

JTLS 120 - JTLS Advanced Modeling

Valkyrie Enterprises LLC

Date/Time	Topic
Monday	
0900 - 1000	Selected Topic 1
1000 - 1100	Selected Topic 2
1100 - 1200	Selected Topic 3
1200 - 1300	Lunch
1300 - 1400	Selected Topic 4
1400 - 1500	Selected Topic 5
1500 - 1600	Selected Topic 6
Tuesday	
0900 - 1000	Selected Topic 7
1000 - 1100	Selected Topic 8
1100 - 1200	Selected Topic 9
1200 - 1300	Lunch
1300 - 1400	Selected Topic 10
1400 - 1500	Selected Topic 11
1500 - 1600	Selected Topic 12
Wednesday	
0900 - 1000	Selected Topic 13
1000 - 1100	Selected Topic 14
1100 - 1200	Selected Topic 15
1200 - 1300	Lunch
1300 - 1400	Selected Topic 16
1400 - 1500	Selected Topic 17
1500 - 1600	Selected Topic 18
Thursday	
0900 - 1000	Selected Topic 19
1000 - 1100	Selected Topic 20
1100 - 1200	Selected Topic 21

Date/Time	Topic
1200 - 1300	Lunch
1300 - 1400	Selected Topic 22
1400 - 1500	Selected Topic 23
1500 - 1600	Selected Topic 24
Friday	
0900 - 1000	Selected Topic 25
1000 - 1100	Selected Topic 26
1100 - 1200	Final Questions

The following table lists the advanced modeling topics that currently exist. Each topic takes approximately 1 hour to discuss in detail and consists of one or more numerical examples explaining exactly how the model operates.

Topic Number	Topic Description
1	Assigning Close Air Support Missions
2	Prioritizing Targets and Air Ground Attack Target Selection
3	Multi-Target Mission and Its Constraints
4	Determining When Fuel Is Needed / Refuel Location Selection
5	Armed Recce Target Selection
6	Air Mission Patrol Polygon Path Selection
7	Integrated Air Defense
8	Submarine Detection
9	Naval Mine Warfare
10	No Fly Zone Representation
11	Rules of Engagement
12	Operations Area Rules of Engagement
13	National Boundaries
14	Interceptor Assignment and Interceptor Restrictions
15	Interceptor Flight Path
16	Air Mission Runaway Logic
17	Manual Pair and Breakoff Rules
18	Aircraft Maintenance

Topic Number	Topic Description
19	Transfer Mission and Civilian Aircraft Flights
20	Electronic Radar Jamming
21	Psychological Operations
22	Communications Jamming
23	Air Mission Detection
24	Link-16 Representation
25	Directed Search Areas (DSAs)
26	Basic Encyclopedia (BE) DSA Rules
27	Joint Desired Point of Impact (JDPI) Representation
28	Airlift / Airdrop of Unit Logic
29	Aircraft Capacity Representation
30	Delivery Item Mission Logic
31	Landing Logic
32	Automatic Identification Friend or Foe (IFF) Assignment
33	Takeoff Logic
34	Ground Minefield Representation
35	Air Mission Package
36	Location Selection For Support Missions
37	Post-Strike Recce Representation
38	Use of Runway By Friendly Sides
39	Types of Ground Moves
40	Automatic Ground Unit Posture Changes
41	Transporting A Unit
42	Special Attack Rules
43	Special Delay Rules
44	Selecting a Withdraw Route
45	Detailed Lanchester Attrition Example (This is a three hour lecture)
46	Artillery Selection
47	Counter-Fire Representation
48	Repairing A Target
49	Methods To Destroy A Target

Topic Number	Topic Description
50	Firing An SSM / Launcher Setup Representation
51	Unit Detachment
52	Unit Attachment
53	Emission Control Representation
54	Special Operation Force (SOF) Alert
55	Wounded in Action / Killed In Action / Evacuation
56	High Resolution Unit (HRU) to HRU Combat
57	Aggregate Resolution Unit (ARU) to HRU Combat
58	HRU Special Capabilities: Translation, Call In CAS, Training, Traffic
59	HRU Ambush Capability
60	HRU Patrol Capability
61	HRU Raid Capability
62	HRU Extraction Rules
63	HRU Overwatch Capability
64	Generate Traffic Logic
65	Forces Changing Sides
66	Resupply of Air Defense Sites
67	Unit Echelon and Unit Size
68	Altering Terrain Rules / Updating WHIP Of Terrain Changes
69	Nuclear and Chemical Contamination Attrition
70	Unit Radius
71	Direct Damage To Ground Units
72	Blast Damage To Ground Units
73	Naval Unit Damage Representation
74	Naval Unit Sinking Representation
75	Abandon Ship Representation
76	Unit Reporting Player
77	Weather Representation
78	Impact of Side Relationship
79	Ground Unit Combat Power Orientation
80	Command Authority Rules

