# George Mason University

## Volgeneau School of Engineering, Telecommunications Program

## Fall 2019 Syllabus for TCOM 547: Telecommunications Project Management

Instructor: Narendra Mangra
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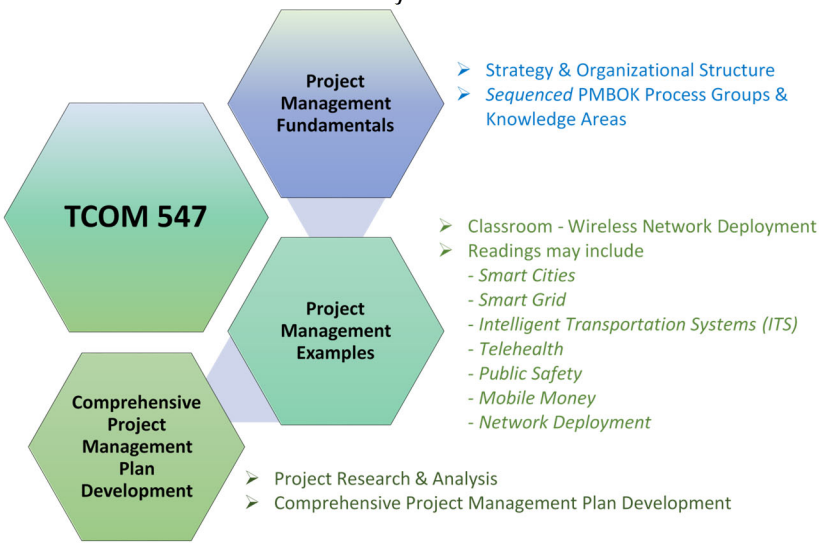
Class Schedule: Thursdays 7:20 to 10pm
Office Hours: By appointment.

## Course Overview and Learning Objectives

The wireless telecommunications landscape is rapidly evolving as it extends into traditional industries to create new value propositions. Emerging mobile broadband technologies blur adjacent industry borders and drive innovations in Smart Cities, Smart Grids, Intelligent Transportation Systems (ITS), Telehealth, Public Safety, Mobile Money, etc.

Project managers working on complex projects, such as the deployment of smart cities, may face challenges in working with cross-functional teams from adjacent industries as they strive to integrate multiple complex mobile and internet communications systems.




The course provides a structured approach for managing complex projects and emphasizes:

- Project Management Fundamentals:
  - Strategy & Organizational Structure
  - Sequenced PMBOK® Process Groups & Knowledge Areas
  - Project Environment
- Project Management Examples
  - Classroom project examples of underlying ecosystem deployments for a Smart Cities ecosystem of ecosystems approach
  - Selected Readings on Smart Cities: Governance Framework, Open Data, Smart Grids, Connected Vehicles / Intelligent Transportation Systems (ITS), Electric Vehicles (EV), Healthcare Industry Landscape, Telehealth Applications, Public Safety, Mobile Money, etc.
- Comprehensive Project Management Plan Development
  - Project Research and Analysis
  - Comprehensive Project Management Plan Development

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

1. Understand and apply the PMBOK® Knowledge Areas and Process Groups
2. Analyze and provide recommendations to improve project plans
3. Develop a comprehensive project management plan

## Course Structure & Readings

Required readings are accessible via the Blackboard or the TCOM547 Course Packet. Optional readings are not required for this course but may enhance our understanding of the subject matter. The basic reading and classroom discussion topics are shown below.

**Industry Structure, Strategy, and Organizational Structure**

Session 1: Strategy and Project Management, *Healthcare Industry Landscape*
Session 2: Organizational Structure, *Smart Cities Governance Framework*
Session 3: Project Life Cycle and Smart Cities Environment (5G Mobility Overview), *Wireless Network Deployment: Digicel (Jamaica)*

**Initiating and Planning Process Groups**

Session 4: Communications & Stakeholder Management, *Smart Grid Deployments: Customer Engagement Pilot Projects (US), and Smart Cities: Open Barcelona (Spain)*
Session 5: Project Requirements & Scope Baseline, *Mobile Money: MPESA (Kenya)*
Session 6: Project Schedule, Deliverable 1 Due (Smart Cities Vision Statements and Project Management Concepts / City of Columbus, OH)
Session 7: Budgets, Resources & Quality Plans, *Telehealth: EHAS (Peru)*
Session 8: Procurement and Risk Management Plans, *ITS: Connected Vehicle Safety Pilot (US)*

