Course outline

Name of institution	**Rajapruk University**
Faculty/Department	**Faculty of Education, Doctor of Philosophy Program**
Field of study	**Educational administration**

Section 1 General information

1. List of subjects

932-204 Innovation and Technology Revolution for Educational Administration

2. Number of credits

3 credits 3 (3-0-6)

3. Course curriculum and types

Course Doctor of Philosophy Program, Field of Study: Educational Administration

4. Lecturer

1) Dr. Darunee Panjarattanakorn

2) Dr.Aroonsri Arckarapunyathorn

3) Asst. Prof. Dr. Waraporn Sriayut

4) Assoc. Prof. Dr. Laddawan Petchroj

5) Dr. Vinutthapat Phophet

6) Asst. Prof. Dr. Chomkhae Phongcharoen

7) Dr.Chatkul Uapipattanakul

5. Semester/Year of Study

Semester 1 Year 2025 Year 1

6. Place of study

Rajapruk University

Section 2 Objectives

1. Objectives of course

1.1 Analyze the context of 21st-century changes and their impact on education, leading to the need to adapt educational management concepts and approaches in the country.

1.2 Explain the key concepts of innovation and technology for educational administration to improve the quality of education in the context of 21st-century change.

1.3 Analyze the trends and movements in the development of innovation and technology for educational administration aimed at enhancing the quality of education in the context of 21st-century change.

1.4 Explain the key concepts of computer systems and analyze strategies for enhancing the value of computer technology in educational administration to improve national education quality in the 21st-century context.

1.5 Explain the essential concepts of Big Data and its applications in educational administration to improve national education quality in the context of 21st-century change.

1.6 Analyze approaches to utilizing Big Data for the benefit of educational administration to improve national education quality in the context of 21st-century change.

1.7 Propose appropriate innovative ideas for educational administration to enhance the quality of national education in the context of 21st-century change.

Section 3 Characteristics and operation

1. Course description

Innovation and new technology revolution, application of computer technology in digital era for educational administration and learning in the 21st century, and the application of big data to support educational administration and decision making.

2. Number of hours

Describe	Practice	Self study
48	**-**	**96**

3. Number of hours per week the instructor provides academic consultation and guidance to individual students

3.1 In-person consultation at the instructor's office

3.2 Consultation via email

Instructor: Dr. Darunee Panjarattanakorn

E-mail: dapanj@rpu.ac.th

3. Learning Targets: Performance in the course will be assessed by evaluating the extent to which doctoral students can successfully:

1. Able to manage complex moral and ethical issues in academic or professional contexts.

2. Able to promote concrete application of moral and ethical discretion among personnel within the organization in their work and daily life.

3. Demonstrates leadership in adhering to moral and ethical principles in the workplace and broader community.

4. Possesses moral courage.

5. Possesses a thorough understanding of the body of knowledge in the field of educational administration.

6. Demonstrates deep and broad understanding of changes in educational management at both national and international levels.

7. Has up-to-date knowledge in the field of educational administration, including key emerging issues.

8. Possesses knowledge of research techniques and the ability to develop conclusions that are recognized in the academic field.

9. Able to apply research management techniques to professional development.

10. Demonstrates the ability to critically analyze significant and complex issues, develop innovative problem-solving approaches, and express academic and professional opinions.

11. Able to synthesize research findings and theories to advance knowledge and understanding by integrating diverse concepts from both domestic and international sources.

12. Capable of creating new knowledge and developing innovations in educational administration to advance the profession or improve professional practices through complex research processes.

13. Demonstrates the ability to build constructive interactions with relevant individuals, collaborate effectively with others, and exhibit leadership in academic and professional domains within a complex society.

14. Possesses the ability to connect and build educational and community-based social networks.

15. Able to plan, analyze, and solve complex problems, while effectively improving oneself and the organization, to demonstrate social and community responsibility.

16. Possesses numerical analysis skills, proficiency in both Thai and foreign languages for communication, and the ability to use information technology to solve problems and plan for professional development.

17. Enhances skills in problem summarization and proposing solutions across various areas, with an in-depth focus on specific academic disciplines.

18. Communicates effectively and appropriately with individuals in academic, professional, and general community contexts.

19. Presents reports, including dissertations or major research projects, formally and informally through academic and professional publication channels.

