**** FACULTAD DE CIENCIAS

**CURSO DE POSTGRADO**

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| **Nombre del curso**  | **Bases conceptuales del Origen de las Especies** |
| **Tipo de curso** (Obligatorio, Electivo, Seminario) | Máximo 12 alumnos (Electivo) |
| **N° de horas totales** (Presenciales + No presenciales) | 3 presenciales + 3 no presenciales a la semana |
| **N° de Créditos**  | 4  |
| **Fecha de Inicio – Término** | 16 sesiones26 Octubre – 17 Diciembre |
| **Días / Horario** | Lunes y Jueves 16:15 – 17:45 |
| **Lugar donde se imparte** | Facultad de Ciencias |
| **Profesor Coordinador del curso** | Rodrigo Medel |
| **Profesores Colaboradores** | No hay |
| **Descripción del curso**  | El curso examinará mediante sesiones lectivas y lecturas dirigidas, los eventos cruciales y razonamiento de Charles Darwin que le permitieron elaborar las tres hipótesis centrales de su Teoría de Evolución, (1) la transmutación, (2) la selección natural, y (3) el principio de divergencia.  |
| **Objetivos**  | 1. Lograr que los alumnos/as integren a su formación naturalista las bases históricas y conceptuales que permitieron a Charles Darwin elaborar el Origen de las Especies en 1859. 2. Examinar la naturaleza del razonamiento usado por Darwin en la elaboración de las hipótesis nucleares de su teoría. |
| **Contenidos**  | I El conocimiento naturalista pre-Darwiniano.II La Hipótesis de TransmutaciónII La Hipótesis de Selección NaturalIII El Principio de Divergencia |
| **Modalidad de evaluación**  | 1. Presentaciones de papers y capítulos de libros (40%)2. Ensayo I (30%)3. Ensayo II (30%) |

**Literatura Básica**

1. Ayala, F. 2009. Darwin and the scientific method. PNAS 106: 10033–10039.
2. Browne, J. 1980. Darwin’s botanical arithmetic and the “Principle of Divergence”, 1854-1858. Journal of the History of Biology 13: 53-89.
3. Darwin, C.R. 1859. On the origin of species by natural selection, or the preservation of favoured races in the struggle for life. John Murray, London.
4. de Beer, G. 1962. The Wilkins lecture: the origins of Darwin's ideas on evolution and natural selection. Proceedings of the Royal Society of London, Series B 155: 321-338.
5. Eldredge, N. 2005a. Darwin’s other Books: “Red” and “Transmutation” Notebooks,“Sketch,”, “Essay,” and “Natural Selection”. PloS Biology 3: e382.
6. Evans, L.T. 1984. Darwin's use of the analogy between artificial and natural selection. Journal of the History of Biology 17: 113-140.
7. Gruber, H.E. 1985. Going the limit: toward the construction of Darwin's theory (1832-1839). Páginas 9-34 en Kohn, D. (Ed.), The Darwinian heritage. Princeton University Press, Princeton.
8. Herbert, S. 1971. Darwin, Malthus and selection. Journal of the History of Biology 4: 209 - 217.
9. Hodge, M.J.S. 1985. Darwin as a lifelong generation theorist. Pages 207-243 in D. Kohn (Ed.), The Darwinian Heritage. Princeton University Press, Princeton.
10. Hodge, M.J.S. & D. Kohn. 1985. The immediate origins of natural selection. Pages 185-206 in D. Kohn (Ed.), The Darwinian Heritage. Princeton University Press, Princeton.
11. Kohn, D. 1980. Theories to work by: rejected theories, reproduction, and Darwin's path to natural selection. Studies in the History of Biology 4: 67-170.
12. Kohn, D. 1985. Darwin’s principle of divergence as internal dialogue. Páginas 245-257 en Kohn, D. (Ed.), The Darwinian heritage. Princeton University Press, Princeton.
13. Millman, A.B. & C.L. Smith. 1997. Darwin’s use of analogical reasoning in theory construction. Metaphore and Symbol 12: 159-187.
14. Ospovat, D. 1979. Darwin after Malthus. Journal of the History of Biology 12: 211-230.
15. Richards, R.A. 1997. Darwin and the inefficacy of artificial selection. Studies in History and Philosophy of Science 28: 75-97.
16. Richards, R.J. 2012. Darwin’s principles of divergence and natural selection: why Fodor was almost right. Studies in History and Philosophy of Biological and Biomedical Sciences 43: 256-268.
17. Ruse, M. 1975. Darwin's debt to philosophy: an examination of the influence of the philosophical ideas of John F.W. Herschel and William Whewell on the development of Charles Darwin's theory of evolution. Studies in History and Philosophy of Science 6: 159-181.
18. Sandow, A. 1938. Social factors in the origin of Darwinism. Quarterly Review of Biology 13: 315-326.
19. Schweber, S.S. 1980. Darwin and the political economists: divergence of character. Journal of the History of Biology 13: 195-289.
20. Sulloway, F.J. 1982. Darwin and his finches: the evolution of a legend. Journal of the History of Biology 15: 1-53.
21. Tammone, W. 1995. Competition, the division of labor, and Darwin's principle of divergence. Journal of the History of Biology 28: 109-131
22. Thagard, P.R. 1977. Darwin and Whewell. Studies in History and Philosophy of Science 8: 353-356.
23. Theunissen, B. 2012. Darwin and his pigeons: the analogy between artiﬁcial and natural selection revisited. Journal of the History of Biology 45: 179-212.
24. Van Valen, L. 1976. Domains, deduction, the predictive method, and Darwin. Evolutionary Theory 1: 231-245.
25. Vorzimmer, P.J. 1969. Darwin, Malthus, and the theory of natural selection. Journal of the History of Ideas 30: 527-542.

