EECB 703 Readings/Calendar

**The course calendar is also available as a Google Calendar:** [link](https://calendar.google.com/calendar/embed?src=1pfst79qqq79vbsl5orfv96f6s%40group.calendar.google.com&ctz=America/Los_Angeles)

Discussion groups can be found [here](allgroups.html). The person first in each list will be the discussion group leader. The second person in each list will be the designated note-taker (responsible for updating the [study guide](https://docs.google.com/document/d/1qn6WsiXiIBTktnpOW7EbHkpYNdjtE2FKPztTRpvMPYg/edit?usp=sharing)). All group members are expected to participate every week.

For the official list of readings and questions, [click here](https://docs.google.com/document/d/1VkpM0Mn4-rWlnWKV_EqKXxwHbXxZWWWWC4jCEDZXlSY/edit#)

## Aug 29

[Course overview, syllabus, etc.](INTRO.html)

## Sep 5

### Behavioral Ecology, Dr. Vladimir Pravosudov

[Trivers, R. L. (1974). Parent-offspring conflict. American zoologist, 14(1), 249-264.](Trivers%20-%201974%20-%20Parent-offspring%20conflict.pdf)

[Zahavi, A. (1975). Mate selectionâ€”a selection for a handicap. Journal of theoretical Biology, 53(1), 205-214.](Zahavi%20-%201975%20-%20Mate%20selectionâ€”a%20selection%20for%20a%20handicap.pdf)

[Davis, J. M., & Stamps, J. A. (2004). The effect of natal experience on habitat preferences. Trends in Ecology & Evolution, 19(8), 411-416.](Davis%20and%20Stamps%20-%202004%20-%20The%20effect%20of%20natal%20experience%20on%20habitat%20preferen.pdf)

### Diversity and Neutral Models, Dr. Lee Dyer

[Chave, J. (2004). Neutral theory and community ecology. Ecology letters, 7(3), 241-253.](Chave%20-%202004%20-%20Neutral%20theory%20and%20community%20ecology%20Neutral%20theo.pdf)

[Kraft, N.J., Comita, L.S., Chase, J.M., Sanders, N.J., Swenson, N.G., Crist, T.O., Stegen, J.C., Vellend, M., Boyle, B., Anderson, M.J. and Cornell, H.V., 2011. Disentangling the drivers of Î² diversity along latitudinal and elevational gradients. Science, 333(6050), pp.1755-1758.](Kraft%20et%20al.%20-%202011%20-%20Disentangling%20the%20Drivers%20of%20Î²%20Diversity%20Along%20Lat.pdf)

Recommended but not required: [Schemske, D. W., Mittelbach, G. G., Cornell, H. V., Sobel, J. M., & Roy, K. (2009). Is there a latitudinal gradient in the importance of biotic interactions?. Annu. Rev. Ecol. Evol. Syst., 40, 245-269.](Schemske%20et%20al.%20-%202009%20-%20Is%20There%20a%20Latitudinal%20Gradient%20in%20the%20Importance%20.pdf)

## Sep 12

### Diseases of wild populations, Dr. Jamie Voyles

[Keesing, F., Holt, R. D., & Ostfeld, R. S. (2006). Effects of species diversity on disease risk. Ecology Letters, 9(4), 485-498](Keesing%20et%20al.%20-%202006%20-%20Effects%20of%20species%20diversity%20on%20disease%20risk%20Effe.pdf)

[Young, H. S., Dirzo, R., Helgen, K. M., McCauley, D. J., Billeter, S. A., Kosoy, M. Y., … & Dittmar, K. (2014). Declines in large wildlife increase landscape-level prevalence of rodent-borne disease in Africa. Proceedings of the National Academy of Sciences, 111(19), 7036-7041](Young%20et%20al.%20-%202014%20-%20Declines%20in%20large%20wildlife%20increase%20landscape-leve.pdf)

### Specialization & niche dynamics, Dr. Matt Forister

[Leiby, N., & Marx, C. J. 2014. Metabolic erosion primarily through mutation accumulation, and not tradeoffs, drives limited evolution of substrate specificity in Escherichia coli. PLoS biology, 12(2), e1001789](Leiby%20and%20Marx%20-%202014%20-%20Metabolic%20Erosion%20Primarily%20Through%20Mutation%20Accum.pdf)