20. Demonstrates leadership and management capabilities that meet international standards.

21. Possesses skills in creating innovations for educational administration.

4. Teaching Methods

1. Lectures – To provide key concepts, theories, and frameworks on innovation and technology in education.

2. Collaborative Discussions – To encourage sharing of ideas and real-world experiences among students.

3. Case Study Analysis – To examine real or simulated scenarios involving educational technology and innovation.

4. Problem-Based Learning (PBL) – To develop critical thinking by solving practical problems in educational administration.

5. Student-Led Seminars and Presentations – To build research, leadership, and communication skills through peer-led learning.

5. Assessment Methods

1. Class Participation and Discussion – 20%

Active involvement in class discussions, sharing insights, asking questions, and contributing to group activities.

2. Written Reflections and Assignments – 20%

Regular short reflections and critical responses to weekly topics, articles, or case studies. Quality, clarity, and originality are key.

3. Group Project and Presentation – 30%

A collaborative project focused on applying innovation or technology to educational administration. Your group will present findings and proposed solutions.

4. Final Individual Paper or Innovation Proposal – 30% A comprehensive, research-based paper or a proposal for an innovative solution to an educational challenge, demonstrating your understanding and creativity.

Teaching and Assessment Plan

1. Teaching Plan

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
1	**Course Introduction: Concepts and Importance of Innovation and Technology in Education** • Concepts and definitions of innovation and technology • The importance and roles of innovation and technology in education • Trends and future directions of innovation and technology	3	1. **Interactive Lecture:** The instructor uses lecture-based teaching to explain core concepts such as the definitions of innovation and technology, and the distinction between incremental and disruptive innovation. Students are encouraged to ask questions, share opinions, and respond throughout the session to create an interactive and engaging learning environment. 2. **Active Learning:** Students participate in activities such as matching old and new technologies, categorizing the roles of technology in different contexts, or engaging in interactive tools (e.g., Mentimeter, Kahoot). These tasks are designed to stimulate analytical thinking and maintain active student engagement.	• PowerPoint slides to support lectures • Sample video clips demonstrating the use of technology in schools or universities • Academic articles and case studies • Padlet board for collaborative activities • Google Forms or Mentimeter for surveys and polls	1) Dr. Darunee Panjarattanakorn 2) Dr.Aroonsri Arckarapunyathorn 3) Asst. Prof. Dr. Waraporn Sriayut 4) Assoc. Prof. Dr. Laddawan Petchroj 5) Dr. Vinutthapat Phophet 6) Asst. Prof. Dr. Chomkhae Phongcharoen 7) Dr.Chatkul Uapipattanakul

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
			3. **Case-Based Learning:** Students analyze real-world cases of educational technology implementation, such as the use of Big Data, AI, or LMS platforms to enhance school administration. They then engage in small-group discussions and present their insights to the class. 4. **Collaborative Group Activity & Presentation:** Students are divided into groups to collaboratively design future-oriented strategies for applying technology in educational administration. Each group presents their ideas and receives peer feedback, helping develop communication skills, creativity, and teamwork.		
2-3	**1. The Fourth Industrial Revolution and Education:**	6	**1. Flipped Classroom** Students are assigned a short article and video explaining Industry 4.0 concepts (AI, IoT, Big Data, Blockchain) to review in advance.	- Short academic article / 10-minute summary video	1) Dr. Darunee Panjarattanakorn 2) Dr.Aroonsri Arckarapunyathorn

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	• Definition and characteristics of the Fourth Industrial Revolution (Industry 4.0) • Key technologies in the Industry 4.0 era such as AI, IoT, Big Data, and Blockchain • Impacts of Industry 4.0 on education in various dimensions, including teaching and learning, educational administration, and student skill development **2. Digital Technology and the Transformation of Teaching and Learning:** • The shift from traditional teaching methods to digital-based learning • Digital learning tools and platforms such as Learning Management		**2. Interactive Lecture & Q&A** The instructor summarizes key points, adds strategic perspectives, and facilitates Q&A to connect the content with the Thai context and learners' organizations. **3. Small-Group Case Analysis** Students are divided into small groups to analyze case studies of schools/universities implementing Industry 4.0 technologies (e.g., using Big Data systems to track student performance). **4. Expert Panel Discussion (Online)** **1. Demonstration & Hands-On Workshop** Demonstrate how to use popular LMS platforms (e.g., Moodle, Canvas). Let students register, set up a course module, and try tools like quizzes and forums. **2. Jigsaw Activity**	- PowerPoint slides summarizing key frameworks - Case pack / printed case study materials LMS user accounts / Quick-start guide via Google Docs	3) Asst. Prof. Dr. Waraporn Sriayut 4) Assoc. Prof. Dr. Laddawan Petchroj 5) Dr. Vinutthapat Phophet 6) Asst. Prof. Dr. Chomkhae Phongcharoen 7) Dr.Chatkul Uapipattanakul

