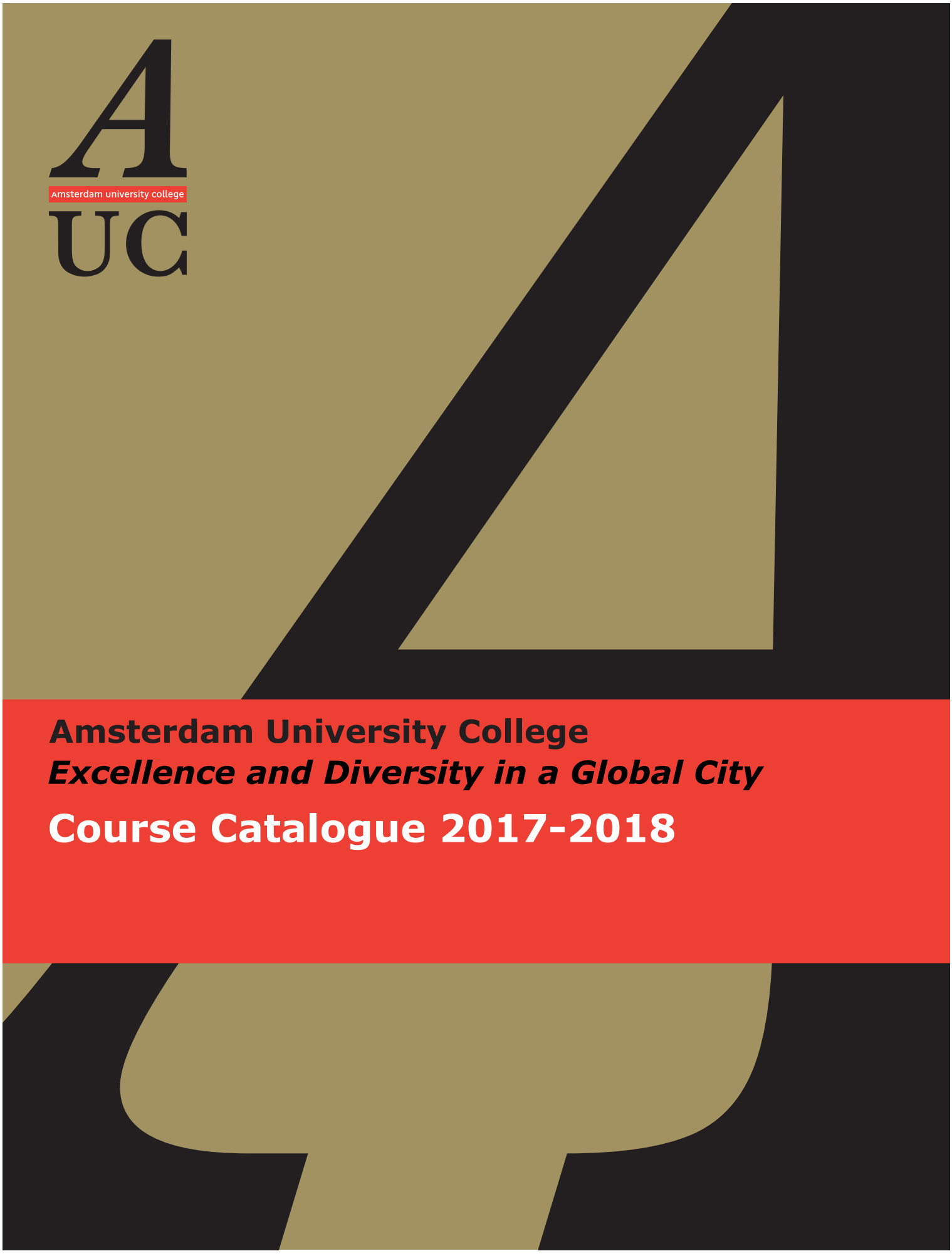

Amsterdam University College

Excellence and Diversity in a Global City

Course Catalogue 2017-2018

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University of Amsterdam

VU VRIJE UNIVERSITEIT AMSTERDAM

900112ACC: Academic Writing Skills

Discipline	ACC
Theme	n/a
Track	n/a
Prerequisites	All students (apart from native speakers) should have exit level grade 8 in English VWO (or comparable). Remedial grammar work will be offered via self-study.

Academic Writing Skills provides an introduction to academic study and the foundationalskills required for becoming a successful member of an interdisciplinary academic community. The syllabus reflects a progression of competence in the primary skills of academic reading, research, writing, and presentation (i.e. several activities build on each other). Activities will combine different media and will draw on the range of six AUC themes, emphasizing interdisciplinarity and diversity, demonstrating contemporary relevance and a global perspective, and – importantly - reflecting students' own interests. The course will accommodate different learning methods and styles and will provide students with detailed feedback on their writing. Each section of the syllabus will involve both a theoretical and a practical dimension, encouraging reflection and enabling students to learn by doing. The course culminates in an interdisciplinary academic conference, during which students actively participate in producing and responding to a series of formal research presentations. Students will: learn how to recognize and practice different genres and modes of academic discourse; o improve reading comprehension and efficiency; learn how to handle reading material in an objective and critical manner; learn about and practice different genres of academic writing; develop the writing skills appropriate to different disciplines; learn how to recognize and apply different research methodologies; work independently and as part of a collaborative group; develop vocabulary appropriate to an academic environment; improve listening comprehension and develop presentation skills; participate in discussions and debates, and prepare presentations. This course is offered in semester 1 and in semester 2.

900121ACC: Basic Research Methods and Statistics I

Discipline	ACC
Theme	n/a
Track	Maths
Prerequisites	Mathematics at exit level VWO Wiskunde A (or comparable). Extra-help sessions will be offered for students with deficiencies.

This course provides a general introduction into the methods of behavioral and social research. It covers research design, data collection and data analysis. Topics include: Using Excel to summarize quantitative and qualitative data, random sampling, basic probability theory, probability distributions on random variables, the binomial and normal distributions, sampling distributions, statistical testing and confidence intervals, and statistical inference on a mean or proportion or mean differences of a single population, the difference between means or proportions for two populations, or categorical variables. Part of the course is dedicated to the practical application of these skills in a group research project, culminating in a written report. This course is offered in semester 1 and in semester 2.

900124ACC: Calculus for Economics

Discipline	ACC
Theme	n/a
Track	Maths
Prerequisites	None

This course is intended for potential Social Science majors who are planning to study economics courses such as Fundamentals of Micro- and Macro Economics (200-level) and the advanced economics courses (300-level). This course provides an introduction to the Calculus of real-valued functions. It introduces some of the essential analytical tools of the Sciences, such as differentiation and integration, series expansions, differential equations, optimization and matrices. We will carefully define important mathematical concepts such as continuity and convergence and make it clear how Calculus is applied in Economics. Topics to be covered are: 1. Limits and continuity 2. Differentiation 3. Optimization 4. Linear approximation 5. Taylor's formula 6. Integration: the fundamental theorem of Calculus 7. Sums, areas, volumes and lengths 8. Techniques for integration 9. First and second order differential equations 10. Sequences and series 11. Functions of more variables: partial differentiation 12. The method of Lagrange multipliers 13. Multidimensional spaces, vectors, matrices 14. Double integration At the end of the course students will be familiar and comfortable with the basic concepts of Calculus described above. Moreover, they will be aware of the importance and applicability of Calculus in the Sciences. This course is offered in semester 1 and in semester 2.

900125ACC: Calculus

Discipline	ACC
Theme	n/a
Track	Maths
Prerequisites	Mathematics at exit level Wiskunde B or D (or comparable). Extra-help sessions will be offered for students with deficiencies.

The emphasis in the course is on differential and integral calculus in one variable. Topics include: - Limits of functions and continuity, - Differentiation: its definition, meaning and rules, - Inverse functions, exponential and logarithmic functions, and inverse trigonometric functions, and their derivatives, - Linear approximations and Taylor approximations, - Optimization, - Graphing functions, - Integration, sums and areas, - The fundamental theorem of calculus, - Methods for computing antiderivatives, - Integration techniques, - Applications of integration to area and volumes of revolution, - First and second order differential equations, - Sequences, infinite series and power series. Students will also practice exercises in-class to improve their skills. This course is offered in semester 1 and in semester 2.

900127ACC: Linear Algebra

Discipline	ACC
Theme	n/a
Track	n/a
Prerequisites	900125ACC Calculus

Linear algebra is a branch of mathematics that turns up in an enormous variety of contexts. One reason is that many processes can be described with reasonable accuracy by a linear approximation (in which nonlinear interactions are neglected). Another reason is that some mathematical objects have a intrinsically linear structure (e.g. in group theory and geometry). This course aims to develop a good understanding of concepts and ideas in linear algebra, as well as the ability to perform matrix computations. We also discuss applications in physics, engineering, business and biology. These include Googlerank, curve fitting, linear regression, Markov chains, Leslie matrices and linear differential equations. Topics include: Linear equations, matrices and vectors Subspaces, dimension and rank Matrix with respect to a pair of bases (linear operators) Projections Determinants Eigenvalues, eigenvectors, diagonalisation Inner products and orthogonality Singular Value Decomposition Least square method, curve fitting Unitary, symmetric and self-adjoint matrices Jordan normal form Systems of linear differential equations. This course is offered in semester 1 and in semester 2.

900128ACC: Statistics for Sciences

Discipline	ACC
Theme	n/a
Track	Maths
Prerequisites	900125ACC Calculus

This is a calculus-based applied statistics course intended for students in the life sciences, health sciences, environmental sciences and information sciences. The course will ensure competence in using the statistical techniques necessary for their courses within these scientific disciplines, along with the foundational probability theory upon which the techniques are based. These include tests and confidence intervals for a difference in means or proportions, tests for goodness of fit and independence of variables, simple and multiple linear regression, and analysis of variance. Students will analyze real data using the R statistical package. Further topics include discrete and continuous probability distributions on random variables, point estimation theory, the central limit theorem, and maximum likelihood estimation. This course is offered in semester 1 and in semester 2.

900131ACC: Dutch A1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	None. Students will take a diagnostic test prior to the language course.

Students learn to handle a variety of uncomplicated, basic communicative tasks, including understanding spoken Dutch, answering questions and reading texts. Common European Framework of Reference for languages levels A1. Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help.

900132ACC: Dutch A2

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	None. Students will take a diagnostic test prior to the language course.

Students learn to handle a variety of uncomplicated, basic communicative tasks, including understanding spoken Dutch, answering questions and reading texts. Common European Framework of Reference for languages levels A2. Can understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment). Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Can describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need.

900133ACC: French A1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	None. Students will take a diagnostic test prior to the language course.

Students learn to handle a variety of basic communicative tasks, including understanding spoken French, speaking French, reading texts and writing short texts. Common European Framework of Reference for languages levels A1. Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help. Students learn essential verbs, nouns and cases while working to build vocabularyand learn the basics of French grammar and syntax. Students practice listeningspeaking, reading and writing skills. Students will also be introduced to French culture through short texts from the internet, magazines and newspapers.

900134ACC: French A2

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	None. Students will take a diagnostic test prior to the language course.

Students learn to handle a variety of basic communicative tasks, including understanding spoken French, speaking French, reading texts and writing short texts. Common European Framework of Reference for languages levels A2. Can understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment). Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Can describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need. Students learn essential verbs, nouns and cases while working to build vocabulary and learn the basics of French grammar and syntax. Students practice listening, speaking, reading and writing skills. Students will also be introduced to French culture through short texts from the internet, magazines and newspapers.

900135ACC: German A1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	None. Students will take a diagnostic test prior to the language course.

Students learn to handle a variety of basic communicative tasks, including understanding spoken German, speaking German, reading texts and writing short texts. Common European Framework of Reference for languages levels A1 and A2. Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help. Students learn essential verbs, nouns and cases while working to build vocabulary and learn the basics of German grammar and syntax. Students practice listening, speaking, reading and writing skills. Students will also be introduced to German culture through short texts from the internet, magazines and newspapers.

900136ACC: German A2

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	None. Students will take a diagnostic test prior to the language course.

Students learn to handle a variety of basic communicative tasks, including understanding spoken German, speaking German, reading texts and writing short texts. Common European Framework of Reference for languages levels A1 and A2. Can understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment). Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Can describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need. Students learn essential verbs, nouns and cases while working to build vocabulary and learn the basics of German grammar and syntax. Students practice listening, speaking, reading and writing skills. Students will also be introduced to German culture through short texts from the internet, magazines and newspapers.

900137ACC: Spanish A1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	None. Students will take a diagnostic test prior to the language course.

Students learn to handle a variety of uncomplicated, basic communicative tasks, including understanding spoken Spanish, answering questions and reading texts. Common European Framework of Reference for languages levels A1. Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help. Students learn essential verbs, nouns and cases while working to build vocabulary and learn the basics of Spanish grammar and syntax. Students practice listening, speaking and reading skills. Students will also be introduced to Spanish culture through short texts from the internet, magazines and newspapers.

900138ACC: Spanish A2

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	None. Students will take a diagnostic test prior to the language course.

Students learn to handle a variety of uncomplicated, basic communicative tasks, including understanding spoken Spanish, answering questions and reading texts. Common European Framework of Reference for languages levels A1. Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help. Students learn essential verbs, nouns and cases while working to build vocabulary and learn the basics of Spanish grammar and syntax. Students practice listening, speaking and reading skills. Students will also be introduced to Spanish culture through short texts from the internet, magazines and newspapers.

900139ACC: Arabic I

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	None.

The Arabic language consists of two varieties: Modern Standard Arabic, which is used in writing, in the media and in formal speech, and colloquial Arabic, which refers to the different regional dialects that are used in informal speech. Modern Standard Arabic is understood by educated Arabic speakers across the Middle East and North Africa. In this course, students will learn the Arabic alphabet, as well as basic grammatical structures, syntax and vocabulary of Modern Standard Arabic. Students will also be introduced to the culture of the Arab world through short texts from the internet, magazines and newspapers. Upon completion of the course, students will be able to read and write the Arabic alphabet. Students learn to handle a variety of uncomplicated, basic communicative tasks, including understanding spoken Modern Standard Arabic, answering questions and reading texts.

900141ACC: The Global Identity Experience

Discipline	ACC
Theme	n/a
Track	n/a
Prerequisites	None.

The world is composed of a large variety of peoples and cultures, some constituting large majorities (in number, or merely in terms of power), others forming small minorities. In a sense, multicultural diversity is of all times. Relatively new is the emergence of modern nation states and ensuing, often official cultural communities with clearly articulated boundaries. There is, however, nothing static about this situation. Group-formation processes are ongoing historical processes which include outcomes of continuing political struggle, economic development, modernization and various globalisation processes (influence of mass media, migration, etc). The aim of this introductory course is to familiarize students with academic views and debates about the aforementioned matters. The course addresses various topics in relation to identity in a multicultural context, such as the politics of identity, transnationalism and migration, state-formation and nationalism, selforganization, politics of religion, globalisation and ‘creolisation’. The following themes are included: - The relation between culture and ethnicity - Nationalism and long-distance nationalism - Colonisation and decolonisation - Migration and transnationalism - Identity politics and the politics of religion - Identity and gender - Processes of inclusion and exclusion - Processes of labelling, classification and categorization - Minority politics - Politics of commodification and cultural representation Students are theoretically sensitized to and prepared for issues arising from a multicultural context at the societal level in general as well as referring to their particular situation as students at an international college in a specific multicultural society. This will help them, on the one hand, to understand the main issues of world politics nowadays (e.g., terrorism and polarization) and, on the other hand, to cope with multicultural issues, and function academically, personally, and socially. - Students are provided with a brief (cultural, social, and political) orientation regarding the Netherlands. - The students’ academic skill of critical self-reflection is developed. - The students’ knowledge about and skills with respect to successful intercultural communication are developed. This will assist their academic performance. - Students are introduced to dialectical, multi-level, and multi-method thinking - Students are provided with a platform where they can share and discuss their own experiences with culture and identity. Throughout the course the link to students’ academic and personal life and to their professional future will be emphasized.

900151ACC/SCI: Big Questions in Science

Discipline	SCI, ACC
Theme	Life, Evolution, Universe
Track	Big Questions
Prerequisites	None.

This course provides students with a basic understanding of the state of the art of natural science: of its contents, main theories, and methods. This is an important asset in societies in which science is ever more present. Furthermore, in order to better understand the role of science in culture and in society, we also study science as a human activity, rather than a body of knowledge: its history, methods, and ways of thinking. Informed writing about science is also practiced in the assessments. The course is aimed at non-science majors, and no prior knowledge of natural science is assumed. The course is made up of three broad sections: physical sciences, earth sciences, and life sciences. (1) The first section deals with what is known about the particles of matter that make up everything around us, including our own bodies. It also deals with the concepts of space and time, which form the fabric of our universe. (2) The second section revolves around the System Earth: and how, from a geological perspective, earth is a system in which everything is interconnected. We also deal with how humans affect this system. (3) The third section revolves around life: what it is, what it is made of, its fuel; as well as a number of connected questions around health and cardiovascular diseases, offspring, and the evolution of life on earth. This course is offered in semester 1 and in semester 2.

900155ACC/SCC: Big Questions in Future Society

Discipline	SSC, ACC
Theme	n/a
Track	Sociology
Prerequisites	None.

We live in a rapidly changing society as is evidenced when we consider the digital revolution, global urbanization, and the shift in the balance of (economic and political) power between East and West. In this course we will consider the main developments and challenges facing our (global) society at the moment and what this may mean for future society. We will start with changes and developments which are apparent in present-day society and consider the political, sociological and economic consequences for these in the future. This course enables students to study these Big Questions from many different perspectives which link up to the various disciplines in the Social Sciences. This course is offered in semester 1 and in semester 2.

