



This catalogue is a non-binding reference for courses offered to IES Abroad students at Nantes University.

It contains a **selection of courses** that IES students previously enrolled in the program have attended.

This sample is **for information only**: the course offering at Nantes University may change from one year to the next.

Please **do not** consider this listing as a current course offering and do not use it to make your course selection. A final, up-to-date and complete catalogue will be **available onsite** during the academic orientation.

Nantes University offers **hundreds of course options** in the following departments:

- Literature
- Sociology
- History
- Geography
- Art History and Archaeology
- Philosophy
- Psychology
- Political Science and Law
- Sciences of Education
- Sciences of Languages
- Foreign Languages (beginners or non-beginners, in German, Spanish, Italian, Russian, Arabic and more)
- Economics
- Sciences: Mathematics, Biology, Chemistry, Physics, IT

All the details concerning registration and evaluation for Nantes University courses are explained thoroughly during the orientation.

An individual counselling session with IES staff is scheduled during orientation to advise students regarding course selection and options.

CM = lecture course TD = tutorials (course in smaller groups with more interaction)

History

<p>Women, families and society in the modern era 22h</p>	<p>The beginning of the modern era in Europe coincides more or less with the beginning of a questioning of the place of women in society, especially following the</p> <p>This course will focus on the "women's quarrel" initiated in the 15th century, a debate that was regularly reactivated until the Enlightenment and the French Revolution. The aim of this course is twofold: it will focus on the representations of men and women, the social relations that result from this in everyday life and the political questions that this implies (what involvement of women at the top of power and in public life). But focusing on women will also invite an interest in family life, in the way in which the family framework structures societies and social relations in the modern era - and their contestation.</p> <p>Bibliography</p> <ol style="list-style-type: none"> 1. D. GODINEAU, Les femmes dans la société française, XVIe-XVIIIe siècle, Paris, Armand Colin, 2003 2. F. THÉBAUD (ed.), Écrire l'histoire des femmes, Fontenay-aux-Roses, ENS éditions, 1998 	<p>CM</p>
<p>Extra-European (contemporary) history 22h</p>	<p>Asia (Japan)</p> <p>This course studies Japan from the Edo period (from 1603), then from the Meiji period (from 1868) to the Second World War; the main features of the civilisation and history of the ancient and medieval periods will also be presented more quickly. This course will deal as much as possible with the history of Japan in its regional area, the history of China in particular will be evoked</p> <p>Bibliography</p> <ol style="list-style-type: none"> 1. F. ABBAD, Histoire du Japon 1868-1945, Paris, Coursus, 1992. 2. J. GRAVEREAU, Le Japon au XXe siècle, Paris, PHSeuil, 1990. 3. P.-F. SOUYRI, Nouvelle histoire du Japon, Paris, Perrin, 2010. 	<p>CM</p>
<p>The Ancient Mediterranean</p>	<p>Between myth and history: nine figures from ancient worlds (Akhenaton, Tarquin the Great, Alexander the Great, Spartacus, Cleopatra VII, Jesus of Nazareth, Nero, Zenobia, Constantine the Great)</p>	<p>CM</p>
<p>Contemporary France II - the Third Republic and Vichy France, 1870-1945</p>	<p>The course studies the Third Republic in its internal aspects: contested birth, consolidation despite the defects</p> <p>This is followed by an examination of the period from the structural changes and oppositions, the weakening of the 1930s and the final collapse. The period of war: Vichy regime, internal and external resistance. The political history gives a large place to social data, It is the economic, religious and cultural environment on which it is closely dependent.</p> <ol style="list-style-type: none"> 1. S. BERSTEIN, O. RUDELLE (eds.), Le Modèle Républicain. Paris, Puf, 1992. 2. M. AGULHON, La République, Tome I: L'élan fondateur et la grande blessure, 1880-1932, Paris, Hachette, 2011: Tome II: Nouveaux drames et nouveaux espoirs, 1932 à nos jours, Paris, Hachette, 1999. 3. R. PAXTON, La France de Vichy. Paris, 1972. 	<p>CM TD</p>

