HÖGSKOLAN I GÄVLE

# Mathematics Education in Teaching and Research 7.5 cr

*Matematikdidaktik i undervisning och forskning 7,5 hp*

Set by Faculty of Engineering and Sustainable Development

| **Version** | **Set at** | **Valid from** |
|---|---|---|
| | 6/3/20 | **HT2021** |

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| **Level** | G1F |
| **Education level** | First cycle |
| **Course identifier** | MAG325 |
| **Credits** | 7.5 cr |
| **Main field of study** | Mathematics |
| **Subject group** | Mathematics |
| **Disciplinary domain** | Natural sciences 100.0 % |

**Learning outcomes**

After completion of the course, the student shall be able to

Knowledge and understanding
1. display knowledge of different theories of children's mathematical learning
2. describe and examine different examples of current research in mathematics education, from national and international perspectives
3. display knowledge of the importance of language in mathematics teaching

Competence and skills
4. examine recent research literature in mathematics education
5. propose how to plan, carry out and evaluate mathematics teaching through problem solving
6. assess and evaluate pupils' achievements through the use of different assessment tools.

**Course content**

Research in mathematics education from national and international perspectives
Didactical theories of mathematics learning
The importance of language in mathematics education, both mathematics as a discursive practice and multilinguality in mathematics education
Variation-theoretical perspective on mathematics education
Teaching through problem-solving

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| | Evaluation and assessment |
| **Teaching** | Lectures and seminars |
| **Prerequisites** | Prerequisites in English is missing |
| **Examination** | Written and oral presentations of didactical assignments and active participation in seminars<br><br>Module 0010 Written paper analysis 4,5 credits, examines learning outcomes 1-2, 4, grades A-F<br>Module 0020 Written group examination 2,5 credits, examines learning outcome 5, grades Pass with distinction, Pass, Fail<br>Module 0030 Seminars 0,5 credits, examines learning outcomes 1-3, 6, grades Pass, Fail |
| **Grade** | A, B, C, D, E, Fx, F |
| **Other regulations** | Degree Criteria for final grade will be given by course responsible or examiner latest at the beginning of the course. |
| **Sustainable environment** | Content with sustainable development is not relevant to this course. |

**Module**

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| 0010 | Written Paper Analysis | 4.5 cr | Grade: AF |
| 0020 | Written Group Examination | 2.5 cr | Grade: UV |
| 0030 | Seminars | 0.5 cr | Grade: UG |