

INF 2177 Information Management and Systems

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Lectures:	Thursdays 6:30-9:30pm on Zoom. March 3 and after: 7-9:30pm Room BL205
Office hours:	TBA
TA:	TBA – See Quercus

Information systems and technologies are used extensively for information management in organizations. Notions of architecture are introduced to help manage the complexity of information management and the numerous systems in an organization. This course examines various notions of information architecture, systems architecture, and organizational architecture, and their inter-relationships and interactions. Examples will be drawn from a wide variety of systems types, such as workflow systems, document management systems, content management systems, enterprise (ERP) systems, customer relationship management (CRM) systems, and data warehousing and business intelligence (BI). Issues will include dealing with legacy and change, enterprise-wide interoperability and beyond (e.g., e-commerce), convergence of information content and processing, and support for knowledge management. Frameworks and techniques for architectural modeling, analysis, and design will be considered.

Course objectives

- To acquire a good understanding of the issues and challenges in the use of information technologies and systems in managing information in organizations.
- To be able to analyze specific types of IT systems in terms of their capabilities and limitations, organizational contexts, and future directions.
- To understand the interplay between information technologies and changes in organizational structures and business models.
- To study the concepts, methods, and frameworks of enterprise architecture advocated for effective information management.
- To learn about how strategy, policy, and standards are manifested in or exercised through information management practices and systems, including issues of compliance, governance, and business-IT alignment.
- To study current developments in digital transformation and how the latest information technologies are transforming organizations.

Course learning outcomes

At the end of this course, students will be able to:

- analyze a wide range of information systems and technologies to understand how they contribute to information management in organizations (Assignment 1)
- understand how conceptual frameworks such as those in enterprise architecture can help manage complex issues in information management (Assignment 1, 2 and 3)
- appreciate the different roles and specialized skills needed for enterprise information management, and how they complement each other. (Assignment 2 and 3)
- apply conceptual frameworks for information management in realistic settings (Assignment 2 and 3)
- apply alignment concepts to address information management architectures (Assignment 3)

Relationship between Course Learning Outcomes and Program Learning Outcomes

This course helps students understand and be conversant in the role of information systems in managing information in organizations (Program Outcome 1). Students develop an understanding of the application of new technological developments, particularly digital technologies, in organizational and business settings (Program Outcome 5). The course helps students acquire learning skills through integration of material from diverse sources, and by applying learned concepts in realistic case studies, preparing them for life-long learning (Program Outcome 6).

Who should take this course

This course should be of interest to anyone planning to work in (or already working in) large organizations and institutions dealing with a variety of information types, supported by different kinds of computer-based information systems, and subject to organizational or external policies and standards. For the research-oriented student, there are many open problems that can lead to thesis topics.

Format

The course is organized around lectures, readings, case studies, in-class and online discussions, presentations, and student peer reviews and critique. The subject area encompasses a wide swath of material. The scope and coverage will likely be adjusted according to the interests and needs of the class.

Prerequisites

Students should have a general understanding of information systems and technologies, e.g., from an introductory course on information technology applications such as INF1003, and/or experience using, designing, or managing information systems. INF1341 (systems analysis and innovation), INF1343 (database design), and INF1342 (system requirements and architectural design) are recommended as complementary to this course, either before or after taking this course.

COURSE SCHEDULE

Readings shown in smaller font (10pt) are supplementary readings.

Week 1 (Jan 13) Course overview.

Course overview. Impact of IT/IS on organizations and industry sectors.

Readings:

- World Economic Forum (2018). Digital Transformation Initiative – [Executive Summary](#). Pp. 6-28, 61-68, skim the rest.

- Accenture (2021). Leaders Wanted – Experts at Change at a Moment of Truth – [Executive Summary](#). 30pp. (technology trends for 2021, 2020, 2019).
- Asif, C. et al. (2020) [Reshaping retail banking for the next normal](#). McKinsey & Co. 13pp.

