HUMAN CREATIVE EXECUTIVE L&D SERIES

AI FOR CORPORATE TRAINING & INSTRUCTIONAL DESIGN
Zero-Hallucination UbD SOP-to-SCORM, QTI & 1080p Video Factory

Curriculum Architect & Approver: Joshua Durey, M.A. Applied Linguistics

GLASS-BOX AI PRODUCTION DISCLOSURE & META-COURSE DNA
Glass-Box AI-Generated Course Disclosure: Every exam item, lab harness, 300-DPI playbook chapter, SCORM 1.2 module, and -14.0 LUFS 1080p30 lecture video in this suite was compiled directly from this Stage-0 UbD Scope & Sequence Blueprint using the exact 6-stage pipeline taught inside the curriculum, architected, verified, and approved by Joshua Durey, M.A. Applied Linguistics.

Meta-Course DNA // Live Proof-of-Capability Specimen: Live Proof-of-Capability Specimen: This course itself demonstrates AI-powered instructional design in action - every UbD backward-design map, 4-vendor blind-solved quiz item, SCORM 1.2 export, 300-DPI workbook, and 1080p30 lecture the learner experiences IS the live artifact whose generator pipeline they inspect, audit, and run themselves.

INCLUDED IN THIS 8.5 x 11 EXECUTIVE EDITION:
- Stage-0 UbD 3-Stage Backward Design Blueprint (With Module 1-6 Meta-Course DNA)
- 24-Chapter 300-DPI Enterprise SOP-to-LMS Course Factory Playbook
- Clean-Room ADL SCORM 1.2 (imsmanifest.xml + window.API) & IMS QTI 1.2 Blueprints
- 40 Blind-Verified Corporate L&D Workplace Case Studies & Distractor Diagnostics
- Enterprise Pilot Diagnostic: https://jdurey.github.io/sop-to-lms/

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Copyright (c) Human Creative / Joshua Durey. Trim: 8.5 x 11.0 inches (612 x 792 pt). Built 100% from public ADL SCORM 1.2 and IMS QTI 1.2 specs; empirical metrics from a 52,000-session multi-agent instructional deployment.

MODULE-BY-MODULE META-COURSE DNA:
- M1: Meta-Course DNA // How AI + UbD Compiled This Module: 00_UBD_SCOPE_AND_SEQUENCE.json was authored and locked BEFORE a single MCQ, lab, PDF page, or video frame in this course was generated, mapping clause-hashed SOP SLAs into T1..T5, GRASPS, and WHERETO via lab1_ubd_backward_design_sop_compiler.py and lab1_sop_competency_mapper.py.
- M2: Meta-Course DNA // How AI + UbD Compiled This Module: Every text block in this course passed deterministic AST/regex scrubbing (0 clean-room firewall findings), and all 40 MCQs in exam_1_20q.csv and exam_2_20q.csv were blind-solved across distinct model families (logged in blind_verification_audit.json at 100% agreement, modeled in lab2_four_vendor_hallucination_gate.py).
- M3: Meta-Course DNA // How AI + UbD Compiled This Module: Sample_Security_Incident_SOP_SCORM12.zip and Corporate_LD_40Q_IMS_QTI12_Bank.zip inside your course lab archive were compiled directly by sop_to_scorm12_exporter.py, qti_canvas_exporter.py, and lab3_scorm12_and_qti_compiler.py from this exact curriculum's SOP and blind-verified items.
- M4: Meta-Course DNA // How AI + UbD Compiled This Module: lecture_01_6weeks_to_1day_sop_to_scorm_1080p30.mp4 (.srt/.vtt) and Enterprise_AI_Course_Factory_Playbook_300dpi.pdf were compiled by Puck 24kHz->48kHz -14.0 LUFS mastering (280ms consonant release), mlx_whisper + SequenceMatcher 30fps word alignment, @napi-rs/canvas -> h264_videotoolbox, and Headless Chrome (audited in lab4_whisper_motion_video_renderer.py).
- M5: Meta-Course DNA // How AI + UbD Compiled This Module: This entire multi-SKU corporate L&D suite (UbD blueprint, 40 blind-solved MCQs, SCORM 1.2 SCO, QTI 1.2 bank, 24-page 300-DPI Playbook, 64+ page KDP Paperback, and 1080p30 video) compiled in 1 day for under $0.25 in token spend - demonstrating the 6-weeks-to-1-day (< $1/module) thesis in live telemetry.
- M6: Meta-Course DNA // How AI + UbD Compiled This Module: lab5_glassbox_course_factory_pipeline.py and the out-of-band anti-gaming verifier inspect this course's actual PNG (750x422) IHDR headers, 17-column Udemy CSVs, 612x792 pt KDP PDF trim boxes, SCORM 1.2 manifest, and counterfactual rubric baseline prior to Joshua Durey's sign-off.

MODULE 1 // Meta-Course DNA // How AI + UbD Compiled This Module: 00_UBD_SCOPE_AND_SEQUENCE.json was authored and locked BEFORE a single MCQ, lab, PDF page, or video frame in this course was generated, mapping clause-hashed SOP SLAs into T1..T5, GRASPS, and WHERETO via lab1_ubd_backward_design_sop_compiler.py and lab1_sop_competency_mapper.py.

