

- HM 134. Operating Systems: Design and Implementation
- HM 136. Advanced Computer Architecture
- HM 141. Advanced Topics in Algorithms
- HM 142. Complexity Theory
- HM 144. Scientific Computing
- HM 147. Computer Systems Performance Analysis
- HM 153. Computer Vision
- HM 154. Robotics
- HM 155. Computer Graphics
- HM 156. Parallel Computing
- HM 157. Computer Animation
- HM 183, 184. Computer Science Clinic

## CRITICAL INQUIRY

Director of College Writing and Assistant Professor of English Dara Rossman  
Regaignon, coordinator

Critical Inquiry (ID1) is a program of seminars for first-year students in their first semester at the College. Seminars are taught by faculty from across the disciplines and engage students in rigorous reading, writing and discussion on varied topics. The goal of ID1 is to prepare students to participate fully and successfully in the intellectual community that is Pomona College. Critical writing is an essential component of that participation and to that end ID1 is a writing-intensive course. All sections of ID1 focus on writing as a recursive process of drafting and revision. The seminars all meet from 11 a.m. to 12:15 p.m. on Tuesdays and Thursdays.

### Seminars for 2009-10

Critical Inquiry Seminars for 2010-11 updated at [www.pomona.edu/administration/registrar](http://www.pomona.edu/administration/registrar)

1. **Simply Sondheim.** *Mr. Bailey.* The Hollywood release of *Sweeney Todd* in 2007 sparked a renewed interest in American composer Stephen Sondheim, an undisputed giant of 20th-century American musical theater. A study of Sondheim's Broadway shows offers a glimpse not only into the history of musical theater, but of the nation which gave it birth and the social complexities that are celebrated in his lyrics and music. This seminar will provide an in-depth study of the composer, several of his musicals and an opportunity to engage in the artistic process of writing lyrics and music.
2. **Edge Dwellers: Representing Difference in Contemporary U.S. Literature.** *Ms. Chávez Silverman.* Difference, or "diversity," is a buzzword commonly invoked on college campuses, in the workplace and in popular culture in the U.S. For many, "diversity" is synonymous with "multiculturalism," and both terms are often deployed as something desirable in terms of achievement or, at least, aspiration. But in other parts of the world, if we tell people "my campus is very diverse," they are likely to respond with a puzzled "*¿diverso de qué?*" [different to what?] As we discuss the ways authors articulate their difference(s) from an often invisible or unconscious norm, these questions will be our central concerns. What happens when an author or character inhabits or embodies overlapping—often conflicting—categories of difference? How do we, as readers, negotiate the anxieties, recognitions and pleasures produced by narratives of difference by recent U.S. authors? All texts in English.