[Poisot, T., Bever, J. D., Nemri, A., Thrall, P. H., & Hochberg, M. E. 2011. A conceptual framework for the evolution of ecological specialisation. Ecology Letters, 14, 841-851](Poisot%20et%20al.%20-%202011%20-%20A%20conceptual%20framework%20for%20the%20evolution%20of%20ecolog.pdf)

[Konuma, J., Sota, T., & Chiba, S. (2013). A maladaptive intermediate form: a strong tradeâ€off revealed by hybrids between two forms of a snailâ€feeding beetle. Ecology, 94(11), 2638-2644](Konuma%20et%20al.%20-%202013%20-%20A%20maladaptive%20intermediate%20form%20a%20strong%20trade-of.pdf)

## Sep 19

### Population ecology, Dr. Kevin Shoemaker

[Turchin, P. (2001). Does population ecology have general laws?. Oikos, 94(1), 17-26](Turchin%20-%202001%20-%20Does%20population%20ecology%20have%20general%20laws.pdf)

[Hanski, I. (1998). Metapopulation dynamics. Nature, 396(6706), 41-49](Hanski%20-%201998%20-%20Metapopulation%20dynamics.pdf)

*Recommended but not required:*

[Sibly, R. M., Barker, D., Denham, M. C., Hone, J., & Pagel, M. (2005). On the regulation of populations of mammals, birds, fish, and insects. Science, 309(5734), 607-610](Sibly%20et%20al.%20-%202005%20-%20On%20the%20Regulation%20of%20Populations%20of%20Mammals,%20Birds.pdf)

[Griffith, A. B., Salgueroâ€GÃ³mez, R., Merow, C., & McMahon, S. (2016). Demography beyond the population. Journal of Ecology, 104(2), 271-280](Griffith%20et%20al.%20-%202016%20-%20Demography%20beyond%20the%20population.pdf)

### Population genetics, Dr. Marjorie Matocq

[Wang, I. J., & Bradburd, G. S. (2014). Isolation by environment. Molecular Ecology, 23(23), 5649-5662](Wang%20and%20Bradburd%20-%202014%20-%20Isolation%20by%20environment.pdf)

[Marko, P. B., & Hart, M. W. (2011). The complex analytical landscape of gene flow inference. Trends in ecology & evolution, 26(9), 448-456](Marko%20and%20Hart%20-%202011%20-%20The%20complex%20analytical%20landscape%20of%20gene%20flow%20infe.pdf)

## Sep 26

### Mathematical models for EECB, Dr. Paul Hurtado

[Ellner, S. P., & Guckenheimer, J. (2011). Dynamic models in biology. Princeton University Press. Chapter 1](Ellner%20and%20Guckenheimer%20-%202011%20-%20Dynamic%20Models%20in%20Biology_Ch1.pdf) ([Ch. 9](Ellner%20and%20Guckenheimer%20-%202011%20-%20Dynamic%20Models%20in%20Biology_Ch9.pdf) also recommended but not required).

[Waddington, C. H. (1968). Towards a theoretical biology. Nature, 218(5141), 525-527.](Waddington%20-%201968%20-%20Towards%20a%20theoretical%20biology.pdf)

Recommended but not required:

[Chowell, G., Viboud, C., Simonsen, L., Merler, S., & Vespignani, A. (2017). Perspectives on model forecasts of the 2014â€“2015 Ebola epidemic in West Africa: lessons and the way forward. BMC medicine, 15(1), 42.](Chowell%20et%20al.%20-%202017%20-%20Perspectives%20on%20model%20forecasts%20of%20the%202014â€“2015%20E.pdf)

### Landscape Ecology, Dr. Peter Weisberg

[Turner, Monica G. 2005. Landscape ecology: what is the state of the science? Ann. Rev. Ecol. Evol. Syst. 36: 319 â€“ 344.](Turner%20-%202005%20-%20Landscape%20Ecology%20What%20Is%20the%20State%20of%20the%20Scienc.pdf)

