

## Program Proposal for an Undergraduate Certificate

**1. Name of the proposed undergraduate certificate.**

Healthcare Management Certificate (hereafter, the HCM certificate)

**2. Name of the department(s) involved.**

Management and Entrepreneurship

**3. Name of contact person(s).**

Natallia Gray (healthcare management program director)

Deidra Schleicher (department chair)

Michael Howe (associate department chair)

**4. General description of the undergraduate certificate.**

The certificate in healthcare management is designed for students who wish to enhance their degree and employment possibilities by adding expertise in healthcare management.

HCM Certificate requires a minimum of 20 credits, including 11-12 required credits and 8-9 electives. The courses required for the certificate are shown in Table 1 on the next page.

Consistent with Iowa State University [Requirements for Certificates](#), the healthcare management certificate includes at least 9 credits that are not used to meet any other department, college, or university requirement. Credits used to meet the certificate requirements may be used to satisfy the credit requirement for graduation and to meet credit requirements in courses numbered 300 or above.

In addition, students must meet the following University requirements:

- At least 12 credits must be taken at ISU.
- All prerequisite requirements for the certificate must be met as part of fulfilling the requirements for the certificate.
- At least 9 of the credits taken at Iowa State University must be in courses numbered 300 or above.
- Courses taken for a certificate may not be taken on a pass-not pass basis.
- A cumulative grade point average of at least 2.00 is required in all courses taken at ISU towards the certificate.
- A student may not receive both an undergraduate major and a certificate of the same name.

**Table 1:** Required and Elective Courses for Certificate in Healthcare Management

<b>Required Courses (11-12 credits)</b>	<b>Prerequisite Courses</b>
HCM 301: Introduction to the US Healthcare Industry (3) <b>OR</b> FS HN 430: U.S. Health Systems and Policy (2)	Sophomore Junior
HCM 302: Economics for Healthcare Managers (3)	CR/EN in HCM 301 or FS HN 430
HCM 303: Healthcare Quality Management (3)	CR/EN in HCM 301 or FS HN 430
HCM 402: Law and Regulatory Environment in Healthcare (3)	CR/EN in HCM 301 or FS HN 430
<b>Elective Courses (8-9 credits)</b>	
BIOL 255: Fundamentals of Human Anatomy (3)	
BIOL 256: Fundamentals of Human Physiology (3)	
BIOL 328: Molecular and Cellular Biology of Human Diseases (3)	
BIOL 335: Human and Other Animal Physiology (3)	
BIOL 344: Human Reproduction (3)	
BIOL 421: Biological Principles of Aging (3)	
BIOL 423: Developmental Biology (3)	
BBMB 121: Medicine, Drugs, and You (2)	
BME 352: Molecular, Cellular and Tissue Biomechanics (3)	
BME 444: Biomedical Applications of Chemical Engineering (3)	
COMST 450B: Special Topics in Communication Studies: Health Communication (3)	
ENTSP 310: Entrepreneurship and Innovation (3)	
FS HN 360: Advanced Nutrition and the Regulation of Metabolism in Health and Disease (3)	
FS HN 364: Nutrition and Prevention of Chronic Disease (3)	
FS HN 365: Obesity and Health (3)	
FS HN 367: Medical Terminology for Health Professionals (1)	