Supplementary:

- Bughin, Jacques, Chui, Michael, and James Manyika. (2013). [Ten IT-enabled Business Trends for the Decade Ahead](#). *McKinsey Quarterly*. 13pp.
- Heidmann, Marcus. (2010). [Overhauling Banks' IT Systems](#). McKinsey & Co. 9 pp.
- Desai, Parag, Potia, Ali, and Brian Salsberg. (2013). [Retail 4.0: The Future of Retail Grocery in a Digital World](#). Toronto: McKinsey & Company.

Week 2 (Jan 20) Information & IT Systems in the Enterprise

The evolving landscape of IT systems for enterprise information management.

Readings:

Evolving and emerging technologies

- Romero, D., & Vernadat, F. (2016). [Enterprise information systems state of the art: Past, present and future trends](#). *Computers in Industry*, 79, 3-13.
- Constantinides, P., Henfridsson, O., & Parker, G. G. (2018). [Introduction—platforms and infrastructures in the digital age](#). *Information Systems Research*, 29(2), 381-400.

Supplementary:

- Dumas, M., La Rosa, M., Mendling, J., & H. A. Reijers (2018). [Fundamentals of Business Process Management](#). Second edition. Berlin; New York: Springer. Ch. 2.
- Fielding, Roy. [Architectural Styles and the Design of Network-based Software Architectures](#). Doctoral dissertation, University of California, Irvine, 2000. Ch. 2 and 3.
- Armbrust, M., Fox, A., Griffith, R., Joseph, A. D., Katz, R., Konwinski, A., et al. (2010). [A View of Cloud Computing](#). *Communications of the ACM* 53(4): 50-58.
- Xu, L. D., Xu, E. L., & Li, L. (2018). [Industry 4.0: state of the art and future trends](#). *International Journal of Production Research*, 56(8), 2941-2962.
- Laudon K.C. & J.P. Laudon. (2022) *Management Information Systems: Managing the Digital Firm*, 17th ed, Pearson. .

Organizational fabric and architectures

- Zammuto, R. F., Griffith, T. L., Majchrzak, A., Dougherty, D. J., & Faraj, S. (2007). [Information Technology and the Changing Fabric of Organization](#). *Organization Science* 18(5): 749-762.

Supplementary:

- Hinings, B., Gegenhuber, T., & Greenwood, R. (2018). [Digital innovation and transformation: An institutional perspective](#). *Information and Organization*, 28(1), 52-61.
- Tapscott, Don. (2006). [Winning with the Enterprise 2.0](#). *IT&CA Big Idea Series*. 62pp. (skim).
- Bailey, D., Faraj, S., Hinds, P., von Krogh, G., & Leonardi, P. (2019). Special Issue of organization science: [Emerging technologies and organizing](#). *Organization Science*, 30(3), 642-646.
- Daft, R. L. (2020). *Organization theory and design*. 11th edition.

Enterprise Architecture

- Zachman, J. A. (1987). [A Framework for Information System Architecture](#). *IBM Systems Journal* 26(3): 276-292.

Supplementary:

- Winter, Robert, and Ronny Fischer. (2006). [Essential Layers, Artifacts, and Dependencies of Enterprise Architecture](#). In: *EDOCW '06 Proceedings of the 10th IEEE on International Enterprise Distributed Object Computing Conference Workshop, October 16-20, 2006*. Washington, DC: IEEE Computer Society.

Week 3 (Jan 27) Enterprise Architecture

Systematic methods and approaches for managing information and systems in enterprises.

Readings:

Enterprise Architecture Frameworks

- Lankhorst, Marc, et al. (2018). [Enterprise Architecture at Work: Modelling, Communication and Analysis](#). 4th ed. Berlin: Springer. Chapter 1, pp. 1-10; Chapter 2, pp. 24-27 (Zachman, TOGAF); Chapter 5, pp. 75-76 (Service-orientation and layering).
- Sessions, Roger. (2007, May). [Comparison of the Top Four Enterprise Architecture Methodologies](#). ObjectWatch. ([alternate source](#)).

