run this course anyway as an offering within the major. It would therefore be easy to open this course to PHP minors and certificate-seekers. Enrollment in this course has been healthy, but if present enrollment trends hold, there would be room for students from other JCU programs like PHP.

Let me add in conclusion that PHP has the potential to benefit English majors. Having coordinated the JCU team involved in the Medical Humanities Program, I have witnessed the wonderful potential for dialogue between the humanities and medicine. I predict that this dialogue will only grow, not only because doctors need humanizing but because humanists need to partner with fields outside its traditional disciplinary ambit to adapt to a changing world. I could easily imagine a yearly cohort of English majors minoring or obtaining a certificate in PHP. What is true for English majors will, I think, also be true for other majors in the humanities. Brian Williams is right about the appeal of this program, which will prove attractive not only to pre-health students but also to a wide variety of students outside pre-health interested in working in the burgeoning healthcare field.

As a member of the Health Advisory Committee, I participated in the conversations that resulted in the proposal to establish the PHP. I believe that this is a well-crafted proposal whose program will fill an important niche in the university's increasingly diverse curricular offerings in the healthcare field, a job sector that promises to grow as fast as any other employment field in the United States in the future and to which Cleveland, with its many educational and medical resources, will contribute significantly. PHP will help John Carroll's students to be part of that future.

Sincerely,

John McBratney
Professor and Chair, English



1 John Carroll Boulevard
University Heights, Ohio 44118-4581
www.jcu.edu

To: Dr. Anthony Roy Day, Chair, Faculty Council
From: Mr. Brian Williams, Vice President for Enrollment
Date: January 13, 2013
Re: Support for Minor & Certificate Program in Professional Healthcare Preparation

The Office of Admissions and Financial Aid fully supports the development and passing of a new minor and certificate program in Professional Healthcare Preparation.

John Carroll University is committed to recruiting, and graduating a talented, diverse student body prepared for today's global challenges. This proposed academic program will create a structured pathway for our undergraduate students interested in healthcare to follow. Further, such a minor or certificate allow the university to designate this curricular focus on the student academic transcript explicitly while avoiding students need to major in Pre-health or pre-med as they might at other schools. True to our liberal arts roots, students will still fully pursue a specialized major field of student of interest to them. This will be a curricular advantage and more distinctive pathway will be easy for us to promote.

This is the right time for formalizing the strong work the university already exhibits in the healthcare preparatory fields. As the university continues to focus on health care and forge strong relationships regionally this will resonate with the career demands and the interests of many prospective students.

If I can address the student marketing, enrollment possibilities, or other non-curricular aspects of this important program, please do not hesitate to contact me at any time.

Sincerely,

A handwritten signature in black ink that reads "Brian G. Williams".

Brian G. Williams
Vice President for Enrollment

Cc: Dean Jeanne Colleran, Ph.D.

Appendix D.

**Proposal for an Undergraduate Major in Computer Science and
Healthcare Information Technology**

Submitted and approved by the Department of Mathematics and Computer Science

Proposal for a Major and a Minor in Health Care Information Technology

1. Narrative

a. Context for Addition of New Program

Background

In late 2008, the academic vice-president's office called for proposals for "seed-money" grants for innovative ideas from the faculty. One result of this program was recognition of the potential of the computer science program reaching out to the medical community for collaborative opportunities. In the same time frame, the Cleveland Clinic wanted to expand its outreach to the regional institutions of higher education. Through a solid computer science program and serendipitous good fortune, four John Carroll graduates, three from the computer science program, worked in one of the areas that was leading the way on the outreach program.

Roseann Spitznagel '95, JCU computer science major and software development manager at the Cleveland Clinic, and JCU computer science professor, Dr. Daniel Palmer began conversations in early 2009 that have led to this proposal. One primary focus of these conversations, which expanded to include the other JCU alumni, was the difference in the experiences of Jim Wetzel '01 (a JCU computer science major) between his starting work at National City Bank versus his, later, starting work at the Cleveland Clinic. Specifically, we spoke at length as to how the John Carroll CS program could have better prepared him for the environment and circumstances he faced developing software in a healthcare institution for physicians.

In mid-2010, after piloting a few courses that would eventually become part of this proposal, interim Dean of the College of Arts and Sciences, Dr. Beth Martin, approved a Healthcare Information Technology track within the Computer Science major. This paved the way for a pilot of the internship program in the Spring semester of 2012.

The conversation grew and more administrators on both sides became interested and involved in the program culminating in a signed Memorandum Of Understanding (MOU) between the Cleveland Clinic and John Carroll University. The document (officially titled "Collaborative Agreement Between John Carroll University and The Cleveland Clinic Foundation for a Health Care Information Technology Program") went through several iterations, and required much legal scrutiny on both sides, but was eventually approved and signed by both parties as of August 2012.

The signing of this document opened the way for piloting many aspects of the agreement including official internships for John Carroll computer science majors with Cleveland Clinic software developers, a semester-long Grauel fellowship for Dr. Daniel Palmer at the Imaging Institute, and development of courses using Clinic resources and personnel. The most significant result of the signing of the document resulted in a high-level meeting between John Carroll University and Cleveland Clinic administrators, including Dean of Arts and Science, Dr. Jeanne Colleran, and Thomas Masaryk, MD, Chairman of the Department of Diagnostic Radiology. The parties discussed the future of the partnership and plans for the program. The many courses piloted for the program between 2009 and 2012 could now be officially developed and incorporated into a proposal for a new major.

During 2013, the ties between the partnering organizations grew stronger, with Dr. Palmer doing collaborative research with Dr. David Piraino, MD of the Cleveland Clinic, Mike Ciancibello '14 doing an internship in the Spring of 2013 with Jim Wetzels, a team of John Carroll CS majors developing a radiology tool in their Software Engineering class for the Imaging Institute, and preparations are being made for sending two John Carroll students to the Clinic for internships in the Spring of 2014. It is within this productive, collaborative environment that we propose this Healthcare Information Technology program.

Justification for Program

At HealthBeat 2013, Dr. David Levin, MD, Chief Medical Operations Officer at the Cleveland Clinic said, "Everyday I go to work in healthcare and then return home to live in the 21st century." His comments refer to the lag in adopting emerging technologies in the medical field. Governmental incentives, patient expectations, and an overwhelming need to drive down healthcare costs are changing the landscape and are ushering in a "new age of healthcare." The coming changes to the field, spurred on by now embracing advances in mobile communications, electronic medical records, analysis of large healthcare datasets, and increasing connectivity, will transform the industry in ways that make our current understanding of medicine and its delivery antiquated. Levin says that the changes "...will come in three 'P's: personalized, population-based, and pervasive." All three changes rely on information technology, requiring more students with more knowledge in this area.

