

EUROPEAN INVESTMENT CASTERS' FEDERATION



## INTERNATIONAL INVESTMENT CASTING EICF EDUCATION COURSE



**BRNO UNIVERSITY OF TECHNOLOGY**

<https://www.fme.vutbr.cz/en/>

**Department of Foundry Engineering**

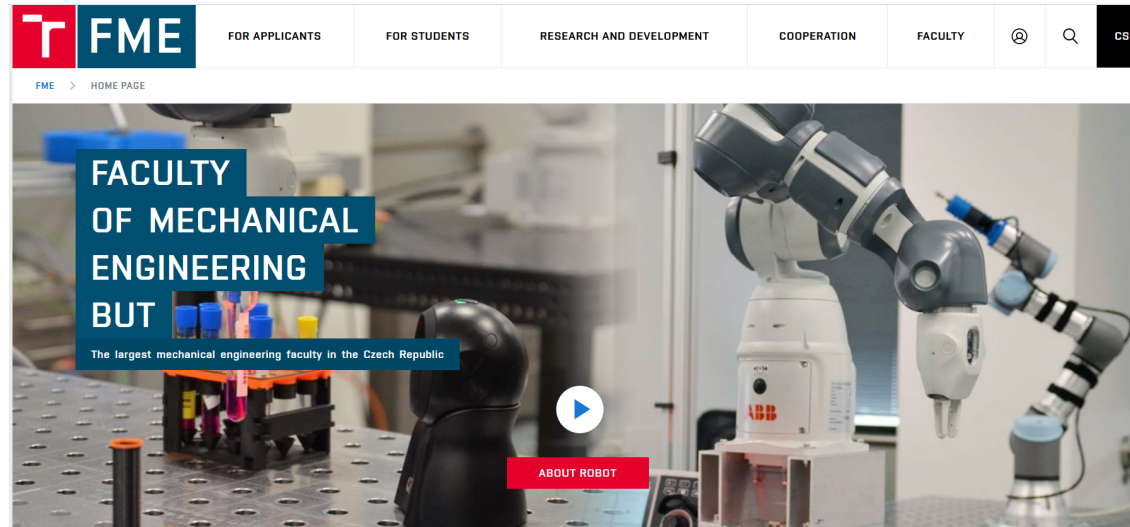
Technická 2869/2

Brno

CZECH REPUBLIC

<https://goo.gl/maps/HX7wbKdf9zTcGFbJ6>

# EUROPEAN INVESTMENT CASTERS' FEDERATION



**31.8 – 6.9. 2025**

## EUROPEAN INVESTMENT CASTERS' FEDERATION



### SCOPE OF THE COURSE

Brno University of Technology, in collaboration with the European Investment casters' federation (EICF), is organizing an educational course that is oriented towards the relation of technology and materials theories to industrial practice. **This one-week course held in English is designed for postgraduate bachelors and engineers and workers from industry and R&D who wish to improve their knowledge in the field of investment casting technology.** The course is organized with experienced lecturers and specialists in IC technology with the support of industrial partners. The course combines both educational lectures and practical exercises, and the program is extended by excursions to production plants. After passing the certification test, each participant will receive an EICF certificate of course completion.

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## COURSE PROGRAMME

Day	Time	Topic	Lecturer/C
Sunday 31.8. 2025	16:30 17:00 - 19:00 19:00 – 20:00	The arrival of participants by 4 PM at Hotel Departure for team building Team building – bowling tournament Dinner	BUT (Brno University of Technology)
Monday 1.9. 2025	8:00 - 9:15	<b>Morning session of lectures (8:00-12:00)</b> <ul style="list-style-type: none"> <li>Introduction to Investment casting - the basics of the process</li> </ul>	BUT
	9:15 – 10:15	<ul style="list-style-type: none"> <li>Casting design optimization (topology optimization, generative design)</li> </ul>	BUT
	<b>10:15 - 10:30</b>	<b>Coffee break</b>	
	10:30 – 12:00	<ul style="list-style-type: none"> <li>Computer process modelling – simulation of IC processes in ProCAST SW</li> </ul>	ESI GROUP
	<b>12:00 - 12:45</b>	<b>Lunch</b>	
		<b>Afternoon session – lectures + LABs (13:00-17:30)</b>	
	13:00 – 14:00	<ul style="list-style-type: none"> <li>IC waxes overview</li> </ul>	BUT + BLAYSON
	14:00 – 15:30	<ul style="list-style-type: none"> <li>Wax testing methods</li> </ul>	REMET
	15:45 – 18:00	<ul style="list-style-type: none"> <li>Tree assembly practice</li> </ul>	BUT
<b>18:30</b>	<b>Dinner</b>		

