

AO Trauma Course—Basic Principles of Fracture Management

Aug 26 (Wed) [Day 1 - Basic]

Time	Activity	
8:30	9:00	Registration
9:00	9:10	Welcome and introduction
		Module 1: Introductory lectures
9:10	9:25	The AO world—from history to lifelong learning
9:25	9:40	The (soft-tissue) injury—a high priority consideration
9:40	10:00	Bone healing and the effect of patient factors and injury mechanism on fracture management
10:00	10:10	Session discussion
10:10	10:30	GROUP PHOTO & COFFEE BREAK
		Module 2: General Principles
10:30	10:45	Absolute stability: biomechanics, techniques and fracture healing
10:45	11:00	Relative stability: biomechanics, techniques and fracture healing
11:00	11:15	The use of plates in fracture fixation
11:15	11:30	The 2018 AO/OTA Fracture and Dislocation Classification Compendium
11:30	11:45	Principles of external fixation
11:45	11:55	Session discussion
11:55	12:55	LUNCH BREAK
12:55	14:15	Practical exercise 1 (Group 1, 2, 3) 1. Internal fixation with screws and plates—absolute stability 2. The principle of the internal fixator using LCP - relative stability
12:55	14:15	Small group discussion 1 (Group 4, 5, 6) Discussion on general principles, classification, concepts of stability, their influence on bone healing, and how to apply implants to achieve appropriate stability
14:15	14:35	COFFEE BREAK
14:35	15:55	Practical exercise 1 (Group 1, 2, 3) 1. Internal fixation with screws and plates—absolute stability 2. The principle of the internal fixator using LCP - relative stability
14:35	15:55	Small group discussion 1 (Group 4, 5, 6) Discussion on general principles, classification, concepts of stability, their influence on bone healing, and how to apply implants to achieve appropriate stability
15:55	16:00	Move to main lecture room
		Module 3: Treatment of diaphyseal fractures
16:00	16:20	Principles of diaphyseal fracture management—what is important in treating these fractures?
16:20	16:40	Principles of articular fractures—how do they differ from diaphyseal fractures?
16:40	16:50	Session discussion
16:50	16:55	Move to skills lab room
16:55	18:45	AO Skills Lab A. Torque measurement of bone screws (10) B. Soft-tissue penetration during drilling (10) C. Heat generation during drilling (10) D. Mechanics of bone fractures (10) E. Techniques of reduction, part 1 (10) 10 mins break F. Techniques of reduction, part 2 (10) G. Mechanics of intramedullary fixation (10) H. Mechanics of plate fixation (10) J. Fracture healing and plate fixation (10) K. Damaged implant removal (10)
18:45		End of Day 1

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Aug 27 (Thu) [Day 2 - Basic]