[Serra-Diaz, J.M., R.M. Scheller, A.D. Syphard and J. Franklin. 2015. Disturbance and climate refugia mediate tree range shifts during climate change. Landscape Ecology 30: 1039-1053.](Serra-Diaz%20et%20al.%20-%202015%20-%20Disturbance%20and%20climate%20microrefugia%20mediate%20tree%20.pdf)

*Recommended but not required:* [Fahrig, L. 2003. Effects of habitat fragmentation on biodiversity. Annu. Rev. Ecol. Evol. Syst. 34: 487-515.](Fahrig%20-%202003%20-%20Effects%20of%20Habitat%20Fragmentation%20on%20Biodiversity.pdf)

*Recommended but not required:* [Wiens, J.A. 1989. Spatial scaling in ecology. Functional Ecology 3: 385-397.](Wiens%20-%201989%20-%20Spatial%20Scaling%20in%20Ecology.pdf)

## Oct 3

### Soil Ecology, Dr. Ben Sullivan

[Vitousek, P. M., & Reiners, W. A. (1975). Ecosystem succession and nutrient retention: a hypothesis. BioScience, 25(6), 376-381](Vitousek%20and%20Reiners%20-%201975%20-%20Ecosystem%20Succession%20and%20Nutrient%20Retention%20A%20Hyp.pdf)

[McGill, W. B., & Cole, C. V. (1981). Comparative aspects of cycling of organic C, N, S and P through soil organic matter. Geoderma, 26(4), 267-286](McGill%20and%20Cole%20-%201981%20-%20Comparative%20aspects%20of%20cycling%20of%20organic%20C,%20N,%20S%20.pdf)

[Wieder, W. R., Bonan, G. B., & Allison, S. D. (2013). Global soil carbon projections are improved by modelling microbial processes. Nature Climate Change, 3(10), 909-912](Wieder%20et%20al.%20-%202013%20-%20Global%20soil%20carbon%20projections%20are%20improved%20by%20mod.pdf)

### Microbial Ecology, Dr. David Vuono

[Pace, N. R. (2009). Mapping the tree of life: progress and prospects. Microbiology and Molecular Biology Reviews, 73(4), 565-576.](Pace%20-%202009%20-%20Mapping%20the%20Tree%20of%20Life%20Progress%20and%20Prospects.pdf)

[Thompson, J. R., Pacocha, S., Pharino, C., Klepac-Ceraj, V., Hunt, D. E., Benoit, J., … & Polz, M. F. (2005). Genotypic diversity within a natural coastal bacterioplankton population. Science, 307(5713), 1311-1313.](Thompson%20-%202005%20-%20Genotypic%20Diversity%20Within%20a%20Natural%20Coastal%20Bacte.pdf)

*Recommended but not required:*

[Pepe-Ranney, C., Campbell, A. N., Koechli, C. N., Berthrong, S., & Buckley, D. H. (2016). Unearthing the ecology of soil microorganisms using a high resolution DNA-SIP approach to explore cellulose and xylose metabolism in soil. Frontiers in microbiology, 7.](Pepe-Ranney%20et%20al.%20-%202016%20-%20Unearthing%20the%20Ecology%20of%20Soil%20Microorganisms%20Usin.pdf)

## Oct 10

### Ecoimmunology, Dr. Angela Smilanich

[Schulenburg, H., Kurtz, J., Moret, Y., & Siva-Jothy, M. T. (2009). Introduction. ecological immunology. Philosophical Transactions of the Royal Society of London B: Biological Sciences, 364(1513), 3-14](Schulenburg%20et%20al.%20-%202009%20-%20Introduction.%20Ecological%20immunology.pdf)

[Pamminger, T., Treanor, D., & Hughes, W. O. (2016, January). Pleiotropic effects of juvenile hormone in ant queens and the escape from the reproductionâ€“immunocompetence trade-off. In Proc. R. Soc. B (Vol. 283, No. 1822, p. 20152409). The Royal Society.](Pamminger%20et%20al.%20-%202016%20-%20Pleiotropic%20effects%20of%20juvenile%20hormone%20in%20ant%20que.pdf)