Supplementary:

- Zachman Framework <http://www.zachman.com/about-the-zachman-framework>
- Open Group. (2018). The Open Group Architecture Framework (TOGAF) [Version 9.2](#). 692 pp. online document: <http://pubs.opengroup.org/architecture/togaf9-doc/arch/>
- van't Wout, Jack, Waage, Maaten, et al. (2010) [Integrated Architecture Framework Explained: Why, What, How](#). Berlin: Springer and Capgemini SA. 260 pp. Detailed illustration of Business, Information, and System Architecture “aspect areas” for IAF, including examples of modeling (Chapters 3.3 – 3.5).
- Federal Enterprise Architecture. (2013) <https://obamawhitehouse.archives.gov/omb/e-gov/FEA>
- FEAPO. (2013). [A Common Perspective on Enterprise Architecture](#). *Architecture & Governance Magazine* 9(4): 11-17. (Free registration required.)

Enterprise Architecture modeling

- Lankhorst, Marc, et al. (2018). [A Language for Enterprise Modeling](#). (Archimate 3.0) In: *Enterprise Architecture at Work: Modelling, Communication and Analysis*. The Enterprise and Engineering Series. Berlin: Springer. Chapter 5, pp. 73-121
- Jonkers, Henk, Band, Iver, and Dick Quartel. (2016). [ArchiSurance Case Study](#). Version 2. The OpenGroup. 43 pp.

Supplementary:

- ISO/IEC/IEEE 42010:2011 - [Systems and Software Engineering - Architecture Description](#). International standard. Previously IEEE Standard 1471.
- Greefhorst, Danny, and Erik Proper. (2011). [Architecture Principles: The Cornerstones of Enterprise Architecture](#). In: The Enterprise Engineering Series 4. Berlin: Springer. 197pp.

Week 4 (Feb 3) Business Architecture & Strategy

Notions of business architecture.

AIP presentations: (*Schedule of topics to be determined after teams sign-up*).

Readings:

Business architecture

- Business Architecture Guild. (2021). [A Guide to the Business Architecture Body of Knowledge](#) (BIZBOK™ Guide). Version 10. Part1-Intro. 17 pp.
- Glissman, S., & Sanz, J. (2010). [Business Architectures for the Design of Enterprise Service Systems](#). In: P. Maglio et al. *Handbook of Service Science*. New York; London: Springer. pp.251-282. (Inforum - HD9980.5 .H359 2010 – 2 day loan [[Check availability](#)])

Supplementary:

- Bloesch, M, I. Tyler, & S. Brand (2019) A Detailed Examination of the Elements of the Business Architecture Landscape. Gartner Research Note G00385536. 23 pp. <https://gartner.utoronto.ca> (utorid login)

Strategy

- Kaplan, Robert, and David Norton. (2000). [Having Trouble with Your Strategy? Then Map It](#). *Harvard Business Review* 78(5):167-276. (Print Journal: [[Check availability](#)])
- Kaplan, Robert S., and David P. Norton. (1996). [Using the Balanced Scorecard as a Strategic Management System](#). *Harvard Business Review* 74(1): 75-85. (Print Journal: [[Check availability](#)])
- Porter, Michael E. (2008). [The Five Competitive Forces that Shape Strategy](#). *Harvard Business Review* 86(1): 78-93. (Print Journal: [[Check availability](#)])

Supplementary:

- Ross, Jeanne W., Weill, Peter, and David C. Robertson. (2006). *Enterprise Architecture as Strategy: Creating a Foundation for Business Execution*. Boston, MA: Harvard Business School Press. (Inforum - HD45.2 .R72 2006 -- 2 day loan [[Check availability](#)])

Business capabilities

- Open Group Architecture Forum (2016). [Business Capabilities – Open Group Guide G161](#). 25pp. (Free registration required).

Supplementary:

- Banking Industry Architecture Network (BIAN e.V.) Banking Models Working Group (2018) [Skin the Financial Services Onion – A Capability-Based Model to Explain the \(R\)Evolution of the Banking Industry](#). 28pp.
- Teece, David J., Pisano, Gary, and Amy Shuen. (1997). [Dynamic Capabilities and Strategic Management](#). *Strategic Management Journal* 18(7): 509-533.
- Teece, D. J. (2007). [Explicating dynamic capabilities: the nature and microfoundations of \(sustainable\) enterprise performance](#). *Strategic management journal*, 28(13), 1319-1350.
- Danesh, M. H., Loucopoulos, P., & Yu, E. (2015). [Dynamic capabilities for sustainable enterprise IT—a modeling framework](#). In *Int. Conf. on Conceptual Modeling*. Springer. 358-366. (extended version)

Week 5 (Feb 10) **Business Model Innovation**

How does your organization create and deliver value to the people it serves? How does it leverage the internet to obtain or disseminate information, and to exchange value in a value network? How are competitors innovating or reshaping their value networks?

