THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

Information Item

Establishment of a 15-Hour Graduate Certificate in Digital Health (CIP Code 51.0722)

The University of Alabama at Birmingham Marnix E. Heersink School of Medicine wishes to add a 15-Hour Graduate Certificate in Digital Health to provide students whose first degree is within computing and/or healthcare related disciplines the required knowledge and skills to become visionary digital health technologists, providing a 'fast-track' into the health care and social care profession. There is currently no other graduate certificate in Digital Health within the state of Alabama.

THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

RAY L. WATTS, M.D.
President

July 14, 2022

Chancellor Finis St. John, IV
The University of Alabama System
500 University Boulevard East
Tuscaloosa, AL 35401

Dear Chancellor St. John:

The UAB Heersink School of Medicine proposes to establish a 15-hour graduate certificate in Digital Health. This certificate will provide students whose first degree is in computing or healthcare related disciplines the required knowledge and skills to become visionary digital health technologists, providing a 'fast-tack' into the healthcare and social care professions.

The new certificate program will be offered 100% online to meet the needs of stakeholders across the state.

The proposal has been thoroughly reviewed here at UAB and has my full support. If you approve, please include this item on the Board's agenda for its September 16, 2022 meeting and then forward it to the Alabama Commission on Higher Education. If additional information is needed, we will be pleased to provide it.

Sincerely,

Ray L. Watts

Ray L. Watts, M.D.
President

RLW:khb

Attachments

cc: Dr. Pam Benoit
Dean Selwyn Vickers
Mrs. Kirsten Burdick
Dr. Tonja Johnson

OFFICE OF THE PRESIDENT

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UAB OFFICE OF THE PROVOST
The University of Alabama at Birmingham

July 14, 2022

MEMORANDUM

TO: Ray Watts, M.D.
President

FROM: Pam Benoit, Ph.D.
Senior Vice President for Academic Affairs and Provost

SUBJECT: Academic Affairs Items for September 2022 Board of Trustees Meeting

For the September 16, 2022, Board of Trustees meeting, we are submitting the following Academic Affairs items from the following UAB Deans:

Kecia M. Thomas, Dean of the College of Arts and Sciences
- Undergraduate Certificate in Public History
- BA in Writing and Media

Andrew J. Butler, Dean of the School of Health Professions
- MSHA Degree Option for MD Students (MD-MSHA)
- Proposal for a B.S. Disability Studies and Rehabilitation Science

Paul Erwin, Dean of the School of Public Health
- NISP for a MS in Global Health

Eric Jack, Dean of the Collat School of Business
- 15-Hour Graduate Certificate in Digital Marketing
- Deletion of the Fast-Track Master of Accounting
- 15-Hour Undergraduate Real Estate Certificate

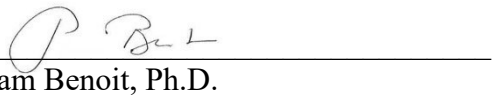
Jeffery Holmes, Dean of the School of Engineering
- NISP for a Master of Construction Engineering Management (MCEM)

Selwyn Vickers, Dean of the School of Medicine
- 15-Hour Graduate Certificate in Digital Health
- 15-Hour Graduate Certificate in Artificial Intelligence in Medicine
- 15-Hour Graduate Certificate in Translation of Biomedical Innovations to Clinical Practice

Michelle Robinson, Interim Dean of the School of Education

- 15-Hour Graduate Certificate for Coaching the Intercollegiate Scholar Athlete
- Name change for Ed.S. TESOL Non-Certificate Track to Ed.S. TESOL Professional Track
- 100% Online delivery of the Ed.S. TESOL Certificate Track
- Proposal for the Educational Specialist (Ed.S.) degree in School Psychology
- Name change for B.S. and M.A.Ed. from High School Education to Secondary Education

These requests have my full endorsement for submission to the Board of Trustees for review and approval at their September 16, 2022, meeting. Please let me know if you have any questions.