### Applied evolution, Dr. Beth Leger

[Schoener, T. W. (2011). The newest synthesis: understanding the interplay of evolutionary and ecological dynamics. science, 331(6016), 426-429.](Schoener%20-%202011%20-%20The%20Newest%20Synthesis%20Understanding%20the%20Interplay%20.pdf)

[Oduor, A. M. (2013). Evolutionary responses of native plant species to invasive plants: a review. New Phytologist, 200(4), 986-992.](Oduor%20-%202013%20-%20Evolutionary%20responses%20of%20native%20plant%20species%20to%20.pdf)

## Oct 17

### Community ecology, Dr. Beth Pringle

[Vellend, M. 2016. Chapter 3: A brief history of ideas in community ecology. pp 20-35 in The Theory of Ecological Communities, Princeton University Press: Princeton.](VellendChapter3.pdf)

[Gotelli, N. J., G.R. Graves, C. Rahbek. 2010. Macroecological signals of species interactions in the Danish avifauna. PNAS 107: 5030-5035](Gotelli%20et%20al.%20-%202010%20-%20Macroecological%20signals%20of%20species%20interactions%20in.pdf)

*Recommended but not required:* [Sandel, B. 2015. Towards a taxonomy of spatial scale-dependence. Ecography 38: 358-369.](Sandel-2015-Ecography.pdf)

### Physiological ecology, Dr. Jack Hayes

[Huey, R. B., Kearney, M. R., Krockenberger, A., Holtum, J. A., Jess, M., & Williams, S. E. (2012). Predicting organismal vulnerability to climate warming: roles of behaviour, physiology and adaptation. Phil. Trans. R. Soc. B, 367(1596), 1665-1679.](Huey%20et%20al.%20-%202012%20-%20Predicting%20organismal%20vulnerability%20to%20climate%20war.pdf)

[Kearney, M., & Porter, W. (2009). Mechanistic niche modelling: combining physiological and spatial data to predict speciesâ€™ ranges. Ecology letters, 12(4), 334-350.](Kearney%20and%20Porter%20-%202009%20-%20Mechanistic%20niche%20modelling%20combining%20physiologic.pdf)

## Oct 24

### Phenotypic Plasticity, Dr. Jenny Ouyang

[Pigliucci M. 2005. Evolution of phenotypic plasticity: where are we going now? Trends in Ecology & Evolution, 20, 481-486.](Pigliucci%20-%202005%20-%20Evolution%20of%20phenotypic%20plasticity%20where%20are%20we%20g.pdf)

[Pigliucci M. “Phenotypic Plasticity.” In. Evolution: The Extended Synthesis. Eds. Pigliucci and Mueller. 2010. Massachusetts Institute of Technology Press. pgs 355-378.](Pigliucci%202010%20book%20chapter.pdf)

[Charmantier A, Mccleery RH, Cole LR, Perrins C, Kruuk LEB, Sheldon BC (2008) Adaptive phenotypic plasticity in response to climate change in a wild bird population. Science, 320, 800-803.](Charmantier%20et%20al.%20-%202008%20-%20Adaptive%20Phenotypic%20Plasticity%20in%20Response%20to%20Clim.pdf)

### Chemical Ecology, Dr. Lora Robinson

[Salazar, D., Jaramillo, A. & Marquis, R. J. 2016. The impact of plant chemical diversity on plantâ€“herbivore interactions at the community level. Oecologia 181, 1199-1208](Salazar%20et%20al.%20-%202016%20-%20The%20impact%20of%20plant%20chemical%20diversity%20on%20plantâ€“he.pdf)

[Raguso, R. A. et al. The raison d’Ãªtre of chemical ecology. 2015. Ecology 96, 617-630](Raguso%20et%20al.%20-%202015%20-%20The%20raison%20d'Ãªtre%20of%20chemical%20ecology.pdf)