Time		Activity
8:00	8:40	Practical exercise 2 (Group 1, 2, 3) Application of a modular large external fixator (tibia modular external fixator)
8:00	8:40	Small group discussion 2 (Group 4, 5, 6) Management principles for the treatment of diaphyseal fractures
8:40	8:55	COFFEE BREAK
8:55	9:35	Practical exercise 2 (Group 4, 5, 6) Application of a modular large external fixator (tibia modular external fixator)
8:55	9:35	Small group discussion 2 (Group 1, 2, 3) Management principles for the treatment of diaphyseal fractures
9:35	9:40	Move to lecture room
		Module 4: Treatment of articular fractures (I)
9:40	9:55	Tension band principles and cerclage wiring
9:55	10:10	Distal radial fractures—which to fix? how to fix?
10:10	10:25	Ankle fractures—a systematic approach for their fixation
10:25	10:35	Session discussion
10:35	10:40	Move to break out sessions
10:40	11:10	Practical exercise 3 (Group 1, 2, 3) Cerclage compression wiring of the olecranon
11:10	12:00	Practical exercise 4 (Group 1, 2, 3) Management of a type 44C malleolar fracture
10:40	12:00	Small group discussion 3 (Group 4, 5, 6) Management principles for the treatment of diaphyseal fractures II
12:00	12:50	LUNCH BREAK
12:50	13:20	Practical exercise 3 (Group 4, 5, 6) Cerclage compression wiring of the olecranon
13:20	14:10	Practical exercise 4 (Group 4, 5, 6) Management of a type 44C malleolar fracture
12:50	14:10	Small group discussion 3 (Group 1, 2, 3) Management principles for the treatment of diaphyseal fractures II
14:10	14:15	Move to lecture room
		Module 5: Preoperative planning and forearm fractures
14:15	14:30	Forearm fractures need understanding of principles for diaphyseal and articular fractures
14:30	15:30	Preoperative planning—“plan your forearm operation” Templating exercise (in lecture room)
15:30	15:35	Move to break out sessions
15:35	16:35	Practical exercise 5 (Group 1, 2, 3) Operate your plan—fixation of a 22-C1 forearm fracture using the LCP 3.5 (8 and 11 holes)
15:35	16:35	Small group discussion 4 (Group 4, 5, 6) Management principles for the treatment of articular fractures I
16:35	16:50	COFFEE BREAK
16:50	17:50	Practical exercise 5 (Group 4, 5, 6) Operate your plan—fixation of a 22-C1 forearm fracture using the LCP 3.5 (8 and 11 holes)
16:50	17:50	Small group discussion 4 (Group 1, 2, 3) Management principles for the treatment of articular fractures I
17:50	17:55	Move to main lecture room
		Module 6: Treatment of articular fractures (II)
17:55	18:10	Femoral neck fractures
18:10	18:25	Trochanteric fractures
18:25	18:40	Distal femoral fractures—management principles
18:40	18:55	Introduction to tibial plateau fractures
18:55	19:05	Session discussion
19:05		End of Day 2

AO Trauma Course—Basic Principles of Fracture Management

Aug 28 (Fri) [Day 3 - Basic]

Time		Activity
		Module 7: Emergency management and minimally invasive surgery
8:15	8:25	Radiation in the operating room—appropriate use and hazards
8:25	8:40	Treatment algorithms for the polytrauma patient
8:40	8:55	Emergency management of pelvic fractures—a critical skill can save lives
8:55	9:05	Session discussion
9:05	9:10	Move to breakout session
9:10	10:05	Practical exercise 6 (Group 1, 2, 3) Reamed intramedullary nailing of the tibia using the TN-Advanced tibial nailing system (TN-A)
9:10	10:05	Small group discussion 5 (Group 4, 5, 6) Management principles for the treatment of articular fractures II
10:05	10:20	COFFEE BREAK
10:20	11:20	Practical exercise 6 (Group 4, 5, 6) Reamed intramedullary nailing of the tibia using the TN-Advanced tibial nailing system (TN-A)
10:20	11:20	Small group discussion 5 (Group 1, 2, 3) Management principles for the treatment of articular fractures II
11:20	11:25	Move to lecture room
		Module 8. Special issues and problems (I)
11:25	11:40	Management of open fractures
11:40	11:55	Fracture-related infection—how to prevent, diagnose, and manage infections
11:55	12:10	Delayed healing—causes and treatment principles
12:10	12:20	Session discussion
12:20	13:10	Lunch break
13:10	14:10	Practical exercise 7 (Group 1, 2, 3) Intramedullary fixation of a trochanteric fracture using the TFN-Advanced proximal femoral nailing system (TFNA)
13:10	14:10	Small group discussion 4 (Group 4, 5, 6) Final case discussion (polytrauma, complications, special fractures, eg, geriatric fractures, osteoporosis, periprosthetic fractures)
14:10	15:10	Practical exercise 7 (Group 4, 5, 6) Intramedullary fixation of a trochanteric fracture using the TFN-Advanced proximal femoral nailing system (TFNA)
14:10	15:10	Small group discussion 4 (Group 1, 2, 3) Final case discussion (polytrauma, complications, special fractures, eg, geriatric fractures, osteoporosis, periprosthetic fractures)
15:10	15:15	Move to lecture room
		Module 9: Special issues and problems (II)
15:15	15:30	Fixation principles in osteoporotic bone—the geriatric patient
15:30	15:40	Implant removal—why, when and how?
15:40	15:55	Violation of principles
15:55	16:05	Course evaluation & closing remarks
16:05		End of the course