NORLAND

Module specification

1. Factual information			
Module title	NC4208: A Focus on Practical Science, Technology, Engineering and Maths (STEM)		
Module tutor	Viki Bennett Kane	**Level**	4
Module type	Taught	**Credit value**	5
Mode of delivery	100% face-to-face		
Notional learning hours	50 notional hours, made up of: Lectures: 5 hours Guest speakers: 2 hours Independent study: 43 hours		

2. Rationale for the module and its links with other modules
This module will support students to be playful in their approach to science, technology, engineering and mathematics (STEM). Students will be encouraged to think creatively about how their approaches to STEM can be embedded in their practice with children, and to demonstrate and explore how excitement can generate children's engagement and learning. This module will build on the knowledge gained in NC4204: Learning, Development and Pedagogical Theory.

3. Aims of the module
The aims of this module are to establish how learning theory can support children's understanding and enjoyment of STEM subjects. Students will create a resource that explores these ideas and rationalise them with support from reading.

4. Pre-requisite modules or specified entry requirements
None.

5. Is the module compensatable?
No.

6. Learning, teaching and assessment strategy for the module
Lectures Independent research activity

6. Learning, teaching and assessment strategy for the module
Group tasks

7. Intended learning outcomes *At the end of the module, learners will be expected to:*			
1. Explain how STEM can be embedded within early years practice with children. 2. Demonstrate practice that excites children to engage in STEM.			
A: Knowledge and understanding	**B: Cognitive skills**	**C: Practical and professional skills**	**D: Key transferable skills**
A1		C1	D2

8. Indicative content *This should provide an overview of content over the number of weeks of module delivery*
Week 1: The environmental contexts and theoretical perspectives of STEM for babies and young children. Week 2: Exploration of STEM resources and provocations: documentation and reflection. This module provides opportunities for you to evidence the Early Childhood Graduate Practitioner Competencies https://www.ecsdn.org/wp-content/uploads/2021/09/ECSDN-Booket-Rev-July-2020.pdf.

9. Assessment				
Assessment rationale Students will demonstrate the application of knowledge to create a resource that promotes STEM focused learning and present their rationale. Students must submit referenced notes to support their ideas.				
Assessment task/s	**Weighting**	**Week submitted**	**Grading (Pass/Fail or %)**	**Module Learning Outcome(s) that the assessment task maps to**
Demonstration: Demonstration of activity/resource related to STEM	100%	T3, Week 5	%	All

9. Assessment				
- 5 mins (300 words equivalent) - Notes (200 words equivalent) - Reference list				

10. Teaching staff associated with the module
Name and contact details
Viki Bennett Kane viki.bennettkane@norland.ac.uk
Tara Nolty tara.nolty@norland.ac.uk

11. Core reading list				
Author	**Year**	**Title**	**Location**	**Publisher**
Dale Tunnicliffe, S.	2015	*Starting Inquiry-based Science in the Early Years. Look, talk, think and do*	London	Routledge
Davies, D., Howe, A., Collier, C., Digby, R., Earle., S. and McMahon, K.	2019	*Teaching science and technology in the Early Years (3-7). 3rd edn.*	Abingdon	Routledge
Vasquez, V.M., Woods, B, and Branigan Felderman, C. (eds)	2022	*Technology and Critical Literacy in Early Childhood. 2nd edn.*	Abingdon	Routledge

12. Other indicative text (e.g., websites)
Ashbrook, P. (2019). 'The Early Years: Teaching the M in STEM.' *Science and Children*, Vol. 56, p.16–17. Brierley, J. and Nutbrown, C. (2018). *Understanding Schematic Learning at Two*. London: Bloomsbury

Hachey, A. C., An, S. A., and Golding, D. E. (2022). 'Nurturing Kindergarteners' Early STEM Academic Identity Through Makerspace Pedagogy.' *Early Childhood Education Journal*, 50(3), 469–479

Kewalramani, S., Palaiologou, I. and Dardanou, M. (2023). *The Integration of Internet of Toys in Early Childhood Education: Research from Australia, England, and Norway*. Abingdon: Routledge

Tedeschi, M., Maccaferri, E. and Rabotti, A. (2021). 'The Hundred Languages of Digital in the Reggio Emilia Approach.' *Journal of E Learning and Knowledge*, 17(3) 24–32

13. List of amendments since last (re)validation		
Area amended	**Details**	**Date Central Quality informed**

Document Control Information	
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