Geography

Contemporary environmental issues	At a time when we are witnessing environmental evolutions that are sometimes very sensitive, on a planetary scale, and even more so on a local scale, this course aims to clarify first of all the way in which geography approaches certain major themes that are regularly in the news (pressure on natural resources; erosion of biodiversity; threats posed by floods and droughts; erosion of soils; accelerated rise in the level of the seas and oceans). At the same time, it looks at how societies are adapting more or less easily to these changing conditions, and how some local initiatives are trying to move decisively towards sustainable development of their living space, despite the many pressures on it.	CM 20h And TD 20h
Evolution and management of natural areas	The course will deal with the dynamics of natural environments and its factors, with a focus on several notions essential to its understanding: artificialisation, state of conservation, restoration, resilience, ecological continuity (green and blue framework, corridor, etc.) and protection. The methods for observing and analysing changes will be apprehended from various scales and temporalities. Several types of environment In particular, aquatic environments (rivers and wetlands) and maritime marshes will be addressed to highlight these concepts and methods.	CM 14:00 And TD 26h

Translation

(NB: IES / Nantes University joint course)

24h translation	<p>Translation of literary texts from French, English and American authors (20th and 21st century) insisting on basic methods of translation and frequent references to rules of French grammar.</p> <p>Review of main grammatical rules and developing the ability to analyze and translate literary texts.</p> <p>Required work: Weekly preparation of the translation done in class.</p> <p>Assessment:</p> <p>Minimum requirement :</p> <ul style="list-style-type: none"> - 1 composition in French (approximately two pages and a half) - 2 additional translations done at home (one from English to French and one from French to English) - 1 mid-term (one translation from English to French, and one from French to English) - 1 final exam (one translation from English to French, and one from French to English) 	TD
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Modern literature

<p>History of language 18:00</p>	<p>This course is an introduction to the analysis of the evolution of languages in general and French in particular. After a review of linguistics, this course will address the issues of language comparison, change, synchrony and variation. We will then deal with the diachrony of French itself: history of French and historical phonetics.</p> <p>Elements of bibliography :</p> <ul style="list-style-type: none"> – Perret M. (1998). Introduction à l'histoire de la langue française, A. Colin, Paris. – Bourciez E. & Bourciez, J. (1967). Phonétique française : Etude Historique, C. Klincksieck, Paris. – Zink G. (1986), Phonétique historique du français, PUF, Paris. 	<p>CM</p>
<p>French literature from the 19th to the 20th century Baudelaire, <i>The Flowers of Evil</i> 18h</p>	<p>Few works in our literary pantheon enjoy a reputation comparable to that of <i>Les Fleurs du mal</i>. An indication of Baudelaire's pre-eminence in our modernity is that he was the first author to be published in the prestigious "Bibliothèque de la Pléiade" collection, in 1931. "Baudelaire is the first seer, the king of poets, a true God", wrote Rimbaud, Proust quoted him willingly, Genet borrowed a hemistich from him here and there: Baudelaire cannot be ignored, at the risk of cutting modern literature off from one of its main roots.</p> <p>The courses will address the major themes of Baudelaire's poetry, such as the representation of the city, the problem of memory and the motif of travel.</p> <p>Bibliography :</p> <p>Charles Baudelaire, <i>Les Fleurs du mal</i>, edition by Claude Pichois, Paris, Gallimard, collection "Poésie", 2014</p>	<p>TD</p>
<p>Comparative Literature and Founding Texts Discovering Founding Texts 18h</p>	<p>The aim of this course will be to relate the most famous scenes and characters of the Old and New Testaments to see how literature from the 16th to the 20th century draws on them. It will also be an opportunity to extend the study to other forms of representation: painting, sculpture and music, genres for which the Bible is an inexhaustible source of inspiration.</p> <p>An anthology will be distributed at the beginning of the course.</p>	<p>CM</p>
<p>Literary and folk tales, general culture and children's literature 24h</p>	<p>The aim of this course is to rediscover the great classical authors of fairy tales (Perrault, Grimm, Andersen) as well as popular tales from other cultures (Russian tales, African tales...) from a multidisciplinary approach (comparative mythology; ethnology and folkloristics; structuralism; psychoanalytical, historical and stylistic approaches...) image analysis for albums). The study of contemporary reconfigurations for young people will also be supported by this theoretical knowledge. We will thus study in parallel the source tales and their rewriting or production in albums, within the framework of investigations on the socio-educational approaches, adapted to today's children, to which this contemporary production bears witness.</p> <p>Books to be obtained:</p> <p>Perrault, <i>Contes</i>, edition by Catherine Magnien, Paris, Le Livre de Poche Grimm, <i>Contes</i>, Preface by Marthe Robert, Paris, Gallimard, coll. Folio n°840.</p>	<p>TD</p>