Reaching the same conclusion from a different direction, Thomas Masaryk, MD, makes a strong statement about education: "If I were a pre-med undergraduate, there is nothing I could do that would make me a *more* valuable applicant to a medical school today than to graduate from a program like one proposed by John Carroll University." He refers to the growing interconnectedness of the healthcare field and information technology that leads to the growing importance of technologically savvy medical professionals.

Dr. Madhu Sasidahr, of the Cleveland Clinic's Pulmonary Intensive Care Unit, is such a doctor. He writes software to support the medical monitoring of patients in the ICU. The software requires specialized knowledge from both fields and only a small number of medical doctors possess the knowledge. More future physicians will need this kind of background to excel in the next generation of healthcare delivery.

Healthcare constitutes *the* area of excellence, growth, and reputation in Northeast Ohio. The opening of the Global Center for Health Innovations at the new Cleveland Convention Center only multiplies the already wonderful healthcare environment established here by the Cleveland Clinic, University Hospitals, and MetroHealth Medical Centers. Graduates from our computer science program have successful careers at all three of these institutions. They continue to spread John Carroll's reputation for providing an excellent foundation in software development to our graduates.

However, because of the requirements unique to the field of healthcare IT, these graduates spend their first year to a year and a half acclimating themselves to the healthcare environment. Even just learning the fundamental vocabulary for the field takes time and constitutes unnecessary obstacles. To be sure, our students, and others prepared in software development techniques, can successfully bridge this gap – and many have.

We justify this program as follows:

It will:

- ... provide our students a means for reducing the healthcare acclimation period.
- ... tailor our students to the premier field in our area.
- ... reduce “brain drain” in our region.
- ... establish and build a closer partnership with the Healthcare community in general and, initially, with the Cleveland Clinic specifically.
- ... attract students to John Carroll who are interested in this field
- ... enhance John Carroll’s reputation in the region.
- ... infuse the local healthcare IT community with John Carroll graduates and establish professional relationships between JCU and those organizations

Programs at Other Institutions

If John Carroll moves forward with this proposal for an undergraduate major in computer science focused on preparing our students for software development in the healthcare environment, we will be something of a trailblazer. Dr. Linda Seiter recently attended an NSF-sponsored event on computational education. She reports that “there seems to be a growing interest among universities in developing health care degrees.” If approved, our program will go live in Fall of this year – with three years of experience to build on.

We have found institutions offering graduate programs at this confluence of fields and we have found other institutions offering post-baccalaureate certificate programs in this area, but when we limit the search specifically to undergraduate programs in healthcare IT and computer science, ours is the first result.

University of New York at Stony Brook offers several undergraduate degrees in Health Sciences, one of which is in Laboratory Information Systems. This program is designed for students who want to manage the IT infrastructure at laboratories.

[link to program](#)

Boston University has a graduate certificate in Software Engineering in Healthcare Systems.

[link to program](#)

University of Wisconsin at Milwaukee has a Master’s program in Healthcare Informatics.

[link to program](#)

Case Western Reserve University also has a graduate program in the Center for Clinical Investigation dealing with Bioinformatics. Dr. GQ Zhang, division chief for the Medical Informatics Division, who administers and teaches in this program has said that our program at John Carroll would be a good pathway into this program. We have discussed ways to align the programs for the benefit of future students.

[Link to GQ Zhang's website](#)

University of Texas at Austin has a graduate program in Healthcare IT, including certificate programs. This program has connections with Corepoint Health, a Texas company that is providing JCU with online HCIT courses for our students.

[Link to program](#)

The AMIA American Medical Informatics Association offers many certificate programs through many different universities aimed at healthcare professionals.

[link to AMIA site](#)

Purpose of Program

This new program will prepare our undergraduates to function as fully capable software developers in any professional environment, but specifically tailor their skills to the healthcare information technology field. Every student completing this program will have as rigorous and as broad an education in computer science as our computer science majors. Graduates of the program will also learn medical terminology in an IT context, work with software, tools, and standards in IT specific to the healthcare field. They will build software systems for healthcare professionals and have the opportunity to intern with healthcare IT professionals working in the field.

Ways program strengthens academic mission

John Carroll has a unique opportunity to help set standards and lead in the field of undergraduate healthcare IT education. With our experience in piloting many of these courses and our established relationship with the Cleveland Clinic, the program, if approved, will quickly attain a level of maturity that cannot be matched in the near term by other universities in the region. The program will focus our students to succeed in a field that features three of the top ten largest employers in Ohio and resides in the top ten fastest growing jobs in Ohio through 2020

Additionally, this program meshes well with the other healthcare initiatives underway at John Carroll. It will help further establish John Carroll's stature as an institution committed to healthcare education for our students.

b. Curricular Requirements – Course of study to complete program

Rationale and justification for courses

The selection of courses meets two intersecting sets of criteria: teaching students the curricular material in computer science, and preparing them to apply that knowledge in the field of professional healthcare information technology. These criteria have come about through many conversations between our institutions over the last two and half years.

To meet the first criteria, we require students in the program to complete all the requirements for a HC in computer science.

To meet the second criteria, we compiled a list of healthcare IT topics that students should learn. These topics will either be covered in new courses or integrated into existing courses.

HIPAA certification (CS 475HC)

Students must gain an understanding of, and compliance with, the Health Insurance Portability and Accountability Act.

Healthcare Terminology (CS 475HC)

Students must become familiar with a selected vocabulary of medical terminology to be better able to communicate with healthcare providers

Healthcare Information standards and formats (CS 312)

Students must learn and interact with existing healthcare data standards such as HL7 (message protocol) and DICOM (Digital Imaging and Communications in Medicine) (Image formats).

Professional Healthcare software development environments (CS 470HC, CS478)

Students need to understand the unique aspects of working in healthcare IT – including experiencing that development environment firsthand.

Developing a Healthcare Software System (CS 470HC, CS 478)

Interaction with software clients is critical in all software development. Experiencing a large development, over time, with a healthcare provider as a client is critical to this program.

Appreciation for the healthcare field (HCIT electives CS 312, CS476)

The skills needed to develop software can be applied in any area. Students in this program must be able to “think like a healthcare provider” because in the long run, that is exactly what they will be doing.

Note that students cannot double major in either Computer Science and HCIT or Computer Information Systems and HCIT.

Prerequisites and sequencing of courses

This major is designed for undergraduates. Any student accepted to this university can take classes and graduate with this major. The first two years of this program are identical to the first two years for the Computer Science major and the Computer Information Systems major. This computer core has three gateway courses which can be taken in any order, but the remaining portion of the core builds on that foundation toward a mini-capstone experience of CS 270 Software Development Practices. The junior and senior years in the program consist of upper level classes, most of which can be taken in any order to allow for a greater selection of offerings by a small faculty. Most of these courses are taught every other year, so students will either take them as juniors or seniors, depending on when they started the program. The main exceptions to this are CS 478 Healthcare Technology Internship, which is to be taken in the Spring of the student’s junior year, and CS 470HC Software Engineering Healthcare Project, which is to be taken in the Fall semester of a student’s senior year.

