

# Lesson Outline Matrix

## Instructions:

Determine the structure for your lesson based on all the previous steps and the referenced Doctrine. If your lesson teaches a single task or educational topic, write the action of the corresponding learning objective in the TLO. If your lesson will teach two or more tasks or educational topics, write the action statements of the corresponding learning objectives in the appropriate ELOs. You will then have to write a TLO that encompasses all ELOs. Include the domain/level and criticality standard of all objectives you include in your outline. If using ELOs, do not include a criticality standard for the TLO. NOTE: Insert all action statements in the areas marked in purple italic font.

Next, determine the instructional strategy and/or knowledge type for the lesson and ELOs if applicable (drop downs). Enter the learning steps (4 if TLO only, or 2 per ELO). Determine the domain and level of each LSA (drop down). Determine the method of instruction, media type(s), instructor to student ratio, and time of instruction for each LSA. MOI and media are drop-down menus. In the last column, describe how the lesson objectives will be assessed.

Create a lesson title and scope. Refer to the example of a scope statement.

## Lesson Title: UAS Calculations for Modern Aerial Dissemination

Scope: This one-day workshop updates traditional PSYOP aerial dissemination by incorporating sUAS methods. The lesson covers essential calculations, formulas, and planning methods required for PSYOP planners to effectively employ UAS platforms for leaflet dissemination. It progresses from basic terminology to complex dispersion pattern calculations and flight planning, culminating in practical application exercises.

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### Objective(s) and Learning Domain & Level(s)

**TLO:** Action: Calculate and apply UAS leaflet dissemination parameters to develop effective MISO delivery plans

Learning Domain - Level: Cognitive - Synthesis

Criticality: Critical for operational effectiveness of sUAS-based PSYOP dissemination missions

**Instructional Strategy/Knowledge Type:** Procedural knowledge with theoretical foundations, using a combination of direct instruction, guided practice, and practical application exercises

**What will the student learn?** Students will learn to identify key doctrinal terms, select appropriate sUAS platforms, calculate essential metrics for leaflet dissemination (descent time, drift distances, dispersion patterns), develop flight plans based on calculations, and adapt MISO product development to account for the technical constraints of sUAS delivery platforms.

### Learning Event (LS/A)

#### ELO: A

Action: Identify key doctrinal constants for UAS leaflet dissemination

Learning Domain - Level: Cognitive - Knowledge

Criticality: Essential - Required for all subsequent calculation tasks

**Instructional Strategy/Knowledge Type:** Direct instruction with memorization and recall activities

**What will the student learn?** Students will learn the essential terminology and constants required for UAS aerial dissemination in both English and Spanish, creating a bilingual foundation for multinational operations.

### Learning Event (LS/A) (2/ELO)

- LSA 1
    - Action: Define key terms related to UAS aerial dissemination
    - LSA Learning Domain and Level: Cognitive - Knowledge
    - Method of Instruction: Lecture with guided discussion
    - Media: Slides, handouts with bilingual terminology
    - Instructor to Student Ratio (I:S): 1:16
    - Time of Instruction: 25 minutes
    - Describe the learning assessments for each LSA: Knowledge check quiz with matching terms to definitions and identifying constants from doctrinal tables
  - LSA 2
    - Action: Explain the relationships between key constants and their operational significance
    - LSA Learning Domain and Level: Cognitive - Comprehension
    - Method of Instruction: Interactive discussion with examples
    - Media: Slides with visual representations, doctrinal tables
    - Instructor to Student Ratio (I:S): 1:16
    - Time of Instruction: 25 minutes
    - Describe the learning assessments for each LSA: Oral questioning about the significance of key constants and how they affect operational planning
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### ELO: B

Action: Select appropriate sUAS platform for leaflet dissemination operations

Learning Domain - Level: Cognitive - Analysis

Criticality: Critical - Platform selection directly impacts mission success

**Instructional Strategy/Knowledge Type:** Case-based learning with comparative analysis

**What will the student learn?** Students will learn to evaluate and select appropriate sUAS platforms based on mission requirements, operational constraints, and leaflet dissemination needs.