900156ACC/SCI/SSC: Big Data

Discipline	SSC, SCI, ACC
Theme	n/a
Track	Big Questions
Prerequisites	None

The defining characteristic of the 21st century might very well be the omnipresence of digital data. The continuous, voluminous and heterogeneous stream of data generated by sensors and people is rapidly transforming how we experience, how we analyse and how we interact with the people and things around us. Citizens, enterprises, governments and scientists are confronted with the potential blessings as well as challenges that “Big Data” provides for understanding the world around us. “Big Data” is a term that is difficult to define, hence the Big Question structure of the course provides a suitable way of approaching this topic that crosses disciplines. This course sets out to let students discover for themselves what “Big Data” entails and encourages them to reflect on that experience. Central to the course are therefore a series of real-life case studies related to key cultural, social and environmental issues in current day society. The case studies will lead the students to experience, first-hand, different techniques for data collection and storage, data visualisation and analytics, and hypothesis definition and communication. These steps are grounded in “data-driven knowledge discovery”, also referred to as “Abductive reasoning”, which starts with data describing a phenomena and continues with defining a hypothesis that explains the data. Is “Big Data” an exciting new way to discover new things about ourselves and the world around us, or does it hamper our privacy and lead us to follow invisible patterns that in the end proof to be terribly wrong? We frame the course as Applied data science, with a focus on tackling societal and scientific problems, from a geographic perspective. Students gain a theoretical and practical understanding of the impact of data in society. They take part in practical use cases and present their group work online.

900157ACC/HUM: Big Books, World Literature

Discipline	HUM, ACC
Theme	n/a
Track	Literature, Big Questions
Prerequisites	None

Big Books, World Literature will complement our very successful Big Books course which looks largely at the Western tradition. This world literature course will include works from Asian, Arabic and African sources. The course is offered in semester 1 and in semester 2.

900158ACC/HUM: Big History

Discipline	HUM, ACC
Theme	n/a
Track	History, Big Questions
Prerequisites	None.

Big HistoryThis course offers an overview of all of history, with human history placed within the context of the much longer history of life, the Earth, the solar system and the universe as a whole. This approach is known as Big History. More information on big history can easily be found by surfing the Internet. Critical thinking based on careful observations and scholarly interpretations at all scales of history is central to this course. This is the basis of the academic method. Special attention will be paid to the last 10,000 years of human history, when culture took over as the main adaptive mechanism. This period witnessed the worldwide emergence of agriculture as well as the rise of state societies, while during the past five hundred years, globalization, the emergence of modern science, industrialization, urbanization, democratization and informatization have all contributed to deeply transform human societies. During all the human history sessions we will pay special attention to how humans have been influenced by their natural environment as well as how they have transformed it. The last session will deal with the question of what we may expect from the future. By looking at human history from a big history perspective, it becomes possible to understand both yourself and the world around you better in a way that no other approach to history offers. Furthermore, by contemplating the grand sweep of history simple general theoretical principles become visible that will hopefully help you to better understand how everything has become the way it is now as well as what the future may bring. The course consists of a series of about 30 interactive sessions during which students will discuss important points of view while engaging in challenging assignments including observations of various kinds. The required reading consists of one textbook as well as one or more seminal articles. This course is offered in semester 1 and 2.

900161ACC: Logic, Information Flow and Argumentation

Discipline	ACC
Theme	n/a
Track	Logic
Prerequisites	None.

This course provides an introduction to basic concepts and tools of logic and argumentation that lie at the heart of rigorous scientific reasoning and practice. The students will be trained in analytic and abstract thinking through the study of the formal systems of propositional, predicate and modal/epistemic logic, which have broad applications in areas such as linguistics, psychology, philosophy, communication, cognitive science, computation and many more. It is offered in semester 1 and in semester 2.

900179ACC: Chinese 1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	None

An introductury course in Mandarin Chinese.

900212ACC: Advanced Research Writing

Discipline	ACC
Theme	n/a
Track	n/a
Prerequisites	(900112ACC) Academic Writing Skills (or Academic English 1)

This course will provide targeted guidance to the writing of a capstone research thesis in the Humanities, Social Sciences or Sciences. The course will combine classes on research writing skills with specialized workshops on e.g. writing for the humanities, social sciences or sciences, technology and collaboration, ethical scholarship, professional writing etc. Students will receive extensive feedback on their writing and will thus build up the skills which are essential for their academic work and writing the capstone thesis. Students are encouraged to take this course in their 5th semester. It is offered in semester 1 and in semester 2.

900213ACC/HUM: Creative Writing

Discipline	HUM, ACC
Theme	n/a
Track	Literature
Prerequisites	900111ACC Academic Writing Skils is required 900123HUM Text & Genre is recommended. For second and third year students

Students explore the practice and theory of creative writing before embarking on fully-fledged exercises in prose. Students will develop their skills in writing poetry, fiction and creative non-fiction. Journals, free-writing, guided writing, structured exercises and revision strategies will make up the course. Students will be encouraged to submit samples of their work from rough drafts to the final product. Students will also be encouraged to read in order to develop an eye and ear for form, tone, structure and style. At the end of the course students should have built up a portfolio of the different genres in creative writing. This course aims to further students' writing proficiency in English and familiarise them with techniques used in English prose writing and other genres. This course is offered in semester 1 and in semester 2.

900221ACC: Basic Research Methods and Statistics II

Discipline	ACC
Theme	n/a
Track	Maths
Prerequisites	900121ACC Basic Research Methods and Statistics I

This course builds on the skills developed through BRMS I. The students will learn various quantitative approaches which are commonly used in social science research. The main aim of the course will be to teach students the ability to understand, conduct and interpret quantitative analyses of various empirical studies. Students will also conduct their own research project and read and discuss method and results sections of empirical research articles from various disciplines. As in BRMS I, we will continue to cover all discipline-independent aspects of creating new knowledge: • How to formulate a scientific question • How to plan an investigation bearing on that question • How to conduct the inquiry • How to present the data that result from your research • How to interpret your results, and extrapolate beyond your data • How to report the results in an appropriate way. The central question we will address in this course is: How do I design and analyze research so that it will yield conclusions that are acceptable to critical peers? At the end of the course the student can: • Develop research questions leading to hypotheses that comprise a causal theoretical model • Operationalize concepts that comprise a theory • Understand the conceptual meaning of reliability and validity of measures • Understand the basic elements of experimental, survey and unobtrusive research • Understand and apply the following statistical analyses using SPSS: correlation, reliability, linear regression (simple and multiple), mediation analysis, one-way and two-way ANOVA, post hoc procedures, and moderation analysis • Critically read and understand the basics of methods and results sections in empirical papers from different fields. • Design and conduct independent research to solve basic research questions. The course will include an alternating series of interactive lectures and SPSS practicals in which students learn the theoretical background as well as the application of several statistical techniques, including correlation, regression, and ANOVA. This course is offered in semester 1 and in semester 2.

900222ACC/SSC: Qualitative Research Methods

Discipline	ACC
Theme	n/a
Track	n/a
Prerequisites	Students are required to have completed at least one 100-level course in the social sciences.

Quality and quantity are two dimensions of all empirical research. One is about the qualities or properties or attributes of the object under study, like age, social class, or the colour of someone's dress. The other is about the quantities or scales on which these properties are measured, like number of years, lower-middle-higher class, or degree of blueness. What is conventionally called 'qualitative' research aims to describe, interpret, and explain social reality primarily through the medium of language, as opposed to 'quantitative' research, which aims to do so primarily through the medium of mathematics. Yet in each and every research, both dimensions are present. The course in Qualitative Research Methods covers the epistemology of qualitative research, which is typically interpretive, exploring the meaningful experiences of the people under study. It is inductive, distilling theory from data rather than testing hypotheses on data. And it usually reasons from intensive case studies. The course provides instruction in and hands-on experience with often used qualitative methods: participant observation, interviewing, using historical documents and visual materials, and analysing networks. It also provides guidance in the analysis of qualitative materials and in writing. Empathy, sensitivity and reflexivity (the ability to think about one's own thinking) are encouraged throughout. Qualitative research is best learned and practiced as craft; the course therefore is very much hands-on. Students are invited to bring in their own research topics – e.g. prospective capstone projects – and explore these during the course. The program of the course will be finalized in consultation with the students andtheir individual needs.EXTREMELY IMPORTANT: 200-level Qualitative Research Methods has become essential for all 3rd-year students to take if they are planning to write a Social Science capstone using qualitative data (interviews, focus groups, discourse analysis, etc.) If they do not take this course in Semester 1, students run the risk of being refused capstone supervision. If students will be on Study Abroad during their 1st semester 3rd year, then they need to find and register for a Qualitative Research Methods class at that other university. The skills learned in this class are crucial to students' ability to write a qualitative capstone, and they will also be necessary when proceeding to graduate programs in the Social Sciences. Please discuss this with your tutors if you have any questions. This course is offered in semester 1.

900223ACC/SCI: Computational Thinking

Discipline	SCI, ACC
Theme	n/a
Track	Maths
Prerequisites	TBA

Computational thinking is a digital age skill which is important for everyone, and not only computer scientists. We all need to understand how, when and where computers and other digital tools can help us solve problems. We also need to know how to communicate with others who can assist us with computer-supported solutions. It is a way of solving problems, designing systems and understanding human behavior by drawing on concepts fundamental to computer science. This includes: Formulating problems in such a way that computers and other tools can be used to help solve them Logically organizing and analyzing data Representing data through abstractions, such as models and simulations Automating solutions through algorithmic thinking(a series of ordered steps) Identifying, analyzing and implementing possible solutions with the goal of achieving the most efficient and effective combination of steps and resources Generalizing and transferring this problem-solving process to a wide variety of problems. Computational thinking is widely applicable across the Humanities, Social Sciences and Sciences. Some examples of applications are: Data Collection – studying population data in the social sciences, doing linguistic analysis in the humanities. Data Analysis – analyzing data from a scientific experiment, identifying patterns for different sentence types in linguistics. Abstraction – summarizing facts and deducing conclusions in the social sciences, using similes and metaphors in writing in the humanities. Algorithms and procedures – doing an experimental procedure in the sciences, writing instructions. Automation – using excel, using a spell checker. Simulation – simulating the movement of the solar system, playing (computer) games, doing a re-enactment from a story. This course will enhance critical thinking and analytical skills for students from all majors. It is offered in semester 2.

900239ACC: Arabic II

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900139ACC Arabic I

In this course, students will learn new grammatical structures, syntax and vocabulary. The course will focus on the four language skills: reading, writing, speaking and understanding Arabic. Students will continue to learn about the culture of the Arab world through watching television programmes and reading articles from newspapers and magazines. Students will complete a number of assignments, including writing exercises and listening exercises.

900242ACC/SSC: Global Leadership

Discipline	SSC, ACC
Theme	n/a
Track	n/a
Prerequisites	100-level course The Global Identity Experience

This course follows up on the 100 level Global Identity Experience course and focuses on an interdisciplinary study of the important elements of global leadership. Among such elements are many other attributes, contextual and cultural awareness, clear understanding of diversity, global knowledge transfer, power distance indices, vision making, planning, organizational know-how, (savvy), strategies capabilities development and use of emotional intelligence. The course is divided into six parts: Part I: presents the contextualization of leadership and the distinctions between domestic, community,and global leaders. Part II: identifies the competencies of domestic to global leaders. Part III: introduces qualitative research, ethnographic interviews, shadowing, focus group to engage leaders. Part IV: identifies the significance of women leaders and explains the cultural domains of Geert Hofstede. Part V: Uncovering global challenge: inquisitiveness, perspective, character and savvy. Part VI: identifies some of the current leadership theories and focuses on personal development. It is offered in semester 2.

900243ACC/SCI/SSC: Gastronomy: the Arts and Sciences of Cooking

Discipline	SSC, SCI, ACC
Theme	n/a
Track	n/a
Prerequisites	At least one 100-level (non-cross-listed) science course. Only for second and third year students.

Gastronomy: The Arts & Sciences of Cooking epitomizes the liberal arts and sciences philosophy, because it focuses on the applications of sciences (physics, chemistry & biology) in one of the most basic life skills, that of cooking. The course puts cooking into a broader societal and cultural perspective by using insights and theories from the social sciences and humanities. Among the topics covered are physics of heat, (micro)biology of foods, the chemistry of flavours, neuro-gastronomy, food culture and history, and food in arts. This course will not only be theoretical and discursive, but will also contain cooking exercises and lab sessions. It is offered in semester 2.

900271ACC: Dutch B1.1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900132ACC Dutch A2

This course aims at improving and developing skills and strategies to enable students to handle successfully more complicated oral and written tasks in Dutch. Common European Framework of Reference for languages levels B1.1 and B1.2 (Intermediate) Course outcomes: Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans. Students will increase their general vocabulary of verbs, nouns, articles and prepositions while gaining a greater knowledge of complex problems in Dutch grammar and syntax. Students will continue to learn about Dutch culture through short stories, novellas, films and TV programmes. Students will also be required to submit book reports and short essays.

900272ACC: Dutch B1.2

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900132ACC Dutch A2

This course aims at improving and developing skills and strategies to enable students to handle successfully more complicated oral and written tasks in Dutch. Common European Framework of Reference for languages levels B1.1 and B1.2 (Intermediate) Course outcomes: Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans. Students will increase their general vocabulary of verbs, nouns, articles and prepositions while gaining a greater knowledge of complex problems in Dutch grammar and syntax. Students will continue to learn about Dutch culture through short stories, novellas, films and TV programmes. Students will also be required to submit book reports and short essays.

900273ACC: French B1.1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900134ACC French A2

This course aims at improving and developing skills and strategies to enable students to handle successfully more complicated oral and written tasks in French. Common European Framework of Reference for Languages levels B1.1 and B1.2 (Intermediate) Course outcomes: Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans. Students will increase their general vocabulary of verbs, nouns, articles and prepositions while gaining a greater knowledge of complex problems in French grammar and syntax. Students will continue to learn about French culture through short stories, novellas, films and TV programmes. Students will also be required to submit book reports and short essays.

900274ACC: French B1.2

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900134ACC French A2

This course aims at improving and developing skills and strategies to enable students to handle successfully more complicated oral and written tasks in French. Common European Framework of Reference for Languages levels B1.1 and B1.2 (Intermediate) Course outcomes: Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans. Students will increase their general vocabulary of verbs, nouns, articles and prepositions while gaining a greater knowledge of complex problems in French grammar and syntax. Students will continue to learn about French culture through short stories, novellas, films and TV programmes. Students will also be required to submit book reports and short essays.

900275ACC: German B1.1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900136ACC German A2

This course aims at improving and developing skills and strategies to enable students to handle successfully more complicated oral and written tasks in German. Common European Framework of Reference for Languages levels B1.1 and B1.2 (Intermediate) Course outcomes: Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans. Students will increase their general vocabulary of verbs, nouns, articles and prepositions while gaining a greater knowledge of complex problems in German grammar and syntax. Students will continue to learn about German culture through short stories, novellas, films and TV programmes. Students will also be required to submit book reports and short essays.

900276ACC: German B1.2

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900137ACC German A2

This course aims at improving and developing skills and strategies to enable students to handle successfully more complicated oral and written tasks in German. Common European Framework of Reference for Languages levels B1.1 and B1.2 (Intermediate) Course outcomes: Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans. Students will increase their general vocabulary of verbs, nouns, articles and prepositions while gaining a greater knowledge of complex problems in German grammar and syntax. Students will continue to learn about German culture through short stories, novellas, films and TV programmes. Students will also be required to submit book reports and short essays.

900277ACC: Spanish B1.1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900138ACC Spanish A2

This course aims at improving and developing skills and strategies to enable students to handle successfully more complicated oral and written tasks in Spanish. Common European Framework of Reference for Languages levels B1.1 and B1.2 (Intermediate) Course outcomes: Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans. Students will increase their general vocabulary of verbs, nouns, articles and prepositions while gaining a greater knowledge of complex problems in Spanish grammar and syntax. Students will continue to learn about Spanish culture through short stories, novellas, films and TV programmes. Students will also be required to submit book reports and short essays.

900278ACC: Spanish B1.2

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	Spanish A2

This course aims at improving and developing skills and strategies to enable students to handle successfully more complicated oral and written tasks in Spanish. Common European Framework of Reference for Languages levels B1.1 and B1.2 (Intermediate) Course outcomes: Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans. Students will increase their general vocabulary of verbs, nouns, articles and prepositions while gaining a greater knowledge of complex problems in Spanish grammar and syntax. Students will continue to learn about Spanish culture through short stories, novellas, films and TV programmes. Students will also be required to submit book reports and short essays.

900303CIC: Internship

Discipline	ACC
Theme	n/a
Track	n/a
Prerequisites	-

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900304CIC: Community Project

Discipline	ACC
Theme	n/a
Track	n/a
Prerequisites	-

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900311CIC: Second Community Project

Discipline	ACC
Theme	n/a
Track	n/a
Prerequisites	-

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900312ACC/HUM: Advanced Creative Writing

Discipline	HUM, ACC
Theme	n/a
Track	Literature
Prerequisites	ACC/HUM 900213 Creative Writing

Advanced Creative Writing is an extension of the principles learned in the existing Creative Writing course. Whereas the existing course deals with basic principles of genre and composition and asks students to complete several shorter writing assignments, this course will be more focused on advanced aspects of creative production. Students submit a proposal for their intended creative project at the beginning of the course and work on it throughout the class, assisted by peer critique and other forms of assessment. Alongside their project, in-class activities inform the students' work: lectures by the instructor and Amsterdam-based guest speakers, writing exercises, small group work and presentations by fellow students. Additionally, students are expected to have a research component attached to their project; this research component directs their project in an appropriate manner. Ultimately, students have to present their creative work to the class, discuss the rhetorical aims of their pieces, and answer questions concerning their final projects asked of them by a panel. This course should be attractive to HUM students who want to write – creatively or technically – for their profession, SSC or SCI students who recognize that writing will be a large part of their desired profession, and all students who have an interest in working within the creative industries.

