



Modeling Teachers International 502 (Spring 2026)
Modeling Method of Instruction (Model Didactics)

Course Schedule

Week	Week of	Activity
1	Mar 2	Topic 1
2	Mar 9	Topic 1
3	Mar 16	Practice
4	Mar 23	Practice
5	Mar 30	Practice
6	Apr 6	Practice
7	Apr 13	Topic 2
8	Apr 20	break
9	Apr 27	break

Week	Week of	Activity
10	May 4	Topic 2
11	May 11	Practice
12	May 18	Practice
13	May 25	Practice
14	May 1	Practice
15	Jun 8	Topic 3
16	Jun 16	Topic 3
17	Jun 22	Topic 4
18	Jun 29	Topic 4

Topic Description

Topic	Topic title	Science teaching and learning	Subject-matter content
What are scientific models?			
1	Introduction to scientific modeling	Inductive vs. conventional labs, student learning in magnetism (Hendrix & Prilliman 2018)	Ampere's law of magnetism
2	Magnetism I: Force on a current carrying wire	Whiteboard discussions, problems and issues in the teaching of magnetism (Borges et al 1998; Font 2018)	Interaction of current-carrying wire and permanent magnet, Right-Hand-Rule 1
What does a model-centered classroom look like?			
3	Magnetism II: Force on a charged particle	Physical analogies, classroom activities on Lorentz force, teaching and learning the RHR (Tillotson 2017)	Helmholtz coil, radius-momentum relationship, e/m measurement, RHR 2
4	Faraday's law of induction	TEAM diagram, problems and issues in the teaching of Faraday's and Lenz's law (Galili 2006)	Analysis of electro-magnetic induction, interaction loop and field, induced emf