### Learning Event (LS/A) (2/ELO)

- LSA 1
    - Action: Analyze platform capabilities and limitations
    - LSA Learning Domain and Level: Cognitive - Analysis
    - Method of Instruction: Case studies and guided discussion
    - Media: Platform specifications, comparison charts, mission scenarios
    - Instructor to Student Ratio (I:S): 1:16
    - Time of Instruction: 25 minutes
    - Describe the learning assessments for each LSA: Platform selection exercise with justification of choices based on mission requirements
  - LSA 2
    - Action: Evaluate operational constraints and security considerations
    - LSA Learning Domain and Level: Cognitive - Analysis
    - Method of Instruction: Problem-based learning
    - Media: Operational scenarios, constraint matrices, security checklists
    - Instructor to Student Ratio (I:S): 1:16
    - Time of Instruction: 25 minutes
    - Describe the learning assessments for each LSA: Completion of constraint analysis worksheet with proper consideration of security factors
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**ELO: C**

Action: Calculate required metrics for leaflet descent and drift parameters

Learning Domain - Level: Cognitive - Application

Criticality: Critical - Forms the foundation for all targeting calculations

**Instructional Strategy/Knowledge Type:** Procedural knowledge with guided practice and worked examples

**What will the student learn?** Students will learn to perform fundamental calculations for descent time, forward drift, and lateral wind drift using both doctrinal tables and manual formulas.

**Learning Event (LS/A) (2/ELO)**

- LSA 1
    - Action: Calculate descent time and forward drift for leaflet drops
    - LSA Learning Domain and Level: Cognitive - Application
    - Method of Instruction: Demonstration and guided practice
    - Media: Worksheets, calculators, doctrinal tables D-1 and D-2
    - Instructor to Student Ratio (I:S): 1:16
    - Time of Instruction: 25 minutes
    - Describe the learning assessments for each LSA: Completion of calculation worksheets with at least 90% accuracy using both tables and formulas
  - LSA 2
    - Action: Calculate lateral wind drift for leaflet drops
    - LSA Learning Domain and Level: Cognitive - Application
    - Method of Instruction: Demonstration and guided practice
    - Media: Worksheets, calculators, doctrinal table D-3
    - Instructor to Student Ratio (I:S): 1:16
    - Time of Instruction: 25 minutes
    - Describe the learning assessments for each LSA: Completion of calculation worksheets with varying wind conditions with at least 90% accuracy
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**ELO: D**

Action: Calculate compound drift metrics for leaflet dispersion patterns

Learning Domain - Level: Cognitive - Analysis

Criticality: Critical - Defines the actual coverage area for psychological operations

**Instructional Strategy/Knowledge Type:** Procedural knowledge with problem-solving elements and guided practice

**What will the student learn?** Students will learn to calculate total drift distance, major axis, minor axis, and overall dispersion patterns using vector methodology and spread factors.

**Learning Event (LS/A) (2/ELO)**

- LSA 1
  - Action: Calculate total drift distance using vector sum methodology
  - LSA Learning Domain and Level: Cognitive - Analysis
  - Method of Instruction: Demonstration and guided practice
  - Media: Worksheets, calculators, doctrinal table D-4
  - Instructor to Student Ratio (I:S): 1:16

- Time of Instruction: 25 minutes
  - Describe the learning assessments for each LSA: Completion of vector calculation worksheets with at least 85% accuracy
  - LSA 2
    - Action: Calculate major and minor axes of leaflet dispersion ellipses
    - LSA Learning Domain and Level: Cognitive - Analysis
    - Method of Instruction: Guided practice with worked examples
    - Media: Worksheets, calculators, visualization tools
    - Instructor to Student Ratio (I:S): 1:16
    - Time of Instruction: 25 minutes
    - Describe the learning assessments for each LSA: Completion of dispersion ellipse worksheets with application of correct spread factors with at least 85% accuracy
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#### **ELO: E**

Action: Calculate leaflet density metrics for operational effectiveness

Learning Domain - Level: Cognitive - Analysis/Evaluation

Criticality: Critical - Determines if the planned dissemination will achieve desired psychological effect

**Instructional Strategy/Knowledge Type:** Procedural knowledge with conceptual understanding elements

**What will the student learn?** Students will learn to calculate the area coverage of dispersion patterns and determine the resulting leaflet density to ensure sufficient coverage for psychological impact.

#### **Learning Event (LS/A) (2/ELO)**

- LSA 1
    - Action: Calculate the area of leaflet dispersion ellipses
    - LSA Learning Domain and Level: Cognitive - Application
    - Method of Instruction: Demonstration and guided practice
    - Media: Worksheets, calculators, doctrinal table D-5
    - Instructor to Student Ratio (I:S): 1:16
    - Time of Instruction: 25 minutes
    - Describe the learning assessments for each LSA: Completion of area calculation worksheets with at least 85% accuracy
  - LSA 2
    - Action: Determine required leaflet quantities based on target area and desired density
    - LSA Learning Domain and Level: Cognitive - Analysis/Evaluation
    - Method of Instruction: Problem-based learning with instructor guidance
    - Media: Worksheets, calculators, case studies
    - Instructor to Student Ratio (I:S): 1:16
    - Time of Instruction: 25 minutes
    - Describe the learning assessments for each LSA: Completion of a leaflet quantity determination exercise that meets psychological operation requirements
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#### **ELO: F**

Action: Develop an integrated flight plan for SUAS leaflet dissemination operations

Learning Domain - Level: Cognitive - Synthesis

Criticality: Critical - Final operational product that enables mission execution

**Instructional Strategy/Knowledge Type:** Case-based problem solving with application of previously learned calculations

**What will the student learn?** Students will learn to translate their technical calculations into actionable flight parameters including release points, flight paths, and mission profiles.