This program is intended to be a four-year program that requires 1 additional course (3 additional credits) beyond a computer science degree.

Courses for the Healthcare Information Technology Major

Note: The new major will consist of all the courses currently required for a computer science major, with healthcare related classes to fulfill the CS electives in the major, variants of two required classes to emphasize healthcare concepts and issues, and 1 additional class beyond those in the CS major.

The Computer Science “Core” (to be completed in the first two years)	
MT 118, MT 122, MT 130, MT 135, MT 167 (or other MT course with dept. permission)	
CS 125	Introduction to Web Programming and Image Processing
CS 128	Introduction to Software Application Development
CS 128L	Introduction to Software Application Development Laboratory
CS 150	Database Systems
CS 225	Advanced Web Design
CS 228	Object-Oriented Design and Programming
CS 242	Computational Modeling
CS 270	Software Development Practices

Note: The computer science core classes are required by both CS and CIS majors currently. By adding HCIT majors we are leveraging existing courses effectively and giving our students extended time to determine which major is right for them.

Healthcare Information Technology Major Requirements

(To be completed in the 3rd and 4th years)

CS 312	Healthcare Information Technology (3 credits) [#]
CS 470HC	Software Engineering Healthcare Project (3 credits) ^{+ ^}
CS 475HC	Technical Writing in Healthcare IT (3 credits) ^{+ ^}
CS 476	Systems Technology and Practices Seminar (3 credits) ^{# ^}
CS 478	Healthcare Technical Internship (with approval)(3 credits) ^{# ^}

(Note: CS312 and CS476 can be taken as electives for CS and CIS majors)

[#] new courses developed for the HCIT major

⁺ existing CS courses tailored for the HCIT major

[^] courses already piloted

Two Additional Courses from the list of HCIT supporting courses:

EN 407	Writing About Our Health (3 credits) ^x
CS 307	Bioinformatics (3 credits) ^x
MT or CS XXX	Big Data Analytics (course proposed by Dr. Victor Lee)(3 credits)
SC 273	Public Health in U.S. Society (3 credits) ^x
CS 479	Healthcare Mentoring Internship (by invitation only) (3 credits)
CS 3XX-4XX	Any 300 or 400 level CS class (at most 1 of these) ^x

^x Denotes existing courses

Students must also complete HIPAA certification and pass a comprehensive exam

Courses for the Healthcare Information Technology Minor (25 credits)

CS 125, CS 128, CS 128L, CS 150, CS 225, CS228, CS 312, CS 476; one of the following electives: SC 273, CS307, EN407 (Note: students must also complete HIPAA certification)

Justification for the courses in the minor:

We anticipate that students taking the minor are interested in medical school and are looking to augment their major in a traditional pre-med field. The minor will give the student enough background in programming, web development and database for them to effectively participate in the Healthcare Information Technology (CS 312) course and the Systems Technology and Practices Seminar (CS 476). The support course will provide additional healthcare related context for the technology courses. The HIPAA certification, obtained by majors through the CS 475HC course, must also be completed by the minors to provide understanding of their ethical responsibilities in dealing with medical information. This minor is not open to CS, CIS or HCIT majors.

Courses to be developed with timetable and mechanism for their development

All new *required* courses for this major have either already been developed and piloted, or will be by the end of the Spring semester of 2014. The only course listed as applicable to the major that has not been developed or piloted is the Big Data Analytics course, which has been proposed as a mathematics course in our department independently of its inclusion in the HCIT major. The creation and offering of this course will either occur or not on its own merits. Those supporting and developing the HCIT major will offer support for this course. If it becomes an offering of the department, it will be included as an optional course for HCIT. If it does not, then it will not be included in the new major.

The implementation plan for the HCIT major has a three-tiered approach: What we are currently offering in the form of a healthcare IT track (Now), What we propose to offer as a Healthcare IT major (Soon), and Our goals for the program as it grows into a sustainable program at the university (Goal).

Now: (2010 – present)

Healthcare Information Technology Track

The track consists of taking all the requirements for either a CS or CIS major with variations on certain classes and specific courses to fulfill electives within the major.

CS majors:

Upper-level electives: CS 312, CS475HC, CS476

Upper-level substitutions: take CS 470HC for CS 470

If qualified: CS 478*

CIS majors:

Upper-level electives: CS 312, CS 476

Upper-level substitutions: take CS 470HC for CS 470

take CS 475HC for CS 475

If qualified: CS 478*

* students not recommended by the HCIT Oversight Committee, or who are not selected through the Healthcare Institution interview process, must take an additional CS course at the 300 level or higher

The Mathematics and Computer Science Department has been offering a Healthcare Information Technology track within the CS major since interim dean of Arts and Sciences, Beth Martin originally approved it in mid 2010. Since that time we have piloted many of the courses in this proposal. We have also had JCU student internships at the Cleveland Clinic in Spring of 2012 (Katie Ek), and the Spring of 2013 (Michael Ciancibello). We also have two interns (Mark Creel and David Grace) accepted to the program for Spring of 2014, with a third (Mike) returning for a Mentoring Internship. We have also had three different software development projects over three years with an MD from the Cleveland Clinic as the client. We have piloted CS 476, with JCU CS alumni, Cleveland Clinic employees, and medical personnel from other institutions as guest speakers. We have had one person graduate with the Healthcare track (Katie Ek) and we will have another graduate this Spring (Mike Ciancibello).

We present this information to make it clear that we not only have the capability to offer this program within our department, but that we *have* piloted several of the courses as part of the HCIT track.

Soon: (Fall, 2014 -

Healthcare Information Technology Major (initial)

See “Courses” section above – contains the full proposal for the major.

Differences between the proposed major and the current track:

The major requires two additional courses, which adds academic rigor and a stronger healthcare informatics foundation. (The additional courses include a broader view of the field and an opportunity to tailor the program to a student’s specific interests.) From a reputation and commitment perspective, having a major, rather than a less visible “track” will distinguish John Carroll University and be viewed by college applicants and employers as more substantial, therefore leading to potential increases in enrollment. The curricular differences are:

Major includes:

- Implementation of the CS 312 Healthcare Information Technology course
Previously, students in the HCIT track would have to substitute for this course. The first pilot of this course will be the Spring semester of 2014 – prior to this the course was in development.

- Inclusion of list of HCIT electives of which students must take two
This list includes courses from around the university in other areas to give our students a balanced experience. It also includes courses to be developed in Big Data Analytics and an Advanced Mentoring Internship. This list also provides a mechanism for additional courses to be developed and included in the major. (See the Goal segment for suggestions for additional course development ideas for the “linked courses” concept from the new core.)

By the end of the Spring semester 2014, all required courses for the HCIT major will be provisionally developed and piloted. Note that many of these piloted classes were supported by having a visiting faculty in the department giving us the flexibility to develop them.