900312CICY: Third Internship

Discipline	ACC
Theme	n/a
Track	n/a
Prerequisites	-

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900323ACC/SSC/SCI: Advanced Research Methods and Statistics

Discipline	SSC, SCI, ACC
Theme	n/a
Track	n/a
Prerequisites	900121ACC BRMS I or 900128ACC Statistics for Sciences; 900221ACC BRMS II is strongly recommended

This course will cover a series of statistical methods for more complex research designs than those covered in BRMS I and BRMS II or Statistics for Sciences. We will work extensively with real data and learn how to analyze and interpret data at an advanced level. The course covers the following topics: - review of multiple linear regression and ANOVA, - logistic regression, - MANOVA and MANCOVA, - Principle Components Analysis, - Discriminant Analysis, - Analysis of Repeated Measures, - Categorical Data Analysis, and, if time allows, - Time Series. These advanced methods will be an essential preparation for those who are planning to do a master's program in applied natural science or one of the quantitative social sciences such as Psychology, Economics, Sociology, Political Science, or Health Science. This course is offered in semester 2.

900339ACC: Arabic III

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900239ACC Arabic II

In this course, students will gain a greater knowledge of complex grammatical structures and will increase their vocabulary. Students will continue to learn about the culture of the Arab world through short stories, newspaper articles and television programmes.

900371ACC: Dutch B2.1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900271ACC Dutch B1.2

Students develop skills that enable them to handle a wide variety ofcommunication tasks. This course also provides understanding of cultural aspectsof the Netherlands.Common European Framework of Reference for Languages levels B2.1 and B2.2(Upper Intermediate)Course outcomes:Can understand the main ideas of complex text on both concrete and abstracttopics, including technical discussions in his or her field of specialisation.Can interact with a degree of fluency and spontaneity that makes regularinteraction with native speakers quite possible without strain for either parties.Can produce clear, detailed text on a wide range of subjects and explain aviewpoint on a topical issue giving the advantages and disadvantages of variousoptions.Students build on elements of vocabulary and syntax. Students learn the basicsof academic writing and debate in Dutch and continue to learn about Dutchculture by reading short stories and one novel, as well as viewing and reportingon films and TV programmes.

900372ACC: Dutch B2.2

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900371ACC Dutch B2.1

Students develop skills that enable them to handle a wide variety ofcommunication tasks. This course also provides understanding of cultural aspectsof the Netherlands.Common European Framework of Reference for Languages levels B2.1 and B2.2(Upper Intermediate)Course outcomes:Can understand the main ideas of complex text on both concrete and abstracttopics, including technical discussions in his or her field of specialisation.Can interact with a degree of fluency and spontaneity that makes regularinteraction with native speakers quite possible without strain for either parties.Can produce clear, detailed text on a wide range of subjects and explain aviewpoint on a topical issue giving the advantages and disadvantages of variousoptions.Students build on elements of vocabulary and syntax. Students learn the basicsof academic writing and debate in Dutch and continue to learn about Dutchculture by reading short stories and one novel, as well as viewing and reportingon films and TV programmes.

900373ACC: French B2.1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900274ACC French B1.2

Students develop skills that enable them to handle a wide variety ofcommunication tasks. This course also provides understanding of cultural aspectsof France and other French speaking countries.Common European Framework of Reference for Languages levels B2.1 and B2.2(Upper Intermediate) Course outcomes: Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his or her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either parties.Can produce clear, detailed text on a wide range of subjects and explain aviewpoint on a topical issue giving the advantages and disadvantages of variousoptions. Students build on elements of vocabulary and syntax. Students learn the basicsof academic writing and debate in French and continue to learn about Frenchculture by reading short stories and one novel, as well as viewing and reportingon films and TV programmes.

900374ACC: French B2.2

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900373ACC French B2.1

Students develop skills that enable them to handle a wide variety ofcommunication tasks. This course also provides understanding of cultural aspectsof France and other French speaking countries.Common European Framework of Reference for Languages levels B2.1 and B2.2(Upper Intermediate) Course outcomes: Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his or her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either parties.Can produce clear, detailed text on a wide range of subjects and explain aviewpoint on a topical issue giving the advantages and disadvantages of variousoptions. Students build on elements of vocabulary and syntax. Students learn the basicsof academic writing and debate in French and continue to learn about Frenchculture by reading short stories and one novel, as well as viewing and reportingon films and TV programmes.

900375ACC: German B2.1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900265ACC German B1.2

Students develop skills that enable them to handle a wide variety ofcommunication tasks. This course also provides understanding of cultural aspectsof Germany and other German speaking countries.Common European Framework of Reference for Languages levels B2.1 and B2.2(Upper Intermediate) Course outcomes: Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his or her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either parties.Can produce clear, detailed text on a wide range of subjects and explain aviewpoint on a topical issue giving the advantages and disadvantages of variousoptions.Students build on elements of vocabulary and syntax. Students learn the basicsof academic writing and debate in German and continue to learn about Germanculture by reading short stories and one novel, as well as viewing and reportingon films and TV programmes.

900376ACC: German B2.2

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900375ACC German B2.1

Students develop skills that enable them to handle a wide variety ofcommunication tasks. This course also provides understanding of cultural aspectsof Germany and other German speaking countries.Common European Framework of Reference for Languages levels B2.1 and B2.2(Upper Intermediate) Course outcomes: Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his or her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either parties.Can produce clear, detailed text on a wide range of subjects and explain aviewpoint on a topical issue giving the advantages and disadvantages of variousoptions.Students build on elements of vocabulary and syntax. Students learn the basicsof academic writing and debate in German and continue to learn about Germanculture by reading short stories and one novel, as well as viewing and reportingon films and TV programmes.

900377ACC: Spanish B2.1

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900278ACC Spanish B1.2

Students develop skills that enable them to handle a wide variety ofcommunication tasks. This course also provides understanding of cultural aspectsof Spain and other Spanish speaking countries.Common European Framework of Reference for Languages levels B2.1 and B2.2(Upper Intermediate) Course outcomes: Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his or her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either parties.Can produce clear, detailed text on a wide range of subjects and explain aviewpoint on a topical issue giving the advantages and disadvantages of variousoptions.Students build on elements of vocabulary and syntax. Students learn the basicsof academic writing and debate in Spain and continue to learn about Spanishculture by reading short stories and one novel, as well as viewing and reportingon films and TV programmes.

900378ACC: Spanish B2.2

Discipline	ACC
Theme	n/a
Track	Languages
Prerequisites	900377ACC Spanish B2.1

Students develop skills that enable them to handle a wide variety ofcommunication tasks. This course also provides understanding of cultural aspectsof Spain and other Spanish speaking countries.Common European Framework of Reference for Languages levels B2.1 and B2.2(Upper Intermediate) Course outcomes: Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his or her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either parties.Can produce clear, detailed text on a wide range of subjects and explain aviewpoint on a topical issue giving the advantages and disadvantages of variousoptions.Students build on elements of vocabulary and syntax. Students learn the basicsof academic writing and debate in Spain and continue to learn about Spanishculture by reading short stories and one novel, as well as viewing and reportingon films and TV programmes.

9000365HUM: Revolutions in History

Discipline	HUM
Theme	Cities and Cultures
Track	History
Prerequisites	Early to Modern HIstory AND 1 History course on 200 level

From Crane Brinton's 1938 The Anatomy of Revolution the comparative study of revolution has been a flourishing field of study, mainly from sociological, political and economic points of view. However, after the cultural turn of the early 1970s historians moved away from the tendency of meta-narratives to study the phenomenon in general. This course will introduce students to the historical approaches of the 'renewed' comparative study of revolution throughout the ages and will provide a state of the art assessment of the latest developments within this research field. Students will not only gain insights into the modern historical approaches of the comparative study of revolutions but also into some of the new topics that are being explored by global and cultural historians, such as gender, the role of the media, dress, songs and revolutionary leadership. The course will also highlight two Dutch revolutionary moments, the Batavian Revolution (1795) and the Provo movement of the 1960s. In addition, students will acquire skills in working with primary source material and oral presentations as well as written communication. The course will also incorporate a visit to the International Institute of Social History which holds a large amount of potentially relevant source material. Throughout the course we will receive several guest speakers on the various specialist topics.

900111HUM: Theme Course I Introduction to Cities and Cultures

Discipline	HUM
Theme	Cities and Cultures
Track	Theme
Prerequisites	None

This course will offer an introduction to theoretical concepts and practices in the field of the broad humanities by examining the complex connections between cultural and urban life. In the modern age, city life has increasingly come to shape our understanding of culture and social interaction, while the 'global village' of digital culture can be viewed both as an extension of this urban paradigm and as a potential way of breaking free of the alienation associated with modern cities. Using examples and case studies drawn from literature, film, tv, history, philosophy, comics, art, photography, and architecture, this course will stimulate an interdisciplinary conceptual approach to cities and cultures. Throughout the course, we will investigate and debate the relationship between cities and cultures: is cultural life the same thing as metropolitan life? Does being "cultured" also mean being "urban"? How have cities shaped our understanding of art, history, identity, and popular culture? And how do our media and artworks in turn shape our understanding of cities? How can a broad humanities perspective help us understand the complex relationship between cities and cultures? The course will be structured by a series of key theoretical concepts that bring together our understanding of both cities and cultures, and which can help us formulate answers as well as introduce new questions: 1) History and narrative 2) Industry and labor 3) Culture and identity 4) Digitization and globalization 5) Power and resistance The course will offer an introduction to urban studies by using a variety of methods and theoretical frameworks primarily from the humanities, but also from other academic traditions. The joint disciplines of cultural theory and urban studies will occupy a central position throughout, and we will use a variety of case studies to discuss and interrogate methods and practices from literary theory, film and television studies, gender studies, human geography and popular geopolitics, art history, postcolonial theory, and globalization studies.

900123HUM: Text and Genre

Discipline	HUM
Theme	Cities and Cultures
Track	Literature
Prerequisites	n/a

This course provides an introduction to the study of literary genres (poem, play, novel) as well as detailed study of the relationship between literary texts and their cultural and historical contexts. The course emphasizes the development of close reading and analytical skills and encourages students to acquire a working knowledge of the social and political milieus in which the authors under study wrote. We address both canonical and non-canonical, Anglophone and world literatures, in order to consider current literary debates about the social, educational, and political values of literature.

900131HUM: Film History

Discipline	HUM
Theme	Cities and Cultures
Track	Film
Prerequisites	None

This course introduces students to both the concept and the phenomenon of Film History. Approaching the subject from various disciplines (philosophy, politics, aesthetics, science and technology, etc.), students will be required to confront a central question that will reappear throughout the semester, namely, “what is cinema?” Beginning with the prehistory of film in the 18th century (magic lantern shows, visual toys, etc.), the course will critically follow film’s social, aesthetic, and technological developments up until the present day. In doing so, we will examine the close relationship between cinema and society, especially in relation to key historical events of the 20th century, such as WWI and WWII. Additionally, students will be asked to analyze the political and ideological uses of documentary and narrative cinema, at various historical junctures, and in specific cultural contexts (national, postcolonial, queer, etc.). Special attention will be paid to concepts in film studies, such as the ‘cinema of attractions,’ the ‘language of cinema’, and ‘auteur theory,’ in addition to important film genres and aesthetic movements (German- expressionism, Italian neo-realism, la Nouvelle Vague, etc.). During the final weeks of the course, we will look at the current state and future of cinema, where digital modes of production and distribution, as well as participatory audiences, might be fundamentally transforming the very concept of film itself.

900142HUM: Periods and Genres: Modern

Discipline	HUM
Theme	Cities and Cultures
Track	Art History
Prerequisites	None

Periods and Genres: Modern is an introduction to art starting in the early Renaissance and continuing up to the present day. The course emphasizes visual literacy in a historical context. The material includes works of art and architecture drawn from a range of world cultures. By the end of the semester students should be able to recognize and analyse the differences among the major periods, artists, genres, and theories of art. The course will help students develop a familiarity with the art and broader cultural background of several non-western traditions. Students will develop the basic vocabulary for the formal analysis of art objects, and gain an understanding of the variety of social and historical contexts that have shaped artistic production in the periods discussed. Examples will include the visual arts of Africa and Asia, the Renaissance in Italy and the Dutch Republic, the Baroque period in France, the advent of modernity in the 19th century, the 20th-century avant-gardes, and postmodernism. Periods and Genres: Modern is complemented by the other introductory art history course, Periods and Genres: Early. The combination provides a comprehensive overview of the field of art history. It is important to note, however, that both courses also function independently and it is not necessary to take both or to take them consecutively.

900143HUM: Periods and Genres: Early

Discipline	HUM
Theme	Cities and Cultures
Track	Art History
Prerequisites	None

This course introduces students to the study of material and artistic cultures from the earliest cave paintings up to the artistic production of the Late Middle Ages. Students will learn the basics of formal, iconographical and contextual analysis, citing key examples of Near Eastern, Egyptian, Greek, Roman, Early Christian, Byzantine, Islamic and Late Medieval art. Special interest will be given to the understanding of these art works in their specific social, cultural and historical contexts. From a more theoretical point of view, students will learn to work with concepts such as periodization, stylistic development, and the position and status of artists over the ages. This course is complemented by a second introductory course in art history, Periods and Genres Modern. Taught in the second semester, this second course covers the Early Renaissance up to 21st-century art. When taken together, the courses provide a comprehensive overview of the art historical discipline. Please note, however, that both courses have been designed to function independently from one another, so it is very well possible to take just one of them.

900144HUM: Performing Arts - Theatre

Discipline	HUM
Theme	Cities and Cultures
Track	Literature
Prerequisites	None.

Performing Arts (theatre version, semester one) has two principal objectives: 1) Using a play text as a focus, we study from various angles the ideas of a number of practitioners of performance over the past 100 years. How would their varying approaches to ‘performance’ determine a final production of our chosen play text? 2) Using this academic knowledge and awareness of text and performance in action, we (write and) put on a theatre production before an audience. Thus, the theorized position of performance is brought to a practical manifestation. The course covers the ideas of Artaud, Bausch, Beckett, Brook, Copeau, Craig, Grotowski, Lepage, Meyerhold, Piscator, Schechner, Stanislavski & Robert Wilson. Each of these practitioners of performance has been seminal in defining our understanding of the diversity of the act of performance. In studying their contributions to the field, we might establish from what theoretical positions they work(ed), and under what circumstances their ideas are appropriate to performance today, and relevant to our own final performance.

900145HUM: Performing Arts - Music

Discipline	HUM
Theme	Cities and Cultures
Track	Art History
Prerequisites	n/a

Performing Arts: Music - Each year, the Performing Arts: Music course evolves around a different central theme, chosen by the group. Through weekly, both improvisation- and research-based assignments, we work toward a final performance. The nature and content of the final performance largely depends on the available instruments, the musical background, technical possibilities and taste of the participating students. - Point of departure in this journey is the instrument we all carry within us: the human voice. During the course, the students learn about the working mechanism of the voice and explore the possibilities of their own instrument by singing exercises, solo and ensemble pieces. We closely study the relationship of words and music in the vocal repertoire and its evolution throughout music history by e.g. comparing different settings of the same text. - Next to singing, instrumentalists are encouraged to take their instruments to the classes and play together in new formations. - To ease our work together, the students acquire basic knowledge of music theory (rhythm, melody treatment, basic harmony and music notation). - Guests from different fields of performing arts are invited to help preparing the performance. During the course two Open Stage evenings will be organized by the students where they can try out / show parts of their work in progress in front of an audience. - There are no prerequisites for this course. Instrumentalists are welcome just as well as singers and students without any previous experience in making music. This course is offered in semester 1.

900153HUM: Media and Communication

Discipline	HUM
Theme	ICC, Cities and Cultures
Track	Media
Prerequisites	n/a

This course is a broad survey of and introduction to the field of media and mass communication. Students consider the role of media messages and technologies in changing political, social and cultural dynamics on the local, regional, and global stage. The course introduces students to the analysis of media content, as well as to the evolving landscape of media technologies. The main aim of the course is to introduce students to the mutually constitutive properties of media and society, considering how media content and forms participate in the formation of individuals and identities, communities and cultures. Three primary elements cross cut the course: • Theories: How messages are produced, communicated and received in mass media; how media forms impact individuals and groups. • Medium: The history, structure, impact and control of individual media forms, including print, broadcast and new media. • Influence: The mutual engagement and interaction between media and society.

900154ACC/HUM: Big Books

Discipline	HUM
Theme	n/a
Track	Literature, Big Questions
Prerequisites	None.

Big Books examines seventeen works of paramount importance in Western history and culture (e.g., The Odyssey, Antigone, Symposium, Confessions, The Praise of Folly, Hamlet, Faust, The Second Sex, Endgame, and Disgrace), and explores their possible meanings and significance. All of those books reflect, in one way or another, on "the human condition" – they present an array of literary and philosophical perspectives on love, embodiment, sexuality, revolt, social exclusion, guilt, evil and suffering. The purpose of the course is to learn how to make sense of those works, to understand in what way the perception of the various aspects of "human condition" are related to the respective historical, social, cultural and intellectual context of each of the discussed works, and, thereby to the evolution of Western European culture at large. We will ask questions such as: What are the historical, social, and cultural conditions in which these works were first produced and received? Where can we trace the influence of these works? And how can they be relevant to us in the present, or even the future? This course is offered in semester 1 and 2.

900157ACC/HUM: Big Books, World Literature

Discipline	HUM, ACC
Theme	n/a
Track	Literature, Big Questions
Prerequisites	None

Big Books, World Literature will complement our very successful Big Books course which looks largely at the Western tradition. This world literature course will include works from Asian, Arabic and African sources. The course is offered in semester 1 and in semester 2.

900158ACC/HUM: Big History

Discipline	HUM, ACC
Theme	n/a
Track	History, Big Questions
Prerequisites	None.