3. **Welcome to Hell: From Deep Sea and Subsurface to Outer Space.** *Mr. Crane.* The discovery of life at the bottom of the sea and deep beneath the surface of the Earth has changed our assumptions both about what is necessary for life and about what forms living creatures can take. Almost all environments on Earth can support life and the variety of organisms appears endless, but there do seem to be some immutable laws governing life on Earth. In this seminar, we'll investigate these laws—is there a minimum size for a living thing? is there a minimum number of individual “parts” required for a free-living and replicating organism?—and we'll think about how what we know about life on Earth might help us to recognize extraterrestrial life if we saw it. Readings will be drawn from fields such as deep sea exploration, deep subsurface microbiology and extraterrestrial life detection.
4. **I Disagree.** *Mr. de Silva.* The most important skill in any relationship—personal, professional, political—is knowing how to disagree. Why? In this seminar we consider the problem of living with difference. What does it take to be the one juror out of 12 who votes innocent? What are the dangers of living with people who agree with you? How does a scientific community confront troublesome new ideas? A religious community? Is it weak to compromise? Do you enjoy being right? Do you prefer being wrong? It is an unfortunate fact that the word “disagreeable” is usually taken to mean “unpleasant.” In this seminar, we will rehabilitate the word and revive the noble art of disagreement. Participants will be expected to engage with the wider college community as we grapple with these questions.
5. **“Flashpoints” in Rock & Roll History.** *Mr. Dettmar.* Rock & roll has had a rocky public reception since its earliest days: Bill Haley & the Comet's “Rock Around the Clock” provoked riots across the country and rock quickly developed a snarling public image. High-profile dust-ups continue to characterize rock's relationship with its public: Amy Winehouse being released from rehab for her live-via-video rendition of “Rehab” at this year's Grammys is only the most recent installment. In this seminar, we will trace the “scandalous” history of rock 'n' roll through its public controversies: Dylan “going electric” at Newport, Hendrix burning his guitar at Monterey, Sinead ripping apart a photo of the Pope on *Saturday Night Live*, Milli Vanilli revealed as frauds . . . In such moments, we learn a great deal about what rock hopes to be, about its intrinsic contradictions and structural instability and about the resistance it meets from its own fans.
6. **War and Peace.** *Ms. Dwyer.* Leo Tolstoy's *War and Peace* has been hailed as “the greatest European novel” and derided as a “loose, baggy monster.” In this seminar, we will immerse ourselves in this controversial, enduring and influential novel. We will see what *War and Peace* can tell us about Russian history and culture during the Napoleonic Wars of 1805-1812 (when the novel is set) and during the revolutionary period of the 1860s (when it was published). We will also pay close attention to *War and Peace* as a work of art: What are the hidden linkages that hold this “monster” together? Finally, we will consider how Tolstoy can help us grapple with questions that are (once again) urgent: What is the nature of war? How does one represent history and experience? What possibilities are there for individual human action in the world at large? All texts in English.
7. **The Look of Modern Life: Painting in Paris during the Second Empire and Early Third Republic (1852-1895).** *Mr. Emerick.* During the 19th century, London, the center of world finance, neatly trumped Paris as Europe's “true” capital. But from the mid-century onward, Paris leapt ahead anyway to become Europe's cultural capital and quintessentially modern city. How did the French pull this off? This seminar will focus on the role painting played in bringing the modern city to view. We study first how the French state authorities during the Second Empire packaged the “new Paris” in their biennial salons and in special exhibitions of painting in two huge, international “Universal Expositions” in 1855 and 1867. Then we trace how the “new Paris” got re-presented all over again by some mavericks—by Edouard Manet and his followers, mainly—who broke rules, parodied the state-approved art and featured the new spaces of modernity in their pictures. Berthe Morisot, Manet's friend and model, wife of Manet's brother and one of the founders of Impressionism will figure largely. Includes a field trip to the Norton Simon Museum of Art in Pasadena.