**Executing, and Monitoring & Controlling Process Groups**

Session 9: Integration, Scope, Schedule & Cost Control
Session 10: Quality Management, Quality Control, & Scope Validation, *Public Safety: E911 Deployments (US)*
Session 11: Project Communications & Stakeholder Engagement, Deliverable 2 Due (Project Analysis & Recommendations)
Session 12: Risk Responses & Monitoring, Procurement Award & Management, Smart Aarhus (Denmark)
Session 13: Team Management

**Project Closing Process Group**

Session 14: Project Closure, Lessons Learned, Deliverable 3 Due (Comprehensive Project Management Plan Due), *Electric Vehicles (EV)*

Details provided in Session Outline section below. Course Packets may be purchased through Study.net- http://www.study.net/r_mat.asp?crs_id=30141578

### *PMBOK® and PMP Certification*

This course addresses the ten (10) Knowledge Areas and the five (5) Process Groups that are described in the PMBOK®. The relevant PMBOK® sections are shown in the course syllabus as a benefit to students that are studying for the PMP Certification.

This course also contains readings and class discussions on the revised areas necessary for PMP renewals. These areas include strategy and business management (e.g. industry structure, strategy,

organizational structure, telecommunications industry, etc), technical project management (e.g. scope, cost, schedules, quality, etc), and leadership (e.g. communications, negotiations, leadership styles, etc

Note – This course does not address PMP certification testing strategies, and the PMBOK® is **not** required for this course. However, students who are interested in pursuing PMP Certifications may benefit from the following optional text:

**A Guide to the Project Management Body of Knowledge (PMBOK), 6th Edition,** Project Management Institute, 2017, ISBN-9781628251845

## Performance Evaluation

Students will earn grades based on their understanding of the project management concepts, ability to assess projects and provide suitable recommendations, and their ability to create a comprehensive project management plan at the end of this course. The grading details are shown below:

- Assignments & contribution to class discussions 20%
- Written Deliverable 1 – Project Management Concepts 20%
  - Individual Assignment
- Written Deliverable 2 - Project Analysis & Presentation 30%
  - Group Assignment
- Written Deliverable 3 - Project Management Plan & Presentation 30%
  - Group Assignment

### *Contribution to class discussions (20%)*

This course will focus on "real world" telecommunication issues that project managers may face in a network rollout. The readings and homework assignments are designed to enhance our understanding of the subject material. Students may be called upon to start off a discussion based on the required readings and assignments. It is expected that students prepare for each session and actively participate in our discussions.

### *Written Deliverable 1: - Smart Cities Vision Statements and Project Management Concepts (20%)*

This deliverable will be completed individually. Students will demonstrate their understanding of the PMBOK based project management concepts discussed in this course via a written analysis of the Smart City Challenge: Columbus Vision Statement.

Columbus won the Smart City Challenge that was conducted by the US Department of Transportation in June 2016. "The City of Columbus proposed a comprehensive, integrated plan addressing challenges in residential, commercial, freight, and downtown districts using a number of new technologies, including connected infrastructure, electric vehicle charging infrastructure, an integrated data platform, autonomous vehicles, and more. Columbus plans to work closely with residents, community and business leaders, and technical experts to implement their plan"

City of Columbus Vision Statement -
https://www.transportation.gov/sites/dot.gov/files/docs/Columbus%20OH%20Vision%20Narrative.pdf

## *Written Deliverable 2: Project Analysis & Presentation (30%)*

Students will work in project teams and select an actual project from a publicly available database or source. Students will provide a concise analysis of the project's intended value proposition, outcome (if completed), and status (if ongoing). The project should be analyzed within the context of the PMI Knowledge Areas. Students should state the areas and reasons where they agree with how the project was handled, and offer alternative recommendations for areas where they disagree. The project deliverables will include a written report and a class presentation.