Big HistoryThis course offers an overview of all of history, with human history placed within the context of the much longer history of life, the Earth, the solar system and the universe as a whole. This approach is known as Big History. More information on big history can easily be found by surfing the Internet. Critical thinking based on careful observations and scholarly interpretations at all scales of history is central to this course. This is the basis of the academic method. Special attention will be paid to the last 10,000 years of human history, when culture took over as the main adaptive mechanism. This period witnessed the worldwide emergence of agriculture as well as the rise of state societies, while during the past five hundred years, globalization, the emergence of modern science, industrialization, urbanization, democratization and informatization have all contributed to deeply transform human societies. During all the human history sessions we will pay special attention to how humans have been influenced by their natural environment as well as how they have transformed it. The last session will deal with the question of what we may expect from the future. By looking at human history from a big history perspective, it becomes possible to understand both yourself and the world around you better in a way that no other approach to history offers. Furthermore, by contemplating the grand sweep of history simple general theoretical principles become visible that will hopefully help you to better understand how everything has become the way it is now as well as what the future may bring. The course consists of a series of about 30 interactive sessions during which students will discuss important points of view while engaging in challenging assignments including observations of various kinds. The required reading consists of one textbook as well as one or more seminal articles. This course is offered in semester 1 and 2.

900161HUM: Introduction to Literary and Cultural Theory

Discipline	HUM
Theme	Cities and Cultures
Track	n/a
Prerequisites	None

This course introduces students to the history, theory, and practice of various methods of interpretation that are used across the Humanities disciplines for the study of literary texts and other artefacts. The schools and methods of interpretation that are covered in the course include: New Criticism, Russian formalism, (post-)structuralism, narratology, deconstruction, psychoanalysis, feminism and gender studies, Marxist criticism, historicism and cultural studies, postcolonial theory, and reader response theory. As the course progresses, you will become familiar with the main principles and ideas of each of those schools of interpretation, both through the first-hand study of some central theoretical texts and through the reflective development of your own interpretative skills and practices. Strategic use will be made of short stories and other primary texts, which will be discussed and analysed in class in order to illustrate, examine, and critically interrogate the theories and methods of interpretation under discussion. By the end of the course, you will be able to read literary and cultural theory independently, with a keen understanding of the different schools of thought feeding into it. You will be able to analyse primary literary texts in terms of their internal features and make-up, their social and cultural functions, and their ideological implications. And you will be able to express opinions and develop arguments about those texts and their role in society and culture that are informed by a critical and reflective use of interpretative principles and tools. While the course places a significant emphasis on theoretical debates emerging from the field of literary studies, it also lays the foundations for your conversance with the more theoretical debates within film studies, visual studies, media theory, and other areas of Humanities scholarship.

900164HUM: Introduction to Cultural Analysis

Discipline	HUM
Theme	Cities and Cultures
Track	Culture
Prerequisites	None

This course introduces students to the key concepts, analytical strategies and interpretive models used in cultural studies. As such, the course provides a comprehensive and coherent introduction to the disciplinary and historical contexts of the field, as well as to a diverse range of courses available in the Culture track. It also offers ways to apply some of the theoretical paradigms addressed in Introduction to Literary and Cultural Theory to cultural processes and cultural products, or artifacts, in their social, political, aesthetic and ethical contexts.

900165HUM: Early to Modern History

Discipline	HUM
Theme	Cities and Cultures
Track	History
Prerequisites	None.

With complex and far-reaching developments like the Renaissance, the Reformation, the Scientific Revolution, the Agricultural Revolution, Tulipmania and the South Sea Bubble, the Commercial Revolution, the Transport Revolution, the development of the public sphere, and the political revolutions at the end of the eighteenth century, the early modern era (1450-1850) seems a period full of dramatic revolutions and crises. This course will study those moments of crisis, change and revolt, introducing the students to the major political, religious, economic, social and scientific developments in Europe. It encourages students to connect events and phenomena from the early modern period to recent developments. How, for instance, can we compare the 1720's South Sea Bubble to the recent financial crisis? Can we compare early modern interest in gossip and slander with modern blog practices? What revolutions are remembered, what revolutions forgotten? Students will explore how ideas and practices concerning power, knowledge, truth, and beauty; material wealth and 'progress'; social morality and justice; cultural, national, and European identities; God and mankind; and everyday life shifted at different times. Students will develop their own critiques about these historical developments, and will also be actively encouraged to assess how the ideas and practices that developed in the early modern period are still used (and perhaps abused) today. The course will also incorporate visits to various cultural heritage institutions and places of cultural memory (like the Boerhaave Museum in Leiden, the Amsterdam Museum, or the Amsterdam Stock Exchange).

900171HUM: History of Philosophy

Discipline	HUM
Theme	Cities and Cultures
Track	Philosophy
Prerequisites	None

The course offers a broad overview of the history of philosophy from the so-called Axial age (800-200 BC) to 20th century Postmodernism. There is a focus on Western philosophy. At the same time, however, the course tries to develop a more 'world philosophical' approach, by relating to Eastern Philosophy (guest lecture on Confucius) and by discussing the influence of Arabic philosophers (such as Avicenna and Averroes) on Medieval thought. Major themes in the history of philosophy are touched upon through primary sources. Special attention will be paid to metaphysical and aesthetic issues. The course includes a discussion of the traditional philosophical canon, and address what can be seen as the historical exclusion of women from the philosophical tradition. This course is offered in semester 1 and in semester 2.

900191SSC/SCI/HUM: Theme course: Introduction to ICC

Discipline	SSC, SCI, HUM
Theme	ICC
Track	Theme
Prerequisites	None.

Humans sense, act, think, feel, communicate, learn and evolve. We see these capabilities increasingly also in machines. This course aims to develop a first understanding of how humans and machines make sense of the natural environment from all the physical signals pouring into them. Information from the world around us will be related to the structure of our brain and basic cognitive tasks such as language, sensory perception, intelligent interaction, and action. In parallel, the course will introduce how machines can encode information, store it, reason with it and retrieve it later to guide behaviour. The course is particularly relevant for students interested in crossing the divide between (physical, life, social) sciences to cooperatively i) step up progress in cognitive information processing in both man and machine, and ii) develop new applications and technologies serving society. Topics covered include, information structure, pattern recognition and machine learning, man-machine interaction, collective intelligence, mediated communication, expression and emotion, memory, brain structure, neuronal processing, visual consciousness, social cognition.

900213ACC/HUM: Creative Writing

Discipline	HUM, ACC
Theme	n/a
Track	Literature
Prerequisites	900111ACC Academic Writing Skils is required 900123HUM Text & Genre is recommended. For second and third year students

Students explore the practice and theory of creative writing before embarking on fully-fledged exercises in prose. Students will develop their skills in writing poetry, fiction and creative non-fiction. Journals, free-writing, guided writing, structured exercises and revision strategies will make up the course. Students will be encouraged to submit samples of their work from rough drafts to the final product. Students will also be encouraged to read in order to develop an eye and ear for form, tone, structure and style. At the end of the course students should have built up a portfolio of the different genres in creative writing. This course aims to further students' writing proficiency in English and familiarise them with techniques used in English prose writing and other genres. This course is offered in semester 1 and in semester 2.

900221HUM: Adaptation Studies

Discipline	HUM
Theme	Cities and Cultures
Track	Literature, Film
Prerequisites	For HUM, Introduction to Literary and Cultural Theory 900161HUM. For SCI, any 100-level Humanities course in Film or Literature and/or ILCT. For SSC, any 100-level Humanities course in Film or Literature and/or ILCT.

Although the originality of a work of literature or art has often been privileged as the main criterion for evaluation, writers, playwrights, filmmakers and artists have always looked to previous works for inspiration. Adaptation, in other words, has always played a leading role within literature and culture as a primary mode of creative transfer and production. Arguably, globalization and advancing technologies have made (and are making) processes of adaptation increasingly complex, by increasing the scope and modes of reception and interaction across cultures and genres. This class examines the theory and the practice of adaptation. We will consider adaptation as a cultural product (primarily from literature and film, but also including theatre, art, media, etc) and as a cultural process, in which an existing work is adapted to another medium or form, or to another context or culture. We do so from an interdisciplinary and international perspective. In the introductory part of the course, we will explore possible frameworks for analysing adaptation. Students will be introduced to a) the main issues and debates involved in adaptation studies and b) some of the primary "tools" that have been proposed for the study of adaptations. Throughout the course we will: 1. attempt to move beyond (i) the idea that adaptations and their 'source' texts represent a singular and one-directional line of influence from past to present; and (ii) the kind of comparative reviews that focus on 'good' originals and 'bad' adaptations; 2. interrogate the dialogue between multiple versions of a narrative 'pre-text' (i.e. our case studies): how and why do adaptations modify their sources in a particular way? How are stories adapted to particular aesthetic, commercial, social, or political demands – and are particular modes (e.g. film, novels, games…) more suited than others for these purposes? How do adaptations move across different cultures, genres, and time periods? With the case study adaptations as our points of departure, we will consider different approaches to and theorisations of adaptation and examine various relevant notions, such as originality, fidelity, authenticity, universality, history, myth, canon, and genre. Throughout the course, students will be asked to bring in their own examples of adaptations to discuss in class.

900225HUM: Literature and Science

Discipline	HUM
Theme	Cities and Cultures, Social Systems
Track	Literature
Prerequisites	For HUM, 900161 HUM Introduction to Literary and Cultural Theory. For SSC, any 100-level Humanities course. For SCI, any 100-level Humanities course. For second and third year students.

This course will explore the relationships between scientific discovery and cultural imagination, production, and representation. We will consider the ways in which imaginative literature in particular, but also art cinema, and the media, addresses, responds to, and creates popular science, while also considering works of science which make use of literary strategies. Together, this collection of texts will encourage us to re-examine the relationships between scientific and literary communities in order to draw conclusions about the role of creativity in scientific discourse and the part literature has to play in reflecting critically on scientific developments in a range of historical and cultural contexts. From Renaissance explorations of the relationship between science, magic, the imagination, to the emergence of 'science fiction' and evolutionary Darwinism in the nineteenth century, to the development of late-twentieth century cyberpunk and beyond, this course will analyse the treatment of such recurring themes as the 'mad' scientist, utopian and dystopian visions, intelligent machines and monsters, travel through time and space, science fantasy and prophesy, science and crime fiction, and science and the mind.

900226HUM: Fictions of Empire

Discipline	HUM
Theme	Cities and Cultures
Track	Literature
Prerequisites	900154ACC/HUM Big Books, OR 900161HUM Introduction to Literary & Cultural Theory, OR 900123HUM Text and Genre. This is a course for second and third year students.

In the first part of the course we will read 'the literary Caucasus', a body of literature that presents the endeavours of Russia to extend its empire into and beyond the Caucasus, bringing it into violent confrontation with both local tribes and the Ottoman empire (roughly 1830-1900, with a brief excursus to the Chechen war of the 1990s). Works by Pushkin and Tolstoy, poetry and prose, will serve as central texts. In parallel we will read from the major thinkers in the field of postcolonial studies, primarily Fanon and Said. The focus will then move to the Dutch East Indies and Dutch colonial literature, both by colonizers and colonized. Readings will include texts by Dutch and Indonesian writers. We will also extend our reading of postcolonial criticism with work by Homi K. Babha and Spivak (among others). The texts for the final part of the course are V.S. Naipaul's A Bend in the River (1979) and Daoud's The Meursault Investigation. They will be the basis for discussing literary approaches to the complex issues of race, identity and nationhood from a non-western perspective. Students will contribute other texts of their own choosing from non-western literatures, to be presented and discussed in a final paper. Evaluation will take the form of two short papers and one substantial paper, as well as individual and small-group presentations. Themes will emerge from the set readings that can be extended by studying primary and secondary sources, partly to be researched by students.

900227HUM: Modernism and Postmodernism in Theory and Fiction

Discipline	HUM
Theme	Cities and Cultures
Track	Literature
Prerequisites	900154ACC/HUM Big Books OR 900161HUM Introduction to Literary and Cultural Theory OR 900123HUM Text and Genre

[not offered 2017-2018; will be offered again 2018-2019, semester 2] In this course we will read some of the major texts that define literary modernism by authors such as James, Woolf, Joyce, Eliot, Proust Pound, Hemingway and Stein while being mindful of the historical, political and economic contexts in which they were written. Students will learn to identify features of typically modernist texts such as fragmentation and alienation and how these features are articulated in critical essays and print culture/ reviews of the period. We will also discuss how these features relate to modernism in media such as painting and theatre, through authors such as Veblen, Benjamin, Lukacs, Simmel, Levi- Strauss, and Todorov. The course will then move on to address the paradigm shift to postmodernism that occurred roughly in the 1960s and 1970s through the work of literary authors such as Beckett, Nabokov, Pynchon, Ellison, and selected poems from Sylvia Plath, Anne Sexton, Adrienne Rich, Seamus Heaney, Robert Lowell, and Allen Ginsberg. This part of the course will be supported by a look at the work of theoreticians whose work has addressed or defined this shift including Harvey, Lyotard, Barthes, Derrida, Taylor and Culler. Students will learn to identify the characteristics of literary modernism and postmodernism and their narrative representation, while discovering the deeper philosophical, cultural, and economic implications of this major paradigm shift. Students will also become acquainted with the basic tenets of theories that define modernism and postmodernism including structuralism, post-structuralism, and deconstruction. This will include a consideration of attendant issues such as modern and postmodern constructions of subjectivity.

900231HUM: The Cinematic City

Discipline	HUM
Theme	Cities and Cultures
Track	Film
Prerequisites	For HUM, 900161HUM Introduction to Literary and Cultural History OR 900131HUM Film History. For SCI, any 100-level Humanities course. For SSC, any 100-level Humanities course.

This course is structured around three interrelated themes: cinema and modern urban society,crime in the city, and cinematic representations of Amsterdam. The course engages city filmsin which the city itself is truly one of the protagonists...Learning Objectives• To understand film as a technology, an art, and a social practice• To bring together film, theory, and history in an analysis• To understand the relation between cinema and urban society, the way urban societyhas been expressed in film, and cinema’s emergence as a technology, art, and practice• To closely read films and texts• To structure a discussion• To compose an original and cohesive argument in dialogue with other voices

900232HUM: Film and the Body

Discipline	HUM
Theme	Cities and Cultures
Track	Film
Prerequisites	For HUM, 900161HUM Introduction to Literary and Cultural Theory OR 900131HUM Film History. For SCI, any 100-level Humanities course. For SSC, any 100-level Humanities course.

The body is the focal point of cinema, whether as the fetishized object of the gaze, or the implied but absent observer behind/beyond the camera. In this course, we will explore the discursive and physical space where film and spectator, cinema and body encounter one another. More specifically, we will examine how film represents various kinds of bodies--the racialized body, the gendered body, the comedic body to name a few—and analyze the relationship that cinema forges between these bodily representations and the (body of) the spectator, sensorially and perceptually. We will draw on various theories and fields of study to explore these themes, including but not limited to, spectator theory, gender studies, and cultural theory, as well as on diverse film genres such as horror, melodrama, film noir, and the western. In the process, we will study how film represents various conceptualizations of bodies at key historical junctures, such as the return of the repressed body in early slapstick; the subjugated body of post-war sci-fi films; whiteness and Marilyn Monroe movies of the 50’s as an antidote to the Cold War; (post-)colonial bodies in the era of colonial divestment; and the surgically, prosthetically, and digitally enhanced body in contemporary blockbusters.

900233HUM: National Cinemas

Discipline	HUM
Theme	Cities and Cultures
Track	Film, Culture
Prerequisites	For HUM, 900161HUM Introduction to Literary and Cultural Theory OR 900131HUM Film History. For SCI, any 100-level Humanities course. For SSC, any 100-level Humanities course.

NB. This course has a specific focus each semester. If a nation, like an individual, derives its identity in large part through the stories it tells about itself, the cinema is the medium par excellence to narrate those stories to mass audiences on a global scale. This course will study the cinema of a particular nation/region and its domestic and international reception, in order to examine its influence in shaping ideas about what it means to be, for instance, Cuban or Singaporean, Latin American or Southeast Asian. The focus of analysis will be those films considered landmarks of the nation's/region's cinema which helped to frame a sense of identity both at home and abroad. In cases where the cinema being studied lies outside a dominant industry (such as Hollywood, Western Europe (France, Italy, Germany), or Bollywood), films made about that nation or region will also be examined since in these cases identity is often a process not only defining oneself, but also of being defined. The specific focus of the 2014-2015 course will be 'The Case of Spain'.

900243HUM: Urban Utopias

Discipline	HUM
Theme	Cities and Cultures
Track	Art History
Prerequisites	For HUM, 900142HUM Periods and Genres Early OR 900143HUM Periods and Genres Modern. For SCI, any 100-level Humanities course, Periods and Genres preferred. For SSC, any 100-level Humanities course, Periods and Genres preferred.

Assuming that a well-designed environment results in the social, political and economic advance of society at large, mankind has always looked for ways to improve his habitat. Over the centuries, architects and architectural theorists have thus shaped the way communities have lived, worked and interacted with one another. Through recourse to architectural history and theory, this course investigates a range of concepts and ideologies of planning and shaping urban environments and the context in which they emerged. After an introduction in the history and theory of ideal cities and communities, we will focus on a number of key design concepts and theorists, from the royal palace and gardens of Versailles to the modernist ideas of Baron Haussmann and his renovation of 19th- century Paris, from the totalitarian vision of Albert Speer and Adolf Hitler for Berlin and Linz, up to the planning of Almere, a ‘New Town’ close to Amsterdam. Special attention will be given to garden design and architecture, and its development from the Islamic palace garden to the concept of ‘Garden Cities’ (Ebenezer Howard, 1898) - and present-day attempts for greener urban spaces. The last weeks will be dedicated to the architecture of World Exhibitions.

900244HUM: History and Heritage of the Dutch Golden Age

Discipline	HUM
Theme	Cities and Cultures, n/a
Track	History
Prerequisites	None.