Goal: (Hope to begin ramping up in Fall of 2015 or 2016)
Healthcare Information Technology Major (sustainable)

One of the primary goals in the original development of this program was for it to be attainable with limited resources. With this in mind, we have modified existing courses, augmenting them with HCIT content. We have leveraged a Grauel fellowship at the Cleveland Clinic so that a JCU faculty member could learn aspects of healthcare IT with hands-on experience. This faculty member worked side-by-side with John Carroll students in the internship program under the tutelage of Jim Wetzel, as a cost-effective and valuable way to maintain currency in the field. We have relied on CS program graduates in the healthcare field to come back and share their experiences with our current students. In short, we have done everything possible to gain experience and expertise in the healthcare IT field with as small a budget as possible.

Once the program is up and running, we need to nurture it with a greater level of support. In particular, the program needs to hire a computer scientist to help cover the teaching load. We need to either hire a computer scientist with healthcare IT expertise, or a general computer scientist to teach CS classes while one (or more) existing CS faculty get extensive healthcare IT training. (Or both.) The additional faculty member would also make supporting and sustaining three majors within the department realistic. We need to provide scholarships for Cleveland Clinic employees to take JCU classes in healthcare IT. We need to be able to purchase healthcare related software to use in classrooms. We need to develop new courses from scratch specifically for the Healthcare IT major. Finally, we have developed several hybrid courses – modifications to existing CS classes to incorporate healthcare information technology. Our goal is to replace these hybrid classes with ones specifically developed for the HCIT major.

Our plan is to implement the cost-effective major in the Fall of 2014. With support of the administration and the creation and approval of new courses in the major, evolve the program into this vision of a sustaining and sustainable HCIT program.

Mechanism for approving new course for program

New courses for the major can either be developed from scratch for the program or be nominated for inclusion from existing courses taught at JCU in the Mathematics and Computer Science or other departments. The HCIT oversight committee will evaluate these courses and determine whether to include them in an updated version of the major.

c. Organization and administration of program

Job description for director

This major will be housed entirely within the Mathematics and Computer Science department and administered as such. In that context a separate director will not be necessary. Within the department, an oversight committee consisting of department members approved by the chair will perform duties for the major. In particular, this committee will have 4 primary responsibilities: coordinating with the chair of the Mathematics and Computer Science department and the JCU Health Advisory Committee, interfacing with the healthcare institution partners, approving development and inclusion of new courses, and administering the internships for the program. One facet of this oversight is the evaluation and approval of students in the program for participation in the internship portion of the major.

Recommended line of reporting

The committee will consist of at least two members of the computer science faculty within the department and at least one other member of the Mathematics and Computer Science department. The department chairman will appoint the members of the committee. One of the CS faculty members will chair the committee and report to the department chair.

Structure of governance

The major is entirely housed within the Mathematics and Computer Science department. The structure of governance consists of the HCIT oversight committee and the department chair.

d. Implementation timetable

The implementation timetable has a three-tiered approach detailed earlier in this section consists of the current status, the near-term plans, and the broader goals for the program.

Current Status: The program currently exists as a track in the computer science major. For the past two and half years, we have been piloting courses and establishing internship programs. (2010-2014)

Near-term Plans: Convert the existing track into a major and solidify experimental, piloted courses into established, regularly offered courses. (beginning Fall, 2014)

Broader Goals: Establish a sustaining program with specifically developed courses, targeted recruitment of undergraduate applicants, additional faculty, and institute an industry advisory group. The primary work of evolving the major from its initial state as proposed in this document will begin after the first year of the major and support from the administration has been put into place. (beginning Fall, 2015 through the life of the program)

Note: Regardless of the status of this proposed major, the Mathematics and Computer Science Department needs an additional CS faculty member just to teach the existing courses for the existing majors. We anticipate that fulfilling this need with a new faculty member who had expertise in healthcare IT would be a win-win situation for all parties.

Assessment plan – learning outcomes, anticipated method for assessment

The primary learning goals of this program are to produce software developers better capable of working in the healthcare IT field than traditional computer science majors. As such, students will have a functional knowledge of, and be able to apply that knowledge to, the following computer science principles and practices:

- Fundamental logic constructs of computer programs
- Data structures for the acquisition, organization, and retrieval of information
- Professional software development tools, technologies, and practices
- Generation and maintenance of all documentation associated with software

In addition, students will also have functional knowledge of, and be able to apply their knowledge of, the following healthcare IT principles and practices:

- Healthcare IT standards and formats
- Terminology unique to healthcare IT and healthcare environments
- HIPAA – Healthcare Information Portability and Accountability Act
- Understanding and ensuring data integrity standards
- Working in, and developing a significant software system in, the healthcare IT environment

We will measure the achievement of these learning goals through a learning assessment program developed in conjunction with the Assistant Provost for Institutional Effectiveness and the Mathematics and Computer Science department. This assessment plan may include targeted surveys (not just course evaluations) for students, peer review (invitations for departmental colleagues outside evaluators into the classroom), and self-evaluations using recorded lectures and classroom activities. The primary tool for assessment of student learning outcomes will be a tailored comprehensive exam similar to the MFAT subject tests.

Program evaluation plan – program outcomes, indicators of program success

This program will be evaluated based on the number of students entering John Carroll with the intent to major in HCIT, course evaluations, exit interviews at graduation, and alumni career tracking. We will also meet and consult with our healthcare institution partners (initially the Cleveland Clinic) to annually evaluate the

program, the quality and preparedness of the program interns. In the long-term, we will establish an advisory board from healthcare IT professionals in the region to provide insight and input to the program. We will also call on this body to evaluate the program formally in a periodic fashion and on a continuous basis, informally.

Marketing and communication plan

A strong internal marketing facet of the program relies on an additional requirement of the JCU HCIT interns. They visit CS 270, the computer science core capstone class, relating their experiences to those sophomores taking the course. This serves three purposes:

- 1.) By presenting their internship experiences, the students solidify their knowledge and hone their skills speaking about healthcare IT.
- 2.) The sophomores, who are learning about software development practices, get to hear about them, and ask related questions, from students applying them in the field.
- 3.) It exposes the sophomores to an insider perspective of the internship program, and providing knowledge about the program. The sophomores can then explore their own interest level and decide whether to participate in the following academic year.

Another primary component of the marketing plans is for John Carroll University host a two-week summer camp for high school students. The camp curriculum will consist of healthcare information technology. One week of the camp will take place on the John Carroll campus, exposing potential students to our institution. The second week of the camp will take place at the Global Center for Health Innovations, adjacent to the new Cleveland Convention Center. We expect that the beneficial association between John Carroll and the Global Center, made evident in the advertisements and invitations for the camp will greatly raise awareness of this program. Part of the camp will intersect with a 10-week camp put on by the Cleveland Clinic for high school students. We will use that overlap to emphasize the JCU-CCF connection, and to inform the students in the Cleveland Clinic camp of our institution in general and this program specifically. Funding for the first of these camps has already been secured and the future of this program will be evaluated after running the camp this summer.