AIP presentations: (*Schedule of topics to be determined*).

Business models

- Johnson, Mark W., Christensen, Clayton M., and Henning Kagermann. (2008). [Reinventing Your Business Model](#). *Harvard Business Review* 86(12): 50-59. (Print Journal: [[Check availability](#)])
- Osterwalder, Alexander, and Yves Pigneur. (2010). *Business Model Generation*. Hoboken, NJ: John Wiley & Sons. (Inforum - HD30.28 .O88 2010 – 2 hour loan [[Check availability](#)]). See also [book excerpt](#) (72 pp.) and [Canvas – your business model on one page](#).
- Chesbrough, Henry. (2010). [Business Model Innovation: Opportunities and Barriers](#). *Long Range Planning* 43(2/3): 354-363.

Supplementary:

- Normann, Richard and Rafael Ramírez. (1993, July/August). From Value Chain to Value Constellation: Designing Interactive Strategy. *Harvard Business Review* 71(4): 65-77. (Print Journal: [[Check availability](#)])
- Teece, D. J. (2010). [Business models, business strategy and innovation](#). *Long range planning*, 43(2-3), 172-194.

Business Ecosystems

- Van Alstyne, M. W., Parker, G. G., & Choudary, S. P. (2016). [Pipelines, platforms, and the new rules of strategy](#) – scale now trumps differentiation. Harvard business review, 94(4), 54-62.
- Atluri, V., Dietz, M., & Henke, N. (2017). [Competing in a world of sectors without borders](#). McKinsey Quarterly, 54(3), 33-47.
- Pidun, U., Reeves, M., & Schüssler, M. (2020). [How Do You “Design” a Business Ecosystem?](#). Boston Consulting Group.

Supplementary:

- Fuller, J., Jacobides, M.G., Reeves, M. (2019) [The myths and realities of business ecosystems](#). MIT Sloan Management Review.
- Chesini, F., Hunter, R., & LeHong H. (2021) [The Gartner Digital Ecosystem Framework: How to describe ecosystems in the digital age](#). Gartner ID G00402379.

Assignment 1W due February 14 Monday

Week 6 (Feb 17) IT Management and Governance

How can policies be exercised through IT systems? How can information systems and processes be managed and governed effectively? How can an organization take advantage of information technologies in formulating or pursuing its strategies? Should strategy drive IT or should technology drive strategy?

A1P presentations: (*Schedule of topics to be determined*).

Readings:

IT management, compliance, and governance

- Lankhorst, Marc, et al. (2018). [State of the Art](#). In: *Enterprise Architecture at Work: Modelling, Communication and Analysis*. The Enterprise Engineering Series. Berlin: Springer. Chapter 2 (CoBIT, ITIL), pp. 11-40.
- Wilkin, C. L., & Chenhall, R. H. (2020). [Information technology governance: Reflections on the past and future directions](#). Journal of Information Systems, 34(2), 257-292.

Supplementary:

- [COBIT An ISACA Framework](#).
- Rolland, K. H., Mathiassen, L., & Rai, A. (2018). [Managing digital platforms in user organizations: The interactions between digital options and digital debt](#). Information Systems Research, 29(2), 419-443.
- Ghanavati, Sepideh, Amyot, Daniel, and Liam Peyton. (2007). [Towards a Framework for Tracking Legal Compliance in Healthcare](#), In: *Proceedings of 19th International Conference on Advanced Information Systems Engineering*, LNCS 4495. Berlin: Springer, pp. 218-232.
- Ingolfo, S., Siena, A., Mylopoulos, J., Susi, A., & Perini, A. (2013). [Arguing regulatory compliance of software requirements](#). Data & Knowledge Engineering, 87, 279-296.
- Andriole, Stephen J. (2015) [Who owns IT?](#) *Communications of the ACM*, 58(3): 50-57.

