



EESTI LENNUAKADEEMIA

## Õppematerjalide ajakohasuse protokoll 2023/2024 õppeaasta

Õppematerjal on vastavuses Eesti Lennuakadeemia õppeprogrammile (MTOE 4.2.0, 4.2.1, 4.2.2, 4.2.3), Euroopa Komisjoni regulatsiooni Osa-66 liitega I.

**Mooduli nr:** Moodul 6

**Õppematerjali nimetus:** INTERNATIONAL CENTRE FOR AEROSPACE TRAINING (ICAT)  
MODULE 6- MATERIALS AND HARDWARE

**Lisainfo:** International Centre for Aerospace Training (ICAT) paberkandjal ja e-raamatuna  
(A, B1, B2 kategooria)

**Õppematerjali pealkiri:** INTERNATIONAL CENTRE FOR AEROSPACE TRAINING (ICAT)  
MODULE 6 - MATERIALS AND HARDWARE

**Revisjoni number:** 1

**Kasutusperiood:** september 2023 – september 2024

Heaks kiidetud veebikeskkond distantõppe  
läbiviimiseks

Zoom (<https://zoom.us/>)

Google Classroom ([classroom.google.com](https://classroom.google.com))

Protokolli koostamise kuupäev: 02.08.2023

MTO koolitusjuht: Madis Parv  
(allkirjastatud digitaalselt)

## ÕPPEMATERJALI VASTAVUSHINDAMISE KONTROLL-LEHT

Mooduli nr. ja nimetus: Module 6 Materials and hardware	Tase			Õppematerjali vastavus Osa-66 Lisa III mooduli programmile
	A	B1	B2	
<b>6.1 Aircraft Materials — Ferrous</b>  <i>(a) Characteristics, properties and identification of common alloy steels used in aircraft; Heat treatment and application of alloy steels.</i>  <i>(b) Testing of ferrous materials for hardness, tensile strength, fatigue strength and impact resistance.</i>	1  -	2  1	1  1	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.2 Aircraft Materials — Non-Ferrous</b>  <i>(a) Characteristics, properties and identification of common non-ferrous materials used in aircraft; Heat treatment and application of non-ferrous materials;</i>  <i>(b) Testing of non-ferrous material for hardness, tensile strength, fatigue strength and impact resistance.</i>	1  -	2  1	1  1	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.3 Aircraft Materials — Composite and Non-Metallic</b>  <b>6.3.1 Composite and non-metallic other than wood and fabric</b>  <i>(a) Characteristics, properties and identification of common composite and non-metallic materials, other than wood, used in aircraft; Sealant and bonding agents;</i>  <i>(b) The detection of defects/deterioration in composite and non-metallic material; Repair of composite and non-metallic material.</i>	1  1	2  2	2  -	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.3.2 Wooden structures</b>  <i>Construction methods of wooden airframe structures; Characteristics, properties and types of wood and glue used in aeroplanes; Preservation and maintenance of wooden structure; Types of defects in wood material and wooden structures; The detection of defects in wooden structure; Repair of wooden structure.</i>	1	2	-	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.3.3 Fabric covering</b>  <i>Characteristics, properties and types of fabrics used in aeroplanes; Inspections methods for fabric; Types of defects in fabric; Repair of fabric covering.</i>	1	2	-	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<i>(a) Chemical fundamentals; Formation by, galvanic action process, microbiological, stress;</i>  <i>(b) Types of corrosion and their identification;</i>	1  2	1  3	1  2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta

<i>Causes of corrosion; Material types, susceptibility to corrosion.</i>				
<b>6.5 Fasteners</b>  <b>6.5.1 Screw threads</b>  <i>Screw nomenclature; Thread forms, dimensions and tolerances for standard threads used in aircraft; Measuring screw threads</i>	2	2	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.5.2 Bolts, studs and screws</b>  <i>Bolt types: specification, identification and marking of aircraft bolts, international standards; Nuts: self locking, anchor, standard types; Machine screws: aircraft specifications; Studs: types and uses, insertion and removal; Self tapping screws, dowels.</i>	2	2	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.5.3 Locking devices</b>  <i>Tab and spring washers, locking plates, split pins, pal-nuts, wire locking, quick release fasteners, keys, circlips, cotter pins.</i>	2	2	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.5.4 Aircraft rivets</b>  <i>Types of solid and blind rivets: specifications and identification, heat treatment.</i>	1	2	1	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.6 Pipes and Unions</b>  <i>(a) Identification of, and types of rigid and flexible pipes and their connectors used in aircraft;  (b) Standard unions for aircraft hydraulic, fuel, oil, pneumatic and air system pipes.</i>	2 2	2 2	2 1	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.7 Springs</b>  <i>Types of springs, materials, characteristics and applications.</i>	-	2	1	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.8 Bearings</b>  <i>Purpose of bearings, loads, material, construction; Types of bearings and their application.</i>	1	2	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.9 Transmissions</b>  <i>Gear types and their application; Gear ratios, reduction and multiplication gear systems, driven and driving gears, idler gears, mesh patterns; Belts and pulleys, chains and sprockets.</i>	1	2	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.10 Control Cables</b>  <i>Types of cables; End fittings, turnbuckles and compensation devices; Pulleys and cable system components; Bowden cables; Aircraft flexible control systems.</i>	1	2	1	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta
<b>6.11 Electrical Cables and Connectors</b>  <i>Cable types, construction and characteristics; High tension and co-axial cables; Crimping;</i>	1	2	2	<input checked="" type="checkbox"/> Kontrollitud, vastab <input type="checkbox"/> Kontrollitud, ei vasta

Connector types, pins, plugs, sockets, insulators, current and voltage rating, coupling, identification codes.				
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**OTSUS:**

Õppematerjal **vastab** kehtiva määruse Osa-66 Lisa III I liite mooduli programmile.

Õppematerjali vastavuse kontrollis ja kinnitas:

MTO koolitusjuht:                Madis Parv  
     /allkirjastatud digitaalselt/

Kuupäev: 02.08.2023