**Libros recomendados**

1. Barrett, P.H., P.J. Gautrey, S. Herbert, D. Kohn & S. Smith (Eds.). 1987. Darwin's notebooks, 1836-1844: geology, transmutation of species, metaphysical enquiries. Cambridge University Press, Cambridge, UK.
2. Corsi, P. 1988. The age of Lamarck: evolutionary theories in France, 1790-1830. University of California Press, Berkeley.
3. Eiseley, L. 1958. Darwin’s century: evolution and the men who discovered it. Doubleday Anchor Books, New York. Reprinted in 2009 by Barnes and Noble.
4. Gayon, J. 1998. Darwinism's struggle for survival: heredity and the hypothesis of natural selection. Cambridge University Press, Cambridge.
5. Ghiselin, M.T. 1969. The triumph of the Darwinian method. University of Chicago Press, Chicago.
6. Ghiselin, M.T. 1997. Metaphysics and the origin of species. SUNY Press, New York.
7. Gruber, H.E. 1974. Darwin on man: a psychological study of scientific creativity. University of Chicago Press, Chicago.
8. Herbert, S. 1980. The red notebook of Charles Darwin. Edited with an introduction and notes by Sandra Herbert. Bulletin of the British Museum of Natural History 7: 1-164.
9. Malthus, T.R. 1798. Primer ensayo sobre la población. Edición en español, 2000. Alianza Editorial, Madrid.
10. Manier, E. 1978. The young Darwin and his cultural circle: a study of influences which helped shape the language and logic of the first drafts of the theory of natural selection. Dordrecht, Holland.
11. Milne-Edwards, H. 1851. Introduction à la Zoologie Générale. Victor Masson, Paris.
12. Oldroyd, D.R. 1984. How did Darwin arrive at his theory? The secondary literature to 1982. History of Science 22: 325-374.
13. Ospovat, D. 1981. The development of Darwin’s theory: natural history, natural theology, and natural selection, 1838-1859. Cambridge University Press, Cambridge.
14. Paley, W. 1802. Natural theology: or evidences of the existence and attributes of the deity. J. Faulder, London.
15. Ruse, M. 1979. The Darwinian revolution. University of Chicago Press, Chicago.
16. Ruse, M. 1986. Taking Darwin seriously: a naturalistic approach to philosophy. Basill Blackwell, Oxford.
17. Ruse, M. 1989. The Darwinian paradigm: essays on its history, philosophy and religious implications. Routledge, London.
18. Ruse, M. 1996. Monad to man: the concept of progress in evolutionary biology. Harvard University Press, Massachusetts.
19. Ruse, M. 2009. Defining Darwin: essays on the history and philosophy of evolutionary biology. Prometheus Books, Armhest.
20. Shanahan, T. 2004. The Evolution of Darwinism: selection, adaptation and progress in evolutionary biology. Cambridge University Press, Massachusetts.
21. Sober, E. 2011. Did Darwin write the Origin backwards? Prometheus Books, New York.
22. Stauffer, R.C. (Ed.). 1975. Charles Darwin’s natural selection, being the second part of his Big Species Book written from 1856 to 1858, Cambridge University Press.
23. Whewell, W. 1840. The philosophy of the inductive sciences founded upon their history. John W. Parker, London.