Social responsibility

- Schiff, D., Rakova, B., Ayesh, A., Fanti, A., & Lennon, M. (2020). [Principles to practices for responsible AI: Closing the gap](#). arXiv preprint arXiv:2006.04707.

Supplementary:

- ISO 26000-2010 [Guidance on Social Responsibility](#). 118pp.
- IEEE 7010-2020 [Recommended Practice for Assessing the Impact of Autonomous and Intelligent Systems on Human Well-Being](#). 96pp.

No class on Feb 24 – Reading Week

Week 7 (Mar 3) **Digital Transformation and Innovation**

Current developments in IT-enabled transformation and digital innovation.

A1P presentations: (Schedule of topics to be determined).

Readings:

- Westerman, George, Bonnet, Didier and Andrew McAfee. (2014). [The Nine Elements of Digital Transformation](#). *MIT Sloan Management Review*, 7 pp.
- Chen, H. M., Schütz, R., Kazman, R., & Matthes, F. (2016). [Amazon in the Air: Innovating with Big Data at Lufthansa](#). *Proc. 49th Hawaii International Conference on System Sciences (HICSS)*, IEEE: 5096-5105.
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). [Digital transformation: A multidisciplinary reflection and research agenda](#). *Journal of Business Research*, 122, 889-901.
- Bygstad, B., & Øvrelid, E. (2020). [Architectural alignment of process innovation and digital infrastructure in a high-tech hospital](#). *European Journal of Information Systems*, 29(3), 220-237.
- Porter, M. E., & Heppelmann, J. E. (2014). [How smart, connected products are transforming competition](#). *Harvard business review*, 92(11), 64-88.
- Yoo, Y., Boland Jr., R. J., Lyytinen, K., & Majchrzak, A. (2012). [Organizing for innovation in the digitized world](#). *Organization Science* 23(5): 1398-1408.

Supplementary:

- Lori Beer (Wellpoint) interviewed by Michael Fitzgerald. The Digital Transformation of Health Care. *MIT Sloan Management Review*. ([video](#) 38:33)
- PwC. [Retail Banking 2020: Evolution or Revolution?](#) 44p (read first half)
- Brynjolfsson, Erik, Hu, Yu J., and Mohammad S. Rahman. (2013). [Competing in the Age of Omnichannel Retailing](#). *MIT Sloan Management Review* 54(4): 23-29.
- Wißotzki, M., Sandkuhl, K., & Wichmann, J. (2021). [Digital innovation and transformation: approach and experiences](#). In *Architecting the Digital Transformation* (pp. 9-36). Springer, Cham.
- Zimmermann, A., Schmidt, R., Sandkuhl, K., Jugel, D., Bogner, J., & Möhring, M. (2018, October). [Evolution of enterprise architecture for digital transformation](#). In *2018 IEEE 22nd International Enterprise Distributed Object Computing Workshop (EDOCW)* (pp. 87-96). IEEE.
- Fishenden, J., & Thompson, M. (2012). [Digital government, open architecture, and innovation: why public sector IT will never be the same again](#). *Journal of public administration research and theory*, 23(4), 977-1004.
- Lis, Dominik and Otto, Boris (2020). [Data Governance in Data Ecosystems – Insights from Organizations](#). *Americas Conference on Information Systems (AMCIS) Proceedings*.

Week 8 (Mar 10) **Alignment; Guest Speaker**

A1P presentations: (Schedule of topics to be determined).

Readings:

Alignment

- Henderson, J. C. and N. Venkatraman (1993). [Strategic Alignment - Leveraging Information Technology for Transforming Organizations](#). *IBM Systems Journal* 32(1): 4-16.

Supplementary:

- Tallon, P. P., & Pinsonneault, A. (2011). [Competing perspectives on the link between strategic information technology alignment and organizational agility: insights from a mediation model](#). *MIS quarterly*, 463-486.

- Tiwana, A., Konsynski, B., & Bush, A. A. (2010). Research commentary—[Platform evolution: Coevolution of platform architecture, governance, and environmental dynamics](#). *Information systems research*, 21(4), 675-687.

