

## **INSTRUCTOR:**

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## **WELCOME!**

Welcome to HA 8670 Health Information Systems (Digital Health Strategy)! My name is Aaron Baird and I will be the instructor for this class. My specialty is digital health (also known as health IT and health information systems), I have a background in software development and IT as well as digital health education and research, and I always enjoy teaching this class. This is the first time I have taught this class entirely online, so I appreciate your patience as we work out some of the details together. That said, I have worked hard to make this online experience as streamlined and valuable for you as I can. Information about the course is available below and on iCollege. Feel free to e-mail me at any time at [abaird@gsu.edu](mailto:abaird@gsu.edu) with questions. I typically respond during business hours, but will do my best to respond as quickly as possible.

## **COURSE OBJECTIVE:**

At the conclusion of this course, participants will be able to develop an effective digital health strategic plan for a health care organization.

## **COURSE DESCRIPTION:**

This course will introduce the students to digital health strategy. This course is designed to integrate and apply knowledge, concepts, and methods in digital health to the ongoing strategic planning and assessments conducted by health care organizations. Business practices and issues associated with setting strategic goals related to digital health, acquiring, and implementing digital health solutions, sharing information among the various stakeholders, and transforming the healthcare industry, will be discussed in detail. Students have the opportunity to apply these ideas to health care business cases.

## **COURSE MATERIALS:**

Due to the compressed format of this course, there is not an assigned textbook. We will instead be using a number of cases, articles, and supporting materials. Many of these materials are available online through the GSU library or are available for free online. However, some of these materials must be purchased. **The link to these materials will be provided before class begins. Please be sure to obtain access to these materials prior to the first class.**

## INSTITUTE OF HEALTH ADMINISTRATION (IHA) COMPETENCY MODEL:

This course includes content associated with many of the competencies listed below, but the primary focus is on the Health IT and Informatics competency. Competency attainment within this course is specifically measured for Health IT and Informatics, as described further below:

| <b>Institute of Health Administration Competency Model</b> |   |   |   |
|--|---|---|---|
| <b>Business Knowledge and Skills</b>                       |   |   |   |
| 1  | Financial Management                          | The ability to apply basic and complex financial analysis tools to the health care sector   | Not Assessed  |
| 2  | Operations and Project Management             | The ability to apply operations and project management concepts to improve efficiency and effectiveness in the health care sector   | Not Assessed  |
| 3  | Strategic Management                          | The ability to assess the internal and external environment and develop strategies that improve organizational performance consistent with the mission  | Not Assessed  |
| 4  | Human Resource Management                     | The ability to interact with, recruit, manage, and motivate a diverse workforce in accordance with legal requirements and optimize performance to meet the strategic goals of the organization  | Not Assessed  |
| 5  | Analytics                                     | The ability to consolidate data from multiple sources and use analytical techniques to make executive, tactical and operational decisions in the health care industry   | Not Assessed  |
| <b>Knowledge of the Health Care Environment</b>            |   |   |   |
| 6  | Clinical Professions and Continuum of Care    | The ability to use knowledge of the clinical and organizational participants in the delivery of health care and their relationships for leadership and management   | Not Assessed  |
| 7  | Legal, Regulatory, and Policy Environment     | The ability to: <ul style="list-style-type: none"> <li>Describe the legal and regulatory environment in which health care organizations and managers operate,</li> <li>Recognize the implications of that environment for leadership and management, and</li> <li>Influence the policy environment</li> </ul> | Not Assessed  |
| 8  | Economics and Financing                       | The ability to explain concepts, issues, and practices related to the economics of health care financing in the United States and how those concepts affect organizational and political decision making  | Not Assessed  |
| 9  | Organizational performance and quality        | The ability to understand and use quantitative and qualitative methods to measure and improve organizational performance, especially as it relates to health care quality   | Not Assessed  |
| 10   | Health Information Technology and Informatics | The ability to understand and effectively use health IT and health informatics to enable and support health care operations and transformation.   | Assessed with the final project (digital health strategic plan) |
| <b>Leadership and Professionalism</b>                      |   |   |   |