<p>Comparative literature Discovery of non-European founding texts <i>18 h</i></p>	<p>The course covers five non-European cultural areas and three genres: epic with extracts from the Mahābhārata (India, from the 3rd century BC) and the account of the foundation of the Mali empire by King Soundjata (Africa, from the 13th century); storytelling with <i>The Adventures of Sindbad the Sailor</i> (Arab world, 9th century) and <i>Fantastic Stories of the Olden Days</i> (Japan, c. 1120); and poetry with an anthology of poems, <i>Snow on Lotus Mountain. Songs and Verses from Ancient China</i> (China, until the 14th century). The presentation of the texts will be accompanied by the exploration of various avenues of comparative study.</p> <p>India <i>Le Mahābhārata conté selon la tradition orale</i> (IIIe siècle avant Jésus-Christ-IIIe siècle après Jésus-Christ), edition by Serge Demetrian, Paris, Albin Michel, 2006.</p> <p>Afrique Soundjata, <i>la Gloire du Mali. La Grande Geste du Mali</i> (à partir du XIIIe siècle), tome 2 (French text), narrative by Wâ Kamissoko, transcription and translation by Youssouf Tata Cissé, Paris, Karthala, 2009 (text available on Madoc). BU.</p> <p>Monde arabe <i>Les Aventures de Sindbad le marin</i> (IXe siècle), translation by René Khawam, Paris, Phébus, 1985. BU</p> <p>Japon <i>Histoires fantastiques du temps jadis</i> (c. 1120), translation by Dominique Lavigne-Kurihara, Arles, Philippe Picquier, 2002.</p> <p>China <i>Snow on the Lotus Mountain. Songs and verses from ancient China</i> (up to the 14th century), translation by Ferdinand Stočes, Arles, Philippe Picquier, 2006.</p>	<p>CM</p>
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Law and Political Science

<p>Constitutional law (theory - history 3rd and 4th Republics - 5th Republic)</p>	<p>Basic notions of constitutional law. The Third and Fourth French Republics. The right to vote and the electoral system. The birth of the Fifth Republic in 1958. The President of the Republic. The Prime Minister and the government. The Parliament. The legislative procedure. The control of the Parliament on the action of the Government. Constitutional justice.</p>	<p>CM</p>
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Language Sciences

<p>Syntax and language diversity</p>	<p>This course will introduce the methods and principles of structural analysis of the sentence: notion of constituent, grammatical categories, hierarchical representation of the structure of constituents, in the simple and complex sentence.</p>	<p>CM TD</p>
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Classics

<p>Great biblical myths (philosophy) 24h</p>	<p>The course will consist of two parts. In the first, after presenting the object "Bible", a philosophical reading of some of the great biblical texts will be considered: the stories of "original sin" and the sacrifice of Isaac in Genesis, of the crossing of the Red Sea in Exodus, the book of Job, Ecclesiastes, the Song of Songs The second part of the course will reflect on the figures, functions and difficulties of the concept of 'God' as used and criticised in philosophy. In particular, the themes of the relationship between faith and reason, the figuration of the divine, the 'proofs of God's existence', theodicy and the problem of evil will be addressed. The course will take care to maintain a strictly philosophical approach to all these questions. It will also help students to acquire, or reinforce, the biblical and theological culture that they often lack. It will be illustrated by commenting on paintings depicting biblical episodes. To prepare the course : a) Reread what your favourite philosophers have written about 'God'. You can also use the anthology of texts by M.-F. Pellegrin, Dieu, GF, collection "corpus". b) Read or reread the most famous passages of the Bible (choose a scientifically reliable translation, e.g. TOB, Jerusalem Bible, Segond Bible; the "1.90 Euro Bible, the original with today's words" is also very suitable), in particular: Genesis, Exodus (up to ch. 20), the book of Job, Ecclesiastes (or Qohelet), the Song of Songs, a gospel (e.g. Luke), the prologue to the Gospel (e.g. the Gospel of John), and the Bible of the Apostles. 20), the book of Job, Ecclesiastes (or Qohelet), the Song of Songs, a gospel (e.g. Luke's), the prologue to the Gospel of John, ch. 17 of the Acts of the Apostles. A detailed bibliography will be distributed during the first course.</p>	<p>CM</p>
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SOCIOLOGY