## Oct 31

### Species & speciation, Dr. Matt Forister

[Orr, H. A., & Presgraves, D. C. (2000). Speciation by postzygotic isolation: forces, genes and molecules. BioEssays, 22(12), 1085-1094.](Orr%20and%20Presgraves%20-%202000%20-%20Speciation%20by%20postzygotic%20isolation%20forces,%20genes.pdf)

[Rabosky, D.L. (2016). Reproductive isolation and the causes of speciation rate variation in nature. Biological Journal of the Linnean Society, 118(1), pp.13-25.](Rabosky%20-%202016%20-%20Reproductive%20isolation%20and%20the%20causes%20of%20speciatio.pdf)

*Recommended but not required:*

[Mallet, J. (2008). Hybridization, ecological races and the nature of species: empirical evidence for the ease of speciation. Philosophical Transactions of the Royal Society of London B: Biological Sciences, 363(1506), 2971-2986.](Mallet%20-%202008%20-%20Hybridization,%20ecological%20races%20and%20the%20nature%20of%20.pdf)

[Feder, J. L., Flaxman, S. M., Egan, S. P., Comeault, A. A., & Nosil, P. (2013). Geographic mode of speciation and genomic divergence. Annual Review of Ecology, Evolution, and Systematics, 44, 73-97.](Feder%20et%20al.%20-%202013%20-%20Geographic%20Mode%20of%20Speciation%20and%20Genomic%20Divergen.pdf)

### Paleoecology, Dr. Scott Mensing and Dr. Adam Csank

[Mensing, S. A., Tunno, I., Sagnotti, L., Florindo, F., Noble, P., Archer, C., … & Piovesan, G. (2015). 2700 years of Mediterranean environmental change in central Italy: a synthesis of sedimentary and cultural records to interpret past impacts of climate on society. Quaternary Science Reviews, 116, 72-94.](Mensing%20et%20al.%20-%202015%20-%202700%20years%20of%20Mediterranean%20environmental%20change%20i.pdf)

[Roberts, N. (2013). The Holocene: an environmental history. John Wiley & Sons. Ch. 2.](Roberts_1998_Ch2_Holocene.pdf)

*Recommended but not required:*

[Flower, Aquila; Gavin, Daniel G.; Heyerdahl, Emily K.; Parsons, Russell A.; and Cohn, Gregory M., “Western Spruce Budworm Outbreaks Did Not Increase Fire Risk over the Last Three Centuries: A Dendrochronological Analysis of Inter-Disturbance Synergism” (2014). Environmental Studies. 26. http://cedar.wwu.edu/envs\_facpubs/26](Western%20Spruce%20Budworm%20Outbreaks%20Did%20Not%20Increase%20Fire%20Risk%20over.pdf)

## Nov 7

### Philosophy of Biology, Dr. Carlos Mariscal

**What is a Species?**  
[Ereshefsky, M. (1992). Eliminative pluralism. Philosophy of Science, 59(4), 671-690.](Ereshefsky%20-%201992%20-%20Eliminative%20Pluralism.pdf) *Optional*: [Mishler, B. D., & Brandon, R. N. (1987). Individuality, pluralism, and the phylogenetic species concept. Biology and Philosophy, 2(4), 397-414.](Mishler%20and%20Brandon%20-%201987%20-%20Individuality,%20pluralism,%20and%20the%20phylogenetic%20spe.pdf)

**The Extended Evolutionary Synthesis**  
[Laland, K., Wray, G. A., & Hoekstra, H. E. (2014). Does evolutionary theory need a rethink?. Nature, 514(7521), 161.](Laland%20et%20al%202014.pdf) *Optional*: [Laland, K. N., Uller, T., Feldman, M. W., Sterelny, K., MÃ¼ller, G. B., Moczek, A., … & Odling-Smee, J. (2015, August). The extended evolutionary synthesis: its structure, assumptions and predictions. In Proc. R. Soc. B (Vol. 282, No. 1813, p. 20151019). The Royal Society.](Laland%20et%20al.%20-%202015%20-%20The%20extended%20evolutionary%20synthesis%20its%20structure.pdf) *Optional*: [Booth, A., Mariscal, C., & Doolittle, W. F. (2016). The modern synthesis in the light of microbial genomics. Annual review of microbiology, 70, 279-297.](Booth%20et%20al.%20-%202016%20-%20The%20Modern%20Synthesis%20in%20the%20Light%20of%20Microbial%20Gen.pdf)