|    |                                   |   |              |
|----|-----------------------------------|---|--------------|
| 11 | Strategic communications          | Skilled in the arrangement and communication of effective message in written and oral form, adjustment to media and setting, and adaptation to reader and audience feedback.  | Not Assessed |
| 12 | Emotional Intelligence            | The ability to: <ul style="list-style-type: none"> <li>• Recognize one’s own emotions (self-awareness),</li> <li>• Use that awareness to guide one’s thinking and behavior (self-management),</li> <li>• Accurately recognize the emotions of others,</li> <li>• Use emotional information to manage interactions and relationships, and</li> <li>• Demonstrate a personal commitment to others.</li> </ul> | Not Assessed |
| 13 | Team Leadership and Participation | The ability to lead and participate in a team, manage meetings, promote team effectiveness, and evaluate team performance   | Not Assessed |
| 14 | Innovation and Change Management  | The ability to lead through dynamic processes or projects and obtain concurrence among people for change within the governance structures of various healthcare organizations.  | Not Assessed |
| 15 | Ethics, Honesty and Integrity     | Knowledge of and commitment to values, standards and duties that are consistent with the ACHE code of ethics, and merit trust from all stakeholders   | Not Assessed |

## COURSE FRAMEWORK, MODULES, LEARNING OBJECTIVES, and SCHEDULE<sup>1</sup>

The course is organized according to the following framework.

| <b>Module 1: Digital Health Strategy Introduction</b><br>Alignment (with Business Strategy, Policy, and Norms), Scale, Complementarities |  |  |
|--|--|--|
| <b>Service Scope</b>   | <b>Digital Health Enablement</b>                   | <b>Digital Health Transformation</b>         |
| <b>Point-of-Care</b>   | Module 2: Digital Health Infrastructure Investment | Module 3: Service Quality Optimization       |
| <b>Collaboration</b>   | Module 4: Strategic Alliance Development           | Module 5: Patient Engagement and Empowerment |
| <b>Population</b>  | Module 6: High Cost Prevention                     | Module 7: Treatment Personalization          |
| <b>Module 8: Final Project: Digital Health Strategic Plan</b>  |  |  |

<sup>1</sup> This is a tentative schedule and adjustments may be made during the course. Please see iCollege for changes.

## Week 1: May 11 – 15

### 1) Module 1 (Digital Health Strategy Overview) Learning Objective: Participants will be able to describe the digital health strategic planning process and essential components.

- a) *Assignment:* Harvard ManageMentor online course on Strategic Planning and Execution (available through the coursepack: <https://hbsp.harvard.edu/product/7183-HTML-ENG?itemFindingMethod=LandingPage>)
  - i) *Key Question(s):* What is strategy and how are strategic plans developed by health care organizations?
- b) *Supplemental Material:*
  - i) Oxford Economics article on Health IT: <https://oxfordre.com/economics/view/10.1093/acrefore/9780190625979.001.0001/acrefore-9780190625979-e-102#acrefore-9780190625979-e-102-div1-1>
  - ii) NEJM Article on The Agenda for the Next Generation of Health Care Information Technology: <https://catalyst.nejm.org/doi/full/10.1056/CAT.20.0132>

### 2) Module 2 (Digital Health Infrastructure Investment) Learning Objective: Participants will be able to critically evaluate decision making criteria for selecting and implementing digital health infrastructure.

- a) *Case Study:* Stanford Medicine: Health IT Purchasing Decisions in a Complex Medical Organization
  - i) *Key Question(s):* How can health care organizations make effective digital health investment decisions? How should Case Study Strategic Analyses be written for this course?
- b) *Supplemental Material:*
  - i) Health IT Playbook (by the ONC) section on EHRs: <https://www.healthit.gov/playbook/electronic-health-records/>
  - ii) Health IT Playbook (by the ONC) section on Privacy and Security: <https://www.healthit.gov/playbook/privacy-and-security/>
  - iii) HealthITNews article on best practices: <https://www.healthcareitnews.com/news/implementation-best-practices-keys-launching-ehr>
- c) *Assignment Due:* Case Study Strategic Analysis #1 (Stanford Medicine)

## Week 2: May 18 – 22

### 3) Module 3 (Service Quality Optimization) Learning Objective: Participants will be able to identify ways in which digital health can be used to improve service quality.

- a) *Case Study:* Weathering the Storm at NYU Langone Medical Center
  - i) *Key Question(s):* How does risk management play a role in service delivery? Why is measurement important in processes, especially in health care? Why are complementarities—such as process change and standardization—essential to yielding value from digital health investments?