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	Systems (LMS), e-Learning, and Virtual Classrooms • Advantages and disadvantages of using digital technology in teaching and learning		Distribute short articles on 3 topics to small groups (a. e-Learning, b. Virtual Classrooms, c. Mobile Learning). Students then rotate groups to share and synthesize key points. **3. Debate: Pros & Cons** Divide students into two groups (Pro and Con) to prepare arguments on "Advantages vs. Limitations of Digital Teaching," then conduct a short in-class debate.	Short academic articles / Online forum or discussion board Debate slide template	
4-5	**1. Blended Learning:** • Definition and concepts of blended learning • Models and types of blended learning, such as Station Rotation, Lab Rotation, Flipped Classroom, and Flex Model • Advantages and disadvantages of blended learning	6	**1. Blended Learning** **Teaching Method: Flipped Classroom** • A short video explaining key concepts and models (Station Rotation, Lab Rotation, Flipped, Flex) will be provided for students to watch in advance. • In-class time will be used for in-depth discussions and sharing experiences on model design. **Activity:**	- Summary video on models (5–7 minutes) - Google Docs worksheet	1) Dr. Darunee Panjarattanakorn 2) Dr.Aroonsri Arckarapunyathorn 3) Asst. Prof. Dr. Waraporn Sriayut 4) Assoc. Prof. Dr. Laddawan Petchroj 5) Dr. Vinutthapat Phophet

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	• Design and application of blended learning in educational contexts **2. Online Learning:** • Definition and characteristics of online learning • Platforms and tools for online learning, such as MOOCs, Learning Management Systems (LMS), and e-Learning • Advantages and disadvantages of online learning Techniques and strategies for designing effective online learning experiences		• In groups of 3–4, students will design a blended learning plan (choosing one model) for a real-world scenario in a school or university. • Each group will present their plan and receive feedback from classmates. **2. Online Learning** **Teaching Method: Hands-on Workshop** • Introduce MOOC and LMS platforms (e.g., Coursera, EdX, Moodle) • Students practice creating a short course (2–3 screens) on an LMS **Activity:** • Design sample online activities (e.g., Quiz, Forum) and allow peers to try them	- LMS sandbox environment (test account) - Quick-start guide on Google Docs - Sandbox LMS (test account) - Quick guide on Google Docs	6) Asst. Prof. Dr. Chomkhae Phongcharoen 7) Dr.Chatkul Uapipattanakul

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
			• Analyze the strengths and weaknesses of each platform based on hands-on experience **3. Personalized Learning** **Teaching Method: Case-Based Discussion** • Present case studies that involve Adaptive Learning systems or AI-driven platforms • Facilitate discussion on how these systems function and their impact on learners **Activity:** • Analyze the case study: identify the AI mechanisms used and propose improvements Create a simple outline of a personalized lesson plan (1 page)	- Case study document (PDF) - Google Slides template for planning draft	
6-7	**1. Big Data and Data Analytics for Education:**	6	**1. Big Data and Data Analytics for Education** **Teaching Methods & Activities:**	- A set of short research articles and open-source	1) Dr. Darunee Panjarattanakorn

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	• Definition and characteristics of Big Data • Sources of Big Data in educational institutions • Tools and techniques for analyzing Big Data • Benefits of using Big Data in educational decision-making • Case studies on the use of Big Data to enhance teaching, learning, and educational management **2. Learning Analytics and Instructional Improvement:** • Definition and characteristics of Learning Analytics		• **Flipped Classroom** Assign students an article and a short video (10–15 minutes) introducing the principles of Big Data, its sources, and basic techniques to review before class. • **Hands-On Workshop** Students practice using basic Big Data analysis tools (e.g., Google Colab with Python Notebooks or Tableau Public) with sample datasets from educational institutions. • **Small-Group Case Analysis** Students work in groups to analyze real-world case studies involving Big Data in education (e.g., tracking student learning behavior), and summarize the benefits and limitations. **2. Learning Analytics and Instructional Improvement** **Teaching Methods & Activities**	videos (YouTube, Coursera) - Sample notebooks (Colab/Python) or sample CSV datasets - Quick-start guide for using Tableau Public - Academic articles / LMS sandbox	2) Dr.Aroonsri Arckarapunyathorn 3) Asst. Prof. Dr. Waraporn Sriayut 4) Assoc. Prof. Dr. Laddawan Petchroj 5) Dr. Vinutthapat Phophet 6) Asst. Prof. Dr. Chomkhae Phongcharoen 7) Dr.Chatkul Uapipattanakul