**Understanding Function in DNA**  
[Graur, D., Zheng, Y., Price, N., Azevedo, R. B., Zufall, R. A., & Elhaik, E. (2013). On the immortality of television sets:â€œfunctionâ€ in the human genome according to the evolution-free gospel of ENCODE. Genome biology and evolution, 5(3), 578-590.](Graur%20et%20al.%20-%202013%20-%20On%20the%20Immortality%20of%20Television%20Sets%20Function%20.pdf) *Optional*: [Doolittle, W. F., Brunet, T. D., Linquist, S., & Gregory, T. R. (2014). Distinguishing between â€œfunctionâ€ and â€œeffectâ€ in genome biology. Genome biology and evolution, 6(5), 1234-1237.](Doolittle%20et%20al.%20-%202014%20-%20Distinguishing%20between%20Function%20and%20Effect%20in%20.pdf) *Optional*: [Graur, D., Zheng, Y., & Azevedo, R. B. (2015). An evolutionary classification of genomic function. Genome biology and evolution, 7(3), 642-645.](Graur%20et%20al.%20-%202015%20-%20An%20Evolutionary%20Classification%20of%20Genomic%20Function.pdf)

### Genomic variation & architecture, Dr. Tom Parchman

[Ellegren, H., Smeds, L., Burri, R., Olason, P. I., BackstrÃ¶m, N., Kawakami, T., … & Uebbing, S. (2012). The genomic landscape of species divergence in Ficedula flycatchers. Nature, 491(7426), 756-760.](Ellegren%20et%20al.%20-%202012%20-%20The%20genomic%20landscape%20of%20species%20divergence%20in%20Fic.pdf)

[Chapter 2 from: Lynch, M. (2007). The origins of genome architecture (Vol. 98). Sunderland: Sinauer Associates.](lynch_chap2.pdf)

*Recommended but not required:* [Kawakami, T., Smeds, L., BackstrÃ¶m, N., Husby, A., QvarnstrÃ¶m, A., Mugal, C. F., … & Ellegren, H. (2014). A highâ€density linkage map enables a secondâ€generation collared flycatcher genome assembly and reveals the patterns of avian recombination rate variation and chromosomal evolution. Molecular ecology, 23(16), 4035-4058.](Kawakami%20et%20al.%20-%202014%20-%20A%20high-density%20linkage%20map%20enables%20a%20second-genera.pdf)

## Nov 14

### Comparative genomics & gene evolution, Dr. David Alvarez-Ponce

[Cork, J. M., & Purugganan, M. D. (2004). The evolution of molecular genetic pathways and networks. Bioessays, 26(5), 479-484.](Cork%20and%20Purugganan%20-%202004%20-%20The%20evolution%20of%20molecular%20genetic%20pathways%20and%20ne.pdf)

[Alvarez-Ponce, D., & McInerney, J. O. (2011). The human genome retains relics of its prokaryotic ancestry: human genes of archaebacterial and eubacterial origin exhibit remarkable differences. Genome biology and evolution, 3, 782-790.](Alvarez-Ponce%20and%20McInerney%20-%202011%20-%20The%20Human%20Genome%20Retains%20Relics%20of%20Its%20Prokaryotic.pdf)

### Ecological & evolutionary epigenetics, Dr. David Zeh

[Bonilla MM, Zeh JA, Zeh DW. 2016. An epigenetic resolution of the lek paradox. BioEssays 38, 355-366.](Bonilla%20et%20al.%20-%202016%20-%20An%20epigenetic%20resolution%20of%20the%20lek%20paradox.pdf)

[Zeh DW, Zeh JA, Ishida Y. 2009. Transposable elements and an epigenetic basis for punctuated equilibria. Bioessays, 31, 715-726.](Zeh%20et%20al.%20-%202009%20-%20Transposable%20elements%20and%20an%20epigenetic%20basis%20for%20.pdf)