- b) *Supplemental Material:*
  - i) What is Risk Management in Healthcare?:  
<https://catalyst.nejm.org/doi/full/10.1056/CAT.18.0197>
  - ii) CBO Report on Clinical Quality Measurement:  
<https://www.cbo.gov/publication/53387>
  - iii) Health IT Playbook (by the ONC) Population Health:  
<https://www.healthit.gov/playbook/population-public-health/>
- c) *Assignment Due:* Case Study Strategic Analysis #2 (NYU Langone)

**4) Module 4 (Strategic Alliance Development) Learning Objective: Participants will be able to provide examples of how strategic alliances can be enabled with digital health.**

- a) *Case Study:* A Telemedicine Opportunity or a Distraction?
  - i) *Key Question(s):* How can digital health be used to enable strategic alliances? However, we also know that many alliances fail, so what needs to be done to mitigate failure risks?
- b) *Supplemental Material:*
  - i) HBR Article on Simple Rules for Making Alliances Work **(in the coursepack)**
  - ii) The Importance of IT-Enabled Flexibility In Alliances:  
<https://sloanreview.mit.edu/article/the-importance-of-it-enabled-flexibility-in-alliances/>
  - iii) About Telehealth: <https://www.cchpca.org/about/about-telehealth>
- c) *Assignment Due:* Case Study Strategic Analysis #3 (Telemedicine)

**Week 3: May 25 - 29**

**5) Module 5 (Patient Engagement and Empowerment) Learning Objective: Participants will be able to illustrate how to engage and empower patients with digital health.**

- a) *Case Study:* Amazon Alexa and Patient Engagement
  - i) *Key Question(s):* Why is finding the right value proposition for using digital health to engage and empower patient such a challenge? How might consideration of *network effects* impact how a value proposition is developed?
- b) *Supplemental Material:*
  - i) HBR Article on What is Disruptive Innovation? **(in the coursepack)**
  - ii) HBR Article on Pipelines, Platforms, and the New Rules of Strategy **(in the coursepack)**
  - iii) Health IT Playbook (by the ONC) Patient Engagement:  
<https://www.healthit.gov/playbook/patient-engagement/> and  
<https://www.healthit.gov/playbook/pe/>
  - iv) NEJM article on mHealth: <https://www.nejm.org/doi/full/10.1056/NEJMr1806949>
- c) *Assignment Due:* Case Study Strategic Analysis #4 (Alexa)

**6) Module 6 (High Cost Prevention) Learning Objective: Participants will be able to compare different methods of using digital health (and analytics) to prevent high care costs.**

- a) *Case Study:* Carolinas HealthCare System (now Atrium Health): Consumer Analytics
  - i) *Key Question(s):* How can health care organizations most effectively address population (prevention) needs without compromising the power of the provider-patient relationship? How can a population health process—including gathering (information), monitoring, predicting (risks and costs), identifying (care gaps), and intervening—be enabled with digital health?
- b) *Supplemental Material:*
  - i) NEJM Article on Big Data in Health Care:  
<https://catalyst.nejm.org/doi/full/10.1056/CAT.18.0290>
  - ii) Mark Braunstien’s Articles on FHIR: Part 1 of a 6 part series:  
<https://ieeexplore.ieee.org/document/8538913>
  - iii) NEJM Article on Machine Learning in Health Care:  
<https://www.nejm.org/doi/full/10.1056/NEJMra1814259>
- c) *Assignment Due:* Case Study Strategic Analysis #5 (Atrium Health)

**Week 4: June 1 - 5**

**7) Module 7 (Treatment Personalization) Learning Objective: Participants will be able to illustrate how to innovatively apply digital health toward treatment personalization.**

- a) *Case Study:* Intermountain Healthcare: Pursuing Precision Medicine
  - i) *Key Question(s):* How should health care organizations make digital health explore vs. exploit decisions? How should health care organizations make digital health pilot vs. scaling decisions?
- b) *Supplemental Material:*
  - i) NEJM Article on Precision Medicine – Personalized, Problematic, and Promising:  
<https://www.nejm.org/doi/10.1056/NEJMsb1503104>
  - ii) Health Affairs article on A Roadmap to Welcoming Healthcare Innovation:  
<https://www.healthaffairs.org/doi/10.1377/hblog20191119.155490/full/>
  - iii) CMR Article on Organizational Ambidexterity: How Managers Explore and Exploit:  
<https://www.hbs.edu/faculty/conferences/2015-strategy-research/Documents/Organizational%20Ambidexterity%20in%20Action.pdf>
- c) *Assignment Due:* Case Study Strategic Analysis #6 (Intermountain)