Pam Benoit, Ph.D.
Senior Vice President for Academic Affairs and Provost

*This form is intended to be used as a "soft copy" to gather requisite information related to new non-degree certificate notifications. For programs to be included on Commission agendas from March 2022 onward, information should be submitted through the Academic Program Review Portal (apr.ache.edu).

Alabama Commission on Higher Education

Submission of a New Non-Degree Certificate
(Part 1: Description and Rationale)

1. **Institution: University of Alabama at Birmingham**

2. **Date of Certificate Submission: 5/3/2022**

3. **Contact Person and Title: Dr Rubin Pillay**

   Telephone: 205 9346048

   E-mail: rpillay@uab.edu

4. **Program Identification:**

   Award Level (Undergraduate, Graduate, Post-Master's): Graduate

   Title: Graduate Certificate in Digital Health

   6-digit CIP: 51.0722

5. **Program Administration and Implementation:**

   Name of College/ School: UAB School of Medicine

   Name of Dean: Dr Selwyn Vickers

   Name of Department: Marnix Heersink Institute for Biomedical Innovation

   Name of Chairperson: Dr Rubin Pillay

   Proposed program implementation date: Spring 2023

   Anticipated ACHE meeting for notification:

   Other considerations for timing and approval (e.g., upcoming SACSCOC review):

6. Program Design:

Brief Description of Program and Objectives:

Being in the fourth industrial revolution; a period in time where digitization and connectivity of services is moving rapidly, there is no sector more disrupted and transformed than health and healthcare. Digital technologies hold great potential for enhancing health care, in terms of empowering patients, improving access and equity, and delivering better health outcomes. Yet health care's digital transformation lags behind that of other industries. This Graduate Certificate in Digital Health, aims to help learners unlock digital health's potential to improve health care by providing a framework to enable learners to think strategically about digital solutions, develop and deploy them in health care's unique culture and ecosystem, and navigate the sometimes competing needs of health care's multiple stakeholders.

This program is distinctive in that it provides students whose first degree is within computing and/or healthcare related disciplines the required knowledge and skills to become visionary digital health technologists, providing a 'fast-track' into the healthcare and social care profession. It is also distinctive in producing graduates who are able to understand the healthcare and social care perspective and create a strategic view of digital health product development, and who can also manage and lead the development of such products and services.

The courses engage in both theoretical and applied activities to provide the background knowledge necessary to effectively understand the intricacies of the digital health landscape and to identify meaningful opportunities to generate new value for both consumers and organizations. The certificate program consists of five total courses presented 100% online asynchronous format. Students completing this program will gain foundational skills to implement and support digital health initiatives, apply data science tools, and identify ethical and regulatory considerations for digital health products and services.

This program aims to develop critically informed, agile and resourceful graduates, who:

• have a critical understanding of advanced theoretical knowledge, methods and concepts of relevant health digital health technologies required for supporting healthcare and social care services and products;
• have specialized technical knowledge and practical skills to take a professional approach to the planning, design and management of digital health products to address real-world healthcare and social care problems;
• have desired transferable and professional skills to widen their employment prospects through relevant digital health practices;
• have advanced research skills to carry out research to develop new/improved digital health solutions using a broad range of methods, tools and technologies as effective independent researchers and/or consultants in their chosen specialized areas;
• are prepared to adapt to future changes in digital health in the healthcare and social care context via a comprehensive understanding of fundamental theories and current practices.

The Graduate Certificate in Digital Health is informed by and well-aligned with the UABMedicine's strategic plan and the University's digital agenda. UABMedicine identified key strategic investment areas as part of its strategic plan where digital health plays a vital role in supporting the growth of Medical Science and Assistive Technology subject areas. This program will complement the broad range of digital health related expertise already available across the University and health system. It is aligned with an important component of UAB's vision to support/inform/improve sustainable social, environmental, and economic growth and development. The program is designed and delivered by academics with a wealth of industrial experience and research excellence and supported by the industries presenting synergized insights into the relevant fields. Through its fusion approach, it also offers students the opportunity to learn by engaging in a series of practical, industry focused tasks as well as a range of co-creation and co-production projects with academics and industrial contacts to acquire hands-on experience and improve their employability.