Business Motivation/Strategy modeling

- Barone, D., Yu, E., Won, J., Jiang, L., & Mylopoulos, J. (2010). [Enterprise Modeling for Business Intelligence](#). In: P. van Bommel, et al (Eds.), *PoEM 2010: The Practice of Enterprise Modeling* (pp. 31-45). LNBIP, 68. Berlin: Springer.
- Topaloglou, T., & Barone, D. (2015). [Lessons from a Hospital Business Intelligence Implementation](#). In CAiSE Industry Track (pp. 19-33).

Supplementary:

- Business Rules Group/OMG. (2015). [Business Motivation Model](#). Specification Version 1.3. 114pp.

Assignment 2 due March 14 Monday

Week 9 (Mar 17) Enterprise Agility and Resilience; Guest Speaker

Information management in highly dynamic environments.

Readings:

Agility and Resilience

- Blank, Steve. (2013). [Why the Lean Start-up Changes Everything](#). *Harvard Business Review* 91(5): 63-72. (Print Journal: [[Check availability](#)])
- Kotter, John P. (2012). Accelerate! Building Strategic Agility for a Faster-Moving World. *Harvard Business Review* 90(11): 44-58. (Print Journal: [[Check availability](#)])
- Erol, O., Sauser, B. J., & Mansouri, M. (2010). [A framework for investigation into extended enterprise resilience](#). *Enterprise Information Systems*, 4(2), 111-136.
- Haeckel, Stephan H. (2003). [Leading on Demand Businesses—Executives as Architects](#). *IBM Systems Journal* 42(3): 405-413.

Supplementary:

- Wilkinson, A., Kupers, R., & Mangalagiu, D. (2013). [How plausibility-based scenario practices are grappling with complexity to appreciate and address 21st century challenges](#). *Technological Forecasting and Social Change*, 80(4), 699-710.
- Bachmann, Felix, Nord, Robert L., and Ipek Ozkaya. (2012, May/June). [Architectural Tactics to Support Rapid and Agile Stability](#). *Crosstalk* 25(3): 20-25.
- Lee, Hau L. (2004). The Triple-A Supply Chain. *Harvard Business Review* 82(10): 102-112. (Print Journal: [[Check availability](#)])
- Cummins, Fred A. (2010). [Building the Agile Enterprise: with SOA, BPM and MBM](#). Amsterdam; Boston: Morgan Kaufmann.

Enterprise Data Science

- Horkoff, J., Barone, D., Jiang, L., Yu, E., Amyot, D., Borgida, A., & Mylopoulos, J. (2014). [Strategic business modeling: representation and reasoning](#). *Software & Systems Modeling*, 13(3), 1015-1041.
- Nalchigar, S., & Yu, E. (2018). [Business-driven data analytics: a conceptual modeling framework](#). *Data & Knowledge Engineering*, 117, 359-372.
- Nalchigar, S., Yu, E., & Keshavjee, K. (2021). [Modeling machine learning requirements from three perspectives: a case report from the healthcare domain](#). *Requirements Engineering*, 26(2), 237-254.

Supplementary:

- GR4ML [website](#)

Week 10 (Mar 24) Multidisciplinary perspectives on IM challenges; Future Directions

Why is it hard to manage information in an organization? What are the different dimensions and aspects?

Expert panel: "Data-Driven Enterprise - Prospects and Realities"

Readings:

- Assur Rowshankish (2022) [The Data Driven Enterprise of 2025](#). McKinsey.
- Kiron, David (2017) [Lessons from becoming a data-driven organization](#). MIT Sloan Management Review 58.2
- McAfee, A., & Brynjolfsson, E. (2012). [Big data: the management revolution](#). Harvard business review, 90(10), 60-128.
- Fabijan, A., Dmitriev, P., Olsson, H. H., & Bosch, J. (2017). [The evolution of continuous experimentation in software product development: from data to a data-driven organization at scale](#). In 2017 IEEE/ACM 39th International Conference on Software Engineering (ICSE) (pp. 770-780). IEEE.

