

College of Arts – Online Course Outline Template

Course Code: PHIL *6730	Section: 01	Semester: W13
Course Title: Contemporary Philosophy of Science: Scientific Explanation		
Instructor: A. Wayne		
Brief course Synopsis: <p>Course Outline Knowing <i>why</i> is a singular achievement, distinct from other scientific accomplishments. Science aims at describing and representing nature, predicting and controlling it; but science also aims at explanation. This course surveys philosophical work on scientific explanation and related issues, with an emphasis on contemporary work. The first half of the course sets up the problem of scientific explanation. We begin by examining the explanatory strategy of Galileo's new science of mechanics. We then look at challenges from instrumentalism (Pierre Duhem, Nancy Cartwright), from idealization (Robert Batterman) and from reductionism (Sahotra Sarkar). The second half of the course critically evaluates philosophical accounts scientific explanation, with a particular focus on the question of what it means for <i>X</i> to explain <i>Y</i>. We look at key work of Carl Hempel, Wesley Salmon, Philip Kitcher, James Woodward, Michael Strevens and others. Students will be encouraged to explore and develop their own approach to explanation. The focus and readings in the second part of the course may be modified in light of student interests.</p>		