FS HN 460: Global Nutrition and Health (3)	
FS HN 461: Medical Nutrition and Disease I (4)	
FS HN 463: Community Nutrition and Health (3)	
GEN 340: Human Genetics (3)	
GEN 349: The Genome Perspective in Biology (4)	
GEN 462: Evolutionary Genetics (3)	
GLOBE 330/VMPM 330: Global Health Disparities (3)	
GLOBE 360/MICRO 360/ VMPM 360: Global Health (3)	
HD FS 367: Abuse and Illness in Families (3)	
HD FS/GERON 373: Death as a Part of Living (3)	
HD FS/GERON 377: Aging and Family (3)	
HD FS 387: Applying Evidence-Based Practice in Human Services (3)	
HD FS 395: Children, Families, and Public Policy (3)	
HD FS 486: Administration of Human Services Programs (3)	
HS 310: Community and Public Health (3)	
HS 350: Human Diseases (3)	
HS 380: Worksite Health Promotion (3)	
HS 430: Community Health Program Development (3)	
KIN 345: Management of Health-Fitness Programs and Facilities (3)	
KIN 365: Sport Psychology (3) or KIN 366: Exercise Psychology	
MGMT 370: Management of Organizations (3)	
MGMT 371: Organizational Behavior (3)	
MGMT 372: Ethical and Responsible Management (3)	
MICRO 428/VMPM 428/ VPDAM 428: Principles of Epidemiology and Population Health (3)	
RS 420: Promoting a Culture of Health and Wellness (3)	
NRS 440: Population and Community Health Nursing (4)	
NRS 460: Nursing Leadership and Management (3)	

PHIL 331: Moral Problems in Medicine	
POL 337X: Health Politics and Policy	
PSYCH 250: Psychology of the Workplace (3)	
PSYCH 310: Brain and Behavior (3)	
PSYCH 314: Motivation (3)	
PSYCH 315: Drugs and Behavior (3)	
PSYCH 316: Cognitive Psychology (3)	
PSYCH 350: Human Factors in Technology (3)	
PSYCH 360: Personality Psychology (3)	
PSYCH 485: Health Psychology (3)	
RELIG 361X: Religion, Health, and Medicine	
SOC 235: Social Problems and American Values (3)	
SOC 305: Social Psychology: A Sociological Perspective (3)	
SOC 327: Gender and Sexualities in Society (3)	
SOC 330: Ethnic and Race Relations (3)	
SOC 331: Social Class and Inequality (3)	
SOC 345: Population and Society (3)	
SOC 348: Global Poverty, Resources and Sustainable Development (3)	
SOC 410: Human Trafficking (3)	

\* Non-business majors are limited to the 12 credits of business courses for the certificate.

\*\* Students are responsible for meeting the prerequisites or any enrollment restrictions when registering for the elective courses from the approved list.

## 5. Need for the proposed undergraduate certificate.

The healthcare field offers many opportunities for advancement through one's career in healthcare. Clinicians who transition to administrative and supervisory roles are often faced with a steep learning curve and report struggling in their new roles due to discrepancy between clinical training and required administrative skills, such as program assessment, balancing the finances and quality of services, leading, motivating and managing staff, etc.<sup>1</sup> The healthcare management

<sup>1</sup> Freerksen, A. (2023). From Clinician to Administrator: Skills, Struggles, Strengths, and Strategies. The University of Chicago. Retrieved from <https://crownschool.uchicago.edu/student-life/advocates-forum/clinician-administrator-skills-struggles-strengths-and-strategies>.

certificate will help prepare students to transition from clinical to managerial and leadership roles within healthcare organizations.

In our healthcare management courses, we regularly see non-business majors (biology, psychology, kinesiology, economics, engineering, among others) who wish to enhance their knowledge of the healthcare industry, understand the business aspects of healthcare, and gain competencies in healthcare management. The proposed HCM certificate creates a pathway for non-business students to earn a formal credential in healthcare management to be reflected in their academic transcripts.

**6. Objectives of the proposed undergraduate certificate including the student learning outcomes and how the learning outcomes will be assessed.**

*Learning Outcomes:*

1. Explain the relationship between various elements of the U.S. healthcare system and how they interact
2. Demonstrate application of management concepts for decision-making and organizational excellence.
3. Identify managerial challenges and opportunities associated with the economics of the healthcare industry.
4. Demonstrate effective use of quality and performance improvement tools and data analyses in a healthcare setting.

*Outcomes Assessment:* the above learning outcomes will be assessed using in-class assessment techniques, including quiz and exam questions, homework assignments, group projects, and individual and team-based presentations. Student learning outcome data will be collected in compliance with current methods used for AACSB accreditation processes.

