

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			



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-Booklet-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	Week submitted	Grading (Pass/Fail or %)	Module Learning Outcome(s) that the assessment task maps to
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9. Assessment				
Demonstration: Demonstration of activity/resource/idea related to STEM - 10 mins (1000 words equivalent) - Bibliography - Annotated self-assessment rubric	100%	In class	%	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	<i>Starting Inquiry-based Science in the Early Years. Look, talk, think and do</i>	London	Routledge
Davies, D., Howe, A., Collier, C., Digby, R., Earle, S. and McMahon, K.	2019	<i>Teaching science and technology in the Early Years (3-7). 3rd edn.</i>	Abingdon	Routledge
Vasquez, V.M., Woods, B, and Branigan Felderman, C. (eds)	2022	<i>Technology and Critical Literacy in Early Childhood. 2nd edn.</i>	Abingdon	Routledge

12. Other indicative text (e.g., websites)
Ashbrook, P. (2019). 'The Early Years: Teaching the M in STEM.' <i>Science and Children</i> , 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



Document Control Information	
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Approving Body:	Assessment Scrutiny Panel
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Date of effect:	As above
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