<p>Socialisation : Sociology of consumption 22h</p>	<p>The course offers a panorama of the sociology of consumption and its founding works within the framework of an analysis of the social history of this practice, its multiple uses and issues.</p>	<p>CM</p>
<p>Formation of contemporary societies: Sociology of immigration 22h</p>	<p>This course provides theoretical and empirical knowledge in the sociology of immigration. After a general presentation of contemporary migrations on an international scale and a review of the French history of immigration, it will examine various issues in greater depth: ideologies relating to integration (assimilation, multiculturalism, etc.), the Europeanisation of immigration policies, discrimination and racism. Specific objectives: To know the geography of world migration. To know the main stages of immigration in France. To become aware of different approaches to migration (from macro to micro). Understand the reasons for migration, its social determinants, understand the effects of migration in the societies of origin, transit and reception. To understand the diversity of migratory experiences. To become aware of the problems of inter-ethnic relations</p>	<p>CM</p>

<p>Contemporary environmental issues: a theoretical approach</p> <p>20h</p>	<p>At a time when we are witnessing environmental evolutions that are sometimes very sensitive, on a planetary scale, and even more so on a local scale, this course aims to clarify first of all the way in which geography approaches certain major themes that are regularly in the news (pressure on natural resources; erosion of biodiversity; threats posed by floods and droughts; erosion of soils; accelerated rise in the level of the seas and oceans). At the same time, it discusses how societies adapt more or less easily to these changing living conditions, and how some local initiatives are trying to move resolutely towards sustainable development of their living space, despite the multiple pressures that are being exerted.</p>	<p>CM</p>
<p>Sociology of gender</p> <p>24H TD</p>	<p>Presentation of the notion of gender, the processes of categorisation and hierarchisation of sex groups to which they give rise; reflection on the notions of mixity, parity, equality and on the use of the concept of domination</p>	<p>TD</p>

History of Art and Archaeology

<p>Major works in context II</p>	<p>Tour of the great works and monuments of medieval art</p> <p>This course aims to establish a panorama of medieval artistic production based on a tour of the most important works and monuments created from the 5th to the 15th century. This course will familiarise students with the visual and artistic universe of the Middle Ages and give them a first idea of the richness of this millennium of civilisation.</p> <ol style="list-style-type: none"> 1. Philippe Plagnieux (ed.), L'art du Moyen Âge en France, Paris, Citadelles/Mazenod, 2010. 2. Jean-Marie Guillaouët (3 vols. published by Gisserot): Churches, abbeys and cathedrals; Romanesque art; Gothic art. <p>Masterpieces of ancient art</p> <p>The course will focus on the general presentation and contextualisation of ten or so essential masterpieces of Greek and Roman art (Acropolis, Venus of Cnidus, Laocoon, Colosseum, Fayum portraits, etc.). Chosen from each of the three major arts (architecture, sculpture and painting), their study will allow us to place the historical markers essential to the knowledge of these works, but also to consider their posterity and their echoes in the history of art in general.</p> <ol style="list-style-type: none"> 1. Maffre Jean-Jacques, L'art grec. Paris, Flammarion 1996, collection Tout l'art. 2. Rolley Claude, La sculpture grecque 2 La période classique. Paris, Picard, 1999. 3. Hellmann Marie-Christine, Greek Architecture. Paris, Librairie Générale Française, Le Livre de Poche, 1998. 4. Hellmann Marie-Christine, Greek Architecture. Tome 2: Religious and funerary architecture. Paris Picard, 2006. 5. Baratte François, L'art romain. Paris, Flammarion 1996, collection Tout l'art. 	<p>CM</p>
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<p>Extra-European Arts and Civilisation</p>	<p>Religious Architecture in the Land of Islam from the Umayyads to the Ottomans The mosque, central in Islam, although the Koran says almost nothing about it, is the only Muslim building for which, through texts, buildings or excavations, we have significant information since the 7th century. Over a millennium, from the Umayyads to the Ottomans, the course will analyse the history of the building, paying attention to its evolution in time, often linked to politics, and to its variations in space, from the Atlantic Ocean to India, and even beyond.</p> <ol style="list-style-type: none"> 1. M. HATTSTEIN and P. DELIUS, Arts and Civilizations of Islam, Cologne, Köneman, 2000 2. R. HILLENBRAND, Islamic Architecture. Form, Function, and Meaning, New York, Columbia University Press, 2004. 3. M. Frishman and H.-U. Khan (eds.), The Mosque. History, Architectural Development, and Regional Diversity, London, Thames and Hudson, 2002. 	<p>CM</p>
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EDUCATIONAL SCIENCES

