



Department of Health Administration and Policy

College of Public Health

Spring 2026

Syllabus	
Course information	HI 461 / HAP 461 Internet and Web Technology Applications for Healthcare Tuesdays, 4:30 p.m. – 7:10 p.m. Thompson Hall, Room: 1018
Course Placement	() Core (x) Concentration () Elective (x) Pre-requisite(s) – HAP 360 () <i>Course(s) recommended before taking this course:</i>
Instructor	Adjunct Prof. Afshin Pashai, MBA, apashai@gmu.edu . Office hours by appointment.
Course Description	This course will explore the myriad ways in which the communication technology embodied in the internet and the world wide web are employed in health care. Topics of discussion will include web sites and the evaluation of their quality, mobile phone and tablet apps, search engines, personal health records, mobile monitoring, support groups, decision support tools, precision medicine, and the application of AI in search engines.
Course Objectives & Learning Outcomes	<ol style="list-style-type: none"> 1. Analyze emerging healthcare challenges and identify opportunities for technology-based solutions. 2. Apply internet and web technologies to design and evaluate strategies for improving healthcare delivery while reducing costs. 3. Collaborate in teams to develop and present three technology-driven projects addressing real-world issues faced by hospitals and medical practices. 4. Evaluate the effectiveness of digital tools (e.g., SEO, telehealth platforms, mHealth apps) in enhancing patient engagement and organizational performance. 5. Demonstrate proficiency in using online tools and data analytics to support decision-making in healthcare settings. 6. Design and implement an online health marketing/promotion campaign using search engine optimization and digital advertising strategies. 7. Identify common mistakes hospitals and medical practices make in online marketing and propose corrective strategies. 8. Assess areas where hospitals and practices fail to comply with federal privacy regulations (beyond HIPAA) in their marketing and digital initiatives. 9. Evaluate ethical, privacy, and security implications of online marketing and PHR adoption in healthcare organizations.

Required textbook(s) and/or materials	<p>Due to wide range of topics, continuous update of search engine algorithms, and continuous changes in html coding standards, a textbook will not be used. Knowledge of html coding is not a prerequisite.</p> <ul style="list-style-type: none"> - No textbook required. - Canvas - Class Presentations - Packback which can be purchased from the bookstore. 												
Course requirements	I would like my students to be curious, thoughtful, and interested, with some ability to express themselves in writing and in presentations.												
Teaching methods	<input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Projects <input checked="" type="checkbox"/> Independent research <input type="checkbox"/> Field work <input type="checkbox"/> Papers <input checked="" type="checkbox"/> Guest speakers <input checked="" type="checkbox"/> Student presentations <input type="checkbox"/> Case Studies <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Class discussion <input type="checkbox"/> Other _____												
Grading Scale	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">95+ A</td> <td style="width: 25%;">83-87 B</td> <td style="width: 25%;">73-77 C</td> <td style="width: 25%;">63-67 D</td> </tr> <tr> <td>90-94 A -</td> <td>80-82 B-</td> <td>70-72 C-</td> <td>60-62 D-</td> </tr> <tr> <td>88-89 B +</td> <td>78-79 C+</td> <td>68-69 D+</td> <td><59 F</td> </tr> </table>	95+ A	83-87 B	73-77 C	63-67 D	90-94 A -	80-82 B-	70-72 C-	60-62 D-	88-89 B +	78-79 C+	68-69 D+	<59 F
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Evaluation	<p>Assessments & Grading Summary</p> <p>Packback Discussions = 15% of class grade Class participation and peer reviews = 20% of class grade Group Project #1 = 15% of class grade Group Project #2 = 15% of class grade Group Project #3 = 15% of class grade Final Exam = 20%</p> <p>Class participation is a critical part of project preparation. A hands-on approach lab will focus on preparing students to be more valuable at the work setting. It is not uncommon for search engine algorithms to be updated and announced during a semester. Should that happen, we will update what we learn and subsequently add or omit some of the articles during the semester.</p> <p>“Packback Discussions” - 15% of final class grade. Take advantage of this not to just learn the material but also TO IMPROVE YOUR WRITING SKILLS.</p> <ul style="list-style-type: none"> • Packback Discussions (weekly; replaces Exit Tickets): 15% Currently there are more than 10 of these, but we will only do 10 and each is worth 1.5% of your final class grade. • Class Participation & Peer Reviews: 20% This is not about who raises their hand, but it is about meaningful class participation. The thinking is very similar to Packback. In your other classes, you may be able to get credit for simply making a comment on a discussion forum, but in this class, Packback forces you to think through your responses while guiding you to improve your thinking. The same 												