Topic Number	Topic Description
81	Submarine Battery Consumption
82	Submarine Battery Recharging
83	Naval Unit Resupply Rules
84	Ground Unit Background Consumption
85	Ground Unit Movement Consumption
86	Naval Unit Movement Consumption
87	Air Mission Fuel Consumption
88	Loading Using Materiel Handling Equipment (MHE)
89	Loading Using Elementary Loading Facilities (ELFs)
90	Automatic Transportation Mode Selection
91	Detecting and Interdicting Supply Convoys
92	Implicit Resupply Representation
93	Air Mission Launch Capable Test
94	Supply Cache Representation
95	Runway Cuts and Repairs
96	Long Bridge Representation
97	Aircraft Shelter Priority Logic
98	Six Holding Target Types
99	Mandatory Transfer
100	Pipeline Operations
101	Time Phased Force Deployment Data (TPFDD) and Serials
102	Port Operations
103	Strategic Login
104	Strategic Airlift Missions
105	Pass Unit/Target Intelligence
106	Unidentified Objects and Fusion
107	Unobserved Objects and Fusion
108	Coalition Formation Representation
109	Split Formation Rules
110	Embarked Unit Representation
111	Crossdecking

Topic Number	Topic Description
112	Amphibious Pickup and Assault Logic
113	Naval Execution Plans
114	Naval Shadow Logic
115	Submarine Depth Representation
116	Fire Artillery Order Specifics
117	Hypersonic Weapon Flight Profile
118	Leaflet Representation Including Blow-away Logic
119	Order and Message Delay Algorithms
120	Squadron Surge Capability
121	Automatic Cancellation of Delayed Missions
122	Background Combat System Failure
123	Covert HRU Detection
124	Damage Sayings
125	Minefield Deactivation
126	External Events
127	Intelligence Collection Levels
128	Order Interception
129	National Asset Overhead Detection
130	Theater Ballistic Missile Movement
131	Theater Ballistic Missile Detection Reporting Logic
132	Blue Force Tracker Representation
133	Battle Damage Areas
134	Sunrise and Sunset
135	Game Synchronization Algorithm
136	Catastrophic Kills
137	Rail Route Optimization
138	Random Integer Computation
139	TBM Impact Area Computation
140	Supplies Have Arrived Algorithm
141	Available As Supplies and Available For Issue
142	Disease Representation

Topic Number	Topic Description
143	Giving Supplies Away and Dumping Supplies
144	Backorder Representation
145	Issue and Balance of Combat Systems
146	Assembling Rail and Barge Assets
147	Calculating Days of Supply
148	Computation of Unit Strength
149	Ground Movement Time Computation
150	Air Mission Selecting Divert Location / Crash Landing.
151	C4I Automatic Update Process
152	Satellite Communications
153	Model Generated NATO Reports
154	Push Supply Option
155	Satellite Maneuvering
156	Report Jamming
157	Ship Damage States
158	HRU Reports And Compromise
159	Unit Tactical Intel Reports
160	Agility Type And Barrier Type Representation
161	Air Defense Site Weapon Selection Algorithm
162	Aircraft Vertical or Short Take Of Landing (V/STOL) Representation
163	UAV Control Mechanisms
164	Air Mission Self Defense Weapon Representation And Rules
165	Satellite Weapon Firing And Regeneration
166	HRU Allowable Speed Computation
167	Representation Of Unmanned Surface and Subsurface Vehicles
168	Air Mission Changing Mission Type Logic
169	Establishing Starting Damage States
170	Starting Weapon Representation
171	ELINT Representation
172	Weapon Guidance Jamming
173	Units Of Measure (UOM)

Topic Number	Topic Description
174	Naval Automatic Firing
175	Supply Requisitioning Process