**8) Modul 8 (Final Project) Learning Objective: Participants will be able to develop an effective digital health strategic plan for a health care organization.**

- a) *Assignment Due:* Digital health strategic plan for a health care organization of your choice; details below.
  - i) *Key Question(s):* What should be included in a digital health strategic plan?

## COURSE ASSIGNMENT AND ASSESSMENT DETAILS:

| Item   | Evaluation Level  | Points   |
|--|---|--|
| <b>Case Study Strategic Analyses</b>                           | Higher: Synthesis of what has been learned in the course and application toward specific cases (higher). Assessment is formative and based on ability to apply lessons learned in the course (up to the point of the case) and the supplemental materials to the analysis of the issues raised by the case. | 6 * 25 points each =<br><b>150 points</b>  |
| <b>Supplemental Readings, Online Content, and/or Materials</b> | Lower: Content that can be applied to the Case Study Strategic Analyses and the Digital Health Strategic Plan (Final Project)   | Not explicitly graded, but if application of the primary lessons/concepts from these supplemental materials are not evident within the Case Study Strategy Analysis and Final Project assignments, points will be taken off when those assignments are graded. |
| <b>1 Digital Health Strategic Plan (Final Project)</b>         | Higher: Strategic recommendations generated via analysis and critical thinking. Assessment is summative as it is based on application and synthesis of lessons learned throughout the course within a single digital health strategic plan.   | <b>100 points</b>  |
| <b>Total Points</b>  |   | <b>250 points</b>  |

**Case Study Strategic Analyses:** Case studies are available via the course pack. Case study analyses should apply lessons learned from the course and supplemental materials provided to the situation(s) presented in the case and be approximately 2 pages in length (including the following 3 sections):

- 1) **Digital Health SWOT** (for the primary organization discussed in the case)
- 2) **Digital Health Strategic Priority**
  - a) Description of one digital health strategic priority, as derived from the SWOT
  - b) Explanation of strategic importance
- 3) **Digital Health Strategic Priority Action Plan** (for this one digital health strategic priority)
  - a) Objectives (at least two)
  - b) Tactics (at least two for each objective)
  - c) Performance Measures (at least one for each tactic)

**Final: Digital Health Strategic Plan:** The final project will be an approximately 3- to 5-page digital health strategic plan for a health care organization of the student's choice. The plan should



include 4 sections and should reflect an applied synthesis of what has been learned in class and from the supplemental materials.

- 1) **Brief Health Care Organization Description** (including a direction statement: a summary of the organizations' vision, mission, and values that guide the strategy)
- 2) **Digital Health SWOT** (for this organization)
- 3) **Digital Health Strategic Priorities** (3 to 5)
  - a) Description of each strategic priority, as derived from the SWOT
  - b) Explanation of strategic importance of each priority
- 4) **Action Plan**
  - a) Objectives (at least two for each strategic priority)
  - b) Tactics (at least two for each objective)
  - c) Performance Measures (at least one for each tactic)

### ***COURSE SECTION POLICIES***

**ATTENDANCE AND PREPARATION:** Because there is considerable material to be covered, we will move at a rapid pace. Thus, attendance is very important -- you are expected to attend and be thoroughly prepared for each class. Absenteeism or lack of preparation will adversely affect your grade.

**CLASSROOM COMPORIMENT:** You will find it helpful to use your computer or device in class lookup answers to questions, solve problems, review relevant materials, or share electronic materials with others. However, computers and devices in the classroom should not be used for activities unrelated to the class. Please dress appropriately when presenting or when a guest speaker is present.

**ACCESS & ACCOMODATIONS:** Students who wish to request accommodation for a disability may do so by registering with the Access & Accommodations Center (AACE). Students may only be accommodated upon issuance by the Access & Accommodations Center (AACE) of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which accommodations are sought. Please let me know if you have a disability or special need that requires accommodation.