	<p>concept applies to in person class participation.</p> <ul style="list-style-type: none"> • Project #1: How Do Patients Choose a Hospital for Scheduled or Self Pay Elective Procedures?: 15% • Project #2: Digital Promotion Strategy & Measurement: 15% Topic: Online Promotion/Marketing methods, when is it justified to do online marketing for your medical practice and how to budget (amount to allocate)? <p>Part 2 When would online marketing hurt your business? For eg., if you were given \$100,000 to spend on marketing, under what condition would spending this money on online marketing be a bad business decision? More specifically, under what circumstance would spending this money on promoting your medical practice online result in loss of revenue and or new patients.</p> <ul style="list-style-type: none"> • Project #3: SEO Evaluation of Medical Practices: 15% Using online tools, you are to evaluate and compare the ranking of 3 to 4 medical practices in search results for 3 to 4 websites. You must compare medical practices of similar size and specialty in the same geographic area. You must follow the guidelines you will learn throughout the semester to make a fair comparison. For example you cannot compare a small medical practice with a multi-location practice or a hospital. I will be available to help each group select the three businesses they wish to compare. • Individual Exam (Applied scenarios): 20% I encourage all students to take advantage of the writing center on campus as I expect everyone to be able to write without any grammar or spelling errors. You may also get help from your peers, other faculty, or GMU writing center when proofreading your final draft. But the work must come from you.
Mason Honor Code	<p>The complete Honor Code is as follows:</p> <p><i>To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University Community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set for this Honor Code: Student Members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.*</i></p> <p>The use of electronic devices, including smartwatches, is strictly prohibited during quizzes and exams.</p>

	GMU Honor Code and System: Download the George Mason University Honor Code 2023-2024 final version (11 page pdf)
Individuals with Disabilities	The Office of Disability Services (ODS) collaborates with students with documented disabilities and faculty to provide reasonable accommodations, auxiliary aids, and support services that are individualized and based upon medical documentation, functional limitations, and a collaborative assessment of needs. In order to receive accommodations, students must complete the following process: https://ds.gmu.edu/process
E-mail Policy	<p>Web: masonlive.gmu.edu (https://mail.gmu.edu/)</p> <p>Mason uses electronic mail to provide official information to students. Examples include notices from the library, notices about academic standing, financial aid information, class materials, assignments, questions, and instructor feedback. Students are responsible for the content of university communication sent to their Mason e-mail account and are required to activate that account and check it regularly. Students are also expected to maintain an active and accurate mailing address in order to receive communications sent through the United States Postal Service.</p> <p><i>(From the 2024-2025 Catalog – catalog.gmu.edu/policies/student-rights-responsibilities/)</i></p>
Academic Standards	<p>Academic Standards</p> <p>Academic Standards exist to promote authentic scholarship, support the institution’s goal of maintaining high standards of academic excellence, and encourage continued ethical behavior of faculty and students to cultivate an educational community which values integrity and produces graduates who carry this commitment forward into professional practice.</p> <p>As members of the George Mason University community, we are committed to fostering an environment of trust, respect, and scholarly excellence. Our academic standards are the foundation of this commitment, guiding our behavior and interactions within this academic community. The practices for implementing these standards adapt to modern practices, disciplinary contexts, and technological advancements. Our standards are embodied in our courses, policies, and scholarship, and are upheld in the following principles:</p> <ul style="list-style-type: none"> • Honesty: Providing accurate information in all academic endeavors, including communications, assignments, and examinations. • Acknowledgement: Giving proper credit for all contributions to one’s work. This involves the use of accurate citations and references for any ideas, words, or materials created by others in the style appropriate to the discipline. It also includes acknowledging shared authorship in group projects, co-authored pieces, and project reports. • Uniqueness of Work: Ensuring that all submitted work is the result of

	<p>one's own effort and is original, including free from self-plagiarism. This principle extends to written assignments, code, presentations, exams, and all other forms of academic work.</p> <p>Violations of these standards—including but not limited to plagiarism, fabrication, and cheating—are taken seriously and will be addressed in accordance with university policies. The process for reporting, investigating, and adjudicating violations is outlined in the university's academic standards procedures. Consequences of violations may include academic sanctions, disciplinary actions, and other measures necessary to uphold the integrity of our academic community.</p> <p>The principles outlined in these academic standards reflect our collective commitment to upholding the highest standards of honesty, acknowledgement, and uniqueness of work. By adhering to these principles, we ensure the continued excellence and integrity of George Mason University's academic community.</p> <p>Student responsibility: Students are responsible for understanding how these general expectations regarding academic standards apply to each course, assignment, or exam they participate in; students should ask their instructor for clarification on any aspect that is not clear to them.</p>
<p>Academic Standards in relation to Use of AI</p>	<p>Academic Standards: Use of AI Tools</p> <p>AI (Artificial Intelligence) Tools Policy</p> <p>According to GMU Catalog Policy (2025), all syllabi must state a policy on student use of AI tools. For this course, the following applies:</p> <ul style="list-style-type: none"> • Basic Principles Limited use of AI tools is allowed. I strongly recommend the use of Microsoft Copilot, which has been provided to GMU students and faculty and is reported to offer stronger privacy protections. Students may use other AI tools of their choice, but only in ways consistent with the restrictions outlined below. • What Tools Are Included This policy covers text-based tools (e.g., ChatGPT, Copilot), editing tools (e.g., Grammarly), image/video generators (e.g., Runway, Midjourney), and code assistants. Please note that some applications (including Microsoft Word and Grammarly) may have AI features turned on by default; students are responsible for ensuring compliance with this policy if those features are used. However, you do not have to reference any improvements recommended by Grammarly or Microsoft Word spelling check or Editor features. • When and How Tools May Be Used AI tools may be used for brainstorming, outlining, editing, or refining