The Golden Age, which corresponds roughly with the 17th century, was an extremely important period in Dutch history. The enormous increase in trading activity at that time not only increased social mobility but produced a wealthy merchant class. This merchant class was important for patronage of the arts, literature and science and the merchants were also in a position to influence urban planning and architecture of that time. Topics to be covered in the course include colonialism and trade; scientific discoveries; navigation; the Dutch East India Company and the Amsterdam Bank; tulip fever; the perceived tradition of religious tolerance in the Netherlands; still-life painting; the Dutch political scene and the Dutch Republic in the century Europe. Students will learn about historical developments in the Dutch Republic that made the 17th century such an important period for The Netherlands, the ‘Golden Age’, and will trace the significance of these developments to the present day. This course is offered in semester 2.

900244HUM: Art and the Body

Discipline	HUM
Theme	Cities and Cultures
Track	Art History
Prerequisites	For HUM, 900142HUM Periods and Genres Early OR 900143HUM Periods and Genres Modern. For SCI, any 100-level Humanities course, Periods and Genres preferred. For SSC, any 100-level Humanities course, Periods and Genres preferred.

This course is about the ways visual images of the human body are produced and perceived across times and cultures. Indeed, the human body may well account as the first “art” object. From the earliest civilizations, individuals have altered their bodies using tattoos, body paint and other modifications (think of ritual mutilation, or the wearing of corsets and wigs) to underscore their individuality, while also making clear that they belonged to a specific social or religious group. Consequently, cultures have attached great importance to the way that bodies are represented in painting and sculpture. The main part of the course is dedicated to portraiture; from its origins in the Italian renaissance to the famous Dutch Golden Age group portraits (civic group portraits, such as the famous 'Nachtwacht') to (self-) portraits of the 21st century. Together, we will learn to look at conventions of portraits of past and present, in various media (painting, sculpture, numismatics, photography), and see how various elements of these portraits (posture, dress, gaze) have been used to construct identity. The final part of the course will consist of a group project related to the history of costume and dress.

900247HUM: Global Modern and Contemporary Art

Discipline	HUM
Theme	Cities and Cultures
Track	Art History
Prerequisites	HUM900142 Periods and Genres Modern

This 200-level course, Global Modern and Contemporary Art, expands geographically and temporally on the 100-level survey of art history, Periods and Genres: Modern. During the first half of the semester, we will address Modern art in Africa, Asia, and South America, building upon such concepts as positivism, individualism, and “progress.” Several sessions will be devoted to each continent, focusing on modern art as an international phenomenon, and comparing local expressions with canonical examples from Europe. A variety of media will be addressed, including investigation of the South African magazine, Drum, the Post-Impressionist Storm Society in China, and Brasília in Brazil. The second half of the course will address international contemporary art, attending to case studies of artists who work globally—as opposed to focusing on particular locales—as so many contemporary artists do not confine their careers to their native countries, but rather live and work abroad. Identity is fluid, if not elusive, for many of these contemporary artists, so we will consider the contexts in which they operate, as well as the relationship between works of art and their sites of execution. Amongst the artists we will examine are Chinese artist Ai Weiwei, Iranian artist Shirin Neshat, and Columbian artist Doris Salcedo. Throughout the semester, we will confront issues of postcolonialism, multiculturalism, exoticism, identity, and the politics of the cross-cultural gaze. Global Modern and Contemporary Art contributes to AUC’s institutional goal of offering a culturally inclusive and global curriculum. Moreover, this course draws upon recent scholarly research and reflects the worldwide trend away from Eurocentric historiography.

900251HUM: Perspectives on Games

Discipline	HUM
Theme	ICC, Cities and Cultures
Track	Media
Prerequisites	None

Over the course of a few decades, video games have grown from technical novelties to pieces of mainstream entertainment with financial stakes rivaling blockbuster films. Their audience, once comprised of specific age and social groups, now cover the entirety of the demographic spectrum. On the public eye, some have held video games responsible for the most reprehensible acts of violence and crime while others hailed them as demonstrators of the very mechanics through which we can organize our lives and goals in the most fulfilling manner. To an ever-increasing extent, play on digital devices is how we entertain ourselves and socialize with others. In this course, we will look at video games through all of these perspectives and more, and aim to cultivate a multifaceted and interdisciplinary understanding of this youngest and most impactful of media. Starting with the very idea of games and play, we will start by looking at the role of games and playful acts in personal development and social interaction. We will discuss approaches to defining what comprises a game and ways to categorize playful behavior. Building on this understanding, we will then evaluate key concepts in approaching video games and how they came into prominence and how do they relate to each other. Some of the keywords we will discuss are agency, narrative and immersion. Alongside these fundamental concepts, we will look at games as fictional spaces and rule systems, and discuss the phenomenon of cheating alongside other social and individual behavior associated with gameplay. After establishing these conceptual frameworks, we will turn our attention to broader issues that emanate from the interaction of games with broader culture. We will investigate how games intersect with notions of gender, violence, addiction and online community formation. We will discuss the emergence and subsequent dispersal of a distinct games culture and consider the potential of games in larger contexts through serious games. As a burgeoning discipline, video game studies is an inherently interdisciplinary field and the course reflects this eclectic approach. Methodologies and theoretical foundations will draw from multiple disciplines. Throughout the course, we will look at various examples as demonstrations and personal interaction with games will be a core component of the course experience.

900253HUM: Narrative across Media

Discipline	HUM
Theme	ICC, Cities and Cultures
Track	Literature, Media
Prerequisites	900161HUM ILCT

[not offered 2017-2018 - will offered again 2018-2019, semester 1] Telling stories is the most important activity by which human beings make sense of their lives. Narratology is therefore a crucial discipline not just within the humanities, but also one with important ramifications in disciplines beyond it. Many important concepts in the analysis of stories (e.g., narrative agency, focalisation, characterisation, temporal structuring) were first developed in literary studies, and proved to be adaptable to other media. However, as Marshall McLuhan famously emphasized some 50 years ago, “the medium is the message”: the medium affects the form of a story, and thereby inevitably its contents. In this course, which will alternate between lectures, seminars, and viewings, we will study narration in various media, including written fiction, film, comics, painting, poetry, and games, in order to assess whether, and if so how, central elements of narration are recruited for stories in different media. We will also pay some attention to how imposing narrative coherence on reality can have both beneficial effects (for instance in overcoming personal crises) and dangerous ones (for instance in economic theory).

900256HUM: New Media Literacies

Discipline	HUM
Theme	ICC, Cities and Cultures
Track	Media
Prerequisites	900153HUM Media & Communication

After his experience with using a typewriter, Nietzsche wrote “Our writing tools are also working on our thoughts”. More than a century later, our societies are again on the verge of being reshaped by communication tools. This course aims to explore and understand these transitions. Literacy has long been defined as the ability to read and write. This course explores new, more complex definitions of literacy that are integral to our participatory culture. Organized around four themes, the course will historicize the traditional definition of literacy, contextualize the emergence of new media literacies, explore the impact of networked, mobile computing on societies and conclude with reflections on big questions regarding our future interactions with communications technology. We will begin by exploring the history of literacy, situating the printing press in proliferating print culture and consider the social effects of what Marshall McLuhan called the Gutenberg Galaxy. This historical understanding will allow us to contextualize the computer mediated communications revolution that took place in the second half of the 20th century, and the birth of network societies. We will evaluate a list of new skills involved in being active in participatory culture and consider the unique language of the internet meme as a case study. These sessions will allow us to frame the particulars of the debate and construct a historical understanding through which to evaluate the most recent shifts in media and communications. Building on this framework, we will cover the specific impact of new media technologies through several Network-Events. Beginning with the promise and reality of net activism, we will cover topics such as social interactions in the network age, intellectual property and culture, new trends in employment practices and our recent obsession with big data.The final theme of the course will focus on Big Questions regarding the future of network societies and participatory culture. We will begin by tackling a central term from economics, innovative disruption and in the following sessions discuss the current state and future prospects of news media and television as well as the sharing economy, spearheaded by companies such as Airbnb and Uber.

900258HUM/SSC: Journalism

Discipline	SSC, HUM
Theme	ICC
Track	Media
Prerequisites	900153HUM Media and Communication. For second and third year students

While twenty-first century journalism demands diverse, ever-evolving skills, many of these skills remain founded on the principles of a long-standing media institution: the newspaper. With the newspaper as its organizing principle, this class will introduce students to basic concepts of journalism and skills of observation, critical thinking, and clear, precise writing required in all forms of journalism. Students will learn to gather information and present it accurately, objectively, and effectively; evaluate and criticize their own work; and develop sound news judgment to identify the elements of good journalism and recognize story angles to pursue. Using the classroom as a newsroom, students will practice their skills through readings, in-class activities and discussions, and, exercising the reportorial skepticism, independent thinking, and research methods that inform quality journalism, reporting and writing on a range of local and regional topics--such as politics, business, science, education, arts, and sports--in a range of journalistic styles, including short news reports and reviews, long-form features, and multimedia productions such as podcasts. Students will have the opportunity to collaborate with AUC's independent student newspaper, The Herring. The class will also explore the role of the so-called Fourth Estate in a functioning democracy, the way that role is shifting due to technological, economic, and cultural developments, and the ethical challenges these developments present. The semester culminates with an intensively reported enterprise project that demonstrates how journalism can serve as a paradigm for exploring the issues of the day. (This course is offered in the Spring semester.)

900261HUM: Introduction to Visual Methodologies

Discipline	HUM
Theme	Cities and Cultures
Track	Art History, Media, n/a
Prerequisites	Mandatory methodology course for HUM majors. Prereq for all students is ILCT. This course may be taken by 2nd and 3rd year students only. For non-Humanities majors this course may count in the Art History or Communication tracks. .

This course will offer an introduction to the range of methodologies that have been developed in order to analyse works of art and other visual media. Students will examine texts that address a variety of objects, including Renaissance altarpieces, seventeenth-century portraiture, photography, architecture, and contemporary film and video. The course will help develop students' skills in looking, researching, writing and argumentation. Topics to be addressed include formalism, semiotics, structuralism, post-structuralism, feminism and queer theory, visual culture, psychoanalysis, and post-colonial theory. By the end of the course, students should have an understanding of the pros and cons of various methodological approaches. Ultimately, this course will help students become more aware of their own methodological choices as well as those of other researchers.

900263SSC/HUM: Ethics

Discipline	SSC, HUM
Theme	n/a
Track	Philosophy
Prerequisites	Students are recommended to have completed at least two courses in their major.

What is the right thing to do? Do I really have a moral responsibility to others? Are there good reasons to act morally? Does morality have any foundation? This course in ethics will not only explore these questions in a systematic manner, but also engage with some of the most pressing problems in society today. Students will have the opportunity to develop familiarity with important ethical theories such as deontology, utilitarianism, virtue ethics and ethical relativism. They will be introduced to central philosophers such as Aristotle, Kant and Nietzsche and more modern writers such as Foot, Singer, Nussbaum, and Sandel. Topics may include but are not limited to: • Euthanasia, human experimentation and other issues in medical ethics. • Terrorism, violence, equality and the limits of justice. • Animal rights, sustainability, and eco-radicalism. • Diversity and discrimination. This course will provide students with an excellent introduction to the ethical dimension of many of the themes that they are studying at AUC. This course is offered in semester 2.

900264HUM/SSC: World Religions

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	Culture, Philosophy
Prerequisites	Students should have completed their first year.

This course introduces students to the spectrum of world’s religions (drawing from shamanism and shintoism, confucianism and islam, to hinduism and buddhism, egyptian and islam, judaism and christianity, african and aztec), their historical transformations, some of their main issues and their interactions with politics. Certain issues will be combined with certain religions, thus shifting the focus each class. In order to cover the variety of religions, the different issues and the historical transformations worldwide, attention will be paid to - theories on the origins of religion - shamanism and mysticism - ancestor worship - polytheism - monotheism - monism - religion & the Axial Age - religion & the Modern Age - religion & the state - religion & conflict - religious fundamentalism - religion & nationalism - religion & concepts of harmony - religion & globalization - religion & concepts of time. - religion & identity

900266HUM: Counterculture

Discipline	HUM
Theme	Cities and Cultures
Track	Culture, History
Prerequisites	900161HUM Introduction to Literary and Cultural Theory OR 900154ACC/HUM Big Books OR 900163HUM Research Methods in History OR 900151SSC Classical and Modern Political Thought OR 900171SSC Classical and Modern Sociological Thought OR 900181SSC Classical and Modern Anthropological Thought

This course investigates the counterculture of the period known as “The Long 1960s” by looking at the literature, film, music, and art of the period from a social and political history perspective. This turbulent era, which spans the Korean and Vietnam wars, and whose influence on contemporary is constantly being renewed and re-evaluated, is only now being considered in scholarly contexts, with the result that the following questions are only recently being asked and answered. • Is this period best understood as a revolutionary, rupturing moment in history, or an evolutionary moment? • What is the most effective theoretical model for collectively understanding the various liberation movements (national, gender, racial, sexual, ethnic, etc.) of the period? • What is the relation between the political and the personal, between social movements based on individual identity and social change, during this era? • What accounts for the rise and fall of non-violent protest during this period? • How can we characterize the attractions of socialism during this era: as a temporary fashion or a genuine political and economic alternative?

900267HUM: Philosophical Problems

Discipline	HUM
Theme	Cities and Cultures
Track	Philosophy
Prerequisites	Logic AND Academic Writing Skills AND one of the following courses: History of Philosophy OR Classical and Modern Political Thought OR Philosophy of Science

The course offers an exploration of central problems and arguments around the theme of 'foundations' in Western Philosophy, including: Ontology and metaphysics (What kinds of things are there in the world? Are there only concrete objects like tables and chairs, or are there also abstract objects, like numbers or qualities?) Beauty, Taste, Aesthetic Judgments (What is an aesthetic experience, (how) can we ground Aesthetic Judgments, Are there standards of Taste? What is the ontological status of a work of art?) State legitimacy and just government (What is the basis of the state's authority? What type of government is morally justified or not?) The course is organized thematically around these central concerns of Western Philosophy. We will study fragments of philosophical texts that deal with each of these problems, emphasizing how the authors engage with different types of philosophical discourse and approaches: for instance, by the use of thought experiments, fictional narratives, puzzles, or paradoxes. The course is divided into three sections, each of them taught by a teacher from one of AUC's three majors (natural science, humanities, social science). The first focuses on ontology and metaphysics, the second on aesthetics, and the third on foundations of the state and authority. Each teacher brings their own specific background to bear on the philosophical questions and methods discussed. In this way, the course is accessible and interesting for students with a philosophical interest from any of the majors. It is offered in semester 2.

900268HUM: Global History

Discipline	HUM
Theme	Cities and Cultures
Track	History
Prerequisites	N/A

Global History is a newly emerging field, characterized as a study of the past that moves beyond the focus on specific regions and nations in order to consider the transnational interrelations of historical processes and events. This course will take the theme of environment and water in Western and Asian cities. The classes will investigate how global environmental issues affect historical developments at the local scale, in particular in the history of cities.The first part of the course will introduce some debates on large environmental topics including changes in climate, changes in ecosystems and issues of land, water and air pollution. In the second part, the course will focus on specific cities in Europe, America, and Asia. Special attention will be paid to cities situated in deltas and riverbeds. They have had to deal with a variety of water-related issues, including threats of flooding and the provision of good drinking water. Students will write an essay on one of the debates and a comparative essay focusing on two or more case studies of issues in cities.

900269HUM/SSC: Democracy in Modern History

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	History, Political Science
Prerequisites	completed 1st year Recommended: Early to Modern History OR Political Thought

Democracy slowly has become more and more popular from around 1800. Since then this mode of government and the word ‘democracy’ itself has by leaps and bounds found acceptance in Europe as well as in other parts of the world. For many democracy has become the standard or the rule, while other modes of government are seen as deviations or exceptions. But within the world of democracies there are many differences and still there exist alternatives for democracy. How and why did the democratic evolution occurred in Europe and in other parts of the world? What have been and still are the biggest challenges for democracy? What different models of democracy have been experimented with? These questions will be used as a starting point to critically analyse the meaning and development of democracy in the time of the American Revolution and French Revolution, the nineteenth-century struggle between monarchy and democracy, the interwar years when dictatorships rose and after the Second World War and the end of the Cold War when democracy became dominant.

900271HUM/SSC: Gender and Sexuality

Discipline	SSC, HUM
Theme	Cities and Cultures
Track	Anthropology, Sociology, Culture
Prerequisites	a 100 level course on the Culture, Anthropology, or Sociology track

The study of gender and sexuality has constituted a crucial strand of cultural studies from the inception of the discipline through to the present day. This course on gender and sexuality studies traces trajectories of the field as they have emerged over time – from feminist theory to queer theory to trans studies and beyond. The course is interdisciplinary in nature, integrating a combination of both theoretical readings/primary texts, and the analysis of relevant objects within their soci-political context. Special emphasis is placed on the discussion of the social construction of sex and gender; the politics of identity and inequality; and the intersection of gender and sexuality with other markers of difference including race, religion, nationality, andclass.