The specific learning objectives of the program are

- Determine the clinical relevance of digital health solutions in medicine
- Identify the basic categories of digital health technologies with their applications in clinical medicine
- Outline the principles of design thinking
- Identify of proper user research approaches and establish research goals.
- Recognize the ethical and legal issues of deploying digital health solutions in clinical medicine and healthcare
- Devise a digital health strategy for a healthcare organization with focus on adoption
- Assess digital health technologies in a clinical setting and make recommendations
- Understand the usage of block chain, mixed reality and data science in digital health solutions
- Outline security and privacy issues, legislation, regulations, and accreditation standards in the health care domain

Who is the the Digital Health program intended for?

Those with a multi-disciplinary backgrounds including healthcare providers, behavioral scientists, technologists, UX/UI designers, engineers, data scientists, and public health officials. The program serves to augment medical school training and providing supplemental digital health education and experience.

There are excellent career opportunities in developing digital health. This includes project management, Health or MedTech innovations, product ownership, application and/or software development for digital health, implementation facilitation, business development and many other areas. You will find these opportunities within many companies across the globe, including health care providers, charity sector, consultancy firms, tech giants and corporate organizations.

Proposed delivery format (100% in-person, 100% online, hybrid, multiple formats):

If hybrid, what % of program will be delivered online?

If multiple formats, which ones?

This program will be delivered fully online

Total Credit Hours required to complete the program (if range, enter minimum):

15 Credit Hours

Please identify any specialized accreditation agency that may apply to this program and explain why your institution does or does not intend to seek specialized accreditation.

There are no specialized accreditation agencies

Will the curriculum require work-based or experiential learning (internship, practicum, etc.)? If yes, please explain. Definitions and examples of different types of work-based learning are available at https://www.alapprentice.org/.

Case Presentation model, supported by basic medical science, clinical workplace immersion, interactive

student led case discussions/projects incorporating and encompassing learning objectives will be used.

Experiential learning is not required to complete the certificate. Throughout the program, students will apply lessons learnt to their on-going workplace project and reflect on the outcomes via essays and other submissions.

Will the program be designed to meet educational requirements licensure and/or certification required for entry-level employment? If yes, please list license and/or certification(s).

No, this program will not issue any license or certification

7. Employment Occupational Alignment

Using the federal Standard Occupational Code (SOC) System, please indicate the top three occupational codes related to post-graduation employment from the program. A full list of SOCs can be found at https://www.onetcodeconnector.org/find/family/title#17. A list of Alabama's "In-Demand Occupations" is available at https://ache.edu/Instruction.aspx

SOC 1 (required):

- Health Informatics Specialists - 15-1211.01
- https://www.onetcodeconnector.org/ccreport/15-1211.01

SOC 2 (optional):

- Clinical Data Managers - 15-2051.02
- https://www.onetcodeconnector.org/ccreport/15-2051.02

SOC 3 (optional):

- Data Scientists - 15-2051.00
- https://www.onetcodeconnector.org/ccreport/15-2051.00

SOC 4 : 15-0000 Computer and Mathematical Occupations

SOC 5 : 15-1299.00 Computer Occupations, All Other

SOC 6 : 15-1299.07 Blockchain Engineers

8. Relationship to other programs within the institution:

Is the proposed program associated with any existing offerings, including options within current degree programs? If yes, please explain. If this is a graduate program, please list any existing undergraduate programs which are directly or indirectly related. If this is a doctoral program, also list related master's programs.

