

OUTSTANDING TEACHING, LEARNING AND ASSESSMENT TECHNICAL SKILLS NATIONAL PROGRAMME

**Scheme of work
Created by: Reaseheath College**

Managed by

In partnership with



emfec



SCHEME OF WORK

BUILDING YOUR LEAN TOOLKIT TO FRAME THE NEW CURRICULUM



Scheme of Work

Objective:

To integrate LEAN thinking and tools within each Scheme of Work where appropriate and adds value to the learner and the learning outcome.

How have our Schemes of Work changed?

- SOW rewritten to show how outcomes will be achieved on a lesson by lesson basis. Previously SOW grouped outcomes and methods of delivery to individual teachers. New SOW offers a more standardised approach to teaching
- LEAN tools and techniques only embedded where relevant to the module
- SIPOC's embedded
- Use of process maps
- Waste walks
- Protocols and use of farm and industry KPI's
- Use of real live farm data for e.g calculating Dry matter content of feeding rations

Example

Scheme of Work / Learning Journey			
Subject Tutor / Assessor(s)		Location	Agriculture
Course Title	Level 3 Agriculture	Year of Course	2017/2018
Title of Unit	Unit 308 – Undertake Agricultural Livestock Production		
Session Times	Day	Start Time	Duration
	Monday and Tuesday	1pm	1 Yr
	No of sessions	Total Numbers of hrs learning	30 hours plus weekly practical lessons.
	30		
Unit Learning Outcomes		Unit Assessment Strategies	
<ol style="list-style-type: none"> 1. Understand livestock production systems 2. Know the principles of production animal health and breeding 3. Be able to perform routine livestock production skills 4. Be able to plan livestock production 		Examination (40%) Synoptic assessment (60%) Ongoing peer and formative assessments to track and monitor progress	
Rationale for course (Context/purpose/aim/link to course etc)		This unit is undertaken to meet the learning criteria specified by City and Guilds to complete an Extended Diploma in Agriculture.	



Excerpt from previous SOW

Learning Objectives	Learning Activities	Assessment	Workplace & Wider Skills Development
Outcome 1 Understand livestock production systems			
1. Explain major beef, dairy, pig and sheep production systems 2. Evaluate beef, dairy, pig and sheep production systems	Breeds of Dairy cow. History of milk production. Targets and timings of a dairy cow production cycle with gapped handout.	Assignment A: Livestock Production Systems Set Early Oct, Hand in Mid Nov.	R1 Read a range of texts from different sources. R2 Select different types of text in order to gather and use information.
	Dairy systems: housing systems, spring/autumn/year round calving patterns, heifer rearing, grazing and feeding systems, high input/high output, low input/low output, major breed types and impact on milk quality	Questions and answers to check learner understanding.	

New SOW

Learning Objectives	Learning Activities	Assessment	Workplace & Wider Skills Development
Understand livestock production systems Understand the requirements of the module and the assessment methods <i>Identify 4 livestock production systems and the value created from each system</i>	An introductory lesson to establish a student's basic understanding of livestock production Introduction to the each livestock production system (15mins) <i>Students to create a SIPOC of each unit on the farm – completed in groups of 3</i> Using their own knowledge for the 1 st 15mins they will identify the suppliers, customers and then the inputs, outputs and processes (30 mins) <i>Peer assess each groups SIPOC –</i> Ensure each person has notes for file. Review the finished results	Peer assessment of the finished outlines	<i>Lean: Use of SIPOCS</i>

LEAN Teaching Toolkit



<p>Understand livestock production systems</p> <p>Identify the main tasks completed on a dairy farm</p> <p>Compare different systems timeframes to complete production cycle</p> <p>Produce a production cycle template for one system</p>	<p>Refresher on the different dairy production systems</p> <p>Learners will complete a dairy production cycle/ identifying the processes from birth to cull – start with process map and then input onto circular calendar.</p>	<p>Peer marked assessment of short and long answer questions as exam prep.</p>	<p>Lean: Use of process maps</p>
<p>Management of young stock</p> <p>Identify the requirements of young animals</p> <p>Compare and contrast these requirements for different livestock animals</p> <p>Evaluate farm KPI's</p>	<p>Action map of tasks to be done for any young animal</p> <p>Students to then input further detail for specific livestock</p> <p>Students to then consider targets and timeframes</p>	<p>Moodle Quiz</p>	<p>Lean: Use of Farm KPI's to assess performance</p>
<p>Targets and Actions</p> <p>Identify methods of measuring success on farm</p> <p>Compare and contrast farm figures to national benchmarking</p> <p>S+C – Identify areas for improvement and justify</p>	<p>Students to each take one livestock system and identify the targets to assess performance</p> <p>Students to locate information on unit which demonstrates the KPI</p> <p>Students to assess the KPI to national benchmarking figures.</p>	<p>KPI Presentation to group</p>	<p>Lean: Use of KPIs to assess performance</p>
<p>Nutritional requirements – Refresher</p> <p>Determine the requirements of a group of animals</p> <p>Identify the nutritional composition of feed stores</p> <p>Produce a basic ration plan</p>	<p>Using the farm each group will be given a group of livestock.</p> <p>Group to determine how much feed and what feed is required</p>	<p>Worksheets</p>	<p>Lean: Use of KPIs to assess performance</p>
<p>Health Planning</p> <p>Understand what is required in a health plan</p> <p>Evaluate usefulness of utilising a health plan</p> <p>Assess RHC herd health plan</p>	<p>Students to label on board items to be included in a health plan</p> <p>Round 2 students to justify why these items need to be in a health plan</p> <p>Students to consider how to utilise plan to inform decisions</p> <p>Students to assess farm health plan</p>	<p>Peer assessment of health plan poster</p>	



Output

- 228.5 hours of teaching per week now has an element of lean embedded within the delivery
- 4 brand new teaching modules that have been developed specifically on lean to enhance the students learning experience
- 84 hours of brand new teaching
- 80 protocols have been written and are being used by curriculum and staff for practical and theoretical delivery

Impact of the changes

Practitioners point of view....

- 'it makes delivering the lesson so easy, everything drops out of the process map and it is really easy for the student to follow and understand'
- 'I am using process maps in all my delivery, the students are really used to them now and are completing that logical thought process almost automatically'

Students point of view....

- 'Every lesson the staff are making us calculate something, whether its working out the most efficient way to plough a field, and what that means in terms of fuel costs...'
- 'I really like the process maps, it makes everything clear and logical and easy to follow through...'
- 'Sitting in the LEAN meetings has helped us understand what is going on, on the farm and why the data is what it is. This has really helped with the completion of our practical assignments. It was all a bit over my head at the beginning but it is making sense now

