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**	10
Mode of delivery	100% face-to-face		
Notional learning hours	100 notional hours, made up of: Lectures: 10 hours Independent study: 90 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?
Yes – at module level.

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

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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*
The environmental contexts and theoretical perspectives of STEM for babies and young children. 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 practice that promotes STEM focused learning and explain their rationale. Examples include: an idea for an activity; a project or initiative; a resource; a curriculum.

Students will explain their rationale by applying knowledge from the taught content and independent reading evidenced by the submission of a bibliography. The submission will include an annotated self-assessment rubric that is completed by the student within lectures.

Assessment task/s	**Weighting**	**Trimester submitted**	**Grading (Pass/Fail or %)**	**Module Learning Outcome(s) that the assessment task maps to**

9. Assessment				
Live practical project: Demonstration of activity/resource/idea related to STEM - Annotated self-assessment rubric (1000 word equivalent)	100%	T3	%	All

10. Teaching staff associated with the module
Name and contact details
Viki Bennett Kane viki.bennettkane@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**
Section 1	Increase of credit value to 10 from 5, notional hours to 100 from 50 with appropriate changes to proportion of time in lectures & independent study reflected accordingly. Also removed the guest speaker session.	19/03/2025
Section 8	Indicative content elaborated upon.	19/03/2025
Section 9	Further detail provided on assessment rationale & reference list replaced with bibliography & annotated self assessment rubric on assessment criteria. Time permitted for presentation increased to 10 minutes from 5, now equivalent to 1000 words rather than 500.	19/03/2025
Section 9	Changed assessment format from 'Demonstration' to 'Live practical project' and noted assessment is due to take place in trimester 3. Removed requirement for bibliography & time limit, noted the assessment should be the equivalent of 1000 words.	18/07/2025

Document Control Information	
Policy Title:	NC4208 Module specification
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Approving Body:	Programme & Module Modification Panel
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