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	• Collection and analysis of student learning data • Using Learning Analytics to enhance teaching and learning • Indicators and criteria used to assess learning outcomes • Case studies on the application of Learning Analytics to improve instruction **3. Educational Management Information Systems (EMIS):** • Definition and characteristics of Educational Management Information Systems (EMIS)		• **Interactive Lecture & Demo** Introduce the concept of Learning Analytics and demonstrate how to collect and analyze data using an LMS (e.g., Moodle logs). • **Jigsaw Activity** Distribute three focused articles on (a) data collection, (b) statistical analysis, and (c) indicators and evaluation criteria. Students study in small groups, then switch groups to share and present their findings. • **Design Task** Students draft a plan to use Learning Analytics to improve a specific course activity by identifying the data to be collected, the indicators, and how the results will be applied. **3. Educational Management Information Systems (EMIS)** Teaching Methods & Activities • Case-Based Discussion Present case studies on	- Google Sheets template for data collection and analysis - Sample slides showing dashboards and summary reports - Case study documents (PDF) - UML/Flowchart templates on Google Slides	

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	• Components and core functions of EMIS • Benefits of EMIS in managing educational institutions • Design and implementation of EMIS in educational settings • Case studies on the use of EMIS to improve educational administration		the design and implementation of EMIS in both international and Thai educational institutions. • Expert Guest Talk Invite a guest speaker (EMIS developer or system administrator) to share real-world experiences and engage in a Q&A session. • Group Prototype Design Divide students into groups to design a prototype outline for an EMIS in a selected educational institution, including user requirements, data flow, and dashboard elements.	- Zoom/Teams for Expert Talk	
8	**1. Theories and Concepts of Change Management:** • Definition of Change Management • Theories and models of change management, such as Kotter's 8-Step Change Model, Lewin's Change Management Model, and the ADKAR Model	3	**1. Theories and Concepts of Change Management** Teaching Methods & Activities • Interactive Lecture Provide a summary of key models (Kotter, Lewin, ADKAR) using infographics to support explanations.	- Short quiz (5 multiple-choice questions) to assess understanding of the models after the lecture - Individual case study report (1 page) summarizing the analysis	1) Dr. Darunee Panjarattanakorn 2) Dr.Aroonsri Arckarapunyathorn 3) Asst. Prof. Dr. Waraporn Sriayut 4) Assoc. Prof. Dr. Laddawan Petchroj

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	• Steps and processes involved in managing organizational change **2. The Role of Leaders in Driving Change:** • Definition and roles of a change leader • Key characteristics and essential skills of change leaders		Pose hypothetical scenarios and have students respond using the Think–Pair–Share strategy. • Jigsaw Activity Divide students into 3 small groups; each group studies one change model in detail. Then, they rotate groups and take turns "teaching" their peers about the model they learned. • Case Analysis Provide a case study about change in a school or university. Students analyze which model was effective in certain areas and identify points that could be improved **2. The Role of Leaders in Driving Change Teaching Methods & Activities** • Guest Speaker & Q&A Invite an educational leader who has led organizational change to share real-life experiences, followed by an in-depth Q&A session.	of the change model applied in the case, or proposing improvements - Interview video with a leader (case study) - SWOT analysis template on Google Sheets - Role-play script template	5) Dr. Vinutthapat Phophet 6) Asst. Prof. Dr. Chomkhae Phongcharoen 7) Dr.Chatkul Uapipattanakul