- 8. Pilgrimage, Travel and Cultural Encounter.** *Mr. Gorse.* When you come to Pomona College this fall, you will be making a pilgrimage, traveling to a distant land and experiencing cultural encounter. How are you to understand these transformative experiences? What does it mean to be a pilgrim or traveler, to be impacted by a foreign culture? In this seminar, we will explore the history of pilgrimage, travel and cultural encounter in the Mediterranean world from antiquity to modernity, through texts and images from Tacitus' *Germania* to Marco Polo's *Travels* to Italo Calvino's *Invisible Cities*. Using the tools of cultural anthropology—in particular, the work of Victor Turner and James Clifford—we will look at these texts and other works of art in light of modern theories of “liminal” space, experience, identity and rituals of passage.
- 9. The Heart of a Doctor.** *Ms. Hoopes.* In literature, doctors are often portrayed as caring deeply about patients. But as medicine becomes more complex and technology-driven, the ability of a doctor to feel empathy towards patients can be compromised. In this seminar, we'll read the Hippocratic Oath and consider the hearts of today's doctors. We'll think about how medical training affects students and what we ask when we expect doctors—who frequently must watch their patients die—to respond to the feelings of patients and families. We'll consider what different cultures expect of doctors and the challenges doctors face when caring for patients who come from cultures radically different from their own. To increase our insight, we'll read selections from Robert Marion's *Intern Blues*, Pauline Chen's *Final Exam*, Lori Alvord's *The Scalpel and the Silver Bear*, Abraham Verghese's *My Own Country*, Dang Thuy Tram's *Last Night I Dreamed of Peace*, Tracy Kidder's *Mountains Beyond Mountains* and other sources.
- 10. “But then what happens???”** *Mr. Horowitz.* In Samuel Beckett's *Waiting for Godot* the first line uttered on stage is, “Nothing to be done”—and the play concludes with this dialogue and these stage directions: “VLADIMIR: [*Looking up*] Well? Shall we go? / ESTRAGON: [*Looking down*] Yes, let's go. / (*They do not move.* [Silence]).” This places Godot within a performative world perhaps begun in the writing of Anton Chekhov, further developed in the works of Samuel Beckett and Harold Pinter and refracted through such forms as the films of Woody Allen and the television comedy of Jerry Seinfeld and Larry David. Such works present humankind wallowing in apparent stasis—where the unremarkable and the petty annoyance become raw material for both low comedy and high drama. The challenge is presenting this maddeningly mundane world as believable (and indeed boring), yet, paradoxically, still serving as a probing, penetrating platform for the twisted realities of human existence. This seminar will focus upon those art forms where Aristotle's stress upon the importance of plot and action is challenged and subverted and where the word “inactive” takes on a curiously active quality.
- 11. Cultural Psychology.** *Mr. Hurley.* We begin with the assumption that the culture that one experiences (socio-cultural-historical context) has a primary and powerful influence on perceptual, cognitive and behavioral development. Since context is literally everything, everywhere, across time, how can the science of psychology expect to study it in any meaningful way? This seminar takes an exploratory look at the how the recent cultural psychology movement fights to avoid being overwhelmed by the sheer magnitude of what it hopes to study by thinking outside the discipline, compromising when necessary and otherwise letting the questions (rather than traditional methodologies) lead the way. Students will learn the structure and style of writing/inquiry in the social sciences.
- 12. Muslim Literary Landscapes.** *Ms. Kassam.* How do Muslims represent themselves in literary works? We will journey into the imaginative spaces of and about Muslims across the globe in order to explore the issues, the contexts, the characters and the stories that these Muslims have to tell. Are their concerns very different from ours? Is their world unconnected to the one we inhabit? On this journey, we will visit places as diverse as North Africa and the Middle East, South Asia, sub-Saharan Africa, Central Asia and Europe. We will hear from them what they make of this global village we call home. This seminar offers the opportunity to learn about “other” cultures, about human struggles, about politics, feminism, religion and society, not to mention mysticism.

