







Reinforced Concrete Beam Project The reinforced concrete beam problem poses several challenges to the student: selection of the shape and size of the cross-section of the beam; design of a concrete mix based on strength and workability; design of the reinforcement (type of reinforcement, amount, and position in the beam), and the prediction of the SWR of the beam.

Reinforced Concrete Beam Project

The reinforced concrete beam project schedule:

Date	Activity
February 25-27	Introduction; concrete beam #1
March 4-6	Break beam #1; develop concrete beam #2
March 18-20	Break beam #2; develop concrete beam #3
March 25-27	Break beam #3; develop concrete beam #4
April 1-3	Break beam #4; develop final concrete beam
April 8-10	Break final concrete beam

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The cost of each beam will be estimated using the following data:

Material	Cost
Portland Type I cement	\$150/ton
Coarse aggregate	\$18/ton
Fine aggregate	\$10/ton
Steel reinforcement	\$700/ton
Admixtures - water reducer	\$15/gal.
Admixture - silica fume	\$500/ton
Fiber reinforcement	Market value (see Dr. Camp)







Component	Amount (lb.)
Water	304
Cement	708
Coarse aggregate	1,824
Fine aggregate	1,131