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	• Motivation and communication in change management • Case studies of successful change leadership **3. Building an Innovation Culture in Organizations:** • Definition of innovation culture • Key components and factors influencing the development of an innovation culture • Strategies for building and promoting an innovation culture within organizations		• Role Play Students work in pairs to role-play as a "Change Leader" and a "Stakeholder," practicing how to plan motivation strategies and communicate the change effectively. • SWOT Analysis Workshop Students analyze a sample change leader using the SWOT framework—identifying strengths, weaknesses, opportunities, and threats in the leadership process. **3. Building an Innovation Culture in Organizations** Teaching Methods & Activities • Case-Based Discussion Analyze cases of educational institutions with strong innovation cultures—such as schools or universities that actively encourage teachers and students to initiate their own creative projects. • World Café	- Case study document (PDF) - Post-it board or Miro board for World Café discussions - Design Thinking template (Empathize–Define–Ideate–Prototype)	

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	Case studies of successful organizations that have fostered innovation culture		Set up four small roundtable stations. Each table brainstorms key “factors” that contribute to an innovation culture, then rotates to share and expand on ideas from other groups. • Design Thinking Sprint In groups of four, students design an initiative or activity that can spark a creative and innovative culture within a school environment.		
9	**1. Using Technology in Recruitment and Selection:** • Online recruitment systems • Use of AI in personnel selection • Case studies	3	**Teaching Methods:** • Interactive Lecture • Case-Based Learning • Group Discussion **Learning Activities:** • Analyze cases involving the use of AI in personnel selection • Simulate the use of online recruitment platforms • Discuss emerging trends in HR technology	- PowerPoint slides / Infographics / Academic articles (PDF) - Case study videos (featuring real organizations using AI/HRIS) - Online training platforms (e.g., LinkedIn Learning, Google Workspace Training)	1) Dr. Darunee Panjarattanakorn 2) Dr.Aroonsri Arckarapunyathorn 3) Asst. Prof. Dr. Waraporn Sriayut 4) Assoc. Prof. Dr. Laddawan Petchroj 5) Dr. Vinutthapat Phophet 6) Asst. Prof. Dr. Chomkhae

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	2. Staff Development and Online Training: • Online training platforms • Evaluation and monitoring of training outcomes • Case studies **3. Human Resource Data Management:** • Human Resource Information Systems (HRIS) • Use of Big Data in employee data analysis Case studies		**Teaching Methods:** • Project-Based Learning • Collaborative Learning **Learning Activities:** • Practice using online training platforms such as Coursera or Moodle • Design a training program and evaluation tools • Present group outcomes **Teaching Methods:** • Demonstration • Data-Driven Learning **Learning Activities:** • Use HRIS simulation tools or dashboards • Analyze HR-related Big Data from real or simulated case studies Conduct group-based strategic analysis and presentations	- HRIS simulation programs or websites (e.g., OrangeHRM, BambooHR – demo version) - Data analysis tools (e.g., Excel, Google Sheets, or Power BI – basic level) - University LMS for assignment submissions and discussions	Phongcharoen 7) Dr.Chatkul Uapipattanakul

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
10	**1. Financial Management Using Technology:** • Online financial management systems • Budget planning with software tools • Case studies **2. Financial Auditing and Reporting:** • Using accounting audit software • Generating automated financial reports • Case studies	3	**1. Financial Management Using Technology** **Teaching Methods:** • Interactive Lecture • Case-Based Learning • Hands-on Practice **Learning Activities:** • Analyze cases of online financial management in organizations • Practice using budgeting software such as Microsoft Excel or PlanGuru • Brainstorm and design a simulated organizational budget plan **2. Financial Auditing and Reporting** **Teaching Methods:** • Demonstration and Lab Practice • Problem-Based Learning **Learning Activities:**	**- PowerPoint slides + supplementary teaching documents (PDF)** - Video clips/software tutorials (from YouTube or official developer websites) - Software used for practice (Budget planning: Microsoft Excel, PlanGuru Auditing: QuickBooks, Xero, Zoho Books (demo versions) Financial analysis: Power BI, Google Sheets, Tableau (basic level)) - University LMS for assignment submission and discussion	1) Dr. Darunee Panjarattanakorn 2) Dr.Aroonsri Arckarapunyathorn 3) Asst. Prof. Dr. Waraporn Sriayut 4) Assoc. Prof. Dr. Laddawan Petchroj 5) Dr. Vinutthapat Phophet 6) Asst. Prof. Dr. Chomkhae Phongcharoen 7) Dr.Chatkul Uapipattanakul