***Sample Project Databases:***

***International Projects***

- ***African Development Bank*** - http://www.afdb.org/en/projects-and-operations/
- ***Asian Development Bank*** - http://www.adb.org/projects/summaries.asp
- ***European Bank for Reconstruction and Development*** - http://www.ebrd.com/saf/search.html?type=project
- ***Inter-American Development Bank*** - http://www.iadb.org/en/projects/search-project-documents,1302.html
- ***World Bank*** – www.worldbank.org
- ***IEEE Xplore*** - http://ieeexplore.ieee.org

***US Based Projects***

- ***Broadband USA*** - http://www2.ntia.doc.gov/awards
- ***Rural Health Care Pilot Program,*** http://www.fcc.gov/cgb/rural/rhcp_applications.html
- ***Smart Grid*** - https://www.smartgrid.gov/recovery_act/index.html
- ***Connected Vehicles Pilot Deployment Program*** - http://www.its.dot.gov/pilots/index.htm
- ***Smart City Challenge*** - https://www.transportation.gov/smartcity/visionstatements/index

## *Written Deliverable 3: Project Management Plan & Presentation (30%)*

Students will form groups and create and present a comprehensive Project Management Plan to the class. This plan should contain elements of the PMI Knowledge Areas and the Project Process Groups. The plan should include the value proposition, project assumptions & constraints, risks & contingencies, project monitoring & controlling techniques, and any other relevant information necessary to evaluate the proposed Project Management Plan. The project deliverables will include a written report and a class presentation.

| Final Grade | Points Accumulated |
|---|---|
| A+ | 97.0 to 100 |
| A | 94.0 to 96.9 |
| A- | 90.0 to 93.9 |
| B+ | 87.0 to 89.9 |
| B | 84.0 to 86.9 |
| B- | 80.0 to 83.9 |
| C+ | 77.0 to 79.9 |
| C | 74.0 to 76.9 |
| C- | 70.0 to 73.9 |
| F | Less than 70.0 |

## General Information

### *Academic Integrity*

GMU is an Honor Code university (please refer to the University Catalog for a full description of the code and the honor committee process). Academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? Essentially this: when you are responsible for a task, you will perform that task. When you rely on someone else's work in an aspect of the performance of that task, you will give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification.

### *GMU Email Accounts*

Students must activate their GMU email accounts to receive important University information, including messages related to this class.

### *Office of Disability Services*

If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Services (ODS) at 993-2474. All academic accommodations must be arranged through the ODS. http://ods.gmu.edu

### *Other Useful Campus Resources:*

Writing Center: A114 Robinson Hall; (703) 993-1200; http://writingcenter.gmu.edu
University Resources "Ask a Librarian" http://library.gmu.edu/mudge/IM/IMRef.html
Counseling and Psychological Services (CAPS): (703) 993-2380;http://caps.gmu.edu
University Policies: The University Catalog, http://catalog.gmu.edu, is the central resource for university policies affecting student, faculty, and staff conduct in university affairs.

## SESSIONS

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| **Session 1 – Aug 29** | **Introduction to the Strategy & Project Management**<br><br>**Required Readings:**<br>• **Artificial Intelligence as a Growth Engine for Health Care Startups: Emerging Business Models**, Massimo Garbuio and Nidthida Lin**,** California Management Review, 2019, Vol. 61(2) 59-83<br><br>***Optional Readings (Wireless Telecommunications Industry):***<br>• **The Five Competitive Forces That Shape Strategy,** Michael E. Porter, HBS Press, Published 01/01/2008<br>• **What is Strategy**, Michael E. Porter, HBS Press, Published 11/01/1996<br>• ***2018 Consolidated Communications Marketplace Report****, FCC, December 26, 2018,* https://www.fcc.gov/reports-research/reports/consolidated-communications-marketplace-reports/consolidated-communications<br>• ***The Role of Mobile Phones in Sustainable Rural Poverty Reduction****, World Bank, June 15, 2008*<br><br>*PMBOK® Reference – Chapter 1*<br><br>**Topics:**<br>• PM Framework<br>  ○ Enterprise Environmental Factors<br>  ○ Project Phases<br>  ○ Knowledge Areas<br>  ○ Effective Project Management Components<br><br>• Smart Cities<br>  ○ Introduction to Smart Cities: Interconnected Ecosystem of Ecosystems<br><br>**Classroom Discussions:**<br>**AI and the Evolving Healthcare Industry Landscape** |
| **Session 2 - Sep 5** | **Organizational Structure**<br><br>**Required Readings:**<br>• **Governing the City: Unleashing Value from the Business Ecosystem**, Ivanka Visnjic, Andy Neely, Carmelo Cennamo, and Nikola Visnjic, California Management Review, 2016, Vol. 59(1) 109–140<br><br>• **A multi-actor multi-criteria analysis of the performance of global cities**, Karima Kourtit, Cathy Macharis, Peter Nijkamp, Applied Geography, Volume 49, May 2014, pages 24-36 |

