



Board of Teacher Education
Mathematics

Syllabus

Creative mathematics for teachers in grade 4-6 II

Course Code:	LPGG18
Course Title:	Creative mathematics for teachers in grade 4-6 II <i>Kreativ matematik för grundlärare i årskurs 4-6 II</i>
Credits:	15
Degree Level:	Undergraduate level
Progressive Specialisation:	First cycle, has at least 60 credits in first-cycle course/s as entry requirements (G2F)

Major Field of Study:

Course Approval

The syllabus was approved by the Board of Teacher Education 2023-08-14, and is valid from the Spring semester 2024 at Karlstad University.

Prerequisites

Completed courses LPGG00, LPPGG01, LPGG24, and LPGG06, or equivalent

Learning Outcomes

The aim of the course is for students to reinforce and enhance their knowledge of pupils with learning difficulties, how their needs can be attended to and measures taken, and how mathematically talented pupils can be supervised and stimulated to develop their knowledge. The aim is also for students to develop their ability to use assessment of performance as a tool in learning mathematics.

The aim of the practical placement component is for students to develop their professional skills by applying evidence- and experience-based knowledge to learning and development when meeting pupils.

Module 1 Teaching Mathematics from a Teacher and Pupil Perspective II, 7.5 ECTS cr

Upon completion of the module, students should be able to:

1. give an account of how low as well as high achievers in Mathematics can be given attention, supervision, and support,
2. give an account of how pupils varying mathematical skills can be assessed and documented,
3. plan a mathematics unit based on the curriculum taking into account how pupils' different abilities can be developed and clarified, and
4. give an account of how digital tools can be used to enhance mathematics teaching.

Module 2 Practical Placement II, 7.5 ECTS cr

Upon completion of the module, students should be able to:

1. act in accordance with the foundational values stipulated in the Swedish Education Act and the national curriculum,
2. give an account of legislation concerning school obligations to prevent and take measures against bullying and abuse and analyse local school policy on discrimination,
3. under some supervision, implement a norm-critical perspective in pedagogical activities with a special focus on equality and gender equality,
4. communicate professionally with pupils and staff, one-on-one and in groups, in speech and writing, in a functional and adequate way adapted to the context,
5. under some supervision, plan, lead and carry out sequences of teaching on the basis of curricula, subject knowledge, and general and subject-specific pedagogy,
6. plan and conduct teaching with consideration of children's different backgrounds and under supervision reflect on special education needs.
7. analyse their own professional development and give arguments for how it is based on curricula, subject knowledge, and subject-specific teaching methodology,
8. under supervision, assess pupils' knowledge development and social situation in school and discuss how this can be communicated to pupils, guardians, and staff,
9. under some supervision, use digital tools in pedagogical activities, and
10. discuss their own professional development and identify further needs of improvement.

Module 2b: Practical Placement II, 7.5 ECTS cr (when the placement is completed abroad)

Upon completion of the module, students should be able to:

1. reflect upon the fundamental values that underpin the curricula and classroom practices in Sweden and in the school abroad where the placement is completed,
2. communicate and interact professionally with pupils and staff,
3. under supervision, plan, lead, conduct, and evaluate teaching which promotes learning and includes consideration of children's different backgrounds,
4. describe and reflect upon the assessment practices of the school abroad where the placement is completed, and
5. discuss and assess the experience of completing a practical placement abroad in relation to their future role as teachers in the Swedish school system.

Content

Module 1 Teaching Mathematics from a Teacher and Pupil Perspective II, 7.5 ECTS cr
Different perspectives on difficulties in learning mathematics are treated as well as how mathematically talented pupils can be stimulated to develop.

Grading, assessing and evaluation are studied. Definitions of mathematical talent and the means of developing it are problematised. Pupil solutions are analysed in relation to the curriculum. Issues of summative and formative assessment are treated. Different knowledge qualities are clarified on the basis of national test examples.

Students plan a unit in mathematics taking into account several methods and forms of work,

including how digital tools can be used as resources in teaching, and with a focus on how different abilities can be observed and evaluated.

The module prepares the students for the practical placement period.

Module 2a and 2b Practical placement II, 7.5 ECTS cr

Students engage in the following activities:

- using digital tools for learning in school
- making classroom observations
- interpreting and implementing central curricula and local pedagogical planning
- applying pedagogical and subject-specific teaching theories and translating subject knowledge into teaching, with consideration of pupils' different knowledge and interests
- considering special education perspectives
- developing their communicative skills in cooperation with different staff groups and pupils in school
- discussing the profession and their own professional development and identifying areas to develop in the third practical placement period.

The practical placement can be completed abroad (2b).

Reading List

See separate document.

Examination

Module 1

Learning outcome 1 is assessed on the basis of an individual written assignment.

Learning outcomes 2, 3, and 4 are assessed on the basis of individual oral and written assignments.

Module 2a

Learning outcomes 1, 3, 4, 5, 6, 8, and 9 are assessed on the basis of a completed and documented practical placement.

Learning outcomes 2, 7, and 10 are assessed on the basis of oral and written assignments.

Attendance is required for the introduction to the practical placement and for the school placement component. The occasional day of absence can be completed on agreement with the module convener. Students who fail to attend more than five days will have to retake the whole module, unless there are special circumstances.

The number of assessment opportunities for the practical placement component is limited to two.

A practical placement period can be discontinued immediately if there is a concrete risk that the student will otherwise cause injury to another person or valuable property due to grave and inappropriate behaviour. The decision is made by the examiner in consultation with the administrative manager of the teacher education office and the programme co-ordinator, and means that the student has used and failed one assessment opportunity.

The examiner may decide that a student who is very close to a passing grade can complete a supplementary assignment to receive a passing grade for a specific examination, if this can be done shortly after the examination date.

Module 2b

Learning outcomes 1 and 5 are assessed on the basis of oral and written assignments.

Learning outcomes 2, 3, and 4 are assessed on the basis of a completed and documented

practical placement.

Attendance is required for the introduction to the practical placement and for the school placement component. The occasional day of absence can be completed on agreement with the module convener. Students who fail to attend more than five days will have to retake the whole module, unless there are special circumstances.

The number of assessment opportunities for the practical placement component is limited to two.

A practical placement period can be discontinued immediately if there is a concrete risk that the student will otherwise cause injury to another person or valuable property due to grave and inappropriate behaviour. The decision is made by the examiner in consultation with the administrative manager of the teacher education office and the programme co-ordinator, and means that the student has used and failed one assessment opportunity.

If students have a decision from Karlstad University entitling them to Targeted Study Support due to a documented disability, the examiner has the right to give such students an adapted examination or to examine them in a different manner.

Grades

One of the grades Distinction (VG), Pass (G), or Fail (U) is awarded in the examination of the course.

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional information

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.

Additional costs for completing the practical placement abroad are covered by the student.

Teacher education: Primary School years 4-6