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	3. Efficient Financial Resource Management: • Using technology tools to track expenditures • Financial analysis and forecasting Case studies		• Practice using accounting audit software such as QuickBooks or Xero (demo version) • Create automated financial reports • Analyze weaknesses in auditing through case studies **3. Effective Financial Resource Management** **Teaching Methods:** • Group Discussion • Project-Based Learning **Learning Activities:** • Analyze expenditure data and perform financial forecasting • Use analytical tools such as Excel, Power BI, or Tableau (basic level) Collaboratively develop financial management strategies for a simulated organization		
11-12	**1. Digital Curriculum Design:** • Using LMS platforms for course design	**6**	**1. Digital Curriculum Design** **Teaching Methods:** • Interactive Lecture	- LMS platforms (e.g., Moodle, Google Classroom, Canvas)	1) Dr. Darunee Panjarattanakorn

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	• Creating digital instructional materials • Case studies **2. Monitoring and Assessing Learning Outcomes with Technology:** • Using Learning Analytics to track learning progress • Creating and using online assessment tools • Case studies **3. Managing Blended Learning:** • Applying Blended Learning in instructional management • Enhancing teaching through the use of digital media • Case studies		• Project-Based Learning • Case-Based Learning **Learning Activities:** • Analyze real examples of LMS-based courses (e.g., Moodle, Canvas) • Design the structure of a digital curriculum in groups • Practice creating digital teaching materials such as videos, slides, or quizzes **2. Monitoring and Assessing Learning Outcomes with Technology** **Teaching Methods:** • Demonstration of real tools • Problem-Based Learning • Group Discussion **Learning Activities:** • Analyze learning data from a Learning Analytics system	- Media creation tools (e.g., Canva, Powtoon, Genially, Microsoft Sway) - Assessment tools (e.g., Google Forms, Quizizz, Kahoot) - Learning Analytics software (e.g., Moodle reports or Excel-based analytics tools) - Academic articles/case studies on digital teaching and learning - Instructional videos on best practices in online teaching	2) Dr.Aroonsri Arckarapunyathorn 3) Asst. Prof. Dr. Waraporn Sriayut 4) Assoc. Prof. Dr. Laddawan Petchroj 5) Dr. Vinutthapat Phophet 6) Asst. Prof. Dr. Chomkhae Phongcharoen 7) Dr.Chatkul Uapipattanakul

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
			• Create online assessments using tools like Google Forms, Kahoot, or an LMS • Compare assessment results and propose improvements **3. Managing Blended Learning** **Teaching Methods:** • Collaborative Learning • Case-Based Learning • Instructional Strategy Discussion **Learning Activities:** • Design a blended learning management plan • Analyze case studies of successful blended learning implementations in educational institutions Critically evaluate the strengths and weaknesses of blended learning approaches		
13	**1. Utilizing Technology in Facility Management:** • Asset Management Systems	3	**1. Utilizing Technology in Facility Management** **Activities:**	- Slides and demonstration videos of the AMS system	1) Dr. Darunee Panjarattanakorn

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	• Building monitoring and maintenance using technology • Case studies **2. Enhancing the Efficiency of Learning Space Utilization:** • Designing flexible learning spaces with the support of technology • Managing classroom reservations and usage through online systems • Case studies		• Mini-lecture presenting an overview of Asset Management Systems (AMS), including a live demonstration of the actual system interface • Small-group case analysis (3–4 students per group) to explore key features of AMS and propose building maintenance strategies • Workshop to practice using a repair/maintenance request module in a simulated system **2. Enhancing the Efficiency of Learning Space Utilization** **Activities:** • Lecture with visual examples of flexible learning space design • Small-group brainstorming to design classroom layouts that support multiple learning formats	- AMS sandbox or demo environment (e.g., Accruent demo, FM:Systems) - Case study documents and worksheets - Model images and introductory videos on flexible classrooms - Real online room booking platform (with trial user accounts) - Whiteboard (online/offline) and Post-it notes	2) Dr.Aroonsri Arckarapunyathorn 3) Asst. Prof. Dr. Waraporn Sriayut 4) Assoc. Prof. Dr. Laddawan Petchroj 5) Dr. Vinutthapat Phophet 6) Asst. Prof. Dr. Chomkhae Phongcharoen 7) Dr.Chatkul Uapipattanakul