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| | ***Optional Readings (Smart City):***<br>• Smart and Connected Communities Framework, https://www.nitrd.gov/sccc/materials/scccframework.pdf<br>• *Smart City Challenge Vision Statements https://www.transportation.gov/smartcity/visionstatements/index*<br>• Amsterdam Smart City - https://amsterdamsmartcity.com/<br>• Barcelona Smart City - http://smartcity.bcn.cat/en/bcn-smart-city.html<br>• Columbus, OH Smart City Vision - https://columbus.gov/smartcity/vision/<br><br>*PMBOK® Reference – Chapter 2*<br><br>**Topics:**<br>• PM Framework<br>  ○ Strategy Development<br>  ○ Balanced Scorecard<br>  ○ Organizational Structure – Functional, Matrix and Multi-Dimensional Organizations<br>  ○ Organizational Process Assets<br>  ○ Portfolio, Program & Project Management<br>  ○ Centralized and Decentralized PMO Structures<br><br>• Smart Cities<br>  ○ Governance Framework<br>  ○ City Performance and Policies<br><br>**Classroom Discussions:**<br>• **Smart City Governance Framework** |
| **Session 3 - Sep 12** | **Project Life Cycle & Smart Cities Environment (Mobility as a Key Enabler)**<br><br>**Required Readings:**<br>• **The Celtic Tiger Moves to the Beat of the Reggae Boyz**, Inger Boyett, Nottingham University Business School, Published 2005,<br><br>*PMBOK® Reference – Chapter 3*<br><br>**Topics:**<br>• PM Framework<br>  ○ Project Conception<br>  ○ Project Life Cycle<br><br>• Smart Cities<br>  ○ 5G Mobility Ecosystem<br>  ○ 5G Use Case Categories<br><br>**Classroom Discussions:**<br>• **Wireless Network Deployment – Digicel (Jamaica)** |

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| **Session 4 - Sep 19** | **Project Initiation & Planning Process Groups: Project Charter, Communications & Stakeholder Management**<br><br>**Readings:**<br>• **Consumer engagement: An insight from smart grid projects in Europe, Institute for Energy and Transport,** Flavia Gangale, Anna Mengolini, Ijeoma Onyeji, Joint Research Centre of the European Commission Petten, the Netherlands, Energy Policy, Volume 60, September 2013, pages 621 – 628<br><br>• **The Open Kimono: Toward a General Framework For Open Data Initiatives in Cities**, Pascual Berrone, Joan E. Ricart, and Carlos Carrasco, California Management Review, 2016, Vol. 59(1) 39 –70<br><br>*Optional Readings (Smart Grid):*<br>• **Voices of Experience: Insights on Smart Grid Customer Engagement, US Department of Energy,** https://www.smartgrid.gov/files/VoicesofExperience_Brochure_9.26.2013.pdf<br>• **Communicator's Toolkit for a Smart Meter Roll-Out**, National Rural Electric Cooperative Association (NRECA), http://www.nreca.coop/what-we-do/bts/smart-grid-demonstration-project/<br>• **Smart Grid projects in Europe: Lessons learned and current developments, 2012 Update,** Joint Research Centre (JRC) group on Smart Electricity Systems and Interoperability, Vincenzo Giordano, Alexis Meletiou, Catalin Felix Covrig, Anna Mengolini, Mircea Ardelean, Gianluca Fulli (DG JRC), Manuel Sánchez Jiménez, Constantina Filiou (DG ENER), 2013, http://ses.jrc.ec.europa.eu/sites/ses.jrc.ec.europa.eu/files/documents/ld-na-25815-en-n_final_online_version_april_15_smart_grid_projects_in_europe_-_lessons_learned_and_current_developments_-2012_update.pdf<br><br>*PMBOK® Reference – Sections 4.1, 4.2, 13.1 & 13.2, 10.1*<br><br>**Topics:**<br>• PM Framework: Initiating Project Phase<br>  ○ Project Charter<br>  ○ Project Management Plan Components<br>  ○ Stakeholder Identification, Registers & Stakeholder Engagement Plan<br>  ○ Communications Management Plan<br><br>• Smart Cities<br>  ○ Smart Grids Stakeholder Engagement<br>  ○ Trust, Open Data, Privacy<br><br>**Classroom Discussion:**<br>• **Smart Grid Deployments: Customer Engagement Pilot Projects (US)**<br>• **Smart City Engagement: Open Barcelona (Spain)** |

