

NRC ADVANCED COURSE OUTLINE

**by
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Week 1 – Body Condition Scoring

- I. Henneke system
- II. Carroll and Huntington system
- III. BCS, body weight and DE
- IV. Estimating body weight
- V. Putting BCS to use

Week 2 – Review and Apply The Basics

- I. Percentages
- II. Parts per million
- III. English to metric
- IV. Feed and supplement calculations
- V. Elemental minerals and molecular weights

Week 3 – Energy Sources and How They Burn

- I. ATP generation from phosphocreatine, aerobic and anaerobic metabolism
- II. Considerations for weight gain
- III. Methods of describing energy content in feeds
- IV. Forages
- V. Grains and Fat

Week 4 – Protein

- I. Structural and nonstructural proteins
- II. Protein as an energy source

- III. Ideal protein – growth, maintenance, exercise
- IV. Quality of sources
- V. Sulfur

Week 5 - Minerals

- I. Sources and bioavailability
- II. Grades of inorganic minerals – COAs
- III. High manganese and/or iron
- IV. Safe intakes and why horses are different

Week 6 – Formulating Supplements and Diets

- I. Base formula
- II. Feeding barns/groups with individuals having different needs
- III. Bulk supplements

Week 7 – Water

- I. Requirements
- II. Standards
- III. Treatment methods

Week 8 – Soil

- I. Why is this important
- II. Standard analyses and treatments
- III. Albrecht approach

Week 9 – Antinutrients in the Equine Diet

- I. Nitrates
- II. Mycotoxins
- III. Oxalates
- IV. Trypsin inhibitors
- V. Other

Week 10 – Digestive Supplement Ingredients

- I. Gastric
- II. Digestive enzymes
- III. Hind gut
- IV. Probiotics and prebiotics