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	3. Security and Surveillance Using Technology: • Using CCTV and smart security systems • Planning surveillance and risk management strategies • Case studies		• Practice using online room booking tools (e.g., Google Calendar, EMS) through simulated scheduling scenarios **3. Security and Surveillance Using Technology Activities:** • Lecture and demonstration of CCTV + AI technologies (e.g., facial recognition systems, video analytics) • Analyze case studies on the success or failure of security system implementations Scenario planning: In groups, design a surveillance camera layout and an emergency response plan	- Demonstration video clips of CCTV & IoT security systems - Floor plans and risk assessment templates - Risk assessment and incident report forms	
14	**1. Using Technology in Learning Assessment:** • Creating and applying online assessment tools	3	**1. Using Technology in Learning Assessment Activities:** • Mini-lecture providing an overview of online assessment tools (e.g., Moodle Quiz, Google Forms, Kahoot!)	- Demonstration video on setting up and running reports in Moodle/Google Forms	1) Dr. Darunee Panjarattanakorn 2) Dr.Aroonsri Arckarapunyathorn

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	• Analyzing assessment results using technology • Case studies **2. Educational Quality Assurance:** • Utilizing online quality assurance systems • Continuous monitoring and improvement of educational quality • Case studies		• Group workshop: Design an online quiz with 5–7 questions (multiple choice and/or short answer) using a selected platform • Simulated result analysis: Analyze basic statistics (e.g., mean, standard deviation) using responses from another group **2. Educational Quality Assurance:** **Activities:** • Supplementary lecture: Overview of quality assurance frameworks (PDCA, ISO 21001, AQAF) and the use of online QA systems (e.g., Blackboard Quality, Q-Vector) • Comparative case study: Analyze the strengths and limitations of two QA platforms using SWOT Analysis	- Real online assessment tools (trial user accounts) - Sample assessment result files (CSV/Excel format) - QA standards summary document (PDF) - Demo of the online QA system (if available) or video demonstration - SWOT worksheet and Continuous Improvement Plan templates	3) Asst. Prof. Dr. Waraporn Sriayut 4) Assoc. Prof. Dr. Laddawan Petchroj 5) Dr. Vinutthapat Phophet 6) Asst. Prof. Dr. Chomkhae Phongcharoen 7) Dr.Chatkul Uapipattanakul

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	3. Data-Driven Decision Making: • Analyzing data to improve educational quality • Reporting on assessment and quality assurance outcomes Case studies		• Brainstorming: Draft a Continuous Improvement Plan (CIP) for a selected academic program **3. Using Data for Decision-Making:** **Activities:** • Short Workshop: Import evaluation data (from Activities 1–2) into basic BI tools (e.g., Excel PivotTable or Google Data Studio). • Practice Creating Simple Dashboards: Present key metrics (e.g., average scores, trend charts). • Group Presentation: Propose strategic insights derived from the data, along with an actionable improvement plan.	- Sample data files (Excel/CSV) - Basic BI tools (Excel, Google Data Studio) - Slide presentation templates	
15	**1. Planning and Implementation of Technology in Organizations**	3	**1. Developing a Technology Strategic Plan:** **Activities:**	- Strategy framework slides (PDF/PowerPoint) - Technology Roadmap templates (Excel/Word)	1) Dr. Darunee Panjarattanakorn 2) Dr.Aroonsri Arckarapunyathorn

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	• Planning and executing the use of technology in organizations • Monitoring and evaluating the implementation of technology • Case studies **2. Change Management through Technology** • Building a culture of change within the organization • Using technology to support organizational change • Case studies		- Mini-lecture presenting frameworks for creating a Technology Strategy (e.g., TOGAF, Gartner Pace Layer) - Group workshop: Draft a Technology Roadmap for a simulated organization, specifying goals, responsibilities, and timeline - Case analysis of organizations that succeeded or failed in implementing technology strategies **2. Managing Change Through Technology: Activities:** • Lecture on Change Management concepts (e.g., Kotter's 8 Steps, ADKAR) integrated with the use of digital tools • Simulation Game: Organize teams to simulate the launch of a new platform; each team plans communication and training strategies	- Case study documents and video cases - Short video introducing Change Management models - Miro Board for drafting communication plans - Articles/video clips of case studies from Thai organizations	3) Asst. Prof. Dr. Waraporn Sriayut 4) Assoc. Prof. Dr. Laddawan Petchroj 5) Dr. Vinutthapat Phophet 6) Asst. Prof. Dr. Chomkhae Phongcharoen 7) Dr.Chatkul Uapipattanakul