**7. Relationship of the undergraduate certificate to other programs at Iowa State University.**

The healthcare management certificate is available to all students who wish to add healthcare management knowledge to their degree.

The certificate will be highly complementary to several existing health-related programs on campus: business majors, biology, biochemistry, biomedical engineering, psychology, genetics, kinesiology and health, nursing, dietetics, human development and family studies, sociology, global resource systems, nutritional science, gerontology, global health, health promotion, nutrition, and pharmacology and toxicology, among others. Sample completion pathways for the above programs is shown in Appendix A.

In addition to enhancing the undergraduate degrees with knowledge of aspects of healthcare management and business, the certificate may increase the number of students interested in pursuing graduate-level health-related business programs at Iowa State, such as Master of Healthcare Analytics and Operations degree.

**8. Relationship of the undergraduate certificate to the strategic plans of the university, of the college, and of department or program.**

The proposed certificate supports pillars C and D of the University's 2022-2031 Strategic Plan

"C: TO BE THE UNIVERSITY THAT FOSTERS LIFELONG LEARNING.

**C.3. Engaging new students/student pipelines.**

Iowa state students, past, present, and future, expect excellence and innovation in their educational experience. New student pipelines will be created as programs expand to meet demand.

D: TO BE THE UNIVERSITY THAT CREATES OPPORTUNITIES AND FORGES NEW FRONTIERS

**D.1. Innovation in curriculum.**

Iowa State is committed to providing innovations in the classroom, studio, laboratory, or field, whether in person or through other delivery mechanisms. Iowa State will develop new curricula, expand entrepreneurship opportunities, and extend the impact of research."

The certificate also supports Strategic Priority 1 of the 2021-2026 Strategic Plan of the Ivy College of Business:

**"Strategic Priority 1: Advancing innovative, high-quality, and high-impact academic programs.**

*Goal 1: Enhance student experiences and outcomes to sustain and improve rankings and educational quality.*

- Develop undergraduate and graduate curriculum and business programs based on fundamental business principles and sensitivity to ongoing industry needs.
- Prepare students for personal achievement, professional success and societal contributions.

*Goal 2: Provide innovative and effective educational opportunities.*

- Create and support interdisciplinary undergraduate and graduate programs in collaboration with other colleges on campus."

**9. Comparison of the proposed undergraduate certificate with similar programs at other universities, including the Regent's universities.**

University of Iowa, College of Public Health, Department of Health Management and Policy offers a graduate certificate in healthcare management. This degree is not in the College of Business and outside the scope of undergraduate education. They do not offer undergraduate certificate programs to complement other programs on campus.

The University of Northern Iowa (UNI) offers a Business in Healthcare Certificate for their business school students only. The UNI does not have a major in this academic discipline, therefore the certificate is offered as a track within a business degree for college of business students only. UNI does not offer undergraduate certificate programs to complement other programs on campus.

Drake University offers a Health Care Administration and Public Health track for their Bachelor of Science in Health Services degree in the college of Pharmacy and Health Sciences. Drake does not offer undergraduate certificate programs to complement other programs on campus.

**10. Program requirements and procedures, including:**

*a. prerequisites for prospective students;*

The certificate is intended for students enrolled in a baccalaureate degree program at Iowa State University or that currently hold a baccalaureate degree from an accredited institution. Students holding a baccalaureate degree from an accredited institution must meet admission requirements to be enrolled at Iowa State University

*b. application and selection process;*

A certificate may be added to a student's program by completing a the standard Curriculum Change Form obtained from the registrar's office: ([Curriculum Change Form 1 21.pdf \(iastate.edu\)](https://iastate.edu/curriculum-change-form)). The student fills out the form and obtains an advisor's signature.

*c. language requirements;*

There are no additional foreign language requirements for the certificate.

*d. courses and seminars presently available for credit toward the program;*

All of the courses for the certificate are already available.