Another strong component of awareness about the program comes from the admissions officers being able to spread the word to prospective students about official major offered by the school. Approval of this proposed major would also allow updating of JCU documentation and websites detailing the program. We have every expectation that this new major will become a focal point for recruiting efforts.

2. Administrative support – Chairs, Deans, AAVP planning and assessment, AAVP programs

To be included in Appendix C

Chair of the Mathematics and Computer Science Department
Dean of the College of Arts and Sciences

Appendix A – Course Descriptions

Computer Science interdisciplinary with Healthcare Information Technology

Computer Science CORE First and Second year (Required for all computational majors)
25 or 26 credits

MT1XX Mathematics Course (MT 118, MT 122, MT 130, MT 135, MT 167 or
other approved by the department) (3 or 4 credits)

CS 125 Introduction to Web Design and Image Processing (3 credits)

Principles of website design and creation. Software applications such as Dreamweaver, Fireworks, and Flash are used to introduce students to HTML, cascading style sheets, templates, image processing, and animation. Students will use these tools to create their own website.

CS 128 Introduction to Software Application Development (3 credits)

Co-requisite: CS 128L. Fundamentals of computing with an emphasis on mobile technology. Utilizes a visual programming environment to design, build, and test mobile apps. Introduction to application development, inquiry-based simulation, rapid prototyping, incremental problem solving and graphical user interface programming.

CS 128L Introduction to Software Application Development Laboratory (1 credit)

Corequisite: CS 128. Programming laboratory intended to provide hands-on experience in applying the programming concepts learned in CS 128. Experience in learning the process of program development, with emphasis on techniques for testing and debugging.

CS 150 Database Systems (3 credits)

Data modeling, database design, data definition and manipulation language (SQL), entity-relationship model, normal form. Relational database system software. Emerging topics such as XML and web data management.

CS 225 Advanced Web Design (3 credits)

Prerequisites: CS 125, CS 128, CS 150. Design and development of distributed Internet applications and dynamically generated websites. Integration of web and database technology. Exploration of popular web frameworks and APIs such as .NET, Google API's, and AJAX.

CS 228 Object-Oriented Design and Programming (3 credits)

Prerequisite: CS 128. Prerequisite/co-requisite: MT 118 or MT 122 or MT 135 or MT 167. Continuation of CS 128 emphasizing the benefits of object-oriented languages: modularity, adaptability, and extensibility. Object-oriented programming concepts include objects, classes, methods, constructors, message

passing, interfaces, inheritance, and polymorphism.

CS 242 Computational Modeling (3 credits)

Prerequisite: CS 228. Models for representing different aspects of software, including its structure, execution, and evolution. Topics include algorithm analysis and visualization, software models and simulation, UML diagrams, introduction to formal languages and automata, graph algorithms, software testing and coverage, and number representation.

CS 270 Software Development Practices (3 credits)

Prerequisite: CS 228. Prerequisite/ co-requisite: CS 242. Skills, tools, and techniques necessary for successful software engineering projects in a hands-on, project-oriented context. Students will work on development efforts that each focuses on a different set of tools and techniques. Topics include system design, UML diagrams, unit testing, system testing, continuous integration, refactoring, performance and optimization, acceptance testing, and code maintenance.

Healthcare Information Technology Upper level course requirements (24 credits)

CS 312 Healthcare Information Technology (3 credits)

Prerequisite: CS 270. Explores development, tools, and technology specific to healthcare information. Examples include: the HL7 information protocol, electronic medical records, HIPAA issues and practices for developers. DICOM standard for storage and manipulation of medical images, database storage, archiving and network requirements and protocols, security, data access, data maintenance, and backup practices and related software development issues.

CS 328 Advanced Programming (3 credits)

Prerequisite/co-requisite: CS 242. Advanced object- oriented programming: exceptions, threads, synchronization, serialization; Data Structures/Collection API's. Introduction to algorithms and analysis of algorithms. Graphical User Interface APIs.

CS 470HC Software Engineering Project (3 credits)

Prerequisites: senior standing in the Healthcare Information Technology track, CS 270, CS 312. Students in the Healthcare IT major will be required to develop a large software project related to Healthcare IT using the same methodologies and techniques as described in CS 470.

Description for CS 470:

Prerequisites: senior CS or CIS major, CS 270. Simulation of the environment of the professional software developer working in a team on a large software project for a real client or for an open-source community. Development teams will make widespread use of previously learned tools and techniques. Student developers will encounter a wide variety of issues that naturally occur in a project of scale, using their skills, ingenuity, and research abilities to address all issues and deliver a working, useful system. Traditional or Agile development methodologies.

CS 475HC Technical Writing (3 credits)

Prerequisites: participation in the Healthcare Information Technology major, CS 228. Application of the written communication skills described in CS 475 to healthcare IT topics. In addition, HIPAA training and medical terminology will be covered and used in writing requirements.

CS 476 Systems Technology and Practices Seminar (3 credits)

Prerequisite: CS 270. Features a weekly guest speaker from the information technology profession, including the healthcare information technology field. The instructor will provide foundational material prior to each talk and analyze it with the class afterwards. Students will develop individual, self- designed projects based on a speaker's topic.

CS 478 Healthcare Technical Internship (3 credits)

Prerequisites: junior standing in the Healthcare Information Technology track, CS 470HC, and permission of department chair. Highly individualized, culminating experience for students in this track. Focuses on an information technology-related challenge that has been designed and approved by the MT/CS faculty and a healthcare professional.

Additional Courses Descriptions

EN 407 Writing About Our Health (3 credits)

Prerequisite: EN 250, 290, 300-304, or CO 225. Medical science writing, writing as healing, or other topics in health writing.

CS 307 Bioinformatics (3 credits)

Prerequisite: CS 128. The application of computational methods and principles to solve data-intensive and pattern-discovery problems in biology, especially molecular and systems biology, without prior knowledge of computer programming or college-level biology. Topics may include gene sequence assembly, sequence alignment, phylogenetic tree inference, gene expression, and protein interaction networks.

MT XXX

or **CS XXX Big Data and Predictive Analytics** (course proposed by Victor Lee)

(description is taken from an informal proposal for the course by Dr. Lee)

Prerequisite: CS 228 What is Big Data? Why having rich data provides the opportunity to "learn" (or make good predictions) by identifying correlations. Deterministic data mining vs. Statistical learning, data mining algorithms: unsupervised learning, clustering, finding frequent patterns, machine learning algorithms, MapReduce/Hadoop programming paradigm, and randomization and ensemble learning

SC 273 Public Health in U.S. Society (3 credits)

Introduces basic concepts of public health and explores major public health issues in the United States. Central focus on health disparities regarding who becomes ill and inequalities of access to treatment due to stereotypes, racism, and social class.