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| **Session 5 – Sep 26** | **Project Requirements & Scope Baseline**<br><br>**Readings:**<br>• **M-Pesa: Mobile Money for the "Unbanked" Turning Cellphones into 24-Hour Tellers in Kenya**, Nick Hughes and Susie Lonie, Innovations, Winter/Spring 2007<br>• **Why Good Projects Fail Anyway** (HBR OnPoint Enhanced Edition). Nadim F. Matta, Ronald N. Ashkenas, HBR OnPoint, Case No. 4872. 09/01/2003, Harvard Business School Publishing<br><br>*PMBOK® Reference – Sections 5.1 – 5.4*<br><br>**Topics:**<br>• PM Framework: Planning Project Phase<br>  ○ Scope Management<br>  • Project Requirements<br>  • Scope Baseline – Project Scope Statement, Work Breakdown Structure (WBS)<br><br>• Smart Cities<br>  ○ Phased Deployments<br><br>**Classroom Discussion:**<br>• **Mobile Money / Mobile Financial Services: M-PESA (Kenya)** |
| **Session 6 - Oct 3** | **Project Schedule**<br><br>**Readings:**<br>• **Scheduling Guide For Program Managers,** Defense Systems Management College Press College, Fort Belvoir, October 2001, http://www.acqnotes.com/Attachments/Scheduling%20Guide%20for%20Program%20Managers%20Oct%202001.pdf<br>  ○ Chapters 3 – 6<br><br>***Optional Readings:***<br>• **The ABCs of the Critical Path Method**, F. K. Levy, G. L. Thompson, J. D. Wiest, Harvard Business Review, Published September – October 1963<br>• **Critical Chain Project Management: Motivation and Overview**, Hilbert Robinson, Robert Richards, 2010 IEEE Aerospace Conference, September 23, 2009<br><br>*PMBOK® Reference – Sections 6.1 – 6.5*<br><br>**Topics:**<br>• PM Framework: Planning Project Phase<br>  ○ Schedule Management Plan<br>  • Activity Definition, Sequencing, Duration Estimation<br>  • Schedule Baseline<br><br>• Smart Cities<br>  ○ Time-to-market considerations<br><br>**Written Deliverable 1:**<br>**Smart Cities Vision Statement and Project Management Concepts** |

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| **Session 7 - Oct 10** | **Budgets, Resources & Quality Plans**<br><br>**Readings:**<br>• **Beyond Valuation: Options Thinking in IT Project Management**, Robert G. Fichman, Mark Keil, Amrit Tiwana, *California Management Review*, Case No. CMR304. Published 02/01/2005<br>• **An economic analysis of the EHAS telemedicine system in Alto Amazonas,** Andrés Martínez, Valentín Villarroel, Jaume Puig-Junoy, Joaquín Seoane, and Francisco del Pozo, Journal of Telemedicine and Telecare, 1 January 2007; 13: 7 - 14.<br><br>*PMBOK® Reference – Sections 7.1 – 7.3, 8.1, 9.1 & 9.2*<br><br>***Optional Readings:***<br>• **FCC Connect2Health, https://www.fcc.gov/reports-research/maps/connect2health/getting-started.html**<br><br>• **A study of a rural telemedicine system in the Amazon region of Peru,** Andrés Martínez, Valentín Villarroel, Joaquín Seoane, and Francisco del Pozo, Journal of Telemedicine and Telecare, 1 August 2004; 10: 219 - 225<br><br>**Topics:**<br>• PM Framework: Planning Project Phase<br>  ○ Cost Baseline<br>  ○ Burn Rates and Funding Requirements<br>  ○ Quality Management Plan<br>  ○ Resource Management Plan<br>  • Resource Requirements<br><br>• Smart Cities<br>  ○ Resource Procurements & outsourced services<br>  ○ Real Options<br>  ○ Value Creation<br><br>**Classroom Discussion:**<br>**Telehealth Exercise: EHAS (Peru)**<br><br>**Deliverables:**<br>• **Project Selection Due (Project Analysis Deliverables due on Nov 7)** |
| **Session 8 - Oct 17** | **Procurement & Risk Management Plans**<br><br>**Readings:**<br>• **Safety Pilot Model Deployment: Lessons Learned and Recommendations for Future Connected Vehicle Activities, Final Report – September 2015**, FHWA-JPO-16-363, Volpe National Transportation Systems Center, Department of Transportation, Intelligent Transportation Systems Joint Program Office, 2015, http://ntl.bts.gov/lib/59000/59300/59361/FHWA-JPO-16-363.pdf<br>  ○ *Chapters 1 and 2* |