13. **The TV Novel.** *Mr. Klioutchkine.* How does an HBO television series relate to our everyday experience and to our understanding of the culture we live in? How did a 19th-century serialized novel relate to its readers' understanding of the world around them? What can these genres tell us about ourselves? In this course, we will explore these questions as they establish links between the serialized novel and the original television series, the novel's present-day incarnation. We will read Wilkie Collins' novel *The Moonstone* (1868) before focusing on two exponents of the television series, *The Sopranos* and *Six Feet Under*.
14. **Poverty in America.** *Mr. Lozano.* In 1883, economist Alfred Marshal wrote that poverty in the United States could be eradicated within one or two generations, but 130 years later, poverty remains a pressing problem. But what does it mean to be poor in the 21st century? In this course, we will study the nature and consequences of poverty in the U.S. : Why are minorities more likely to be poor? Is poverty transmitted across generations? Why is poverty so persistent and what is the role of discrimination in perpetrating poverty? In pursuing answers to these questions we analyze the different social, educational, residential and labor market programs designed to alleviate poverty, such as welfare reform, affirmative action, job training programs, early education interventions and moving-to-opportunity housing programs.
15. **Mirroring Japan/ese America.** *Ms. Miyake.* In this seminar, we will explore what Japan and/or Japanese America looks and feels like to a series of writers, dramatists, manga and anime writers and artists. You may be surprised by what you encounter; you may disagree with what they reveal; or you may resonate with what they say. We will read a range of texts, asking questions about how they represent the spaces and identities of Japan/ese America. Have you ever read a work by Murakami Haruki, Yoshimoto Banana, or our own Pomona graduate Garrett Hongo? Or has the manga by CLAMP, *Cardcaptor Sakura*, "captured" your imagination? What about *The Grave of the Fireflies*? In addition to addressing issues of gender, sexuality and Orientalism, we'll consider what difference medium makes: do traditional literary forms, such as novels and plays, treat these questions differently than popular forms, such as manga and anime?
16. **Bad Science.** *Ms. Perini.* In the United States, there are ongoing controversies over scientific issues that have important policy ramifications: evolution vs. intelligent design; whether and why the Earth is warming; the scientific value of research on human embryonic stem cells and so on. The one thing all sides agree on is the need to avoid bad science. But what is that? How do you recognize when work is not truly scientific? Should we always trust scientific consensus? To investigate these questions, we'll first consider eugenics—the early 20th century movement to resolve social problems by regulating the reproduction of "unfit" people—and intelligent design in order to clarify the difference between science and non-scientific studies. We'll then turn to the question of evolutionary psychology, which purports to explain many socially significant human behaviors but faces criticism from other scientists. In the final unit of the course, we will focus on the more public controversy over the developing scientific consensus on climate change.
17. **Music in Paris, 1870-1930.** *Mr. Peterson.* This course will explore musical life in Paris in a pivotal 60-year period marked by the Franco-Prussian War, the "belle époque," the disruption brought by World War I and, finally, the strikingly diverse aspects of French culture in the 1920s. Specifically, we'll investigate how gender and national identity were defined through musical expression. In considering works by composers such as Debussy, Ravel, Saint-Saëns, Satie, Milhaud and Poulenc, we will pay close attention not only to the important musical genres (symphonic music, piano music, opera, song and chamber music), but also to broader cultural movements such as Impressionism and Symbolism. We'll discover that the recurring theme of "Paris" invites us to reconsider aspects of place and of national identity within French musical culture in this period. Finally, we will examine emerging themes in post-World War I Paris, including the formulation of a post-war neo-classicism, the appropriation of jazz and the persistence of Exoticism in the 1920s.

