


The AI Course Design Planning Framework		
1 AI in the Domain	2 Learning Environment	3 Course Implementation
<b>Domain</b> With which domain is the course associated? <b>Quality Control</b>	<b>Learners and their interaction with AI</b> What existing AI knowledge and skills do the learners have? What other related skills and knowledge do the learners have? What role in the AI interaction are learners supposed to take after completing the course? - practical use - basic level of knowledge from case perspective - experts for quality control	<b>Learning Outcomes</b> What are the relevant learning outcomes of the course? (1) Knows how tools (open to use AI) apply experience to improve the process - able to assess check with product and follow up with decision
<b>Potential AI Use Cases</b> What are potential use cases of using AI in the domain? - identification of failure - compare to standards - out-of-the-box flexibility (special cases)	<b>Instructions</b> What instructional skills and competencies do the instructors have? - use subject domain - design AI knowledge from basic to implementation from simple to AI system - some experience in teaching - some of critical parameters to have in mind when creating data	<b>Assessment</b> How will the learning outcomes be assessed? - practical implementation - improvement based tasks - who will train? - safety, low from, stop flow manually, use manufacturing competency
<b>Data in the Domain</b> What type of data is most common in the domain? - image data (pics, spectral, ultrasonic) - performance data - environmental data - historical defect rates	<b>Internal Support</b> What time and AI related resources are available? What AI related data is available for the course? What support does the institution or the network provide? - use of data or create use case - include in team meeting in the morning - wrap up before closing the day	<b>Learning Activities</b> What learning activities will be included in the course? What instructional approach will be used? - individual and whole - manual quality control vs. AI because check - live use of AI tools - hands on
<b>Implications of using AI in the Domain</b> What implications (ethical, legal, safety) does the use of AI have in the domain? - sensitive data on product, create sensitive data	<b>Additional Learning Resources</b> What additional (external) material or resources could be used? - best practice (work in AI field) - interactive material for teaching - feedback - contribute for workshops	

**Learner persona**



**Background**

- 42 years old with 15 years of experience in manufacturing
- Supervisor in team of 20 production line workers
- Has basic digital skills but limited exposure to AI
- Education: Bachelor's degree in Industrial Engineering

**Current Challenges:**

- Wants to integrate AI-driven quality control systems
- Needs to support workers in adapting to new AI-powered processes
- Concerned about workers' resistance to technological changes
- Struggles to evaluate AI vendor proposals effectively

Sarah Chee  
Manufacturing Process Engineer

The AI Course Design Planning Framework		
1 AI in the Domain	2 Learning Environment	3 Course Implementation
<b>Domain</b> With which domain is the course associated? <b>Healthcare Administration</b>	<b>Learners and their interaction with AI</b> What existing AI knowledge and skills do the learners have? What other related skills and knowledge do the learners have? What role in the AI interaction are learners supposed to take after completing the course? - how to use AI (work around process limitations in clinical use) - knowledge in teaching, implementation, adaptability, feedback, adaptation	<b>Learning Outcomes</b> What are the relevant learning outcomes of the course? - shall be independently aware and by the platform - Motivation of the integration process - Managing the big data center
<b>Potential AI Use Cases</b> What are potential use cases of using AI in the domain? - AI can assist in scheduling, by the use for scheduling patient doctor resources - risk for the health-related healthcare regulations	<b>Instructions</b> What instructional skills and competencies do the instructors have? - Theory, practical experience, hands on, change, work in hospital	<b>Assessment</b> How will the learning outcomes be assessed? - Hops in the course (student, teacher, integrated system)
<b>Data in the Domain</b> What type of data is most common in the domain? - patient data, scheduling or appointment	<b>Internal Support</b> What time and AI related resources are available? What AI related data is available for the course? What support does the institution or the network provide? - heavy teachers and students have to use it while ready - learning	<b>Learning Activities</b> What learning activities will be included in the course? What instructional approach will be used? - Discussion with role models - Case studies - Live demos
<b>Implications of using AI in the Domain</b> What implications (ethical, legal, safety) does the use of AI have in the domain? - patient private data - employee patient information - support on workload medical	<b>Additional Learning Resources</b> What additional (external) material or resources could be used? - Platforms for management and administration - AI chatbot	

**Learner persona**



**Background**

- 33 years old
- Works in Healthcare Administration
- Manages patient care systems at a regional hospital
- Master's degree in Health Administration
- Education: Master's in Healthcare Administration


**Current Challenges:**

- Wants to implement AI-powered patient scheduling
- Concerned about AI ethics and patient privacy
- Needs knowledge to bridge technical and non-technical teams
- Must ensure compliance with healthcare regulations