*e. proposed new courses or modifications of existing courses;*

No new courses or modifications of existing courses are proposed for the purposes of this certificate.

*f. advising of certificate students;*

Academic advisors in the Ivy College of Business and in the student's home department will act as advisors for students enrolled in the healthcare management certificate.

*g. implications for related areas within the university.*

The certificate requires several courses in Healthcare Management, and one course in Management. This will result in a modest increase in demand for those classes. There should be minimal implications of the certificate on the rest of the University.

**11. General description of the resources currently available and future resource needs, in terms of:**

a. *faculty members;*

All courses required for the Healthcare Management Certificate already exist

As demand for healthcare management certificate and health-related programs at ISU increases, additional sections of the required courses may have to be opened to accommodate growth. The tuition revenue received from both the healthcare management major and the healthcare management certificate should be adequate to hire the needed faculty.

b. *computers, laboratories, and other facilities;*

These resources are already available in different computer labs and classrooms around the university. The ISU library already provides healthcare management resources to support this discipline.

c. *library facilities (journals, documents, etc.) in the proposed area;*

It is not anticipated that any additional library resources will be needed by students enrolled in the certificate program.

d. *supplies, field work, student recruitment, etc.*

Once the certificate is approved, marketing materials about the program will be developed and will be shared with prospective students through our normal marketing channels in the Office of Admissions and in the College of Business. In addition, the Department of Management and Entrepreneurship will prepare special materials to show how a certificate in healthcare management can be added to the respective non-business majors. Details of the certificate will also be available on Iowa State University's website.

**12. Describe the needs for new resources and/or reallocated resources. Attach to the program proposal memos from the department chair(s), the college dean(s), and other appropriate persons, agreeing to the allocation of new resources and/or the reallocation of resources.**

All courses required for the Healthcare Management Certificate already exist at Iowa State University

**13. Attach to the program proposal, letters of support, recommendations, and statements when appropriate, from programs and departments at ISU which are associated with the proposed program or have an interest in the proposed program.**

External letters of support from the affected programs will be solicited once the proposal is voted on by the Department of Management and Entrepreneurship and Ivy College of Business.



- 14. If the new program is interdisciplinary, a governance document should be created and submitted to the Associate Provost for Academic Programs. Indicate here that it has been completed.**

The healthcare management certificate is not interdisciplinary. The certificate will be housed in and administered by the Department of Management and Entrepreneurship

## APPENDIX A

In addition to required 11-12 credits (HCM 301 or FS HN 430; HCM 302, HCM 303, and MGMC 301), student can complete HCM certificate by choosing from the following courses within their programs of study:

**Table A1:** HCM Certificate sample completion pathway by program:

<b>Majors</b>	Sample program-specific courses that would count towards the healthcare management certificate.
<a href="#"><u>Biochemistry</u></a>	BIOL 255; BIOL 256; BIOL 328; BIOL 335; BIOL 344; BIOL 421; BIOL 423; FS HN 360; FS HN 364; FS HN 365; FS HN 367; FS HN 463; MICRO 360.
<a href="#"><u>Biology</u></a>	BIOL 328; BIOL 355; BIOL 344; BIOL 421; BIOL 423; FS HN 360; FS HN 364; FS HN 367; FS HN 461; GEN 340; HS 350; MICRO 360; PSYCH 310; PSYCH 315.
<a href="#"><u>Biomedical engineering</u></a>	BIOL 335; BME 352; BME 444.
<a href="#"><u>College of Business majors</u></a>	MGMT 310; MGMT 370; MGMT 371; MGMT 372.
<a href="#"><u>Dietetics</u></a>	BIOL 255; BIOL 256; COMST 450B; FS HN 360; FS HN 367; FS HN 430; FS HN 461; FS HN 463.
<a href="#"><u>Economics</u></a> <a href="#"><u>List of Approved Electives</u></a>	BIOL 255; BIOL 256; BIOL 344; COMST 450B; GERON 377; PSYCH 310, PSYCH 314, PSYCH 315, PSYCH 316, PSYCH 350, PSYCH 360; SOC 235, SOC 305, SOC 327, SOC 330, SOC 331, SOC 345.
<a href="#"><u>Genetics</u></a>	BIOL 325; BIOL 335; BIOL 344; BIOL 350; GEN 340; GEN 349; GEN 462; MICRO 360; PSYCH 310.
<a href="#"><u>Global Resource systems</u></a>	no specific courses per se; this major requires a standalone technical expertise minor, or a certificate completed in the LAS.
<a href="#"><u>Human Development and Family Studies</u></a>	HD FS 367; HD FS 373; HD FS 377; HD FS 395; HD FS 387, HD FS 486,
<a href="#"><u>Kinesiology and Health</u></a>	HD FS 377; HS 350; HS 310; HS 430; KIN 365; KIN 345; PSYCH 485; VDPAM 428.
<a href="#"><u>Nursing</u></a>	COMST 450B; FS HN 364; FS HN 365; FS HN 430; GERON 373; GERON 377; NRS 420; NRS 440; NRS 460; PSYCH 485.
<a href="#"><u>Nutritional Science</u></a>	BIOL 255; BIOL 256; COMST 450B; FS HN 364; FS HN 365; FS HN 430; PSYCH 485;
<a href="#"><u>Sociology</u></a>	SOC 235; SOC 305; SOC 327; SOC 330; SOC 330; SOC 331;

	SOC 345; SOC 348; SOC 410.
<a href="#">Psychology</a>	BIOL 255; BIOL 256; PSYCH 310; PSYCH 314; PSYCH 315; PSYCH 316; PSYCH 350; PSYCH 360; PSYCH 485.
<b>Minors:</b>	
<a href="#">Gerontology</a>	GERON 373; GERON 377, and 1-2 elective courses.
<a href="#">Global Health</a>	BIOL 328; FS HN 360; GLOBE 330; GLOBE 360; HS 350; SOC 345; SOC 348; VDPAM/VDPM 428
<a href="#">Health promotion</a>	HS 310; HS 350; HS 380; HS 430.
<a href="#">Nutrition</a>	FS HN 360; FS HN 364; FS HN 365; FS HN 367; FS HN 463.
<a href="#">Pharmacology and Toxicology</a>	BIOL 335; BIOL 423; FS HN 461.

## **APPENDIX B**

Letters of support from related programs outside of the Ivy College of Business have been obtained from:

1. Dr. Dawn Bowker - Director of Nursing Education
2. Dr. Li-Shan Chou - Chair, Department of Kinesiology
3. Dr. Donald Sakaguchi - Director of Biology and Genetics Undergraduate Programs.

November 14, 2023

Dear Dr Gray,

I am writing in support of the proposed Healthcare Management certificate. This certificate fills a gap in healthcare that merits consideration. I appreciate the inclusion of RN-to-BSN students in your proposal. To gauge interest among our RN-to-BSN students, I conducted an inquiry. Of the 19 students, 5 expressed interest in enrolling if the certificate was offered face-to-face, and 13 if offered in an online format. Therefore, I would also like to suggest that you consider incorporating an online modality for the Healthcare Management Certificate program in the future.

I believe that the Healthcare Management undergraduate certificate would be a popular program. In my capacity, I would advise nursing students to consider enrolling in the HCM certificate, especially if it becomes available online. The online option would be more accessible for our working nurses, given the constraints of their professional schedules.