## Nov 21

### Conservation Biology and Ecosystem Management, Dr. Sudeep Chandra

*Strongly recommended:*

[Biodiversity, Scientists, and Religious Communities: Conservation Through Collaboration (AAAS news article)](AAAS%20Biodiversity%20Scientists,%20and%20Religious%20Communities%20Conservation%20Through%20Collaboration.pdf)

[Schaefer, J. (2017). New Hope for the Oceans: Engaging Faith-Based Communities in Marine Conservation. Frontiers in Marine Science, 4, 62.](Schaefer%20-%202017%20-%20New%20Hope%20for%20the%20Oceans%20Engaging%20Faith-Based%20Comm.pdf)

[Bhagwat, S., & Palmer, M. (2009). Conservation: the world’s religions can help. Nature, 461(7260), 37-37.](Bhagwat%20and%20Palmer%20-%202009%20-%20Conservation%20the%20world's%20religions%20can%20help.pdf)

*Additional recommended reading:*

[Rolston III, H. (2010). Saving Creation: Faith Shaping Environmental Policy. Harv. L. & Pol’y Rev., 4, 121.](Rolston%20III%20-%202010%20-%20Saving%20Creation%20Faith%20Shaping%20Environmental%20Polic.pdf)

### Phylogenetics, Dr. Guy Hoelzer

[Degnan, J. H., & Rosenberg, N. A. 2009. Gene tree discordance, phylogenetic inference and the multispecies coalescent. Trends in ecology & evolution, 24(6), 332-340](Degnan%20and%20Rosenberg%20-%202009%20-%20Gene%20tree%20discordance,%20phylogenetic%20inference%20and%20.pdf)

[Felsenstein, J. 1988. Phylogenies from molecular sequences: inference and reliability. Annual review of genetics, 22(1), 521-565](Felsenstein%20-%201988%20-%20Phylogenies%20from%20molecular%20sequences%20inference%20an.pdf)

*Optional:* [Huelsenbeck, J. P., & Rannala, B. 1997. Phylogenetic methods come of age: testing hypotheses in an evolutionary context. Science, 276(5310), 227-232](Huelsenbeck%20and%20Rannala%20-%201997%20-%20Phylogenetic%20methods%20come%20of%20age%20testing%20hypothes.pdf)

## Nov 28

### Global Change and Conservation, Dr. Ken Nussear

[AraÃºjo, M. B., & New, M. (2007). Ensemble forecasting of species distributions. Trends in ecology & evolution, 22(1), 42-47.](Araujo%20and%20New%20-%202007%20-%20Ensemble%20forecasting%20of%20species%20distributions.pdf)

[Kearney, M. (2006). Habitat, environment and niche: what are we modelling?. Oikos, 115(1), 186-191.](Kearney%20-%202006%20-%20Habitat,%20environment%20and%20niche%20what%20are%20we%20modell.pdf)

[Buckley, L. B., Urban, M. C., Angilletta, M. J., Crozier, L. G., Rissler, L. J., & Sears, M. W. (2010). Can mechanism inform speciesâ€™ distribution models?. Ecology letters, 13(8), 1041-1054.](Buckley%20et%20al.%20-%202010%20-%20Can%20mechanism%20inform%20speciesâ€™%20distribution%20models.pdf)

## Dec 5

### Final Study Session

## Dec 12

### Final exam

noon-3pm, MS 227

Closed book (except for one note-sheet); 8 short essays, ~300 words each (max 600 words), with questions chosen from a pool constructed as follows: from each of the 25 topics, I will pick 1-2 questions (so you’ll see a list of ca. 40 questions); I’ll divide that list roughly into three parts (beginning, middle and end of the semester), and you’ll have to pick 3 questions from the first, 3 questions from the middle and 2 questions from the end.

In other words, you have a ton of choice, but you also can’t completely ignore some section of the course!

Although the exam is “closed book” and closed-internet, you can bring one sheet (8.5 x 11) of written notes, with writing on front and back.

I will email you the exam via webcampus at the start of the exam period. Please type your answers directly underneath the questions that you have chosen, and (when youâ€™re all finished) please delete the questions that you have not answered.