ideas, but not for producing final drafts of assignments, full presentations, or major assessments. Any AI-generated text, code, or images must be **clearly cited or acknowledged** in the assignment. I encourage students to share not only the results but also the challenges they faced when working with AI, since this is an important part of the learning process.

- **Tracking, Acknowledgement, and Citation**

Students are required to acknowledge when they use AI tools, specifying which tool was used and how. Failure to disclose AI assistance may be considered a violation of academic standards. AI detection software is not used in this course, but transparency is expected. If you are unsure how to cite AI use, ask for clarification before submitting your work.

- **Your Projects and Research done by AI.**

Important Considerations:

Generative AI (GenAI) tools have limitations: they can hallucinate (create incorrect statements and provide fake citations), create inaccurate code, and provide offensive images or examples. They have been trained on limited sources that may contain biases and create biased output. The use of these tools creates other ethical quandaries: the algorithms rely on work done by other humans and do not give credit to their sources, and the algorithm adjustments are often completed by workers who may not be fully compensated for their labor and emotional stress. Lastly, reliance on these tools may stifle your own creativity and impede the learning process. Your decision to use Generative-AI tools should always consider these limitations.

Who owns the right to materials used with GenAI tools - including original student work submitted to a GenAI program - is currently unclear. If you do not wish to risk (or give up) the rights to your intellectual property, you should consult with me first. Because of these limitations, I will hold a class session on common misconceptions about AI. If you would like, I can also share a recorded lecture from **HAP 461 (Spring 2025)** where a guest speaker from Capital One demonstrated these risks in detail.

How to Acknowledge AI Use in This Course

If you use an AI tool (such as Copilot, ChatGPT, Grammarly, or others), you must clearly indicate:

1. **Which tool you used** (name of the tool).
2. **What you used it for** (e.g., brainstorming, outlining, editing, drafting code).
3. **How you revised or built upon the AI's output.**

4. Projects and Research Sources Found by AI

- **Verify** all AI-suggested links, articles, or references before using them.
- **List** all references normally (APA, MLA, or another required format) at the end of your paper, project, or slide deck.
- **Note** in parentheses which AI tool identified each source.
- *Example: Smith, J. (2021). Mobile Health Security Trends. Journal of Health Informatics. (Link suggested by Copilot).*

You can acknowledge AI use in a simple statement at the end of your assignment, project, or presentation.

Examples of acceptable acknowledgements:

- *“I used Microsoft Copilot to generate an initial outline for this paper. I then revised and expanded the content with my own research and writing.”*
- *“I used ChatGPT to check grammar and sentence flow in my draft. All ideas and arguments are my own.”*
- *“I used Midjourney to generate draft images for my presentation slides, which I edited and captioned myself.”*

Unacceptable uses:

- Submitting AI-generated work without acknowledgment.
- Using AI to produce a final draft or entire assignment without significant revision.
- Copying AI output word-for-word into your work without context, editing, or attribution.

Failure to follow these guidelines may be treated as a violation of **GMU Academic Standards**.

Course Schedule

Module No.	Date	Topics
Module 1	Jan 20	Course orientation • Patient journey • SEO & future of search
Module 2	Jan 27	Web fundamentals • CMS • Accessibility
Module 3	Feb 3	Search ranking systems • E-E-A-T • Credibility

Module 4	Feb 10	Technical SEO • Indexing • Structured data
Module 5	Feb 17	Personal Health Records (PHR) • Interoperability + PHR Mini-Project
Module 6	Feb 24	Project #1 Presentations
Module 8	Mar 10	Spring Break – No Class
Module 9	Mar 17	Guest Speaker – AI Privacy & Cybersecurity
Module 10	Mar 24	Project #2 – Digital Promotion Strategy & Measurement
Module 11	Mar 31	HHS OCR: HIPAA & Tracking Technologies
Module 12	Apr 7	Compliance Beyond HIPAA
Module 13	Apr 14	AI in Search Engines
Module 14	Apr 21	Project #3 Presentations
Module 15	Apr 28	Final Exam Review
Final Exam	May 12	Final Exam 4:30–7:10 PM