Supplementary

- Brynjolfsson, E., & Mitchell, T. (2017). [What can machine learning do? Workforce implications](#). Science, 358(6370), 1530-1534.
- Berndtsson, M., Lennerholt, C., Svahn, T., & Larsson, P. (2020). [13 Organizations' Attempts to Become Data-Driven](#). International Journal of Business Intelligence Research (IJBIR), 11(1), 1-21.

Week 11 (Mar 31) Assignment 3P presentations

Week 12 (Apr 7) Assignment 3P presentations

Assignment 3W due Monday April 11.

N.B. Changes to this schedule will likely be made, with appropriate notice given. Additional or alternate readings may also be assigned.

Course requirements

Assignment 1 (5 person teams): Analysis of a type of organizational information system or technology from architectural perspectives.

Analyze one type of IT system or technology from business, organization, information, and systems architecture perspectives. The types of systems may include: business process management systems, enterprise resource planning (ERP) systems, customer relationship management (CRM) systems, enterprise content management systems, data warehousing, business intelligence, and others. Additional technologies may include big data analytics, social

media and social analytics, mobile and location-aware applications, cloud computing, and Internet of Things. Each team will analyze a different type of system or technology. This assignment will be submitted in two parts.

(8%) **1P**: In-class presentation and discussion (via Zoom and will be recorded).

The presentation dates for each topic are to be determined after teams sign up.

Slides are to be posted on Quercus 24 hours in advance and will be available to the class for critique and discussion and as resources for subsequent assignments.

(12%) **1W**: Written Report. Approximately 12 pages of text, plus figures and references. The report must include a brief statement of individual contributions.

Assignment 2 (5 person teams): An enterprise information management case study - analyzing the current state.

This assignment will analyze the current state of a real organization from business, organizational, information, and application systems perspectives. The same organization should be used for Assignment 3. In case access to a real organization is not possible, a fictitious organization constructed from the literature may be used.

(15%) The deliverable is a written report – 10-12 pages of text, plus figures and references. The report must include a brief statement of individual contributions.

Assignment 3 (5 person teams): Aligning business, organization, information, and systems architectures.

In this assignment, you will propose a plan for information management, aligning the business, organization, information, and application systems architectures of the enterprise. The plan should cover a time horizon over several years, considering the impact of digital transformation. Issues of legacy, evolution, and sustainability should also be considered. Deliverables include a presentation and a final report.

(15%) **3P**: In-class presentation and discussion (via Zoom and will be recorded).

There will be designated discussants for each presentation.

(25%) **3W**: Final Report. 15-18 pages of text, plus figures and references.

The report must include a brief statement of individual contributions.

(25%) Participation: in-class (5%) and online (20%). Class notes and summaries of readings posted on the Discussion Forum will be counted towards online participation grade. Students will be graded on the overall quality and quantity of their in-class and online participation. Details will be announced on Quercus.

Questions to instructor

Questions to the instructor should be posted on the Quercus discussion forum designated for this purpose, not sent by email. Read responses in this forum for clarifications on assignments. Subscribe to the Quercus discussion forums to keep up to date.

Group work

In group work assignments, team members are expected to work closely with each other and to coordinate their work throughout. While team members may attend to different aspects or portions of the assignment, each member is expected to be able to explain and defend all parts of the assignment. It is essential that you keep each other updated on your work, and about any break in availability. You should start early to review and discuss each other's work and to integrate, and to ensure overall quality. Be prepared to do several rounds of improvements and editing before the report (or presentation) is ready for final submission.

In addition to the brief statement of individual contributions that you will include with your assignment, each student will be asked to fill out an online form to indicate the contribution of individual members of your team to the team work. Individual members may receive different grades on group work assignments depending on contributions. The instructor should be notified immediately if there is any indication that a team member is not contributing fully. All team members are jointly responsible for the collaborative process and the resulting deliverable. Here is a [quick guide](#) to effective group work.

Grading

Please consult the iSchool's:

- Grade Interpretation Guidelines: <https://ischool.utoronto.ca/wp-content/uploads/2016/11/grade-interpretation.pdf>
- The University Assessment and Grading Practices Policy: <http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/grading.pdf>
- The Guidelines on the Use of INC, SDF, & WDR: <http://www.sgs.utoronto.ca/facultyandstaff/Pages/INC-SDF-WDR.aspx>

These documents will form the basis for grading in the course.