Session	Topic / Description	Hours	Teaching Activities	Teaching Materials (if any)	Instructor
	3. Ensuring Sustainability in Technology Use ● Planning for sustainable technology usage ● Managing resources and utilizing technology efficiently ● Case studies		• Interactive Discussion: Share experiences in managing change within real educational institutions **3. Creating Sustainability in Technology Use: Activities:** • Short lecture on Sustainable IT (e.g., Green IT, Circular IT) • Workshop: Assess resource footprint and design IT equipment recycling policies Case Study: Analyze organizations that have implemented sustainable practices (e.g., data center efficiency, e-waste management)	- Green IT guideline infographic - Resource assessment form (Excel) - Case study videos and articles	
16	Final	3			
	Total	**48**			

Learning Assessment Plan

Learning Outcomes	Assessment Methods	Week of Assessment	Score
1. Analyze the context of 21st-century changes and their impact on educational management approaches.	Homework	1-15	10%
2. Explain key concepts of innovation and technology in educational administration.	Participation in class activities	1-15	10%
3. Analyze trends in innovation and technology development for educational administration.	Midterm examination	8	20%
4. Explain and apply computer systems and Big Data concepts in educational administration to improve national education quality.	Presentation/Report	1-15	20%
5. Propose innovative ideas to enhance the quality of education in the 21st-century context.	Final examination	16	40%
			100%

Grading System

Score	Grade	Description
80 and above	A	ดีเยี่ยม (Excellent)
75-79	B+	ดีมาก (Very Good)
70-74	B	ดี (Good)
65-69	C+	ดีพอใช้ (Fairly Good)
60-64	C	พอใช้ (Fair)
55-59	D+	อ่อน (Poor)
50-54	D	อ่อนมาก (Very Poor)
Below 50	E	ตก (Fail)

Learning Resources

1. Core Textbooks and Teaching Materials:

- *21st Century Skills: Education for a New Era* (2019)

  Authors: James Bellanca, Ed.; Ron Brandt, Ed.

  Translators: Athip Jittatrakul, Worapoj Wongkitrungreung

- *Course Module 23728: Educational Administration Innovation and Leadership* (2019)

  Publisher: Sukhothai Thammathirat Open University

- *Digital Literacy World-Class Standard School* (2010)

  Retrieved from: https://teacherkobwit2010.files.wordpress.com/2010/07/digital-e-book.pdf

- *The Innovator's Method: Bringing the Lean Startup into Your Organization* (2016)

  Authors: Nathan Furr, Jeff Dyer

  Translators: Preeda Yangsuksathaporn, Phantaphong Tangthirasunan

- *Digital Leadership: Changing Paradigms for Changing Times* (2019)

  Author: Eric C. Sheninger

- *Digital Era Administration* (2018)

  Author: Wirat Wiratnipawan

- *School Management in the Digital Era*

  Author: Sukanya Chamchoi

- *Designing Digital-Based Learning*

  Author: Jaitip Na Songkhla

  Publisher: Chulalongkorn University Press, Bangkok, 2018

- *Creating Digital Video & Digital Storytelling for Digital Era Learning and Teaching*

  Author: Naowanit Songkram

  Publisher: Chulalongkorn University Press, Bangkok, 2011

2. Required Documents and Information for Additional Study

- Educational Technology and Innovation Reports from UNESCO, OECD, and the Ministry of Education (latest editions)

- The Thailand Digital Education Master Plan) issued by the Office of the Basic Education Commission (OBEC)
- ISTE Standards for Educational Leaders (2018)
- Academic journals *such as* Educational Technology Research and Development*,* Computers & Education*, and* International Journal of Educational Management
- Government policy documents related to Smart Education, AI for Education, and National EdTech Development Roadmap

3. Recommended Documents and Information for Further Study

- Books and articles on emerging technologies in education (e.g., AI, Big Data, IoT, Blockchain in education)
- Case studies of educational institutions implementing digital transformation
- Research papers on innovation leadership in educational administration
- Webinars or video lectures from global education conferences (e.g., EDUCAUSE, ISTE, BETT)
- Practical guides on using digital tools for school management (e.g., Google Workspace for Education, Microsoft Education Center, Moodle Manuals)

Evaluation and Course Improvement

1.Student Evaluation Strategies: -

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2. Leaching Evaluation Strategies: -

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3. Teaching Improvement: -

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4. Verification of Student Learning Standards: -

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5. Review and Planning for Course Effectiveness: -

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