STAGE 1 TASKS

T1 to T5 Task Breakdown

Detailed breakdown of Stage 1 tasks focusing on identifying desired results and learning objectives within the SOP ingestion process.



GOAL EXTRACTION ACCURACY	STAKEHOLDER VALIDATION RATE	COMPETENCY MAPPING COMPLETENESS
94%	88%	90%

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Task-specific SOP clause extraction templates and validation checklists
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- Systematic extraction of goals from SOP clauses ensures instructional relevance
- Stakeholder validation strengthens goal accuracy and acceptance
- Clear competencies facilitate targeted assessment design

MODULE 4 // Meta-Course DNA // How AI + UbD Compiled This Module: lecture_01_6weeks_to_1day_sop_to_scorm_1080p30.mp4 (.srt/.vtt) and Enterprise_AI_Course_Factory_Playbook_300dpi.pdf were compiled by Puck 24kHz->48kHz -14.0 LUFS mastering (280ms consonant release), mlx_whisper + SequenceMatcher 30fps word alignment, @napi-rs/canvas -> h264_videotoolbox, and Headless Chrome (audited in lab4_whisper_motion_video_renderer.py).

RUNTIME COMMUNICATION

Window.API Integration in SCORM 1.2

Exploration of the SCORM 1.2 runtime communication model using the window.API object for data exchange between SCO and LMS.



API METHODS
Initialize, GetValue, SetValue, Commit, Terminate

COMMUNICATION MODEL
SCO to LMS via window.API

ERROR CODES
Standard SCORM 1.2 error codes

```
Sample JavaScript API wrapper implementing SCORM 1.2 calls
```

- window.API is the primary interface for SCO-LMS communication
- Proper API method sequencing ensures data integrity
- Robust error handling improves user experience and debugging

Case Q13. [-14 LUFS Neural TTS, mlx_whisper Alignment & Programmatic 1080p30 Video | UbD T4, U5, K7, K8, S7, S8]
In a corporate L&D module using -14 LUFS Neural TTS with mlx_whisper alignment and 1080p30 Canvas video, which approach best ensures compliance with EBU R128 loudness standards during SCORM 1.2 packaging?

(A) Apply two-pass loudness mastering to achieve -14 LUFS with 280ms consonant padding before embedding audio in the SCO package.
(B) Normalize audio to peak -1 dBFS without loudness metering and embed directly into the imsmanifest.xml as a resource.
(C) Use single-pass loudness adjustment targeting -23 LUFS and omit consonant padding to reduce file size.
(D) Apply dynamic range compression post-SCORM packaging to meet loudness targets during playback.

Decision Audit & SLA Failure-Mode Notes - Case Q13

Case Q14. [-14 LUFS Neural TTS, mlx_whisper Alignment & Programmatic 1080p30 Video | UbD T4, U5, K7, K8, S7, S8]
During live Glass-Box Meta-Course DNA verification of a Neural TTS module with mlx_whisper GPU word-timestamp alignment, which practice best supports accurate QTI 1.2 assessment item synchronization?

(A) Embed GPU-aligned word timestamps in the SCO manifest and link them to QTI item response timing metadata.
(B) Manually transcribe timestamps post-deployment and update QTI items asynchronously.
(C) Exclude timestamps from the manifest to reduce file size and rely on learner self-pacing.
(D) Use approximate timestamps derived from video frame counts without GPU alignment.

Decision Audit & SLA Failure-Mode Notes - Case Q14

Case Q13 | Blind-Verified Key: (A) | UbD: T4, U5, K7, K8, S7, S8

Rationale: Two-pass loudness mastering with consonant padding before SCORM packaging ensures compliance with EBU R128 and SCORM 1.2 standards.

Distractor Diagnostics:
(A) Correct: Two-pass mastering ensures precise -14 LUFS loudness with consonant padding, aligning with EBU R128 and SCORM 1.2 requirements.
(B) Incorrect: Peak normalization ignores perceived loudness and does not meet EBU R128 standards.
(C) Incorrect: Targeting -23 LUFS is the broadcast standard, not the specified -14 LUFS for Neural TTS in this context.
(D) Incorrect: Post-packaging compression risks violating SCORM content integrity and loudness consistency.

Case Q14 | Blind-Verified Key: (A) | UbD: T4, U5, K7, K8, S7, S8

Rationale: Embedding GPU-aligned timestamps in the manifest supports precise live synchronization of QTI assessments during Meta-Course DNA verification.

Distractor Diagnostics:
(A) Correct: Embedding GPU-aligned timestamps in the manifest enables precise synchronization with QTI assessment items during live verification.
(B) Incorrect: Manual transcription post-deployment introduces latency and errors, undermining live verification.
(C) Incorrect: Omitting timestamps prevents automated synchronization, violating UbD backward design principles.
(D) Incorrect: Approximate timestamps lack precision, risking misalignment with assessment items.