Late Policy

There will be a penalty of half a letter grade for every 24 hour period an assignment is submitted after the specified due date and time. For example, a B+ becomes a B+/B if submitted on the day after the due date, a B if submitted on the second day after the due date. Requests for extensions will only be considered for medical reasons with doctor's note. The request must be received before the due date.

Use of Ouriginal

“Normally, students will be required to submit their course essays to Ouriginal.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Ouriginal.com reference database, where they

will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Ouriginal.com service are described on the Ouriginal.com website”.

Writing support

Please review the material you covered in the Cite it Right workshop [<https://inforum.library.utoronto.ca/workshops/cite-it-right-0>], familiarize yourself with this site [<http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>] (about plagiarism) and UofT's plagiarism policy [<http://www.sgs.utoronto.ca/current/plagiarism.asp>], and consult the SGS writing centre [<http://www.writing.utoronto.ca/writing-centres/graduate-students>] or the UC writing centre [<http://www.uc.utoronto.ca/writing-centre>], if necessary.

Academic integrity

Please consult the University's site on Academic Integrity <http://academicintegrity.utoronto.ca/>. The iSchool has a zero-tolerance policy on plagiarism as defined in section B.I.1.(d) of the University's Code of Behaviour on Academic Matters <http://www.governingcouncil.utoronto.ca/Assets/Governing+Council+Digital+Assets/Policies/PDF/ppjun011995.pdf>. You should acquaint yourself with the Code. Please review the material in Cite it Right and if you require further clarification, consult the site How Not to Plagiarize <http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>. Cite it Right covers relevant parts of the U of T [*Code of Behaviour on Academic Matters \(1995\)*](#). It is expected that all iSchool students take the Cite it Right workshop and the online quiz. Completion of the online Cite it Right quiz should be made prior to the second week of classes. To review and complete the workshop, visit the orientation portion of the iSkills site: <https://inforum.library.utoronto.ca/workshops/orientation>

Accommodations

Students with diverse learning styles and needs are welcome in this course. If you have a disability or a health consideration that may require accommodations, please feel free to approach me and/or the Accessibility Services Office <http://www.studentlife.utoronto.ca/as> as soon as possible. The Accessibility Services staff are available by appointment to assess needs, provide referrals and arrange appropriate accommodations. The sooner you let them and I know your needs, the quicker we can assist you in achieving your learning goals in this course.

Academic Dates: <https://ischool.utoronto.ca/current-students/academic-resources/academic-calendar/>

Statement of Acknowledgement of Traditional Land:

The following is the University approved land acknowledgment statement for official ceremonies (Ceremonial Committee, Governing Council):

See: http://www.provost.utoronto.ca/Assets/Provost+Digital+Assets/TRC_FinalReport.pdf

“I (we) would like to acknowledge this land on which the University of Toronto operates. For thousands of years it has been the traditional land of the Huron-Wendat, the Seneca, and most recently, the Mississaugas of the Credit River. Today this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.”

See also, the Faculty of Information's Commitment to the Findings and Call for Action of the Truth and Reconciliation Commission (approved at the Feb. 4, 2016 Faculty Council):
<https://ischool.utoronto.ca/wp-content/uploads/2017/11/iSchools-TRC-Commitment.pdf>

Information about iSchool Workshops:

The following workshop series are exclusively available to the iSchool community. iSchool professors, Inforum librarians, current students, alumni, and a collective of professionals and academics from each program and concentration, work together to create these unique rosters.

Together with the MMSt and MI curricula, these academic, professional, and technical iSkills workshops provide a robust information and heritage graduate educational experience.
iSkills Workshops: <https://inforum.library.utoronto.ca/workshops/iSkills>

In an effort to ensure your success at the iSchool, key information and skills that all iSchool students must possess, regardless of program or concentration, are covered in these online orientation workshops.

Orientation Workshops: <https://inforum.library.utoronto.ca/workshops/orientation>

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