**Learning Event (LS/A) (2/ELO)**

- LSA 1
    - Action: Determine optimal release points based on target location and calculated drift
    - LSA Learning Domain and Level: Cognitive - Synthesis
    - Method of Instruction: Problem-based learning with worked examples
    - Media: Maps, plotting tools, worksheets
    - Instructor to Student Ratio (I:S): 1:16
    - Time of Instruction: 25 minutes
    - Describe the learning assessments for each LSA: Accurate plotting of release points on operational maps with proper consideration of all drift variables
  - LSA 2
    - Action: Create complete flight plans incorporating all technical parameters
    - LSA Learning Domain and Level: Cognitive - Synthesis
    - Method of Instruction: Guided project work
    - Media: Flight plan templates, maps, calculation results
    - Instructor to Student Ratio (I:S): 1:16
    - Time of Instruction: 25 minutes
    - Describe the learning assessments for each LSA: Development of a complete flight plan document that incorporates all critical parameters
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**ELO: G**

Action: Adapt MISO product design for SUAS aerial dissemination

Learning Domain - Level: Cognitive - Evaluation/Synthesis

Criticality: Critical - Bridges the gap between technical calculations and psychological impacts

**Instructional Strategy/Knowledge Type:** Applied conceptual knowledge with case studies

**What will the student learn?** Students will learn to adapt standard PSYOP products to account for the technical constraints of SUAS dissemination while maintaining psychological effectiveness.

**Learning Event (LS/A) (2/ELO)**

- LSA 1
  - Action: Evaluate MISO products for suitability with SUAS delivery
  - LSA Learning Domain and Level: Cognitive - Evaluation
  - Method of Instruction: Case studies and guided discussion
  - Media: Sample MISO products, evaluation criteria, previous calculation results
  - Instructor to Student Ratio (I:S): 1:16
  - Time of Instruction: 25 minutes
  - Describe the learning assessments for each LSA: Analysis of sample MISO products with justified recommendations for adaptation
- LSA 2
  - Action: Modify MISO products to optimize for SUAS delivery constraints
  - LSA Learning Domain and Level: Cognitive - Synthesis
  - Method of Instruction: Guided practice with feedback

- Media: Product templates, design guidelines, SUAS limitations data
  - Instructor to Student Ratio (I:S): 1:16
  - Time of Instruction: 25 minutes
  - Describe the learning assessments for each LSA: Creation of adapted MISO product design specifications with rationale for modifications
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## **ELO: H**

Action: Execute practical application exercises to reinforce UAS calculation skills

Learning Domain - Level: Cognitive - Application/Analysis

Criticality: Critical - Builds speed and accuracy needed for time-sensitive operations

**Instructional Strategy/Knowledge Type:** Comprehensive applied practice with realistic scenarios

**What will the student learn?** Students will develop calculation fluency and confidence by applying all learned skills to complex, realistic scenarios under time constraints.

## **Learning Event (LS/A) (2/ELO)**

- LSA 1
  - Action: Apply calculation methods to complex operational scenarios (ALIBEIES Part 1)
  - LSA Learning Domain and Level: Cognitive - Application/Analysis
  - Method of Instruction: Practical exercises in teams
  - Media: Scenario packets, calculation tools, maps
  - Instructor to Student Ratio (I:S): 1:16
  - Time of Instruction: 50 minutes
  - Describe the learning assessments for each LSA: Completion of a complex calculation set with at least 80% accuracy under time constraints
- LSA 2
  - Action: Develop complete dissemination plans for realistic missions (ALIBEIES Part 2)
  - LSA Learning Domain and Level: Cognitive - Synthesis/Evaluation
  - Method of Instruction: Team-based project work with instructor facilitation
  - Media: Planning templates, scenario materials, calculation results
  - Instructor to Student Ratio (I:S): 1:16
  - Time of Instruction: 60 minutes
  - Describe the learning assessments for each LSA: Development and presentation of a complete mission plan that properly incorporates all technical calculations and MISO considerations