<p>Philosophy of Education 20 hrs</p>	<p>In the light of the philosophical issues addressed during the first semester, the hypothesis of aesthetic education as a paradigm for education will be considered during the second semester. We will be particularly interested in the question of the body and the sensitive, through a reflection carried out as much by the study of specific philosophical texts as by the analysis of lived experiences on an artistic work within the school. It will then be a question of questioning, through this mediation, the embodied realisation of the project of emancipation. (in terms of political as well as philosophical).</p>	<p>CM</p>
<p>Sociology of Education 20h</p>	<p>The second semester of the course focuses on the contributions of the comprehensive, interactionist and constructivist currents that have renewed the sociology of education. We will study the origins of these currents, their different forms (anthropology of education, ethnography of education, etc.), with an emphasis on research on the classroom, relations between students and teachers and the school experience. The TD sessions will allow us to deepen these The project will be enriched by the study and discussion of research papers.</p>	<p>CM</p>

Psychology

<p>Cognitive psychology General and differential approaches 12 hrs TD 12 hrs CM</p>	<p>The lectures of the disciplinary EU are an introduction to cognitive and differential psychology. Two teachers are involved in this course (6h CM per teacher)</p> <p>Introduction to cognitive psychology, historical, epistemological, methodological and applied aspects.</p> <p>Introduction to differential psychology. We will focus on intelligence and personality. The second part will be devoted to the methods and instruments of the differential approach. Special attention will be paid to psychological tests.</p> <p>The tutorials illustrate concepts, phenomena and processes of cognitive psychology based on experiments carried out in class.</p> <p>Bibliography : Fortin, C., & Rousseau, R. (1990). Cognitive psychology: An approach to information processing. Presse Universitaire du Quebec.</p>	<p>CM TD</p>
<p>Social psychology 12 hrs TD 12 hrs CM</p>	<p>Educational objectives :</p> <p>Introduction to the conceptual and methodological bases of social psychology, with a focus on the generic issue of social influence.</p> <p>Contents :</p> <p>What happens when we are in a group? When do we start talking about a group?</p> <p>After a general introduction on social psychology, its history, its specificity and its methods, the course will focus on the articulation between the individual and the group. It will then address the different aspects of social influence: normalisation, conformism, submission to authority and innovation.</p> <p>The tutorials will be applications of the concepts developed in the course. Particular attention will be paid to examples and illustrations referring to daily life</p> <p>Bibliography : Buègue, L., & Desrichard, O. (2013). Traité de Psychologie sociale. Brussels: De Boeck. Leyens, J.P., & Yzerbyt, V. (1997). Psychologie sociale. Paris: Mardaga. Moscovici, S. (2003). Psychologie sociale. Paris: Presses Universitaires de France. Roussiau, N. (2000). Psychologie sociale. Paris: In Press. A complementary bibliography will be provided during the course.</p>	<p>CM</p>
<p>Child and adolescent psychology 1 18 h</p>	<p>In this course, the issues and knowledge relating to the links between society, the family and the child are developed through (1) societal changes in the West and (2) intercultural aspects. The contributions of other disciplinary fields or related disciplines - history, sociology, law, anthropology in particular - enrich the understanding of these links with psychological development. The first part deals with the evolution of parenthood (father/mother: rights and duties, authority, etc.), the founding frameworks (filiation, genealogy, etc.) of the family; family upheavals; the current place of the child and its pitfalls. The second part is part of the intercultural psychology approach and deals more specifically with differences, particularly on parenting practices, depending on the cultural context.</p>	<p>CM</p>