Sincerely,



**Dawn Bowker, PhD, RN, ARNP-BC, CNE**

Director of Nursing Education  
Clinical Assistant Professor of Nursing  
Iowa State University  
1104 HNSB, Office B, 706 Morrill Road  
Ames, IA 50011-1078  
515-294-6080  
dmbowker@iastate.edu

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Date: November 14, 2023

Natallia Gray, Ph.D., CPHQ, CLSSBB, CHEC  
Healthcare Management Program Director  
Associate Teaching Professor  
Department of Management and Entrepreneurship  
Ivy College of Business  
Iowa State University

Dear Professor Gray,

I have had the opportunity to review your proposal for a new undergraduate certificate in Healthcare Management and agree that the program will complement well with existing health-related programs on campus, including Kinesiology. The elective courses of the proposed program include relevant courses from both Kinesiology and Health Studies, and we anticipate no problems to accommodate any additional class enrollment. You can count on my full support to this new undergraduate certificate in Healthcare Management.

Sincerely,



Li-Shan Chou, Ph.D.  
Professor and Chair, Department of Kinesiology  
Affiliated Faculty, Neuroscience Graduate Program  
Faculty Associate, Gerontology Program

**IOWA STATE UNIVERSITY**  
OF SCIENCE AND TECHNOLOGY

Department of Genetics,  
Development and Cell Biology  
Nanovaccine Institute  
Iowa State University  
5205 Advanced Teach. & Research Bldg.  
2213 Pammel Dr.  
Ames, IA 50011-1101

October 31, 2023

Natallia Gray, Ph.D., CPHQ, CLSSBB, CHEC  
Director, Healthcare Management Program  
Associate Professor of Teaching in  
Healthcare Management

Dear Dr. Gray,

Thank you for sharing your proposal for a new undergraduate certificate in Healthcare Management. Since this certificate focuses on business aspects of healthcare and is open to all students on campus, I see it may be an interesting opportunity for our biology and genetics students who are also interested in more management aspects of human healthcare professions. Our students majoring in biology or genetics interested in human health professions may also find this certificate appropriate for their career goals and enroll in courses and/or the certificate program. As the Director of the Biology and Genetics Undergraduate Programs, I do not envision any conflicts with this certificate you are proposing to develop and offer through your department/program.

Sincerely,



Don Sakaguchi, Ph.D.  
Morrill Professor  
Director, Biology and Genetics Undergraduate Programs  
Department of Genetics, Development, and Cell Biology (GDCB)  
Nanovaccine Institute  
Iowa State University  
5205 Advanced Teaching & Research Building (ATRB)  
2213 Pammel Dr  
Ames, IA 50011-1101  
[dssakagu@iastate.edu](mailto:dssakagu@iastate.edu)

## Academic Program Approval Voting Record

This document is to be appended as the last page of the proposal for any new or revised academic program to record the successive votes of approval as the proposal moves through its required review and approval steps. Consult Faculty Handbook Section 10.8 or the Faculty Senate Curriculum Committee website for information regarding Committee review and voting requirements for each action.

Curricular Action: (check appropriate boxes below)

1. ☒ **New Program**    ☐ Name Change        ☐ Discontinuation        ☐ Concurrent Degree for:
2.    ☐ Undergraduate Major    ☐ Graduate Major    ☐ Undergraduate Minor    ☐ Graduate Minor  
       ☒ **Undergraduate Certificate**    ☐ Graduate Certificate        ☐ Other: \_\_\_\_\_
3. Name of Proposed Change: *Healthcare Management Certificate*
4. Name of Contact Person: *Natallia Gray*    e-mail address: [nagray@iastate.edu](mailto:nagray@iastate.edu)
5. Primary College: *Ivy College of Business*        Secondary College: \_\_\_\_\_
6. Involved Department(s): *Department of Management and Entrepreneurship*

### Voting record for this curricular action:

Voting Body	Votes			Date of Vote
	For	Against	Abstain	
Dept. or Program Committee	4	0	0	04Oct23
Dept. Faculty	26	0	0	20Oct23
College Curriculum Committee	6	0	0	13Nov23
College Approval Vote	82	7	0	08Jan24
Graduate Council				
Faculty Senate Curriculum Committee	6	0	0	25 Jan 2024
Faculty Senate Academic Affairs Council	9	0	0	26 Feb 2024
Faculty Senate				