The Physiology of Labor.

- **Labor:**
  - Begins between 38 weeks and 42 weeks gestation.

- Theories explaining the onset of labor:
  - Increased levels of oxytocin stimulate the uterine muscle causing myometrial (uterine muscle) activity.
  - Oxytocin stimulates prostaglandins to cause cervical softening and increase uterine muscle sensitivity.
  - Progesterone levels decline allowing estrogen to stimulate contractions.
  - Rising level of estriol produces an imbalance with estrodial triggering labor.
  - Uterus becomes over-stretched leading to a natural expulsion of the contents.

- Uterine muscle layers:
  - External.
  - Internal.
  - Middle.

- Musculature changes in the pelvic floor:
  - Levator ani and fascia pull the vagina and rectum upward and forward with each contraction.
  - Pressure of the fetal head causes these muscles to thin from 5 cm to 1 cm at the time of birth.

- Signs of labor:
  - Bloody show.
  - Burst of energy.
  - Rupture of membranes (ROM).
  - Lightening.
  - Contractions.
  - Cervical changes.
    - Effacement.