<p>Developmental psychology</p>	<p>Teaching objectives: The aim is to continue the discovery of theories (Bruner, Wallon, Bowlby) and to introduce some of the main concepts of contemporary developmental psychology. The first five classes are devoted to the question of the role of social relations in the development of the child through the theory of Vygotski and the work of Bruner, the theory of Wallon and the theory of attachment (Bowlby, 1969). The contributions and limitations of this work will be examined in the light of the results of more recent studies in developmental psychology.</p> <p>In TD, a syllabus is distributed during the first session to each student. The pedagogical techniques used allow the consolidation and appropriation of knowledge, through the reading of materials provided and information to be researched by the student in order to develop his/her observation skills and understanding of child development. The pedagogical objective is progressively oriented towards the development of the ability to put knowledge into practice</p> <p>This will help to develop pre-professional skills.</p>	<p>CM</p>
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Philosophy

<p>Bioethical issues 24 hours</p>	<p>How far can and should humans be transformed? The progress of biomedical sciences and techniques allows us to intervene more and more on the genetic heritage of the human being (gene therapies, cloning, etc.), his body, its elements and its products (transplants, artificial organs, cosmetic surgery) but also his psyche (substances, transcranial stimulation, etc.).</p> <p>Are the medical and technical improvements advocated in particular by transhumanists desirable and legitimate? What are the ethical limits of such a quest for perfection and immortality? What does it mean?</p> <p>Recommended bibliography: J.-M. Besnier, <i>Demain les posthumains</i>, Fayard, 2012.</p> <p>G. Canguilhem, <i>The Normal and the Pathological</i>, PUF, 2013.</p> <p>G. Hottois, <i>Dignité et diversité des hommes</i>, Vrin, 2009.</p> <p>A. Kahn and D. Lecourt, <i>Bioéthique et liberté</i>, PUF, 2004.</p> <p>D. Lecourt, <i>Humain post humain</i>, Paris, PUF, 2003.</p> <p>M. J. Sandel, <i>Against perfection: ethics in the age of genetic engineering</i>, trans. H. Valance, Paris, Vrin, 2016.</p>	<p>CM</p>
<p>General philosophy</p> <p>How to find your way in moral philosophy?</p> <p>24h</p>	<p>The course will be devoted to the basic notions of moral (philosophy): good and evil, happiness, virtue and vice, duty, conscience, freedom, and whether morality goes beyond the minimal principle of non-harm to others, and the calculation of the consequences of actions.</p> <p>I will rely in particular on :</p> <ul style="list-style-type: none"> - Robert Spaemann, <i>Notions Fondamentales de Morale</i>, Champs-Flammarion, 1999 - R. Ogien, <i>L'Éthique aujourd'hui: maximalistes et minimalistes</i>, Paris, Gallimard, 2007 <p>A more extensive description and bibliography will be presented on the IFac website in due course.</p>	<p>CM</p>

SPECIALITY MUSIC - PHILOSOPHY

<p>Music, language, society 24h</p>	<p>In a two-hour weekly class, we will reflect on some of the issues at the heart of the complex relationship between music, language and society, the latter being conceived as the necessary link between the other two. We will begin our study with a broad historical survey of the evolution of the relationship between music and society, from the "music of the spheres" to the romantic recital. Case studies will then be used to clarify our thinking: the reception of Beethoven's Ninth Symphony (from the European anthem to the film <i>Clockwork Orange</i>), the functioning of music in totalitarian regimes, Adorno's 'cultural industry' and its application to pop music (from Tin Pan Alley to the punk movement). In particular, we will question the powers of music (manipulation, control, instrumentalisation, embrigadement, catharsis) relative to the very open aspect of its meanings. Bibliography : ADORNO, Theodor. W. <i>The Fetish Character in Music and the Regression of Listening</i>. Paris: Allia, 2001. BENJAMIN, Walter. Œuvres III. Paris: Gallimard, 2000. BOUCOURECHLIEV, André. Le Langage musical. Paris: Fayard, 1993. -Beethoven. Paris: Seuil, 1963; Essai sur Beethoven, Arles: Actes Sud, 1991. NIETZSCHE, Friedrich. The birth of tragedy, The Wagner case, Gallimard pocket. SCHLOEZER, Boris de. Introduction to Johann Sebastian Bach. Paris: Gallimard, 1947. NB: A complete bibliography will be distributed at the beginning of the course.</p>	<p>CM</p>
<p>Enhanced music Vocal practice 24 h</p>	<p>The Choir of the Department of Philosophy is open to all students and staff of the UFR Lettres et Langages who wish to engage in a musical project. By performing in concert, the choir provides additional publicity for the "music" course of the philosophy degree. Experience as a singer, basic musical training desirable but not required. However, attendance at weekly rehearsals is essential. As a continuation of the vocal technique course in L1 (music course), the rehearsals are also an opportunity to deepen, through the link between theory and practice, certain themes dealt with, in particular, in musical aesthetics (L2) and in philosophy of music (L3). We will work on a mainly <i>a cappella</i> repertoire, as varied as possible across periods, countries, languages, genres, styles and cultures. Mandatory supplies, to be brought to each rehearsal: - black flexible file with 4 rings and a set of transparent plastic pockets, for the storage and organisation of scores; - pencil for writing on sheet music. Semi-annual student evaluation: Attendance at rehearsals will be marked out of 10. A sign-in sheet will be circulated at the beginning of each session. Each absence not justified by a medical certificate will result in the withdrawal of one point. Each time a binder is forgotten, one point will be deducted. Mastery of the repertoire will be marked out of 10. During the last sessions of each semester, each student will have the opportunity to sing his or her part in a quartet (or quintet) of soloists. The attendance grade can only be awarded if the student actually submits to the assessment. The validation of the UED and the participation in the concert(s) are dissociated. It is important to inform the choirmaster as soon as possible whether or not you wish to participate in the concert(s). Recommended bibliography: P. Kaelin, <i>L'Art choral</i>, Paris, Berger-Levrault, 1974</p>	<p>TD</p>