**MISCELLANEOUS POLICIES:** Show respect for the instructor and your classmates:

- For in-person classes, please be **punctual** for class — when you're tardy, you miss important course announcements and you disrupt the learning process for others. If you do arrive late, enter and take a seat quietly.
- Please be **courteous** -- do not engage in behaviors that disrupt the class.
- Instructor communication with students is via the Course Announcements on eCollege or via e-mail. It is the responsibility of each student to forward the student email account from iCollege and GoSolar to your preferred email address. The instructor is not responsible for maintaining any other email lists.
- The class may include lectures delivered by guest speakers. Students are expected to treat all guest speakers with the respect they are due. Speakers in GSU courses are not reimbursed for their time. They generously and voluntarily share their expertise with students. Please arrive in class on time, listen and participate in any discussions, and express any disagreement with



speakers respectfully and professionally. The instructor is not responsible for the views of any guest speaker.

- All content created in this course, including videos, handouts, etc., may be used only by students enrolled in the course for purposes relating to the course. No materials may be shared with students outside of the class or posted in any external forum. Failure to abide by these limitations constitutes a violation of the Policy on Academic Honesty and will be treated accordingly.
- **The course syllabus is intended to provide a general plan for the course. Deviations may be necessary and will be announced as soon as possible. The syllabus will be posted on iCollege and will be updated to reflect any changes.**

**LATE WORK:** All assignments are due on the date and time specified. Written assignments submitted after the deadline will be subject to a 20% late penalty (plus an additional 20% per day late) as the compressed nature of this course requires on-time submissions. Presentations can be traded with other students with instructor permission, but can otherwise not be missed. Missed presentations that cannot be rescheduled will receive a grade of zero (0).

**GRADING POLICY:** 100-97.5=A+, 97.49-93.5=A, 93.49-89.5=A-, 89.49-86.5=B+, 86.49-83.5=B, 83.49-79.5=B-, 79.49-76.5=C+, 76.49-73.5=C, 73.4-69.5=C-.

**INCOMPLETE GRADES:** We do not give incomplete grades in this course, unless a formal agreement is made due to excusable situations. According to GSU policy, the grade will automatically be converted to an F if it is not removed by the end of the second academic term after the "I" is assigned.

**GSU ACADEMIC HONESTY POLICY:** Abstracted from Student Handbook Student Code of Conduct "Policy on Academic Honesty" at [http://www2.gsu.edu/~wwwdos/codeofconduct\\_conpol.html](http://www2.gsu.edu/~wwwdos/codeofconduct_conpol.html)

Behavior consistent with College and University policies on academic honesty and treatment of members of the University community is expected of all. Cheating, plagiarizing, submitting the material for credit in more than one class, and other deceptive conduct with respect to a student's work output will be dealt with according to the University Policy on Academic Honesty.

Plagiarism and misrepresentation of work are serious offenses, which can lead to expulsion and a grade of "F" for the course. Plagiarism includes, but is not limited to, taking material from any source written by another and presenting it as your own by failing to indicate full and accurate attribution to the correct author/creator. This includes marginally altering material taken from another source and calling it your own creation. Plagiarism includes materials taken from internet sources. Proper citation requires quote marks or other distinctive set-off for the material, followed directly by a reference to the source. The source details may be in the footnotes/endnotes/references section, but only listing a reference without proper indication in the text is not proper attribution and can be considered plagiarism. Misrepresentation of work includes, but is not limited to, presenting material that was prepared for another class or outside work as an original work product that was produced for this class. All work turned in for this class is represented by the student(s) to be original material prepared in fulfillment of this course's requirements.

Students are encouraged to discuss freely with faculty any questions they may have pertaining to the provisions of the Policy on Academic Honesty prior to submitting assignments. ***Lack of knowledge of the contents of the University Policy on Academic Honesty is not an acceptable defense to any charge of academic dishonesty.***

**GSU WITHDRAWAL POLICY:** A student who withdraws prior to the midpoint in the semester or term will be awarded a “W”. A student who withdraws after the midpoint will automatically receive a “WF.” You are responsible for understanding and adhering to the W limit policy which is described at [http://robinson.gsu.edu/resources/files/ouaa/policy\\_flyer.pdf](http://robinson.gsu.edu/resources/files/ouaa/policy_flyer.pdf)

**STUDENT ASSESSMENT:** Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State. Upon completing the course, please take time to fill out the online course evaluation.