Orders and families to know for Botany 400 2nd lecture exam

Caryophyllales - betalains, dichasium inflorescence, free-central or derived (basal) placentation; petals often lacking

Phytolaccaceae — CA^{5} CO^{0} A^{10} G$^{(5+)}$ -berry — [raceme; sometimes apocarpic]

Caryophyllaceae — CA$^{\frown 5}$ CO^{5} A^{5,10} G$^{(2\text{-}5)}$ -capsule — [dichasium; free-central]

Portulacaceae — CA^{2} CO^{5} A^{5+} G$^{(2\text{-}3)}$ -capsule — [few basal ovules; capsule or pyxis]

Cactaceae — CA$^{\infty}$ CO$^{\infty}$ A$^{\infty}$ G$^{(4)}$ -berry — [parietal]

Amaranthaceae/ Chenopodiaceae — CA$^{3\text{-}5}$ CO^{0} A^{5} G$^{(2\text{-}3)}$ -achene — [unesexual flowers; one ovule; achene or utricle]

Saxifragales - intermediate between ranunculids and rosids; usually2-6 carpels that are only slightly fused at base

Saxifragaceae — CA^{5} CO^{5} A$^{5 \text{ or } 10}$ G$^{\frown 2}$ -follicles

Crassulaceae — CA$^{4\text{-}6}$ CO$^{4\text{-}6}$ A$^{8\text{-}12}$ G$^{\frown 4\text{-}6}$ -follicles

Rosales - Nitrogen fixing, loss or corolla, serrated leaves

Rosaceae — CA^{5} CO^{5} A$^{\infty}$ G$^{\infty}$ -follicles — Spiraeoideae

G$^{\infty}$ -achenes — Rosoideae — G^{1} -drupe — Prunoideae — G$^{(5)}$ -pome — Maloideae

Ulmaceae — CA$^{4\text{-}8}$ CO^{0} A$^{4\text{-}8}$ G$^{(2)}$ -1 seeded samara

Moraceae — [unisexual, multiple fruit (syconium) of 1 seeded units]

Fabales - don't need to know order

Fabaceae	CA^{5} COZ^{5} $A^{(9)+1}$ $\underline{G}^{1}$ -legume	Faboideae

how are Caesalpinoids & Mimosoids different?

Malpighiales - don't need to know order

Violaceae	CA^{5} COZ^{5} A^{5} $\underline{G}^{(3)}$ -capsule	
Salicaceae	CA^{0} CO^{0} A^{∞} $\underline{G}^{(2)}$ -capsule	[unisexual flowers]
Euphorbiaceae	CA^{0} CO^{0} A^{1} $\underline{G}^{(3)}$ -capsule	[unisexual flowers, cyathium]

Fagales - wind pollination, trees, aments, inferior ovary, nut fruit

Juglandaceae Fagaceae Betulaceae	CA^{3-6} CO^{0} A^{∞} $\overline{\underline{G}}^{(2-3)}$ -nut	[unisexual]

Sapindales - don't need to know order

Anacardiaceae	CA^{5} CO^{5} $A^{5,10}$ $\underline{G}^{(3)}$ -drupe	[bisexual or unisexual]
Sapindaceae [Aceraceae]	CA^{4-5} $CO^{0,4-5}$ A^{4-10} $\underline{G}^{(2)}$ -samara, schizocarp	[bisexual or unisexual]

Malvales - don't need to know order

Malvaceae	CA^{5} CO^{5} $A^{(\infty)}$ $\underline{G}^{(5\text{-}\infty)}$ -capsule	

Brassicales or Capparales - mustard oils

Brassicaceae	CA^{4} CO^{4} A^{4+2} $\underline{G}^{(2)}$ -silique, silicle	

Myrtales - internal phloem, vestured pits, well developed hypanthium

Onagraceae	CA^{4} CO^{4} $A^{4,8}$ $\overline{\underline{G}}^{(4)}$	