Mathematics

<p>Groups and symmetries</p>	<p>At the end of this unit, the student will know the abstract notion of Group, and will be able to apply it in order to achieve the following objectives</p> <ul style="list-style-type: none"> -Determine whether a set (finite or infinite) with a product law is a group; • calculate products and inverses within the classical groups $(\mathbb{Z}, +)$, $(\mathbb{Q}, +)$, $(\mathbb{R}, +)$, $(\mathbb{C}, +)$, (\mathbb{R}^*, \cdot), (\mathbb{C}^*, \cdot), $(\mathbb{Z}/p\mathbb{Z}, +)$; -Determine whether an application between two groups is a morphism, an isomorphism; • determine whether a subset of a group is a subgroup; • give different interpretations, geometric, as a permutation or as a subgroup of the transformations of \mathbb{C} of a simple finite group, in particular $\mathbb{Z}/p\mathbb{Z}$ and the symmetry group of a regular polygon; -determine the group of transformations of the plane generated by rotations, translations or similarities ; -Determine whether a set of invertible matrices is a group. <p>At the end of this unit, the student will be able to present the reasoning that leads to the above objectives with the rigour acquired through the example of the demonstrations seen in class.</p> <p>General concepts on groups :</p> <ul style="list-style-type: none"> • definition of a group, classical examples $(\mathbb{Q}, +)$, $(\mathbb{Z}^n, +)$, $(\mathbb{R}^n, +)$, $(\mathbb{C}, +)$, (\mathbb{R}^*, \cdot), (\mathbb{C}^*, \cdot), link with the definition of vector spaces; • definition of a subgroup, example of subgroups of \mathbb{R} ; -Definition of a group morphism, examples in \mathbb{Z}^n and \mathbb{R}^n. Groups and affine transformations of the plane; • notion of rotations, symmetry, translation, similarities ; • group generated by affine transformations of the plane ; • interpretation in \mathbb{C} of affine transformations of the plane ; • symmetry group of a regular polygon or a tessellation. Finite groups : • finite group, order of a group ; • definition of $\mathbb{Z}/p\mathbb{Z}$ with equivalence classes ; • isomorphism with the group of p-th roots of unity ; -Interpretation as a group of rotations of the plane; • definition of the group of permutations of order n ; • interpretation as a permutation group of geometric examples: rotations of finite order, symmetry group of a regular polygon, cube or tetrahedron; • Lagrange's theorem, illustration by geometrical examples of subgroups. <p>Groups of matrices :</p> <ul style="list-style-type: none"> • show that $GL(n, \mathbb{R})$, $SL(n, \mathbb{R})$ are groups; • show by hand, by defining it from the scalar product on \mathbb{R}^2, that $SO(2, \mathbb{R})$ is a group. • interpret rotations, symmetries and similarities preserving the origin, as well as the group they generate. 	<p>CM 16h TD 24h</p>
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