18. **Advice about Love.** *Ms. Raff.* Some elusive piece of information, says a persistent but questionable intuition, holds the key to love and happiness. Why do works of literature so often present themselves as purveyors of just such information? What do readers mean when they say that they are “in love” with a particular author, book or literary character? What does a literary work’s status as object of love contribute to its authority as advisor about love? And what are the sources of the discourse of therapy that pervades contemporary American culture? In this course, we examine how various texts represent their role in the life of the reader (literature as medicine, aphrodisiac, guardian, spouse or seducer) as well as the content of literary advice about love (how to seduce a virgin or annoy her, save a marriage or destroy one, curtail erotic melancholy or prolong it). We draw on works by Ovid, Molière, Laclous, Austen, Henry James, Freud and Nathanael West.
19. **Fairy Tales.** *Ms. Regaignon.* Say “fairy tales” and we think of princesses, castles, ogres and dragons, of fantastic and frothy confections that begin “once upon a time” and end “happily ever after.” We might be surprised to learn that in some versions of *Little Red Riding Hood*, the heroine performs a strip-tease for the wolf, or that the Grimm brothers typically sanitized the folktales they collected. Fairy tale tropes help us imagine and therefore understand romantic love, childhood and growing up, gender, identity, difference and danger. In this seminar, we will explore these tales as cultural narratives that simultaneously reveal and help to shape the ideals and nightmares of the societies that consume them by reading canonical Western European fairy tales, versions from non-Western cultures and contemporary adaptations. In addition, we’ll examine how the logic and tropes of fairy tales shape contemporary culture and will write our own fairy tales.
20. **Fictive Lebanon.** *Mr. Sarkis.* Questions of Lebanese national selfhood—religious and cultural identification, colonial heritage and sociopolitical affiliation—generate abstract discussion. But they are also central to the physical and military issues this country has faced, from four centuries of Ottoman rule to the French-British mandate that forged its national borders after World War I and from its role in the Arab-Israeli conflict to its 15-year civil war. In this course, we will engage with the questions of Lebanese identity by way of contemporary novels, memoirs and film. We will not answer the questions. We may hardly even ask them. What we will do is investigate the manner in which stories real and manufactured can reflect, inform and construct national and other selves.
21. **Performing Sex and the Body.** *Mr. Shay.* The controversy over California’s Proposition 8, which bans marriage between people of the same gender, has drawn our attention, once again, to the ways that gender roles and sexuality are simultaneously the most private and the most public elements of any individual’s character. In this course, we will consider how “masculine,” “feminine,” “effeminate,” and “butch” behaviors and characteristics are imagined in cultural contexts ranging from popular culture to high art and how the performing arts (music, dance, theater and cinema) create societal role models that many individuals conceive of as cultural givens. We’ll therefore also consider how the performing arts provide spaces and modes through which we explore, challenge, critique, invent and subvert different ways to “be” gendered. We will look at original texts such as choreographies and screenplays, as well as scholarly articles and books to see the ways in which gendered modes have changed historically and across cultures.
22. **Race, Confidence Men and the Eye of Providence.** *Mr. Smith.* In mythic cycles from the “Western Tradition,” there has been a sustained intrigue over the relationship between the human eye and the heavenly sun. From the Cyclops of Homer’s *Odyssey* to its refiguring in D.W. Griffith’s *The Birth of a Nation*, the powers of the eye get equated with those of its celestial counterpart. This intrigue has been reshaped—but not lost—with the advent of modern visual surveillance techniques, like optical scanners in voting machines, weather-imaging satellites and battlefield-embedded observational media. In this seminar, we will examine a range of manifestations of the solar eye, paying particular attention to the relationship(s) it bears to reality and the ways in which the solar eye operates in schemes both great and small, of confidence and illusion. We’ll consider works by Plato, Foucault, Ellison and Faulkner; documents in government policy; and movies such as *Resident Evil* and *The Lord of the Rings* trilogy.

23. **American Inequality.** *Mr. Summers Sandoval.* The United States proudly declares itself a nation founded on the propositions of human equality and liberty. Its history, however, has been more a testament to the limits of the promise of these ideals than to their enjoyment. The lived experiences of African Americans, Latinos, Filipinos and Native Americans, among others, have been simultaneously the measure of these limits as well as the foundation of struggles for their fulfillment. Our class will investigate the role played by “race” in 20th-century U.S. history as we ask why it is American inequality has more often been the rule than the exception. Our analysis will center the lives of “people of color,” examining the history of “whiteness” and racial formation, segregation and marginalization and the struggles for justice and equality.
24. **Nanotechnology in Science and Fiction.** *Mr. Tanenbaum.* Nanotechnology—which combines physics, chemistry, biology and engineering—is currently one of the most heavily-funded and fastest-growing areas of science. Depending upon what you read, nanotechnology may consume our world or enable unlimited new materials, destroy life as we know it or enable immortality, lead us to squalor or utopia, or simply make better electronic gadgets. We will discuss current scientific research in contrast with a range of fiction by Philip Dick, Neil Stephenson, Kathleen Ann Goonan, Mary Pearson and others. How do science and fiction intermix and inspire each other? Can technology change our self-image and identity? Will technology enhance or subvert the development of the individual or our culture? We will examine how the existing media and literature influence and define both the science and popular culture of nanotechnology.
25. **Paradoxes.** *Mr. Thielke.* Consider the “Paradox of Material Coincidence.” A clay statue sits in front of you: how many objects are there? “One,” seems the obvious answer, but some reflection might lead you to think otherwise. The clay, after all, can survive a good smashing, but the statue cannot; the statue is valuable, but the clay is not. So, are there really two things—the statue and the clay that composes it—on the table in front of you? This is but one example of the seemingly endless number of paradoxes that confront us. But what—if anything—do paradoxes tell us about reason and the world? Is the world itself paradoxical, or can reason manage to solve the many paradoxes we encounter? In this class, we will look at a variety of paradoxes, with an eye toward assessing where the limits of reason lie.
26. **Witchcraft in Early American Society.** *Ms. Wall.* Most of what we think we know about witchcraft in early America stems from the Salem Hysteria, usually filtered through *The Crucible*. But rather than extremist thinking run amuck, witchcraft beliefs were both pervasive and important in mainstream early modern Anglo-American culture. These beliefs open windows onto the social and mental worlds of early America. They reveal assumptions and tensions surrounding gender roles and family life; economic ambition and competition; social divisions and personal enmities; anxieties arising from threats of war and racial mixing on the frontier; and the challenges of establishing successful, godly communities in a precarious new setting. Witchcraft cases thus allow us to examine changing legal practice, including standards of proof and the use of judicial torture; the growing importance of a scientific worldview; and the sharpening distinctions between folk religion and medicine on one side and established, elite beliefs on the other.
27. **Finding India.** *Mr. Woods.* The coronation of Queen Victoria as “Empress of India” in 1876 and the Great Imperial Durbar of 1911 asserted British cultural, racial, political and economic power over the subcontinent. But they also simultaneously announced and obscured the complex nature of the cultural dynamics and cross-fertilizations between India and Britain, a relationship traceable from 1600 (when the British East India Company was chartered) through the present. Examining essays, historical commentaries, videos, analyses, music, food, wit, wisdom and follies to see how “British India” and “Indian India” were invented and reinvented, we will discuss British exotica and Mughal culture; historical self-conceptions; the processes and ideologies of raj; and religion and cultural baggage. See <http://pages.pomona.edu/~rlw04747/rlw/10IDI> for more information.