EUROPEAN INVESTMENT CASTERS' FEDERATION



Tuesday 2.9. 2025	9:00-12:00	<b>Morning session of lectures (8:00-12:00)</b> <ul style="list-style-type: none"> <li>• Gating systems &amp; Tooling</li> <li>• Wax + core injection</li> <li>• Ceramic cores and filters</li> </ul>	LANIK
	<b>12:00 - 12:30</b>	<b>Lunch</b>	
	<b>12:30 – 14:00</b>	Excursion at LANIK company	LANIK
	14:00-14:30	Transfer from LANIK to MCAE	
	14:30-17:30	<b>Afternoon session – LABs (14:30-17:30)</b> <ul style="list-style-type: none"> <li>• 3D printing methods</li> <li>• Wax Pattern creation (silicon mould) + 3D printing and prototyping + 3D scanning</li> </ul>	MCAE
	<b>18:30</b>	<b>Dinner</b>	
Wednesday 3.9. 2025	8:00 – 10:00	<b>Morning session of lectures (8:00-12:00)</b> <ul style="list-style-type: none"> <li>• Ceramic slurry and shell development (entire shelling process)</li> </ul>	RANSOM&RANDOLPH
	<b>10:10 - 10:15</b>	<b>Coffee break</b>	
	10:15 – 12:15	<ul style="list-style-type: none"> <li>• Ceramic materials for IC (stucco + flour materials, properties)</li> </ul>	IMERYS
	<b>12:15 - 13:00</b>	<b>Lunch</b>	
	13:00 – 14:15	<b>Afternoon session – LABs (13:00-17:30)</b> <ul style="list-style-type: none"> <li>• Advanced ceramic materials and technologies</li> </ul>	CEITEC
	14:30 – 18:00	<ul style="list-style-type: none"> <li>• Ceramic slurry testing</li> <li>• Shell testing</li> <li>• Shelling – shell rapid prototyping by Cyclone</li> </ul>	RANSOM&RANDOLPH IMERYS BUT
	<b>18:30</b>	<b>Dinner</b>	
Thursday 4.9. 2025	9:00 – 11:00	Foundry visit – PBS (Ni-base castings) – Morning	
	14:00 – 16:00	Foundry visit – AluCAST (Al base castings) - Afternoon	

EUROPEAN INVESTMENT CASTERS' FEDERATION



Friday 5.9. 2025	8:00 – 9:15	<b>Morning session of lectures (8:00-12:00)</b> • De-waxing, core leaching	LBBC
	9:15 – 10:00	• Metallurgy fundamentals	BUT
	<b>10:00 - 10:15</b>	<b>Coffee break</b>	
	10:15 – 12:00	• Furnaces + melting procedures and methods	CONSARC
	<b>12:15 - 12:45</b>	<b>Lunch</b>	
	13:00 – 16:00	<b>Afternoon session – LABs (13:00-17:30)</b> • De-waxing + shell fire • Melting and casting pouring	BUT BUT
		<b>Free time + Dinner</b>	
Saturday 6.9. 2025	8:00 – 9:45	<b>Morning session of lectures (8:00-12:00)</b> • Automatization and robots for IC processes	BUT
	<b>9:45 - 10:00</b>	<b>Coffee break</b>	
	10:00 – 11:30	• Casting and shell defects evaluation	RANSOM&RANDOLPH
	11:45 – 12:30	• NDT + properties testing	BUT
	<b>12:30 - 13:15</b>	<b>Lunch</b>	
	13:15-14:30 15:00 – 17:00 18:00 – 21:00	<b>Afternoon session (social program)</b> • Enablers for driving forward a Precision Investment Casting World Class Foundry • Certification test + handing over certificates • Gala evening	Carlos Olabe - EICF
Sunday 7.9. 2025		The departure of course participants	