Course and Further Comparison

* Short Course
  + Day 2/3 – Put together example .Rmd script for running GOA bottom trawl survey example
    - Do this from start to finish (RACE 2x data files) to end.
    - Illustrate use of my helper functions.
  + Update this script to include catchability covariate
    - SST
    - Tow duration
    - Vessel effects (v\_i)
      * vesselID
      * vesselID x year
      * Turn on overdispersionConfig = 1,1
* Exploring differences between DB and geostatistical estimator
  + DB assumes
    - Weighting based on strata
    - Normal error distribution
  + Given that even geostat model with spatial and spatio-temporal RE turned OFF is different
    - We need to evaluate whether difference is due to
      * Error Structure
        + Set obs model to = 0,3
        + Convert all zero observations to very small number

1e-10

i.e. force all to be + catch rates

That way we are replicating the error distribution of the DB estimator

* + - * Stratification
        + Can do so by having

High number of knots

So that each knot region only falls within one strata

Use strata ID as a density (knot-associated) covariate

Basically a dummy design matrix, with one strata set at 0 for identifiability