This program is not related to any current degree programs offered at UAB although some concepts may be covered within the following programs

- The School of Health Professions offers a “Masters in Health Informatics”, there is a significant difference between health informatics and digital health. The former focuses on computer-based programs to help organize and analyze health records to improve healthcare outcomes while the latter focuses on training visionary digital health technologists that are able to implement end-to-end digital health solutions in the hospital settings. This difference will be reflected in our respective curricula.

  https://www.uab.edu/shp/hsa/graduate/mshi/masters

- “Master of Science in Multidisciplinary Biomedical Science”, is an interdisciplinary graduate degree offered by the Graduate School in conjunction with schools across campus. One concentration/specialization, Bioinformatics, is supported by the Informatics Institute and Department of Genetics in the School of Medicine and the Department of Computer Science in the College of Arts and Sciences. This master’s concentration is designed to provide a thorough understanding of bioinformatics, but also provide a background in genetics, molecular biology, computer science, chemistry, and mathematics. Different from our program as well in its focus on technical and scientific approaches, while the digital health program focuses on applicability of Information and Computer/Mobile Technology solutions to improve and deliver healthcare.

  https://www.uab.edu/medicine/informatics/education/graduate-programs

Submission of a New Non-Degree Certificate (Part 2: Course Information)

Please complete the table below indicating all coursework for the proposed program, specifying any new courses developed for the program, along with courses associated with each option as applicable. Include the course number, and number of credits. Coursework listed should total the number of hours required to complete the program.

COURSE	CREDITS	* IF NEW COURSE
HCI 641: FOUNDATIONS OF DIGITAL HEALTH	3	*
HI 657: HUMAN-CENTERED RESEARCH DESIGN METHODS FOR DIGITAL HEALTHCARE	3	
HCI 642: LEADERSHIP AND ETHICS FOR DIGITAL HEALTH	3	*
HCI 643: SPECIAL TOPICS FOR DIGITAL HEALTH	3	*
HI 620: SECURITY AND PRIVACY IN HEALTHCARE	3	

*** NEW PROGRAM CODE NEED TO BE GENERATED. COURSE CODE INCLUDED HERE INCLUDES PROPOSED PROGRAM AND COURSE CODE.**

Intended program duration in semesters for full-time students:
This program may be completed by full-time students in a period of 2 to 3 semesters.

Intended program duration in semesters for part-time students:
This program may be completed by part-time students in a period of 3 to 5 semesters.

Describe any other special admissions or curricular requirements for the program:

N/A

University of Alabama at Birmingham New Course Form

1) course number

HCI 641

2) course title

Foundations of Digital Health

3) course catalog description

Basic concepts needed for implementing Digital Health solutions in Health Care. Digital Health Concepts and Key Components, Digital Health Technologies, and Digitally Enabled Care Models

4) credit hours

3 credit hours

5) contact person(s)

Dr. Rubin Pillay, Assistant Dean for Health Innovation, School of Medicine

Dr. Rama Rudraraju, Director of Research and Development, KIRSO, School of Medicine

6) a list of potential course conflicts, if any (can list N/A if you do not assume there will be any conflicts)

N/A

7) a discussion of why the new course would not create a conflict.

Searched the existing UAB catalog and no courses fitting the current course description were identified.

University of Alabama at Birmingham New Course Form

1) course number

HCI 642

2) course title

Leadership and Ethics for Digital Health

3) course catalog description

Leadership, ethical and strategic skills for digital health,Business and Commercialization Strategies, Ethics, Digital Health Technology Assessment

4) credit hours

3 credit hours

5) contact person(s)

Dr. Rubin Pillay, Assistant Dean for Health Innovation, School of Medicine

Dr. Rama Rudraraju, Director of Research and Development, KIRSO, School of Medicine

6) a list of potential course conflicts, if any (can list N/A if you do not assume there will be any conflicts)

N/A

7) a discussion of why the new course would not create a conflict.

Searched the existing UAB catalog and no courses fitting the current course description were identified.

University of Alabama at Birmingham New Course Form

1) course number

HCI 643

2) course title

Special Topics for Digital Health

3) course catalog description

Special topics in digital health including Blockchain in Healthcare, Mixed Reality in Healthcare, and Data Science for digital health

4) credit hours

3 credit hours

5) contact person(s)

Dr. Rubin Pillay, Assistant Dean for Health Innovation, School of Medicine

Dr. Rama Rudraraju, Director of Research and Development, KIRSO, School of Medicine

6) a list of potential course conflicts, if any (can list N/A if you do not assume there will be any conflicts)

N/A

7) a discussion of why the new course would not create a conflict.