CS 479 Healthcare Mentoring Internship (by invitation only) (3 credits)

For students who demonstrate exemplary performance in the CS 478 (healthcare internship) course, this course allows them to engage in a second internship providing guidance and leadership to the first-time interns. This course is designed to provide continuity across internships and give the student invaluable experience mentoring and managing others. By invitation of the internship sponsoring organization only.

It is expected that as the program goes and transitions from the SOON configuration to the GOAL configuration, more and more varied courses will be added to this list.

3. Appendix B – Budget Details

For the budget estimations/predictions, we obtained a report from Brian Williams, vice president for enrollment. In the report, he has identified almost 50,000 students (high school juniors and seniors) nationwide and over 2,000 in Ohio, who have taken the ACT and expressed interest in such as Health records administration, health data systems management, and health computer info systems. This level of *prospective student* demand is a good indicator of the level of students interested in medical related (and tech) related careers in our region and across the country that are not just focused on medical school. We plan to market the program to this group of students.

Brian Williams further explains, “This ready population is a group we can target in marketing the move to an HCIT major. But added to that, I believe that the alignment with the Cleveland Clinic, the development of a summer camp, the ready internships and success of our alumni working in the field tell a compelling and comprehensive story that will aid in marketing and promoting the program to students and attract them to campus. Until I might learn more about the program and curriculum and got through a full cycle promoting it properly it is always hard to exactly project how many students it might attract. But I fully support the aligning of IT and health care in our curricular offerings.”

We have also gotten an estimate from John Carfagno, based on his experiences with past John Carroll summer camp programs that potentially two of the 30 students participating in the summer will apply and attend John Carroll.

We also expect that if approved, the existence of the program, our ability to incorporate it into the ongoing student recruitment process, our partnerships with the Cleveland Clinic and the Global Center for Health Innovations, and simple word-of-mouth will increase the awareness and participation in the program.

Further, we look at the graduation rates of students who have taken and projected graduation rates for students who are taking the Healthcare IT track: 2012(1), 2014(1), 2015(2). These students are all internal recruiting from within the computer science major. Additionally, we have seen incoming freshmen with interest in the program, and a significant increase in the number of prospective students meeting with Mathematics and Computer Science professors with an interest in the program. In the Fall semester of 2013, we had four prospective students specifically ask to discuss the program with department faculty.

In addition to the basic budgetary considerations, there are two funding sources that have been/ will be pursued for this major. We have secured \$10,000-\$20,000 to join

HIMSS (Healthcare Information and Management Systems Society) innovations at the Global Center for Health Innovations (previously know as the “medical mart”) in conjunction with offering the healthcare IT summer camp. We have also had preliminary discussions with Pamela George-Merritt, Director of Foundation Relations and Grant Writing at John Carroll. She has stated that this proposed major would be an ideal project to receive funding from two major Cleveland area foundations. If this major attains university and faculty support, we will be submitting a funding request to these organizations.

	Year 1	Year 2	Year 3	Year 4
Tuition Revenue				
Number of students*	4	6	8	10
Credit Hours**	12.5	12.5	12.5	12.5
Net Tuition per credit 40% dis.	\$633	\$633	\$633	\$633
Revenue per student	\$7,913	\$7,913	\$7,913	\$7,913
Total Tuition Revenue	\$31,650	\$47,475	\$63,300	\$79,125
Expenses				
Faculty compensation***	\$40,000	\$40,000	\$40,000	\$40,000
Fringe benefits (15%)	\$6,000	\$6,000	\$6,000	\$6,000
Operating Expenses	\$8,500	\$8,500	\$8,500	\$8,500
Total Expenses	\$54,500	\$54,500	\$54,500	\$54,500
Net Income	-\$22,850	-\$7,025	\$8,800	\$24,625
Operating Expenses				
Marketing	\$3,000			
Travel (conferences, meetings)	\$3,000			
Supplies	\$500			
Library budget	\$1,000			
Capital equipment	\$1,000			
	\$8,500			

* Estimate described in text

** 50 total credits / 4 years

*** % salary for teaching HCIT

4. Appendix C – Letters of Support

Letters of support to be supplied

Dr. Jeanne Colleran, Dean, College of Arts and Sciences
 Mr. Brian Williams, Vice President for Enrollment
 Dr. Paul Shick, Chair, Mathematics and Computer Science

March 19, 2014
Barbara D'Ambrosia, Chair
Faculty Council Committee on Academic Policies
Campus Mail

Dear Barbara:

At its February 24, 2014, meeting, The University Budget Committee reviewed the proposal for a Major and Minor in Health Care Information Technology, proposed by the Department of Mathematics and Computer Science. While charged with reviewing the budgetary aspects of the proposal, the UBC also discussed the educational merits of the program. Professor Dan Palmer visited with the Committee and summarized the salient features of the eighteen-page proposal. He noted that the department is piloting the program now as a track within the Mathematics Major; there will be a capstone internship at the Cleveland Clinic; since the program uses many of the currently offered courses in Computer Science, the addition of this major and minor requires relatively few new resources for a program of its significance.

Using the faculty-approved "Protocol for Requesting Approval of a New Academic Program" as a guide, the UBC reviewed the estimated costs for the first four years of the program as well as the estimated revenues for the same period of time. The UBC noted that the program will be accommodated entirely within the Mathematics and Computer Science department and so will not require a separate director or support staff person. Appendix B reports on consultations the proposers had with Brian Williams, concerning the attractiveness of the program to prospective students and related issues, and with John Carfagno concerning issues within his area of expertise related to the IT summer camp, which has been proposed separately. The proposal relates to a number of initiatives in the College of Arts and Science and would enhance our partnerships with the Cleveland Clinic and the Global Center for Health Innovations. External funds have already been obtained to support this effort, and additional grants are also possible, according to Pamela George-Merritt, Director of Foundation Relations and Grant Writing.

As you can see in the proposed budget, the cost estimates include salary and fringe benefits at the part-time faculty rate and an operating budget of \$8,500. In UBC's opinion, the estimated expenses are reasonable for a program of this kind and consistent with previously approved programs of a similar nature. The projected revenues are based on speculative but modest numbers of incremental students in the first four years at an estimated net tuition per credit hour. After incurring operating losses in the first two years, the program is projected to realize a modest profit in the third year and a more significant profit in the fourth year.

Overall the UBC was impressed by the program and commends the proposers for the educational quality of the program and the likely benefit it will provide our students who aspire to careers in healthcare that require advanced technological skills. The UBC voted (10 in favor, 0 opposed, 0 abstention) to ask me to write to you to report that it finds the proposed Major and Minor in Health Care Information Technology to be reasonable from its perspective and that it recommends it to you and to the Faculty for approval.

Please do not hesitate to contact me if you have any questions.

Sincerely,

John T. Day
Provost and Academic Vice President
Chair, the University Budget Committee

February 26, 2014

To the Faculty Council Committee on Academic Policies:

I am writing in strong support of the Proposal for an Undergraduate Major in Computer Science interdisciplinary with Healthcare Information Technology, submitted to Faculty Council by the Department of Mathematics and Computer Science last month. Since you've already received the lengthy proposal and an extraordinarily detailed letter from Dean Colleran, I'll be rather brief in my comments here.