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| | *Optional Readings:*<br>• **The Innovative Organization: Creating Value Through Outsourcing. Steven** Tadelis, California Management Review, Case No. CMR389. November 2007<br>• **Managing Project Uncertainty: From Variation to Chaos**, Arnould DeMeyer, Christoph Loch, & Michael Pich, *MIT Sloan Management Review,* Winter 2002<br><br>*PMBOK Reference – Sections 12.1 and 11.1 - 11.5*<br><br>**Topics:**<br>• PM Framework: Planning Project Phase<br>  ○ Procurement Management Plan<br>  • Make or Buy Decision<br>  • Solicitation Documentation, e.g. RFP, RFQ<br>  • Procurement Scope, e.g. Statement of Work (SOW), Statement of Objectives (SOO), Performance Work Statement (PWS)<br>  • Source Selection Criteria<br>  • Independent Cost Estimates, e.g. IGCE<br>  ○ Risk Management Plan<br>  • Risk Identification & Risk Registers<br>  • Qualitative & Quantitative Risk Analysis<br>  • Risk Response Strategies<br><br>• Smart Cities<br>  ○ Procurements and Solicitation Development<br>  ○ Risk Responses<br><br>**Classroom Discussion:**<br>Connected Vehicles / Intelligent Transportation Systems (ITS) – Safety Pilot Model Deployment |
| **Session 9 - Oct 24** | **Project Execution & Monitoring & Controlling Process Groups – Integration, and Scope, Schedule & Cost Control**<br><br>**Readings:**<br>• **Supervising Projects You Don't (Fully) Understand: Lessons for Effective Project Governance by Steering Committees,** Christoph Loch, Magnus Mähring, and Svenja Sommer, California Management Review 2017, Vol. 59(2) 45–67<br><br>• **Earned Value Project Management Method and Extensions,** Frank Anbari, Project Management Journal, Published December 2003<br><br>*PMBOK® Reference – Sections 4.3 – 4.6, 5.6, 6.6, & 7.4* |

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| | **Topics:**<br>• PM Framework: Executing / Monitoring & Controlling Project Phases<br>  ○ Deliverables & Work Performance Data<br>  ○ Lessons Leaned Register<br>  ○ Work Performance Reports<br>  ○ Change Requests<br>  ○ Schedule & Cost Forecasts<br><br>• Smart Cities<br>  ○ Deployment of Ecosystem(s)<br>  ○ Systems Integration |
| **Session 10 – Oct 31** | **Quality Management, Quality Control, & Scope Validation,**<br><br>**Readings:**<br>• **A Report on Technical and Operational Issues Impacting the Provision of Wireless Enhanced 911 Services,** Dale Hatfield, Prepared for the Federal Communications Commission, 2002<br>  ○ http://fjallfoss.fcc.gov/ecfs/document/view?id=6513296239<br>  ○ http://www.nena.org/sites/default/files/Hatfieldreport.pdf<br><br>*PMBOK® Reference – Sections 8.2, & 8.3, 5.5*<br><br>**Topics:**<br>• PM Framework: Executing / Monitoring & Controlling Project Phases<br>  ○ Quality Reports<br>  ○ Test and Evaluation Documents<br>  ○ Quality Control Measurements<br>  ○ Verified & Accepted Deliverables<br>  ○ Work Performance Information<br>  ○ Change Requests<br><br>• Smart Cities<br>  ○ Quality<br>  ○ Ecosystem Optimization<br><br>**Deliverables:**<br>• **Project Analysis Presentations Begin**<br>• **Final Project Topic Selection**<br><br>**Classroom Discussion**<br>**Public Safety: Wireless Enhanced 911 Services (USA)** |
| **Session 11 - Nov 7** | **Project Communications & Stakeholder Engagement**<br><br>*PMBOK® Reference – Sections 10.2, 10.3, 13.3, 13.4* |

