

**NEIU 21/22**



**NEIU 2021 - 2022**

The course consists of one week each in the respective countries according to the following structure:

Course week laying:

38 - 2021	Angelholm, Sweden
46 - 2021	Korpilampi, Finland
05 - 2022	Finse, Norway
18 - 2022	Knudshoved; Denmark

The course includes group work to be considered at each course week why certain amount of work (preparation) is required in advance.

Interest in participating in the course is the latest 2020-06-01 to each country's management as below.

Norway: Bane NOR, Thorleif Pedersen, [thorleif.pedersen@banenor.no](mailto:thorleif.pedersen@banenor.no)

Finland: NRC Group Finland Ltd, Tero Sorsimo, [tero.sorsimo@vr.fi](mailto:tero.sorsimo@vr.fi)

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**Nordisk Elteknisk IngenjörUtbildning**

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Nordic electricity engineering education



During the autumn and spring 2020-21 the Nordic electricity engineering education is carried out for the twenty-fourth time.

The course is aimed primarily for those who work with electrical engineering in a Nordic infrastructure department. Even person in other companies may participate in the course in case of availability.

This course requires

- An engineering degree or equivalent
- Minimum 2 years' experience in the field
- The opportunity to participate all four weeks

Most of the course will be held in English but some parts in a Scandinavian language, why good knowledge of mainly English is a prerequisite for participation. The course is designed in collaboration between the Trafikverket (SE), Bane NOR (N), Finnish Transport Infrastructure Agency (FIN) and Banedanmark (DK).

**Nordisk Elteknisk IngenjörUtbildning**

Course aim:

- Highlighting the railways terms in a Nordic and European perspective with a focus on interoperability.
- Give participants a greater understanding of different technical systems and their interactions with each other and with the rolling stock.
- Promote the development of a network of employees within the Nordic railway administrations.

On the opposite side there is a preliminary table of contents.

The course will include a number of excursion and other activities in the afternoons and evenings.

	Sweden	Finland	Norway	Denmark	Total hours for topic
Excursion	6	6	6	6	24
Presentation by infrastructure owner	1	1	1	1	4
Communication systems (basic)	4				4
El.system (basic)	3				3
Signal system (basic . Relay-interlocking)	8				8
Track systems (basic)	8				8
Electrical Safety International (TSI energy)		2			2
Catenary systems		4		3	4
Power supply 25KV		2			2
Power supply 15KV	2				2
Maintainace strategy /smart maintenance		3			3
International (TSI signaling)			4		4
Track systems			4		4
GSMR, ERTMS / ETCS / telecommunication			10		10
CSM / approvement process interlocking and signal systems			5		5
Electronic interlocking		4			4
Traction systems		7			7
High speed lines		3			3
EMC				6	6
Earthing				4	4
How to build a brand new line				4	4
Low voltage & point heating				4	4
Energy savings				4	4
Metro-lines			2		2
<b>SUMMARY:</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>32</b>	<b>128</b>

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