- The proposed major is not just "career training," whatever impression the HCIT moniker may leave. The program combines the intellectual rigor of our very modern Computer Science program with added applications and depth in this emerging field. Perhaps this point may help explain the rather "clunky" title for the program.
- The program builds on our existing partnership with CCF in ways that help both institutions, many of which are spelled out in the proposal or other supporting documents, with the potential to strengthen the bonds even further. One benefit to the CCF that might not be evident from the other documents involves the unique demands on software developers and other IT professionals in the healthcare area. Usually, a new IT person brought into the healthcare field from outside will require a year-long transition period before becoming a fully productive member of a team. This program allows the CCF to participate in the development of HCIT-ready professionals who can jump directly into important projects. Further, we expect that the next phase of the program will provide professional development for current and future CCF employees through JCU coursework.
- With sufficient support, the program has the potential to reach out to other large healthcare institutions, positioning us nicely in the area of the NE Ohio region's biggest economic strength.
- The Department of Mathematics and Computer Science is fully committed to the program. In particular, we will be sure that the courses are offered on schedule and taught by fully qualified faculty members. Our administration has committed to hiring the additional tenure track faculty member necessary to make this possible.

In short, I regard this program as an exciting and essentially unique opportunity to add a true "destination" program to our already notable CS offerings. It has my strongest support.

Sincerely,

Paul L. Shick
Professor of Mathematics
Chair, Department of Mathematics and Computer Science

Committee on Academic Programs

Dr. Barbara D'Ambrosia, Professor of Mathematics, Chair

Re: Proposal for a major in Healthcare Information Systems

Dear Professor D'Ambrosia and Colleagues,

I write to endorse and to support the proposal for a major in Healthcare Information Technology with great enthusiasm and confidence in its potential. The planning for this program has taken place with great care and intentionality over several years, and it has reached a place where all of the components are in place to seek a larger place in our curriculum. As you have seen from the proposal, the HCIT major:

1. responds to a real and specific need in the healthcare industry, of which Cleveland is such a significant part;
2. has already placed student interns at the Cleveland Clinic and has a growing track record of placing students in employment in this field;
3. has cultivated very strong partnerships with the Cleveland Clinic and other institutions in the Cleveland area; and
4. has begun planning for greater visibility and marketing.

Let me further address the above points and indicate the resources that CAs will contribute to develop the program further.

1. Curriculum and Industry Need

The healthcare information systems curriculum has already existed as a track in the Department of Mathematics and Computer Science, but there are compelling reasons to make it a major. First, it has grown from a handful of courses to a well-designed curriculum that will give our students the skills they need to work immediately in IT within the healthcare industry. As our alums who have assisted us (particularly Rosean Spitznagel and Jim Wetzel at CCF) have informed us, there is a learning curve for IT graduates when they move into healthcare. Our program responds to the industry needs by providing students with instruction in healthcare terminology and the healthcare information work context, and it gives our graduates a competitive advantage in the job market. Our students are positioned for a range of healthcare IT jobs –from working within systems management and maintenance to working within specific departments to write software programs.

The curriculum is forward-looking and innovative. Students are given the opportunity design software particular to the healthcare industry: one project resulted in the creation of the possibility of several physicians examining and commenting in real time on an x-ray, thus replacing the sequential review. I understand this project is in use now at CCF.

In order to further introduce the importance of healthcare technology to the JCU community, the Faculty Healthcare Advisory Committee and the MT/CS Dept. is meeting with Dr. David Levin on Feb. 20th. Dr. Levin is the former Chief Medical Information Officer at the Cleveland Clinic.

2. Internships

Through our strong alumni network and through Dr. Palmer's work at the Clinic (he spent his Grauel embedded in the Clinic work), we have developed a firm partnership and base of support. Members of CCF's radiology department (Dr. Peirano and Dr. Masaryk) have worked with Dr. Palmer, and we have a signed MOU for placement of our students as interns. The first intern, Katie Eck, received a job offer. We are now in our third year of placing interns.

3. Partnerships

Cleveland Clinic

We also met with other administrators at the Cleveland Clinic to discuss placing our students in other clinical departments or to work with IT. The possibilities are promising.

In the course of Dr. Palmer's work at the Clinic, he presented research at the Radiological Institute of America in collaboration with Dr. Peirano. (Their work is referenced in the "Aunt Minnie" e-newsletter produced about imaging. I am attaching it.)

The main challenge with our partnership with the Clinic is finding enough students to send them – hence this major will grow that relationship.

HIMSS and the Global Center for Health Care Innovation

HIMSS is a not-for-profit organization that promotes better health through information technology. (<http://www.himss.org/>). It offers professional development opportunities and its director, John Paganini, has been especially helpful and enthusiastic about John Carroll's participation. A donor has funded a JCU membership, and we will begin the design of a kiosk for the Global Center for Health Care Innovation (formerly known at the Medical Mart). Dr. Palmer, Dr. Shick, Dr. Norris, and I, along with Mr. Carfagno and Mr. Tyshiasney, visited the very impressive new building and agreed that JCU would benefit from the collaboration since we will be the first university featured there. The membership in HIMSS includes five faculty memberships and unlimited student memberships. This is an excellent opportunity to help establish JCU as a destination program for healthcare information.

4. National and Local Visibility and Marketing

Connectathon: <http://www.iheusa.org/connectathon-ourpartners.aspx>

Our program has begun to get national attention: the Connectathon is an event sponsored by IHE (Integrating the Healthcare Enterprise), a non-profit organization dedicated to improving health information at the point of care. The Connectathon is a one-week convention about issues of

interoperability and problem resolution that attracts engineers, IT professionals, and vendors. JCU was listed as a partner this year.

Summer Camp

Plans are underway to offer a two week summer day camp for high school students that will take place for one week on our campus and one week at the Global Center for Health Innovations. Brian Williams and Dan Palmer have worked out ideas for the possibility of scholarships, and we will offer 1 college credit. The course content will be derived from CS 312. The idea is to advertise our major to talented, tech-savvy students.

Resources from CAS

This proposal has all of the elements for a meaningful curricular addition that will increase enrollment and serve an industry need. Led by Dr. Daniel Palmer with the strong support of the Dr. Paul Shick, the department chair, and the members of MT/CS, the curriculum is through, innovative, and forward-looking. Our partnerships are already strong, and I have confidence the program will continue to attract positive external notice. I cannot over-state the respect of the Cleveland Clinic staff for our program and the assistance provided by our alumni there.

Dr. Day has authorized hiring an additional faculty member in IT, with the search to begin next year. In addition, I will work with Advancement to seek more support for this program. I would love to see an endowed chair in this area.

Please let me know if I may be of further assistance.

