

Scheme of work
KPEDU

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| Qualification: | Vocational qualification in agriculture, specialisation in agricultural technology http://www.oph.fi/download/140406_vocational_qualification_in_agriculture_2009.pdf |
| Level: | 3-4 |
| Unit: | <p>Operation, maintenance and repair of agricultural machinery and equipment (40 ECTS*) (Includes at least 10 ECTS of work based learning)</p> <p>Vocational skills requirements, the student or candidate is able to:</p> <ul style="list-style-type: none"> • use agricultural machinery and service and maintenance facilities • identify faults and defects in agricultural machinery and equipment and decide whether repair work is called for • use, service/maintain and store basic and special-purpose equipment • make initial adjustments to machines and tools • do repair welding and metal work • evaluate his/her own work/working procedures, and, if required, change them • sort hazardous and other waste and store it • use personal protective equipment, observe considerations of occupational safety and maintain ability to work • observe safety and take responsibility in his/her work • budget for agricultural machinery and equipment • use information technology in his/her work and in the search for information • promote working practices that support sustainable development <p><i>* EU's ECTS credit = 27 hours of work</i></p> |
| Module: | <p>Familiarity with engine / motor, power transmission and hydraulics terms and electrical equipment quantities and applying them in the use and maintenance of agricultural machinery (10 ECTS)</p> <p><i>Moottori, tehonsiirron, hydrauliikan ja sähkölaitteiden huollon ja korjauksen perusasiat ja suureet (10 ECTS)</i></p> |
| Number of students: | |
| Taught sessions: | <p>10 ECTS = 270 hours classroom: 40 h independent studying: 20 h</p> <p>workshop: 140 h WBL: 70 h</p> |
| Location: | Classroom & school's workshop & work places |

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| Notes on baseline: | Module "Working in Agriculture" must be accepted before. |
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| | When doing individual learning paths, students' special needs must be addressed (problems with reading => videos, face-to-face lectures; problems with writing => oral exams etc.). |
| Required outcomes: | Familiarity with engine/motor, power transmission and hydraulics terms and electrical equipment quantities and applying them in the use and maintenance of agricultural machinery. |
| Assessment: | <p>Module is graded either passed or failed. Assessment will be done either in practical work or by written exam (teacher decides).</p> <p>Skills demonstration (SD) covers the whole unit "<i>Operation, maintenance and repair of agricultural machinery and equipment</i>" and module "<i>Familiarity with engine / motor, power transmission and hydraulics terms and electrical equipment quantities and applying them in the use and maintenance of agricultural machinery</i>" will also be assessed during the SD. Related to this module:</p> <ul style="list-style-type: none"> The student or candidate demonstrates his/her vocational skills by using agricultural machinery and carrying out service and maintenance and/or repair work to agricultural machinery in a team or alone on a farm or in a rural enterprise or other enterprise. The work is carried out to an extent that makes it possible to establish that the vocational skills meet the requirements." <p>The whole unit is graded excellent / good / satisfactory:</p> <ul style="list-style-type: none"> Excellent: Can determine the basics and quantities relating to the repair and maintenance of commonly used agricultural machinery, has the ability to measure them, and can evaluate the results. Good: Can determine the basics and quantities relating to the repair and maintenance of commonly used agricultural machinery. Satisfactory: With help from an expert, can determine the basics and quantities relating to the repair and maintenance of commonly used agricultural machinery. <p>Learning outcomes of the module:</p> <p>2. Fuels and lubricants 3. Engine, power transmission and basics and quantities of hydraulics and maintenance & 3. repair of electrical equipment 10. Maintenance and repair of agricultural machines Scheduled maintenances of different motors</p> |
| Special issues: | |

| Date | Topic | Outcomes | Resources | Assessment | Notes |
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| week 1 | Engine | 3. | 5 h classroom 20 h workshop | carries out regular service of engines and motors independently | |
| week 2 | Engine | 3. | 3 h classroom 5 h workshop 10 h independent studying | carries out regular service of engines and motors independently | |

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| | Power transmission (1,5) | 3. | 2 h classroom 5 h workshop | carries out repairs/corrections to power transmission | |
| week 3 | Power transmission | 3. | 5 h classroom 20 h workshop | carries out repairs/corrections to power transmission | |
| week 4 | Hydraulics | 3. | 5 h classroom 20 h workshop | carries out repairs/corrections to hydraulics | |
| week 5 | Hydraulics Electrical equipment | 3. | 3 h classroom 2 h workshop 2 h classroom 8 h workshop | carries out repairs/corrections to hydraulics carries out repairs/corrections to electrical equipment, demanding service and maintenance tasks and error diagnostics | |
| week 6 | Electrical equipment | 3. | 5 h classroom 20 h workshop | carries out repairs/corrections to electrical equipment, demanding service and maintenance tasks and error diagnostics | |
| week 7 | Maintenance and repair | 10. | 5 h classroom 30 h workshop 10 h independent studying | can determine the basics and quantities relating to the repair and maintenance of commonly used agricultural machinery | |
| week 8 | Fuels and lubricants | 2. | 5 h classroom 10 h workshop | compares and chooses fuels and lubricants according to their properties and applications | |

WBL will be done during 2nd year as a part of unit "Operation, maintenance and repair of agricultural machinery and equipment" (in total 10 ETCS).