Marcus Weber  
Healthcare Administrator

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1 AI in the Domain	2 Learning Environment	3 Course Implementation
<b>Domain</b> With which domain is the course associated? <b>IT</b>	<b>Learners and their interaction with AI</b> What existing AI knowledge and skills do the learners have? What other related skills and knowledge do the learners have? What role in the AI interaction are learners supposed to take after completing the course? - basic knowledge of AI - practical knowledge of IT-systems (programming, etc.) - able ethical & legal domain	<b>Learning Outcomes</b> What are the relevant learning outcomes of the course? - AI generated questionnaire
<b>Potential AI Use Cases</b> What are potential use cases of using AI in the domain? (1) Utilizing generative AI (2) Monitoring IT-systems	<b>Instructions</b> What instructional skills and competencies do the instructors have? - additional knowledge of Safety & security standards (API, etc.) - ethical & legal implications of AI	<b>Assessment</b> How will the learning outcomes be assessed? - AI generated questionnaire
<b>Data in the Domain</b> What type of data is most common in the domain? - data in the storage database or server - data of organization (HR, assets, log files...)	<b>Internal Support</b> What time and AI related resources are available? What AI related data is available for the course? What support does the institution or the network provide? - ACC: massive online open courses	<b>Learning Activities</b> What learning activities will be included in the course? What instructional approach will be used?
<b>Implications of using AI in the Domain</b> What implications (ethical, legal, safety) does the use of AI have in the domain? - data privacy, confidentiality, low level use of internal data	<b>Additional Learning Resources</b> What additional (external) material or resources could be used? - ACC: massive online open courses	

**Learner persona**



**Background**

- 28 years old
- Completed 3-year vocational training as IT Specialist
- Works as IT system administrator
- Strong practical IT skills, especially in networking and system integration

**Current Challenges:**

- Wants to integrate AI tools into existing IT infrastructure
- Concerned about AI security risks
- Needs knowledge about AI-specific infrastructure requirements

Curtis Wilson  
IT Systems Specialist

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Course:	Author:	Date: Version:
<b>1 AI in the Domain</b>	<b>2 Learning Environment</b>	<b>3 Course Implementation</b>
<b>Domain</b> With which domain is the course associated? <b>Quality Control</b>	<b>Learners and their Interaction with AI</b> What existing AI knowledge and skills do the learners have? What other related skills and knowledge do the learners have? What role in the AI interaction are learners supposed to take after completing the course? - private use - basic level of knowledge from user perspective - experts for quality control	<b>Learning Outcomes</b> What are the relevant learning outcomes of the course? 1) & 2) know new tools / open to use AI / apply experience to improve the process - able to cross check with practical facts and follow up with decision
<b>Potential AI Use Cases</b> What are potential use cases of using AI in the domain? - identification of failure - compare to standards - out-of-the-box-thinking (special cases)	<b>Instructors</b> What AI-related skills and competencies do the instructors have? 1) use instruct Sarah → deep AI knowledge → know to support the team → maintenance AI system 2) Sarah instructs her team → can argument benefits → aware of critical parameters to have in mind when creating data	<b>Assessment</b> How will the learning outcomes be assessed? - practical implications - improve time based tasks ----- Who will learn? - Sarah, her team, shop floor personnel, manufacturing company
<b>Data in the Domain</b> What type of data is most common in the domain? Is data in the domain abundant or scarce? - image data (pics, spectral, ultrasound) - performance indicators - measurement data - historical defect rates	<b>Internal Support</b> What time and AI-related resources are available? What AI-related data is available for the course? What support does the institution or the network provide? 1) One week of intensive training → use old data → create use case 2) include in team meeting in the morning → 2 weeks - wrap up before closing the day	<b>Learning Activities</b> What learning activities will be included in the course? What didactical approach will be taken? - individual and work - manual quality control vs. AI ↳ cross check - live use of AI tools - hands on
<b>Implications of using AI in the Domain</b> What implications (ethical, legal, social) does the use of AI have in the domain / the use case? - sensitive data on product, customer - reliable data		
<b>Additional Learning Resources</b> What additional (external) material or resources could be used? What Open Educational Resources could be helpful? - best practice / intro to AI tools - interactive material for teaching - feedback - curricula for workshops		

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### Learner persona



**Sarah Chen**  
Manufacturing Process Engineer

**Background:**

- 42 years old with 15 years of experience in manufacturing
- Supervises a team of 20 production line workers
- Has basic digital skills but limited exposure to AI
- Education: Bachelor's degree in Industrial Engineering

**Current Challenges:**

- Project to integrate AI-driven quality control systems
- Needs to support workers in adapting to new AI-assisted processes
- Concerned about workforce resistance to technological changes
- Struggles to evaluate AI vendor proposals effectively

## The AI Course Design Planning Framework

Course:

Author:

Date:

Version:

1 AI in the Domain	2 Learning Environment	3 Course Implementation
<p><b>Domain</b>                      With which domain is the course associated?  <b>Healthcare Administration</b></p> <p><b>Potential AI Use Cases</b>                      What are potential use cases of using AI in the domain?                      - AI can advise on which system to use for scheduling patient-doctor meetings.                      - Ask for the final, updated healthcare regulations.</p> <p><b>Data in the Domain</b>                      What type of data is most common in the domain?                      Is data in the domain abundant or scarce?                      - Patient data.                      - Employees data-doctors, technicians.</p> <p><b>Implications of using AI in the Domain</b>                      What implications (ethical, legal, social) does the use of AI have in the domain / the use case?                      - Patients private data                      - employ all participation                      - impact on workflow medical staff</p> <p><b>Additional Learning Resources</b>                      What additional (external) material or resources could be used?                      What Open Educational Resources could be helpful?                      - Platforms for management and administration                      - AI (chatgpt)</p>	<p><b>Learners and their Interaction with AI</b>                      What existing AI knowledge and skills do the learners have?                      What other related skills and knowledge do the learners have?                      What role in the AI interaction are learners supposed to take after completing the course?                      - How to use AI (create correct prompts)                      - Limitations on ethical use.                      - knowledge in technology implementation, adaptability, technology adaptation</p> <p><b>Instructors</b>                      What AI-related skills and competencies do the instructors have?                      - Theory, practical experience, knowledge of language, workflow in hospitals.</p> <p><b>Internal Support</b>                      What time and AI-related resources are available?                      What AI-related data is available for the course?                      What support does the institution or the network provide?                      - Training Teachers and students how to use AI while teaching-learning.</p>	<p><b>Learning Outcomes</b>                      What are the relevant learning outcomes of the course?                      - She/he can independently choose and by the platform.                      - Moderation of the integration process.                      - Managing the buying center.</p> <p><b>Assessment</b>                      How will the learning outcomes be assessed?                      - Happy with the course (student, employees, alumni).                      - Integrated system.</p> <p><b>Learning Activities</b>                      What learning activities will be included in the course?                      What didactical approach will be taken?                      - Discussions with role models                      - Case studies                      - Simulations</p>

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### Learner persona



Marcus Weber  
 Healthcare Administrator

#### Background:

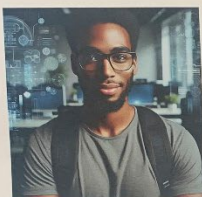
- 35 years old
- 8 years in healthcare administration
- Manages patient data systems at a regional hospital
- Moderate technical skills, some programming experience
- Education: Master's in Healthcare Administration

#### Current Challenges:

- Needs to implement AI-powered patient scheduling systems
- Concerned about AI ethics and patient privacy
- Requires knowledge to bridge technical and medical teams
- Must ensure compliance with healthcare regulations

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Course:	Author:	Date: Version:
1 AI in the Domain	2 Learning Environment	3 Course Implementation
<p><b>Domain</b> With which domain is the course associated? <b>IT</b></p> <p><b>Potential AI Use Cases</b> What are potential use cases of using AI in the domain? <b>(1) Utilizing generative AI</b> <b>(2) Monitoring IT-systems</b></p> <p><b>Data in the Domain</b> What type of data is most common in the domain? Is data in the domain abundant or scarce? <b>data of organisation (HR, assets, log files...)</b></p> <p><b>Implications of using AI in the Domain</b> What implications (ethical, legal, social) does the use of AI have in the domain / the use case? <b>data privacy, confidentiality, no illicit use of internal data</b></p> <p><b>Additional Learning Resources</b> What additional (external) material or resources could be used? What Open Educational Resources could be helpful? <b>MOOC: massive online open courses</b></p>	<p><b>Learners and their Interaction with AI</b> What existing AI knowledge and skills do the learners have? What other related skills and knowledge do the learners have? What role in the AI interaction are learners supposed to take after completing the course? <b>• basic knowledge of AI</b> <b>• practical knowledge of IT-systems (programming, etc.)</b> <b>• checks ethical &amp; legal implications of AI</b></p> <p><b>Instructors</b> What AI-related skills and competencies do the instructors have? <b>• advanced knowledge of safety &amp; security standards (API, etc.)</b> <b>• ethical &amp; legal implications of AI</b></p> <p><b>Internal Support</b> What time and AI-related resources are available? What AI-related data is available for the course? What support does the institution or the network provide?</p>	<p><b>Learning Outcomes</b> What are the relevant learning outcomes of the course?</p> <p><b>Assessment</b> How will the learning outcomes be assessed? <b>AI generated questionnaire</b> <b>😊</b></p> <p><b>Learning Activities</b> What learning activities will be included in the course? What didactical approach will be taken?</p>

### Learner persona



Curtis Myles  
IT Systems Specialist

#### Background:

- 28 years old
- Completed 3-year vocational training as IT specialist
- 5 years experience in IT system administration
- Strong practical IT skills, especially in networking and system integration

#### Current Challenges:

- Needs to integrate AI tools into existing IT infrastructure
- Uncertainty in evaluating AI security risks
- Requires knowledge about AI-specific infrastructure requirements