900272HUM/SSC: Culture Lab

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	Culture, Anthropology
Prerequisites	The Global Identity Experience Introduction to Cultural Analysis OR Anthropological Thought

This course takes the annual European City of Culture festival, and one of its host cities (in June 2016, Paphos) as its object of study, and deploys grounded multi- and interdisciplinary methodologies, to enable students to explore and analyse its impacts, implications and imaginaries. In line with cultural analysis approaches whereby 'No concept is meaningful … unless it helps us to understand the object better on its own terms'(Bal, in Bowman 2003), it deploys grounded multi- and interdisciplinary methodologies including fieldwork approaches from cultural anthropology, critical discourse analysis and related fields such as visual analysis, and participatory approaches to theories of art and culture.' It therefore providesproject-basedandself-directedlearningaboutcultureandculturalfestivals, Europeanidentity-buildingandtheroleofculturalinterventionsinaddressingissuesforcitiesandcitizenswithinEuropeancontexts. Studentsengagewithculturaltheoriesandpractices, study illustrative case studies, and exploreandpracticeusingculturalanthropologymethodologies. They learnaboutand intervene in bothrealandvirtualculturalmanifestationsrelatingto the city, the festival, its audiences and the cultures in which they participate and co-create. T

900273HUM/SCI: Philosophical Logic

Discipline	SCI, HUM
Theme	n/a
Track	Philosophy
Prerequisites	900161ACC Logic, Information Flow and Argumentation, 100 level course

The aim of the 200-level philosophical logic course is to provide the students with a deeper understanding of what logic is about. The course is a continuation of the introductory course `Logic, Information flow and Argumentation'. As such, it maintains an interdisciplinary character and it draws connections with a variety of fields such as: philosophy of language, cognitive science, psychology of reasoning, mathematics, linguistics and natural language semantics, computer science, artificial intelligence, philosophy and history of logic. We will expand on the logics covered in the introductory course, namely, classical propositional and predicate logic, as well as dynamic epistemic logic. We will also motivate and introduce new systems, prominent in one or more of the fields mentioned above; for example, the students will be familiarised with intuitionistic logic, set theory, many-valued logics, tense logic, non-monotonic logic and game theory. In each case the students will learn to work within the respective logical systems and use their expressive powers, while asking critical questions about these systems and investigating their applications to various fields. We will explore the difference between the model theoretic and the proof theoretic approaches to logic, as well as study some interesting axiomatisations. In a few cases, a number of meta-logical results will be proven, such as the completeness theorem for classical propositional logic. Special attention will be devoted to philosophical questions surrounding the technical results. This course is offered in semester 1.

900274HUM: Philosophy of Science

Discipline	HUM
Theme	n/a
Track	Philosophy
Prerequisites	Students are recommended to have completed at least two courses in their major.

In this course students will become acquainted with the most important ideas and analytical tools of philosophy of science, and they will develop the skills to use these tools and ideas for reflecting on the nature of contemporary scientific knowledge and its role in today's culture and society. After a brief introduction in which the aims and the significance of philosophy of science will be discussed, and its historical origins sketched, the course will focus on the issue of the unity of science. While traditional philosophy of science, in particular the logical-positivist movement, regarded science as essentially unified, this idea has been challenged in recent times. We will study the question of whether contemporary science is unified or dis-unified from three different perspectives. First, the methodological point of view: Are disciplinary methods fundamentally different or are they species of a single scientific method? Second, the issue of reductionism: Are the different sciences autonomous or is there a (hierarchical) relation between them? What does this imply for our view of the world and for the ways in which societal problems can be approached scientifically? Third, the debate about the nature of scientific explanation: Is there an essential difference between types of explanation and understanding in the natural sciences, social sciences, and humanities? Subsequently, we will apply our findings to the theme of interdisciplinarity. What does an interdisciplinary approach consist of, and what are the conditions for fruitful interdisciplinary research? We will apply our analysis of interdisciplinarity to concrete cases from the six themes in the AUC curriculum. Finally, we will investigate the impact of science on contemporary society and culture. Throughout the course we will draw on examples from the physical and biological sciences, as well as the social sciences and humanities. Students will be encouraged to relate the philosophical ideas and tools to their own specific fields of interest. Students will be provided with key concepts and approaches in contemporary philosophy of science and with the analytical tools needed for a considered reflection on the nature of scientific knowledge and its roles in today's culture and society. This course is offered in semester 1.

900274SSC/HUM: Sociology and the Other

Discipline	SSC, HUM
Theme	Social Systems
Track	Culture, Sociology
Prerequisites	900171SSC Classical and Modern Sociological Thought

One of the classic subjects of sociology is the relationship between norm and exception or deviation. Entire fields of knowledge from medicine to psychiatry to criminology emerged from practices of identifying, studying and categorizing normative exceptions – the ill, the mentally disabled, the socially pathological to mention few examples. In this course practices of differentiation, and the desire to expel or contain otherness through scientific and governmental techniques are explored. Paying a tribute to philosophical writings on the concept of the Other, the course focuses on the disciplinary and discursive constructions of sexual, moral, social, medical, mental and political difference. Readings in relatively new social science fields such as queer studies and disability studies are also covered to introduce new perspectives on this classic theme.

900275SSC/HUM: Nations, Nationalism and Modernity

Discipline	SSC, HUM
Theme	Social Systems
Track	History, Sociology
Prerequisites	900171SCC Classical and Modern Sociological Thought

The course examines the nature of national identity and nationalism. We will first survey some of the most influential statements on the rise of nation-states and the making of nations in the modern world. Our focus will be on the conceptual debate between “constructivists” and “perennialists.” We will then proceed to explore in more detail the interrelations between nationalism and citizenship, ethnicity and nationhood, as well as between class, religion, gender, sexuality and national identity in a historical and comparative perspective. Specific case studies will allow us to reexamine the drama of the Holocaust, the imperial legacies in post-colonial nation building, and the paradoxes of inclusion and exclusion in contemporary America and Europe. Finally, we will critically examine the prediction that humanity is about to enter the era of “the end of nationalism” and explore the sources of the continuing attraction of the idea of “nationhood.”

900281SSC/HUM: Community and Society in a Globalised World

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	Culture, Anthropology
Prerequisites	900181SSC Classical and Modern Anthropological Thought

It is nowadays commonplace to argue that 'globalization' affects people's social lives. This argument is founded on the observation that social contact increasingly stretches beyond traditional community boundaries, dissolving old configurations while at the same time creating new ones. But how does this work in practice, and how do individual persons respond to the challenges that globalization presents them with? Key to the course is to equip students with approaches, (theoretical) ideas and skills to untangle the complexities of this. The course focuses on globalization from below, i.e. on local actors and their social practices. Hence the course is critical of 'grand' views stressing the universality and predictability of globalizing forces. To unpack the complexities of people’s social lives under globalization, the course explores particular linkages between the 'local' and the 'global'. In this exploration, a distinction is made between social, economic and cultural aspects of globalization. To make this more concrete, the course focuses on three broad themes: i) migration and transnational life, ii) global circulation of goods, iii) cultural globalization. During lectures, key ideas and thinkers in these themes are introduced, followed by empirical case studies wherein these are applied on particular actors, products and ideas. Central throughout is what this all means for common people, and how they respond to this in different ways.

900281Sci/Hum: Environmental Archaeology

Discipline	SCI, HUM
Theme	ECS, Cities and Cultures
Track	History, Earth & Environ.
Prerequisites	Introduction to Geology OR Introduction to Environmental Sciences OR Early to Modern History

Environmental Archaeology covers the interaction between humans and their environment in the archaeological and historical past. This broad scope embraces research covering a range of environmental specialisms within archaeology, such as archaeobotany and geoarchaeology, as well as more synthetic and theoretical approaches to the past human environment. Moreover new concepts such as the Anthropocene debate, the Human Niche Construction Theory and domesticated landscapes will be incorporated in the course.

900301CIC: Capstone (12 ECTS)

Discipline	SSC, SCI, HUM
Theme	n/a
Track	n/a
Prerequisites	Third Year

N/a

900310CIC: Second Internship

Discipline	HUM
Theme	n/a
Track	n/a
Prerequisites	-

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900312ACC/HUM: Advanced Creative Writing

Discipline	HUM, ACC
Theme	n/a
Track	Literature
Prerequisites	ACC/HUM 900213 Creative Writing

Advanced Creative Writing is an extension of the principles learned in the existing Creative Writing course. Whereas the existing course deals with basic principles of genre and composition and asks students to complete several shorter writing assignments, this course will be more focused on advanced aspects of creative production. Students submit a proposal for their intended creative project at the beginning of the course and work on it throughout the class, assisted by peer critique and other forms of assessment. Alongside their project, in-class activities inform the students' work: lectures by the instructor and Amsterdam-based guest speakers, writing exercises, small group work and presentations by fellow students. Additionally, students are expected to have a research component attached to their project; this research component directs their project in an appropriate manner. Ultimately, students have to present their creative work to the class, discuss the rhetorical aims of their pieces, and answer questions concerning their final projects asked of them by a panel. This course should be attractive to HUM students who want to write – creatively or technically – for their profession, SSC or SCI students who recognize that writing will be a large part of their desired profession, and all students who have an interest in working within the creative industries.

900313HUM: Theme: Rethinking the Sublime

Discipline	HUM
Theme	Cities and Cultures
Track	Theme
Prerequisites	900161HUM Introduction to Literary and Cultural Theory, AND 900261HUM Introduction to Visual Methodologies; only open to third-year HUM students

The notion of the ‘sublime’ offers a relevant perspective for the description and interpretation of the experience of different aspects of today’s complex world – aspects such as: globalization, the information age, international terrorism, et cetera. The sublime is the experience of an object with an overwhelming size or of excessive power, causing awe and trembling. Traditionally, aesthetics – the discipline within which the notion of the sublime can be said to have arisen – concerns itself with beauty, and the analysis of ‘taste’, as based in the experience of harmony and pleasure. However, aesthetics has come to have a much wider meaning than the analysis of beauty and taste, and the sublime itself points to an experience different than that of harmony and pleasure. The field of aesthetics and the notion of the sublime can be connected to topics such as power, emotion, alterity, representation and knowledge. The ‘global city’ is the primary locus of the contemporary sublime: whether it is the images of 9/11 and subsequent terrorist attacks, global capitalism as a seemingly inescapable, all-encompassing system (causing worldwide economic upheaval), the Internet (‘the virtual city’) as an ungraspable infinity, or the experience of meaninglessness (strongly associated with the urban) after the demise of the ‘Great Narratives’ – these phenomena all denote the ‘global city’. This ‘sublimity’ we will further explore in the course.It is important to be aware of the history of the sublime. In order to accurately relate the sublime to contemporary issues, students must be acquainted with the notion’s historical development and different conceptualizations – ranging from its supposed origins in Longinus’s writings on rhetoric (1st or 3rd century AD), its embodiment in religious mysticism, its development in Enlightenment philosophy and centrality in Romantic art, to its postmodern and contemporary instantiations.This course employs a ‘double’ approach of offering a survey of the historical development of the sublime, while at the same time seeking to connect those different conceptualizations of the sublime to contemporary issues throughout. Toward the end of the course, students will be asked to interpret a ‘current’ topic or object of their own choice in light of one or more of the perspectives offered throughout, thereby also assessing the relevance of that (or: those) perspective(s).This course will be team-taught by different teachers working in different tracks within the Humanities curriculum, illustrating the wide relevance of the notion of the sublime.

900314HUM: Theme: Rethinking Protest

Discipline	HUM
Theme	Cities and Cultures
Track	Theme
Prerequisites	900161HUM Introduction to Literary and Cultural Theory

This course explores the relationship between the city as a space of community, assembly, law-making, and collective (self-)identity on the one hand and urban manifestations of protest, resistance, disruption, and civil or political disobedience on the other. Special attention is paid to the strategies and dynamics of politicisation at work in contemporary forms of protest, art activism, and protest and performance art, and to the aesthetic and performative dimensions which protest assumes whenever individuals or groups make their bodies seen, or their voices heard, in the attempt to ask attention for a cause. In the first half of the course, we consider key theoretical insights and conceptualisations offered by Michel Foucault, Judith Butler, and Jacques Rancière. With Foucault, we look at parr■sia as free or "truthful" speech in relation to democratic life in the city/polis. With Butler, we look at the embodied and performative aspects of assembly, especially in relations to conditions of precarity. With Rancière, we look at the interrelations between politics and aesthetics, and the ways they play themselves out in political theatre and public art. The second half of the course continues to explore the threads introduced by means of these three thinkers by focusing on a range of case studies from the arts, literature, visual culture, and film, running from the Paris Commune of 1871 to protest in the present "age of austerity."

900321HUM: Literature in the Age of Globalisation

Discipline	HUM
Theme	Cities and Cultures
Track	Literature
Prerequisites	900161HUM Introduction to Literary and Cultural theory AND at least one 200-level course from the Literature or Culture tracks. 900226HUM Fictions of Empire is recommended.

Globalisation holds out many new challenges for thinking about literature and culture: the dynamics of cultural markets, the construction of cultural difference and cultural agency, and the ever-changing forms of cultural translation and transculturation which emerge under "globalising" conditions all invite us to rethink some of the most deeply held assumptions of literary scholarship today, leading to new conceptualisations of culture and literature in relation to politics and the social. The principal aim of this course is to clarify the place and role of literary studies within the larger domain of globalisation scholarship, and to consider how the study of literature – both as a scholarly practice that is focused on literary case studies, and as a scholarly tradition with its own schools and legacy of critical thought – is integral to a better understanding of our global modernity. In so doing, the course builds on the 100-level course Introduction to Literary and Cultural Theory (ILCT), bringing your knowledge of some of the critical schools and theories which are covered in that course further up-to-date. Case studies that will receive in-depth consideration over the course of the semester include: Goethe's collection of poems West-Eastern Divan, The Epic of Gilgamesh and its 19th-century (re)discovery, Edward FitzGerald's Rubáiyát of Omar Khayyám, the classic Chinese writer Lu Xun, Joseph Conrad's Heart of Darkness, and David Mitchell's novel Cloud Atlas.

900322HUM/SSC: Literature of Social Exclusion

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	Literature, Sociology
Prerequisites	900161HUM Introduction to Literary and Cultural Theory AND one 200-level course from the Literature track OR 900274SSC Sociology of the Other

This seminar explores literary engagements with the topic of social exclusion. In doing so, it draws on sociological and anthropological theories of globalization, transculturality, cosmopolitanism, social conflict and group membership. At the same time, close examination of literary texts uncovers that theoretical concepts sometimes fail to account for the intricacies of individual experience. The literary texts explored in this seminar portray diverse experiences of exclusion, stigmatization and discrimination but in some cases also of emancipation and agency. The seminar engages with diverse areas of human experience such as diaspora and exile, war and political conflict, hierarchies of caste, class, race and gender, anti- and postcolonialism, new poverty and HIV/Aids. Literary texts, however, are not read as mere illustrations of ‘real life’ but also as aesthetic specimens in their own right. In addition to this, the seminar explores the aestheticization of social exclusion (for example in the stylized ‘ghetto culture’ prevalent in hip hop music) and its strategic uses in what Graham Huggan has called the “marketing of the margins”.

900323HUM/SSC: Political Shakespeare

Discipline	SSC, HUM
Theme	Cities and Cultures
Track	Literature
Prerequisites	900161HUM Introduction to Literary & Cultural Theory, OR 900154ACC/HUM Big Books, OR 900163HUM Research Methods in History, OR 9000151SCC Classical and Modern Political Thought.

Shakespeare lived in times of turbulent cultural and political change. In this historical context, it is not surprising that Shakespeare's plays are saturated with political themes. In his 'history plays,' Roman plays, and tragedies we encounter a range of monarchs, statesmen, and citizens, who are depicted in situations that challenge their most deeply held beliefs and which often throw their identity as social and political actors into crisis. Taken together these plays constitute a profound inquiry into such issues as the divine right of kings, republican virtue and citizenship, the relationship between church and state, and the nature of the political life. What is more, the early-modern theatre in which Shakespeare was such a leading figure was itself deeply politicized as a social institution. The role of the theatre in early-modern urban culture, and in relation to the Elizabethan and Jacobean courts, makes for a vibrant cultural context in which each play is saturated with political meaning and resonance. In this course, we will study the political dimensions of Shakespeare's work by bringing it into dialogue with insights from political theory, intellectual history, and comparative literature. We will address questions such as: How did Shakespeare think about kingship and statesmanship between ca. 1580 and 1620? By what kind of thinking about (civic) virtue and citizenship was his work informed? How did he respond to new historical, political, and intellectual developments in the course of his long career as a playwright? How do his plays problematise or intervene in the many political debates of the period – an important era of transition in which nothing seemed certain and everything was held up for debate? And, last but not least, are the dilemma's that confront Shakespeare's characters still relevant for readers today and, if so, how? Plays to be read in this course may include: Shakespeare's Coriolanus, The Merchant of Venice, Romeo and Juliet, Richard II, Henry IV (Part 1), Henry V, Richard III, and The Tempest. Furthermore, students are expected to read the following texts in political theory and intellectual history: Machiavelli, The Prince (1513); Thomas More, Utopia (1516); Erasmus, Education of a Christian Prince (1516); James VI/I, The Trew Law of Free Monarchies (1598); Arthur Lovejoy, The Great Chain of Being (1936); Ernst Kantorowicz, The King's Two Bodies (1957).

900331HUM: Film Auteurs

Discipline	HUM
Theme	Cities and Cultures
Track	Film
Prerequisites	For HUM, 900161HUM Introduction to Literary and Cultural Theory AND 900261HUM Introduction to Visual Methodologies and at least one course in the film track. For SCI, any 200-level course in the Film track. For SSC, any 200-level course in the Film track.

The ‘auteur’ is a key concept in film studies. Defining it, criticising it, defending it, dismissing it, re-inventing it, and criticising it again, without being able to get totally rid of it, has shaped film studies as a discipline. Originating in the era of silent film, the ‘auteur’ as a concept supported the distinction of ‘film as avant-garde/art’ vs. ‘film as entertainment’. Decades later, during the 1950s, this debate flared up again in changed form, fuelled by the writing of French filmmakers and critics, who published their ideas in the Cahiers du cinema. During the 1960s, under the influence of structuralism, and then again in the wake of post-structuralism, it came under heavy attack. This course combines a text-based element with a film-based one, which will start off side-by-side, but then part company (historically). We are going to look closely at the polemical debate around ‘auteurism’, at films by ‘auteurs’ and at the history of film studies. We will read and discuss the major articles which formed the debate on ‘auteurism’ in France, the UK and the US. We also contextualise the ‘auteur’ by looking closely at concepts such as ‘genre’, ‘mise-en-scène’, ‘style’ and ‘signature’. Since controversy forms an important element of the debate, we also look at theoretical positions which consider ‘auteurism’ loaded with ideology, and want to explode or discard the concept of the ‘author’ altogether. Part of the course will focus on film-makers who worked inside Hollywood’s studio system, but still managed to get acknowledgment as film auteurs. Next, we move on to films which are considered auteurs’ products in the strict sense of the word (in France, Germany, US). Having looked at independent directors, we then problematise the gendering of ‘auteurism’, by looking at film ‘autrices’, and, finally, turn to what might be called ‘world’-auteurs.