Jeanne Colleran

Dean

College of Arts and Sciences

Jeanne Colleran included this article with her letter of support for the HCIT proposal.

Would crowd-sourcing work in radiology?

By [Erik L. Ridley, AuntMinnie staff writer](#)

November 4, 2013

Thursday, December 5 | 12:45 p.m.-1:15 p.m. | LL-INE3232-THB | Lakeside Learning Center

There's strength in numbers, and that old expression may also be true for imaging interpretations, according to this exhibit from a team from John Carroll University and the Cleveland Clinic.

An algorithmic approach developed by the researchers to mechanically combine diagnoses of medical images from a group of 12 radiologists outperformed 83% of radiologists alone when distinguishing any kind of abnormality from a normal case, said co-author Dan Palmer, PhD, a computer science professor at John Carroll University.

Palmer spent the spring of 2013 on sabbatical at the Cleveland Clinic working on the research with Dr. David Piraino, a radiologist and chief informatics officer for the Cleveland Clinic's Imaging Institute.

Palmer's area of interest is in "swarms," biologically based strategies of creatures that act in large numbers to solve computational problems. Piraino works with Palmer's students as a software engineering client, and Palmer's students developed a project for him that supports collaborative diagnosis of medical images using a social media paradigm.

The exhibit will also show how for a radiological consult, radiologists should present the image(s)/case without any interpretation and get an uninfluenced opinion, rather than presenting a colleague with a diagnosis and asking for confirmation, Palmer said.

"This will provide a wider range of potential diagnoses, increasing the likelihood of finding the correct one," Palmer told *AuntMinnie.com*.

February 18, 2014

Barbara K. D'Ambrosia, Ph.D.
Department of Mathematics and Computer Science
Chair, Committee on Academic Policies
John Carroll University

Dear Barbara:

I am writing to indicate my support for the proposed undergraduate major in Computer Science interdisciplinary with Healthcare Information Technology. I would encourage the members of the Committee on Academic Policies to recommend that the proposed new program be approved by the faculty and made part of our formal curriculum.

I understand my role in this process to provide some commentary on the role of assessment in this proposal. To start, the proposed is consonant with our mission and strategic initiatives to recruit and graduate students prepared for today's global reality and committed to learning, leadership, and service. With a foundation in the liberal arts, this program appears to be well-suited to helping students to achieve within the context of our academic learning goals for learning. Furthermore, it is clear from the proposal that the committee has already given substantial thought to designing an effective assessment plan that starts with a foundation of appropriate learning goals at the program level. The proposal also identifies potential ways in which evidence for assessing these goals will be collected. I look forward to the opportunity to work with Dr. Palmer to further develop course-level learning goals, a curriculum map, and their assessment plan if the proposal is accepted.

I support the approval of this new program with enthusiasm. Do not hesitate to contact me at x1972 or kdean@jcu.edu if there is additional information or perspective that I can provide that might inform your deliberations.

Best,

Kathleen Lis Dean, Ph.D.
Assistant Provost for Institutional Effectiveness



1 John Carroll Boulevard
University Heights, Ohio 44118-4581
www.jcu.edu

To: Dr. Anthony Roy Day, Chair, Faculty Council
From: Mr. Brian Williams, Vice President for Enrollment
Date: March 4, 2014
Re: Support for Healthcare Information Technology

I am writing to confirm the support of the enrollment division for the further expansion of the existing academic track and creation of a major in Healthcare Information Technology for the university.

The proposal stands as a thoughtful integration of our existing programs and essential new courses and further builds from our current faculty strengths and areas of interest. From the recruitment perspective the HCIT program will resonate strongly with prospective students and parents. The foundation is already well in progress for this major and how it aligns with needs of the health care professions and connects JCU with the medical/healthcare community in NE Ohio. Various departments within College of Arts and Sciences are forging strong ties with the new Global Center for Health Innovations, the Cleveland Clinic, and the overall movement and the healthcare focus in our region.

Specifically the curriculum, the strong internships for our students, and the development of a summer camps are all strong positive developments for the university. The opportunity to recruit talented high school students through such a summer camp will help build a pipeline of new students that the enrollment division can help manage wholeheartedly. Exposing students early to these new fields of study by bringing them to JCU's campus will be a key way to establish and introduce John Carroll into the conversation.

From a planning and marketing perspective, the admission staff is prepared to promote this program and will assist with any marketing and logistics necessary for the program, for a successful summer camp, and for growing enrollment in this area. The awareness of a summer camp along with the "elevation" of the track to a major will help to optimize the student enrollment in such a new, exciting and growing field.

If I can address the student marketing, enrollment possibilities, or other non-curricular aspects of this important program, please do not hesitate to contact me at any time.

Sincerely,

A handwritten signature in black ink that reads "Brian G. Williams". The signature is fluid and cursive, with a long horizontal stroke at the end.

Brian G. Williams
Vice President for Enrollment

Cc: Dean Jeanne Colleran, Ph.D.
Dr. Paul Shick
Dr. Dan Palmer
Dr. Barbara D'Ambroisa



Thomas J. Masaryk, M.D., F.A.C.R.
Chairman, Department of Diagnostic Radiology
Professor of Radiology, CCLCM

February 17, 2014

Dr. Barbara D'Ambrosia, Chair Committee on Academic Policies
John Carroll University
1 John Carroll Blvd.
University Heights, OH 44118

Dear Dr. D'Ambrosia,

I wanted to express my sincere thanks for the chance to work with Dr. Dan Palmer of John Carroll University in developing an opportunity for John Carroll computer science students to become involved with healthcare information technology at the Cleveland Clinic.

The mandates Affordable Care Act are driving hospitals and healthcare providers to become adopters of healthcare IT. It is no coincidence that the highest profile occupant of Cleveland's new Global Center for Health Innovation is HIMSS, the Healthcare Information and Management Systems Society. And yet, strangely, there are few undergraduate curricula devoted to healthcare IT within Ohio, despite the necessary mandates of the Affordable Care Act and a desperate need for well-trained information technology graduates.

We have had several John Carroll alumni working within the Imaging Institute as well as The Knowledge Project within the Neurologic Institute for a number of years, and many have been the "best and brightest": hardworking, knowledgeable, collaborative and highly productive. The opportunity to work with Dr. Palmer seemed like a natural.

On a more personal note, as a native of Northeast Ohio I have found these circumstances very reminiscent of my own entry into the field of diagnostic imaging in Cleveland. At that time (the early 1980's) most radiology was still based in celluloid film. But my father (a local physician who attended continuing education courses at the Clinic) was aware of a medical imaging company in Solon (Ohio Nuclear/ Technicare) which readily adopted the transition to digital (and which the Clinic enthusiastically embraced.) Based on his advice, I was strongly encouraged to pursue radiology and during my brief four year residency in Cleveland I witnessed (and benefited from) many of the early innovations in CT scanning, digital subtraction angiography and magnetic resonance imaging. The transition to digital has been a wonderful career.