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| | **Topics:**<br>• PM Framework: Executing / Monitoring & Controlling Project Phases<br>  ○ Project Communications<br>  ○ Work Performance Information<br>  ○ Change Requests<br><br>• Smart Cities<br>  ○ Internal & External Team Communications<br><br>**Deliverables:**<br>• **Continuation of Project Analysis Presentations**<br>• **Written Deliverable 2 - Project Analysis Due** |
| **Session 12 - Nov 14** | **Risk Responses & Monitoring, and Procurement Award & Management**<br><br>**Readings:**<br>• **A Smart City Is a Collaborative Community: Lessons from smart Aarhus**, Charles C. Snow, Dorthe Døjbak Håkonsson, and Børge Obel, California Management Review, 2016, Vol. 59(1) 92–108<br><br>*PMBOK® Reference – Sections 11.6 – 11.7, 12.2 & 12.3*<br><br>**Topics:**<br>• PM Framework: Executing / Monitoring & Controlling Project Phases<br>  ○ Work Performance Information<br>  ○ Change Requests<br>  ○ Selected Sellers<br>  ○ Agreements<br>  ○ Closed Procurements<br><br>• Smart Cities<br>  ○ Performance Monitoring<br>  ○ Pre-launch Coordination<br><br>**Classroom Discussion**<br>• **Smart Aarhus (Denmark)** |
| **Session 13 – Nov 21** | **Team Management**<br><br>**Readings:**<br>• **Leadership That Gets Results**, Daniel Goleman, Harvard Business Review, March/April 2000.<br>• **How Management Teams Can Have a Good Fight** (HBR OnPoint Enhanced Edition). Kathleen M. Eisenhardt, Jean L. Kahwajy, L.J. Bourgeois III, *HBR OnPoint*, Case No. 536X. Published 11/15/2000, Harvard Business School Publishing<br><br>*PMBOK® Reference – Sections 9.3 – 9.6* |

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| | **Topics:**<br>• PM Framework: Executing / Monitoring & Controlling Project Phases<br>  ○ Physical Resource Assignments<br>  ○ Project Team Assignments<br>  ○ Resource Calendars<br>  ○ Team Performance Assessments<br>  ○ Work Performance Information<br>  ○ Change Requests<br><br>• Smart Cities<br>  ○ Leadership and Teamwork<br>  ○ Conflict Management<br><br>**Final Deliverables:**<br>**Project Management Plan Presentations begin** |
| **Nov 28** | **Thanksgiving Recess** |
| **Session 14 - Dec 7** | **Project Closure, Lessons Learned**<br>**Required Readings:**<br>• **Value Propositions for Disruptive Technologies: Reconfiguration Tactics in the Case of Electric Vehicles,** René Bohnsack and Jonatan Pinkse, California Management Review, 2017, Vol. 59(4) 79–96<br><br>***Optional Readings:***<br>• **Lost Roots: How Project Management Came to Emphasize Control Over Flexibility and Novelty**, Lenfle Sylvain, Christoph Loch, California Management Review, Fall 2010, Vol 53<br>• ***Closing the Gap: The Link Between Project Management Excellence and Long Term Success,*** *Economist Intelligence Unit, October 2009*<br><br>*PMBOK® Reference – Section 4.7*<br><br>**Topics:**<br>• PM Framework: Closing Project Phase<br>  ○ Final Product or Service<br>  ○ Transition towards Operations<br>  ○ Project Closeout & documentation<br>  ○ Lessons Learned<br><br>• Smart Cities<br>  ○ Transition towards Operations<br><br>**Classroom Discussion**<br>• **Electric Vehicles (EV)**<br><br>**Final Deliverables:**<br>**Project Management Plan Presentations (continued)**<br>**Written Deliverable 3 - Project Management Plan Due** |