900332HUM: Film Philosophy

Discipline	HUM
Theme	Cities and Cultures
Track	Film, Philosophy
Prerequisites	For HUM majors: 900161HUM Introduction to Literary and Cultural Theory, AND 900261HUM Introduction to Visual Methodologies, AND at least one course in the Film or Philosophy tracks. For SSC and SCI majors: any 200-level course in the Film or Philosophy tracks.

Film is an object of philosophical reflection, but also a vehicle for and of reflection. Accordingly, this course takes a three-pronged approach to the study of film and philosophy. First of all, film can be used as an illustrative tool for explaining and further engaging with different philosophical problems. In Part I, “Philosophy Through Film”, close readings of key philosophical texts will be illustrated with the help of specific films (for example, philosophical problematizations of reality, knowledge and the meaning of life, through films such as The Matrix). In Part II, “Philosophy of Film”, we will move more specifically into film theory, which can be regarded as a branch of philosophy (i.e. aesthetics): core themes such as the ontology of film, realism, representation, ideology, cognitivist theories of watching film, and how films get and give meaning will be addressed (these film-theoretical topics can be seen to refer back to the broader philosophical topics of Part I). Finally, in Part III, “Philosophical Films”, the discussion of the relation between film and philosophy will lead to the question of whether (and if so, how) films can be judged to be philosophical in themselves. In other words, can films offer thoughts, reflections and arguments on their own? These questions will be examined in relation to a selection of philosophical films determined by the students.

900333HUM: Documentary

Discipline	HUM
Theme	Cities and Cultures
Track	Film, Media
Prerequisites	900131HUM Film History OR 900153HUM Media & Communication at the 100-level AND one 200-level course in the Film or Communication (/Media) tracks.

Students will consider the history of documentary filmmaking and the assumed role of the documentary as social vehicle responsible for representing truth and reality, and sometimes dogma and/or propaganda. The documentaries in this class will be viewed and analysed as products of their particular social and historical and political contexts, but also as works of art. To that end, their aesthetic qualities will also be considered. This course, scheduled in the first semester, has the potential to engage in meaningful ways with both the Science Park Film Festival Amsterdam and IDFA (International Documentary Film Festival Amsterdam).

900341HUM: The Art Market and Culture Industry

Discipline	HUM
Theme	Cities and Cultures
Track	Art History, Culture
Prerequisites	For HUM, any 200-level Art History track course. For SSC, Periods and Genres (Early or Modern) is recommended AND any 200-level HUM course. For SCI, Periods and Genres (Early or Modern) is recommended AND any 200-level HUM course.

Although the definition of art remains an open discussion, we can safely state that art works, their makers and public have always been part of society and its social, political, cultural, religious and economic networks. In this respect, the 19th-century concept of “Art for art’s sake” may be unmasked as a typically western invention: it tells us perhaps more about the much-desired emancipation of “artists” from the whims of patrons, guilds and art academies, than about art itself. Drawing from a wide range of historical and present-day examples, this course will investigate relations between art, artists and the market. How has the profession of the artist and artistic education changed over the centuries? How can we define the relationship between artists and patrons, then and now? What is the institutional role of art academies, art dealers, private collectors, museums and the government? Our case studies will range from late medieval commissions of altarpieces to the rise of the art dealer in seventeenth-century Dutch cities, from the Salon in nineteenth-century Paris to the present-day phenomenon of art fairs. Students will learn to investigate these processes with an interdisciplinary approach, working with key concepts such as low and high art, social distinction, art worlds, the culture industry, the commodification of culture and cultural imperialism – in order to come to understand the (changing) social significance given to art and the culture industry, and the relationship between art and the economy. What is the rationale for governments to subsidize art and culture; and how are these aspirations translated into national and international policy documents about art and culture?

900342HUM/SSC: Photograph as Socio-Political Document

Discipline	SSC, HUM
Theme	Cities and Cultures
Track	Art History, Culture, Anthropology
Prerequisites	For HUM, 900261HUM Introduction to Visual Methodologies. For SSC, 900161HUM Introduction to Literary and Cultural Theory or any 200-level Humanities course. For SCI, 900161HUM Introduction to Literary and Cultural Theory or any 200-level Humanities course.

The photograph as proof of what has been (according to Roland Barthes) is inextricably tied to claims of truth. What some viewers might see as merely an art object has had the power to change labor laws (photographs of children in factories), label people and objects (anthropology and natural science), prompt the establishment of national parks (photographs from expeditions in the American west), garnered support for environmental activists (images of Earth taken from space), and provoked debates on abortion (image of fetus on the cover of Life magazine) to name a few examples. This course will examine the history of photographs as they have functioned in the scientist's laboratory, the courtroom, and mass media. We will question the assumed veracity of the photograph and discuss how the photograph has been used as a device in argumentation. Methods will include visual analysis, which will help train students from various disciplines in the interpretation of images. We will look at texts from various fields in the sciences and social sciences and discuss photographs by examining the social, historical, and political contexts in which they were created, addressing how images influence the formation of knowledge.

900345HUM: Existentialism in Literature and Philosophy

Discipline	HUM
Theme	Cities and Cultures
Track	Literature, Philosophy
Prerequisites	For HUM majors: 900161HUM Introduction to Literary and Cultural Theory, AND 900261HUM Introduction to Visual Methodologies, AND at least one course in the Philosophy track or the Literature track. For SCI and SSC majors: any 200-level course in the Philosophy or Literature tracks.

This course will explore Existentialism as an interdisciplinary (philosophical and literary) movement that arose mid-19th century – in response to the modern individual's (increasingly urban) existence in a world no longer God-sanctioned –, and that remains relevant until this day, in the face of the challenges of our contemporary, globalizing world. The course will focus on close reading of important existentialist authors, such as Kierkegaard, Dostoevsky, Kafka, Sartre, De Beauvoir and Camus; but the course will also explore contemporary and non-Western authors, such as David Foster Wallace and Haruki Murakami. The objective of the course is to provide students with a thorough grasp of Existentialism, entering into a critical dialogue with its canonical and contemporary representatives and texts, reflecting on the contemporary relevance of notions such as: anxiety, freedom, boredom, commitment, alienation and authenticity – not as ready-for-use theoretical concepts but as aspects of human reality that require detailed description, analysis and reformulation, as that reality is also subject to constant change. NB: Please note that this is a 300-level course that requires considerable previous academic engagement with either philosophy or literature (ideally with both). The course especially requires the skill and willingness (crucial to the fields of philosophy and literature) to read substantial amounts of text (the average will be 50 to 100 pages per week, but in some weeks even a bit more than that) that will often be complex and will require careful, attentive reading. Not keeping up with this weekly reading will jeopardize your ability to successfully complete the course.

900351HUM: Game Studies: Gender at Play

Discipline	HUM
Theme	ICC, Cities and Cultures
Track	Media
Prerequisites	900251HUM Perspectives on Games OR 900271HUM/SSC: Gender and Sexuality

Within a few decades of their proliferation, digital games have become one of the most technically sophisticated forms of entertainment while also burgeoning into an intricate form of artistic expression. This class presents an in-depth, multi-faceted study of the medium through a combination of theoretical approaches and extensive interaction with diverse objects, organized around the three central themes of gender, culture and ethics. Gender studies offers a crucial perspective in understanding the constructed norms and power structures of cultural objects from all fields. Video games, due to both their unique affordances and their particular cultural history, present many opportunities for analysis from this approach. In this section of the course, we will first establish what is at stake by charting the value-laden notions of play and game design as well as cover fundamental concepts and frameworks in applying gender studies to games. We will then discuss issues around representation, both in the fictional worlds of games as well as within the games industry. Next, we will review the additional perspectives enabled by queer theory and unpack the constructions of masculinity in games. The section will conclude with a session on intersectionality where we will discuss the pedagogical potential of games on bringing together issues of race, class and gender. Heavily building our discussions around gender, the second section of the course will approach games as enabling, and embodying, a cultural rhetoric. We will investigate the cultural construction of the ‘gamer’ identity and explore its limitations. Going beyond the boundaries of an imagined ‘core’ audience, we will also discuss various ways players appropriate games to tell other stories and the rapidly emerging phenomena of esports and livestreaming. In the final section of the course, we will focus on ethics in game design and content. By establishing a comprehensive moral framework, we will contextualize our previous discussions and work towards understanding how games can embody ethical systems through their designs and the circle of responsibility of designers, publishers, fans and journalists. The course will heavily depend on close interaction with a broad spectrum of games, both in terms of assignments and regular in-class play sessions.

900353HUM/SSC: Media Psychology

Discipline	SSC, HUM
Theme	ICC
Track	Media, Cognition
Prerequisites	900192SSC Psychology AND 900153HUM Media and Communication

Media Psychology is an autonomous field of study within the science of psychology, but also a domain of intersection between two large knowledge fields, the one of psychology and the other of media studies. What does this intersection mean today, how is it pertinent, and what new directions are opening with the development of new and social media? This course aims at familiarizing students with the basic areas of interest for media psychology, enabling them to reflect upon the evolvement of media-psychological debates though the field’s history, and to critically engage with the contemporary psychological aspects and implications of media use. Among the topics that will be covered are: political communication, reality TV and mediated surveillance, branding and advertising, media representations of psychopathologies, individual responses to violence, and issues of cognition and perception in videogames and new media.

900354HUM: Visual Culture

Discipline	HUM
Theme	ICC, Cities and Cultures
Track	Art History, Media
Prerequisites	At least one course in the Communication or Art History track, OR a Humanities methods course (900161HUM Introduction to Literary and Cultural Theory OR 900261HUM Introduction to Visual Methodologies)

How do visual artifacts constitute and shape the social, cultural and political landscapes in which they circulate? How might practices of looking establish or maintain particular power relationships? These questions form the basis of viual culture, a field of study traversing disciplines as diverse as art history, anthropology, cultural studies, and media studies, among ohters. This course provides an introduction to the interdisciplinary field, exploring the concepts of ‘the visual’ and ‘visuality’. We interrogate both: 1) The ways in which images participate in shaping social processes; and 2) The socially constructed processes of looking through which we see the world.

900357HUM: Media Lab

Discipline	HUM
Theme	ICC, Cities and Cultures
Track	Media
Prerequisites	Any 200-level course from the Communication (/Media) track New Media Literacies OR Journalism strongly recommended.

New 300 level Course (starting June 2018) - course code to be added. This intense (June) research seminar offers students interested in the latest research topics in new media and society the chance to grapple with various theoretical frameworks and research methodologies. The course synthesizes and builds upon three major thematic components of the AUC Communication track, namely: new media; representation and visual culture; and journalism. The course will be taught by three lecturers from the track, each associated with one of the thematic trajectories around which the course is structured. The final product for each group is a creative project and presentation which addresses, synthesizes and reflects upon these three thematic trajectories. Learning outcomes: - Students become familiar with current debates and theoretical approaches in the fields of new media studies, journalism and visual culture. - Students apply the theoretical and methodological knowledge gained in this and earlier courses to understanding a current, ‘real world’ topic. In short, they practice theory. - Students practice synthesizing multiple perspectives and approaches to a single topic. This exercise also allows students to integrate their learning from the various component trajectories of the communications track. - Students experience working collaboratively with peers on a multifaceted project where they exercise building and managing their team as well as the practical and academic appeal of their final product.

900361HUM: The History of Ideas

Discipline	HUM
Theme	Cities and Cultures
Track	History
Prerequisites	900163HUM Research Methods in History (after 2016-2017: 900165HUM Early to Modern History)AND a 200-level course in the History or Anthropology or Sociology track OR 900161HUM Introduction to Literary and Cultural Theory AND a 200-level course in the Literature track

NB: This course is subject to annual revision. While the course always includes a methods component (methodology of intellectual history), and while it always retains a focus on the period after 1650 (the Enlightenment and later), the precise content and thematic focus of the course might be subject to change. The History of Ideas 2016-2017 This course in the history of ideas explores the intellectual and literary culture of the Enlightenment in international and comparative perspective. We read both canonical and non-canonical texts from the period, supplemented with articles that revisit the age of Enlightenment in light of present-day controversies and debates. In this way, shuttling back and forth between the 18th and 21st centuries, we'll ask questions about the 'legacies' of Enlightenment thought: Why did Voltaire's Treatise on Tolerance become a best-seller again in 2015? What is 'Enlightenment fundamentalism,' and how do its critics (re)situate us in relation to the ideas to which this term refers? How does the Enlightenment stand up to the critique of Eurocentrism, e.g., in postcolonial discourse? And what might the study of Enlightenment ideas still have to offer us in the aftermath of this critique? Through thematically focused classes, the course will pay special attention to: the emergence of modern notions of individuality and diversity in Enlightenment thought and culture; feminism, otherness, and religious tolerance in the age of Enlightenment; the constitution of modern literary and political public spheres; the role of print media as defining of modernity; the notion of 'critique' as Enlightenment practice and value. Alongside a selection of 18th-century texts and recent scholarly articles, the course will also consider some influential 19th- and 20th-century responses to Enlightenment thought (e.g., John Stuart Mill, Isaiah Berlin, Michel Foucault's reading of Kant). The course will start with a few classes on the methodology of intellectual history or history of ideas.

900361SCI/HUM: Mathematical Logic

Discipline	SCI, HUM
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being, Cities and Cultures
Track	Maths, Philosophy
Prerequisites	Third-year Science majors. Third year SSC and HUM majors with good mathematical skills. NB HUM majors should also have followed the 200-level Philosophical Logic (Or: Advance Logic - old name) course. This is not strictly necessary for SCI and SSC majors.

In this course we study branches of logic -techniques and theorems- that aremost relevant to mathematics. There are two sides to the relation of logic tomathematics. On the one hand, logic is concerned with so-called foundationalquestions about mathematics. Such questions lead to the development of formalsystems that formalise parts of mathematics, e.g. axiomatisations ofarithmetic, analysis, geometry etc. A central theme here is the expressivepower of a logical system, and, in particular, whether the system is expressiveenough to contain the mathematical theory at hand, so that properties of thelogic immediately transfer to properties of the mathematical theory. On theother hand, logic is concerned with the proof of meta-mathematical results,such as consistency and decidability of particular formal systems, definabilityof certain notions of interest etc. These results include limitative theoremswhich establish the absolute limits of the deductive power of formal systems; agood example here is the famous Halting problem which roughly states that thereis no method by means of which it can be decided for arbitrary computerprograms whether they will eventually terminate on arbitrary input or runforever. Although such a limitative theorem belongs to theoretical computerscience, its implications inform any application of computation as we know it.The techniques and theorems that we will study come from the four main areas ofmathematical logic, which are: set theory, proof theory, model theory andrecursion theory. This course is offered in semester 2.

900361SCI/SSC/HUM: Moral Dilemmas in Medical Practice

Discipline	SSC, SCI, HUM
Theme	Health and Well-being
Track	Health, Philosophy
Prerequisites	Students are required to have completed at least two 200-level courses in their major.

Medical practice is characterised by moral dilemmas. What should a physician do when a patient asks for active termination of life because of unbearable suffering? What should professional caregivers do when an elderly patient refuses a diagnostic procedure which might help to determine the cause of physical problems? What should a nurse do when a psychiatric patient might become dangerous to himself or others? What should a genetic counsellor do when a person does not want her family to know that she has a hereditary condition which may be relevant for her relatives? In this course, these dilemmas will be studied from a theoretical perspective and investigated using methods for ethical case analysis. Topics include: - end of life decisions - responsibility in elderly care - coercion in psychiatry - genetics. The student will acquire knowledge of: - theories on medical ethics - moral dilemmas in health care - methods of case analysis - the practice of the ethical consultant The student is able to: - understand the significance of moral dilemmas in medical practice. - place these dilemmas in a theoretical perspective and analyse them methodically (discussions, paper). - interview a healthcare professional on ethical issues and analyse the transcript.

900363HUM/SSC: Religion, Secularism and Violence

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	Culture, Anthropology
Prerequisites	For third-year HUM or SSC majors.

While 20th century extreme violence (e.g. Word wars I and II, proxy wars during the Cold War, the Cambodian genocide under the Khmer Rouge) was often justified by atheistic or non-religious political, ideological motives (e.g. Nazism, Stalinism, etc.), the beginning of the 21th century brought violence to the world stage explicitly justified on religious grounds. This religious violence was contested by those who dismissed the use of religion as illegal, and used by others to plea for a peaceful world without religion. This course is taught at a moment at which in major European countries (the Netherlands, France and Germany) election campaigns are fought in which the fear for religious violence is a major factor. This resurgence of religious violence has also triggered new extensive interdisciplinary research on the link between religion and violence in the past and the present. The course will explore this new emerging field of academic enquiry. We will start with an analysis of how violence is part of five world religions (Christianity, Islam, Judaism, Hinduism, and Buddhism) in founding stories, in sacred texts, in rituals, in practices, and in symbols, and how they have dealt during their history with the violence aspects of their religious traditions. In the second part, the entanglement of religion and politics will be illustrated by recent cases in their social, political and cultural contexts (ISIS, Charlie Hebdo), and motives (apocalypse, Armageddon, sacrifice and martyrdom, etc.). In the third part other themes will be explored, such as conflicts about sacred spaces, evil and purification, and blasphemy, next to aspects such as religious violence against women and the use of religion in colonial violence. In the last part we will give attention to new theories that shed new light on the relation between religion and violence from evolutionary, philosophical and theological perspectives.

900364HUM: Modern Philosophical Texts

Discipline	HUM
Theme	Cities and Cultures
Track	Philosophy
Prerequisites	Students are required to have completed at least two semesters and at least one course in the Philosophy track.