Searched the existing UAB catalog and no courses fitting the current course description were identified.

Heersink School of Medicine (HSOM)
UNIVERSITY OF ALABAMA AT BIRMINGHAM

Statement of Approval (to be filled in by proposing faculty member):
By signing this form, I indicate approval for a) Certificate for AI in Medicine and b) Certificate for Digital Health. If I am signing in representation of a recommendation forwarded by a committee (faculty or administrative), my signature represents majority approval of committee members.

Proposing Faculty Member(s), Department of Medicine/ Heersink Institute of Biomedical Innovation

Rubin Pillay (Apr 21, 2022 12:33 CDT) — 4/21/2022

Dr. Rubin Pillay & Signature — Date

Program Coordinator/Director (following recommendation by program faculty)

Rubin Pillay (Apr 21, 2022 12:33 CDT)

Dr. Rubin Pillay & Signature — Date

Curriculum & Programs Committee Chairs and Assistant Dean (following recommendations by the Heersink SOM Ad Hoc Graduate Curriculum Committee)

4/21/22

Dr. Cristin Gavin & Signature — Date

Chair and Senior Associate Dean for Medical Education

Craig Hoesley, MD — 4/21/22

Dr. Craig Hoesley & Signature — Date

Signature: Craig Hoesley

Email: choesley@uab.edu

THE UNIVERSITY OF
ALABAMA AT BIRMINGHAM

April 15, 2022

Colleagues:

We are writing to share our enthusiastic support of the proposal from the UAB Heersink School of Medicine for two new graduate certificates: Graduate Certificate in Artificial/Augmented Intelligence (AI) in Healthcare and Graduate Certificate in Digital Healthcare.

We will make our course: HI 620 Privacy and Security in Healthcare, available for students in these certificates, adding additional course sections as necessary. We will also provide content expertise and faculty time to contribute to other courses in the two proposed certificate programs. Our Health Informatics faculty are excited about these new opportunities and look forward to collaborating with the team from UAB Heersink School of Medicine.

Faculty across the Department of Health Services Administration are excited about the ways that the proposed certificates may be combined with our existing graduate certificates in Clinical Informatics, Healthcare Quality & Safety, Healthcare Simulation, and Healthcare Leadership as part of the stackable certificates program. We also anticipate adding new courses as electives to some of our existing graduate degree programs.

We support these new certificates and believe they have strong potential for success and will help develop new leaders who will reinvent health care around the world.

Sincerely,

Christy H. Lemak

Christy Harris Lemak, PhD, FACHE
Professor and Chair

SCHOOL OF HEALTH PROFESSIONS
Department of Health Services Administration

530 School of Health Professions | 1716 9th Avenue South Mailing Address: SHPB 530 | 1720 2ND AVE SOUTH | BIRMINGHAM AL 35294-1212

phone: 205.934.5665 | fax: 205.975.6608 | www.uab.edu/hsa

THE UNIVERSITY OF
ALABAMA AT BIRMINGHAM

18 April 2022

To Whom It May Concern:

I am pleased to endorse these two graduate certificate programs:

1. AI in Medicine
2. Digital healthcare

Both programs are intended to be part of the Heersink Institute for Biomedical Innovation. As Goodrich Chair and Director of the UAB Entrepreneurship program, I have worked with Dr. Ruben Pillay and his colleagues many times, and I am familiar with the curriculum for these programs and the approach they are taking. I have been an entrepreneurship educator for 20 years and performed this work worldwide.

Based on my experience and based on my knowledge of Dr. Pillay and his team, these two programs along with all the other activities of the Institute will surely make a large impact on our ecosystem and achieve many excellent outcomes for UAB.

Sincerely,

Patrick J. Murphy, Ph.D.

COLLAT
SCHOOL OF BUSINESS

Goodrich Endowed Chair of Innovation and Entrepreneurship

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phone: 205.934.8830 | fax: 205.975.4475 | cell: 206.486.5163 | pjmurphy@uab.edu | www.uab.edu/collatbusiness