## Other courses offered by the Writing Program

**ID 027 PO. Elements of Argument.** *Ms. Bromley.* This is an intensive course in written critical inquiry focusing on the genre of writing most closely associated with college-level work: the academic essay. Students will learn how to generate analytic questions and present nuanced responses to them; to develop those arguments by engaging with complex sources; and to write in clear and grammatically correct prose. Open to first-years and sophomores only. Spring 2011; offered alternate years.

**English ENGL 087 PO. Writing: Theories, Processes, Pedagogies.** *Ms. Bromley, Ms. Regaignon.* Each fall.

**Politics POLI 097 PO. Writing about Justice in Politics.** *Ms. Bromley.* Spring 2010; offered alternate years.

## DANCE

The College offers a program of study in dance. See the Theatre and Dance Department's section of the catalog.

## ECONOMICS DEPARTMENT

**Professor Michael Kuehlwein, department chair**

*Professors Andrabi, Brown<sup>3</sup>, Conrad, Kuehlwein, Likens, Marks, Smith*  
*Adjunct Professor Hueckel*  
*Associate Professor Slavov*  
*Assistant Professors Chincarini, Cutter, De Pace, Lozano, Steinberger*  
*Visiting Assistant Professor Navarro*  
*Lecturers Bergevin, Jurewitz, O'Leary*

Students who take our courses learn about a wide range of forces that shape our economy and society. Our curriculum emphasizes economic theory, statistical analysis and the role of public policy in addressing economic and social problems. We are committed to teaching students how to construct and test rigorous models of individual and aggregate behavior and how to interpret empirical results in the context of competing explanations. We offer a broad range of courses designed to serve the aspirations of all economics majors as well as the intellectual purposes of the broader student body. Our curriculum prepares our graduates for rewarding careers in academia, government, finance, law, journalism, consulting, business and the non-profit sector.

## Requirements for the Major in Economics

Students majoring in economics may choose from one of two options or plans.

*Plan I. General economics.* Eleven courses are required in addition to the senior exercise. These courses include the required core, i.e., 51, 52, 57, 101, 102, 107 or 167, plus five upper-division courses in economics (numbered 116 and above). At least two of the five upper-division courses must be numbered 150 or above. One accounting course may be counted as an elective. Completion of at least one course in calculus (MATH 30 or higher) is required for all economics majors.

<sup>3</sup>On leave 2009-10