This course, offered in the 4-weeks period, will focus on Arthur Schopenhauer's (1788-1860) most famous book: The World as Will and Representation (WWR, 1st edition 1818, revised 1844 and 1859. Original German title: Die Welt als Wille und Vorstellung) This eloquent text, originally published in 1818, contains Schopenhauer’s entire system of thought. Schopenhauer attempts to offer an explanation of the whole world in all its significant aspects, building on Plato, Kant and eastern philosophy. In WWR we find a philosophy of being (ontology), of knowledge (epistemology), of art (aesthetics) and of good and bad action (ethics). Note: Modern Philosophical Texts offers courses on fundamental texts in the history of philosophy (17th century - now). In the past the following books have been discussed: Nietzsche, Thus Spoke Zarathustra; Spinoza, Ethica; Schopenhauer, The World as Will and Representation.

900364HUM/SSC: Cultural Memory Studies

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	Culture, History, Sociology
Prerequisites	For HUM, 900161HUM Introduction to Literary and Cultural Theory AND at least 1 200-level course in the Literature or Culture tracks. For SCI, any two 200-level courses from the Sociology or Anthropology track. For SSC, any two 200-level courses from the Sociology or Anthropology tracks.

This course offers an introduction to the international – and highly interdisciplinary – field of cultural memory studies. Through strategically chosen case studies, a number of fundamental questions will be explored about cultural memory in all its forms: - What is the role of (collective) memories in society and culture? What forms of remembrance and commemoration can be seen to be at work in them? How do cultural memories contribute to the creation of social consensus, to the demarcation of conflicting identities and interests, and to the questioning of painful episodes from the past? - What are the media through which cultural memories are circulated and maintained? What is the role of literature, film, and the visual arts in transmitting cultural memories? How do new media and new communication technologies impact on the material transmission of memories, both geographically (across countries and cultures) and historically (across generations or even centuries)? - What explains the contemporary “memory boom”? Why are readers, museumgoers, and film and theatre audiences so obsessed with the past? And what is the role of the culture industry and the so-called “heritage business” in promoting, selecting, and defining cultural memories? Cases studies may include: Holocaust narratives; narratives of trauma and testimony; urban memory sites; “world heritage” sites; art and history museums; commemorative spaces and practices. Key theorists and critics whose work will be considered in the course include: Aleida Assmann, Maurice Halbwachs, Andreas Huyssen, Pierre Nora, Ann Rigney, Michael Rothberg, and Jay Winter.

900366HUM: Ancient Philosophical Texts

Discipline	HUM
Theme	Cities and Cultures
Track	Philosophy
Prerequisites	Students are required to have completed at least one course in the Philosophy track.

This course is offered in June. Socrates famously claimed that the “unexamined life is not worth living”. In this course we will read several ancient philosophical texts by Plato, Aristotle and Cicero, focusing on philosophical questions of metaphysics, epistemology, ethics, and politics. Students will acquire an understanding of how – for the ancients –answering questions about ethics or the good life, and about metaphysics and epistemology is a prerequisite for a healthy political system. All three philosophers start with a theory about the good life for human beings, and they challenge us to examine our own lives, views and opinions. Plato articulates his view of the good life in the first four books of the Republic. Aristotle expands on the ancient view of the good life in the Nicomachean Ethics, and Cicero gives the ancient Greek view a ‘Roman twist’ in On Duties. We will analyze the implications of the ancient view of the good life for politics by reading sections of Plato’s Republic and Plato’s Laws, Aristotle’s Politics and Cicero’s On the Commonwealth. We conclude the course with several articles discussing the relevance of ancient thought for ethical and political questions today.

900371HUM: The Posthuman

Discipline	HUM
Theme	ICC, Cities and Cultures
Track	Culture
Prerequisites	A 200 level course in the Humanities, preferably on the Culture track

This course takes up surrounding the definition of ‘the human’ and the ramifications of current (cultural) practices such as informatization, virtual reality, cognitive and robotic enhancements, and genetic modification. Analysis of these practices asks, how are current practices surrounding the human displacing the unity of the subject? Is there a potential in the post-human for addressing the multiple, flexible identities which characterize our age?An investigation of the post-human is a current area of important theoretical work in cultural studies as well as in an interdisciplinary context, bringing together philosophy, ethics, science fiction, futurology and others. The proposed course takes up core texts on boundary issues concerning the human body and identity to interrogate the boundaries of human/animal, human/nature, human/non-human. These binaries are explored through analysis of the figures of the monstrous, the cyborg, and the mutant.The topics discussed will, in many cases, be covered in two sessions (so as to have one main topic per week): one session will focus on the posthuman as a (new) conceptualization of the human; the second session will focus on the posthuman as our (ontological) condition, and analyze and discuss its current practices and forms. For the second session students will organize presentations and discussions so as to apply and put into work the studied concepts

900373HUM/SSC: Legal and Social Philosophy

Discipline	SSC, HUM
Theme	n/a
Track	Law, Philosophy
Prerequisites	900142SSC Law, Society and Justice OR Classical and Modern Political Thought (900181SSC)

This course invites students to explore the use of law in society (legal ordering) philosophically. Whereas the first part focuses on mainstream legal and social philosophy, the second will be devoted to a number of more adventurous thinkers, primarily in the sphere of the Critical Legal Studies movement. A significant part of the course is devoted to the paper writing process, with a strong focus on individual guidance and feedback. As such this course also aims to prepare students for the capstone writing process. In fact, students may opt to use their papers as basis for writing a capstone in the sphere of legal and social philosophy. This course is offered in semester 1.

900374SSC/HUM: Race Class Gender Intersectionality

Discipline	SSC, HUM
Theme	Social Systems
Track	Culture, Anthropology, Sociology
Prerequisites	Any 200 level course in the Anthropology and Sociology tracks.

The way in which ‘race’ was constructed during Transatlantic Slavery also affected 19th century Irish factory laborers in the United States, who were considered to be non-white in the American public imagination. The interaction between the Egyptian women’s movement of the late 19th century with European and American suffragettes as well as with male decolonial activists is an example of the forgotten Global History that helped shape current attitudes on decolonialism and gender. This course traces the history and intersections of gender, race, class from a Global History perspective. The interplay between ‘East’ and ‘West’ is under plenty of scrutiny in both political discourse and media. In popular imagination, especially in Western societies, there seems to be an increasingly common idea of ‘East’ and ‘West’ being monolithic entities that differ fundamentally from each other. The aim of this course is to link up critically with the paradigm of ‘East’ and ‘West’ or, according to some, ‘East’ vs. ‘West’ . For the ancient Greek historian Herodotus, ‘Europe’ was the domain of ‘uncivilized barbarians’. This begs the question when ‘Europe’ was constructed as a cultural entity and heir of ancient Greek civilization. Understanding present day global currents requires an in-depth knowledge of historical exchanges that have shaped them. Why were gender, race and class constructed throughout the interplay between ‘East’ and ‘West’? How does the Global History between ‘East’ and ‘West’ shape our current attitudes on gender, race and class?

900383SSC/HUM: Digital Anthropology

Discipline	SSC, HUM
Theme	ICC, Social Systems
Track	Culture, Anthropology
Prerequisites	900181SSC Classical and Modern Anthropological Thought.

This course introduces students to the burgeoning field of digital anthropology. It familiarizes them with how anthropologists (and other scholars in the social sciences and humanities) study the relationship between people and digital technology. It focuses especially on Web 2.0 technologies, questioning what “the internet” is and how should westudy it? The course aims to equip students to independently study social phenomena in contemporary, digitally-mediated life. To this end, the theoretical module of the course introduces students to the work of scholars from Media Anthropology, Communication Science, and Science and Technology Studies. How do these fields theorize the society-technology relationship? Through readings and discussion, the key concepts of mediation, mediatization, media affordances, media environments, and polymedia are explored to provide students analytical tools for thinking about digital media. The methodological module covers important debates and innovations specific to doing social research on digital media. What are the new possibilities and implications regarding data collection and analysis? What do the principles of ethnographic investigation have to offer the study of Web applications? Following the theory and methods modules, the course dedicates thematic modules to a number of focus areas of digital anthropological research. These include international migration and diaspora web connections, social movements and digital communications, gender and racial inclusion/exclusion on the web, and the digital youth culture around the world. In the third module of the course, the course focuses on how particular digital tools and applications, such as mobile phone technologies, digital games, selfies, and online memes, shape our everyday lives and socialities around the world. Throughout the course, questions are raised around configurations and relations of power. In a societal context where digital technologies are increasingly a part of everyday life, do digital media have power over people, or are people actively in charge of digital media? And what role do institutions and collective movements play in this relationship? The course builds on students’ prior knowledge of anthropological understandings of culture. Students’ prior knowledge about ethnographic methods will also be applied to the area of digital media.

900391SSC/HUM/SCI: Theme course: Games and Learning

Discipline	SSC, SCI, HUM
Theme	ICC
Track	Theme
Prerequisites	Any 100-level theme course (Limited to third year students.)

This course is about the scientific study of games and learning. Different perspectives on the nature of learning, from behaviorist tot situated, will be studied. The function of games and play in learning will be discussed from an evolutionary perspective, a neurocognitive perspective as well as other perspectives, such as motivation theory, and social learning theory. The different topics will be organized in seminars which will be student-led. The topics listed here are therefore not fixed. These may change according to students‘ preferences. Next to studying relevant scientific literature and assignments based on this literature the course will address the design of games for learning. How can games contribute to solving big societal issues in health (behavior) and safety (public space). The students will work on a case provided by an external party or devised by the students themselves in small multidisciplinary groups, and write an individual essay addressing a theoretical topic related to the case they are working on. If possible the individual essay can be related to the capstone topic, in terms of theme, approach, technique or methodology. Students are explicitly invited to consider the potential relation between the essay assignment and their capstone work.

900111SCI: Theme course: Introduction to LEU

Discipline	SCI
Theme	Life, Evolution, Universe
Track	Theme
Prerequisites	None

This course covers all of the Natural Sciences and it revolves around a central science concept that runs through all the natural sciences: evolution. This concept can be approached from various disciplines emphasizing their interconnections. The student will gain knowledge about the evolution of the universe, the evolution of life and the evolution of complex biological systems and networks as well as the quantitative and mathematical modelling of complex systems. Four subjects have been selected for this course: The Big Bang – setting the stage for the emergence of life - The first light, the first 300.000 years. Inflation, nucleosynthesis, decoupling and the cosmic microwave background radiation. - Formation of structure; different energy-matter components and the evolution of the universe. Large scale structure: galaxies and clusters of galaxies. The first stars, formation of heave elements, planets and the solar system. The Cambrian Explosion - the crucible of creation - The first tantalizingly elusive traces of life - Emergence of prokaryotic/eukaryotic cells (and sex), emergence of multicellular life. - The Cambrian explosion; (hard) body part formation, - Evolution of flight, appearance of primates, early humans What is life? – a systems biological approach ■ The living cell, the smallest unit of life, but extreme complex ■ How do we study/understand complex and dynamic networks of molecules which interact in time and space? ■ Generic properties of biological networks ■ Quantitative and predicting mathematical models for biological systems. ■ the evolution of networks

900112SCI/SSC: Theme course: Introduction to HW

Discipline	SSC, SCI
Theme	Health and Well-being
Track	Theme
Prerequisites	None

Health and Well-being, both on an individual and societal level, is an important matter for our global society and human mankind in general. The introductory course focuses on a number of issues that are relevant to ongoing research in the disciplines of Biomedical Sciences and Health Sciences. The course provides the student with a powerful introduction to the major disciplines that shape today's thinking on health related issues. The emphasis lies on Medical Sciences that mould the Health and Well- being arena. The theme course offers a preview of biomedically oriented courses such as Metabolic Biochemistry, Medicinal Chemistry, The Human Body II, Hormones and Homeostasis, Immunology, Epidemiology, Nutrition and Health, Infectious Diseases, Cardiovascular Diseases, and Mechanisms of Disease. The student is able to understand on an introductory and elementary level the following medical sciences • general physiological concepts of regulation • biochemistry and cell biology • energy metabolism • pharmacology • pathology • immunology • genetics • epidemiology • hematology • the alimentary system • the internal environment, including topics of the cardiovascular system, the respiratory system, the renal system, and the endocrine system • diet and nutrition Furthermore, the student demonstrates competence in (oral) data presentation, analysis and interpretation, numeric, (medical) information retrieval and written communication

900113SCI/SSC: Theme course: Introduction to ECS

Discipline	SSC, SCI
Theme	ECS
Track	Theme
Prerequisites	High school Calculus. We recommend following Calculus or Calculus for Economics simultaneously.

This course elaborates the concept of sustainability. The carbon cycle and the Earth's energy balance are explained to understand our (changing) climate, and what measures are needed to limit global warming to a level that is considered acceptable. As 82% of the Dutch greenhouse gas emissions (218 Mt CO_2 equivalents) are caused by fossil fuel use, we focus on energy in this course. We discuss our energy demand, the difference between work, energy and power, frequently used energy units, and explain basic thermodynamics to understand why energy conversions are inherently inefficient. We treat the following energy sources in detail: fossil fuels, nuclear energy, biomass, solar and wind energy. Following MacKay we go for numbers, not (only) adjectives. Hence, physical concepts and equations are introduced to describe energy conversions and to calculate their potential for a significant contribution to our energy demand. We discuss reserves, environmental impacts, strategic concerns, costs and benefits. In addition we take a close look at transport and heating (18 and 13% of the total greenhouse gas emissions in the Netherlands, respectively). During this course, students will also do laboratory experiments (on Stirling engines and wind turbines) and a computer simulation.

900121SCI: Introduction to Geological Sciences

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Earth & Environ.
Prerequisites	None

Why do continental plates cruise around the globe, what causes ice ages or global warming, what was the impact of the origin of life on the planet, and what is sustainable management of natural resources, including energy and water? In order to answer these questions a basic understanding of Earth Sciences is essential. Students will understand the dimension of deep time in geologic processes ranging between seconds (earthquakes) and hundreds of million years (plate tectonics), including the basic principles of absolute and relative age determination. Students will be able to identify different rock types and minerals and be able to relate these to the dynamic processes in the Earth System. This course will introduce the foundations of Earth Sciences i.e. the dimension of time in geological processes, the functioning of the major dynamic systems in the Earth as well as the role of Earth sciences in society and its relations to other disciplines. Climate change, natural hazards and natural resources, including energy and water, are key issues in modern society. In this course, students will learn the basics of the Earth's dynamic systems, the climate system, the plate tectonic system and the geodynamo system. In this course we explore the Earth as a dynamic system. The course consists of a series of lectures accompanied by a practical workshop. The lectures will focus on: plate tectonics; minerals, resources and rocks; volcanism and sedimentation; deformation and metamorphism; time in the geological record; the history of the Earth and the origin of life; the climate system and the hydrologic cycle; surface processes and deep processes; and the interaction between the dynamic Earth System and society. The practical rock determination workshop will focus on identifying minerals and rocks and exploring the geological record stored in them.

900132SCI: Introduction to Physics – The Mechanical Universe

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Physics
Prerequisites	High school Physics

In this course, students are introduced to the main concepts and the mathematical formalism of classical mechanics as well as a number of their key applications. Introduction to Physics provides a first encounter with central physical concepts such as space, time, conservation of energy, reference frames, gravity, and determinism. Particular emphasis is placed on the connection between deterministic quantities and random macroscopic phenomena. The course develops the principles of classical mechanics. Newton's laws will be discussed and their applications will cover phenomena such as resonance, earthquakes, and hurricanes. Kepler's laws of planetary motion and the phenomenon of Foucault pendulum precession will be derived. A number of other examples discussed include fluid dynamics, music, and sports. The course will include a self-contained review of the required mathematical background: vector calculus, integrals, and differential equations. The course also includes a laboratory exercise on compressed air and water rocketry. Students will predict the flight path of a simple self-built rocket and compare their predictions to measurements taken by an onboard accelerometer.

900134SCI: Electricity and Magnetism

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Physics
Prerequisites	900125ACC Calculus

This course is an introduction to the basics of electricity and magnetism. In the first part of this course, we study the properties of the electric charge and field and see how this fundamental property of matter can be harnessed to build simple DC electrical circuits that are essential in so many technological applications. In the second part, we study the magnetic field without almost any consideration to the electric field. In the third part, we see how the electric and magnetic fields are intimately related to each other by the electromagnetic induction. Finally, in the fourth part, we revisit electrical circuits under alternative current. After this course, the student will be prepared to study electromagnetism, the subject that describes the nature of light and is at the heart of a tremendously important number of different technologies, like wireless and optical communications systems.

900141SCI: Introduction to Chemistry

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Chemistry
Prerequisites	A solid high school chemistry course and concurrent or prior enrolment in AUC's Calculus course 900125ACC

The main objective of this course is to provide students with understanding of the basic concepts of chemistry in such a way that they can apply these concepts to solve typical chemical problems in various fields of modern science. This course will focus on the first principles and concepts in the chemical sciences, especially in inorganic and organic chemistry. Emphasis will be on a number of essential topics in modern chemistry. In the first part of the course the focus will be on the general principles in the chemical sciences. Special attention will be paid to the structure of atoms and their place in the periodic table and the properties of various types of chemical bonds. Other important topics are the characteristics of gases/liquids/solids, reaction kinetics and acid–based equilibria. The second part of the course will focus on organic and inorganic materials. Typical topics in this part of the course are nomenclature, isomerism, stereochemistry, electrochemistry and chemical bonding theory. Furthermore, an introduction to the reactivity of organic and inorganic compounds will be presented.

900151ACC/SCI: Big Questions in Science

Discipline	SCI, ACC
Theme	Life, Evolution, Universe
Track	Big Questions
Prerequisites	None.

This course provides students with a basic understanding of the state of the art of natural science: of its contents, main theories, and methods. This is an important asset in societies in which science is ever more present. Furthermore, in order to better understand the role of science in culture and in society, we also study science as a human activity, rather than a body of knowledge: its history, methods, and ways of thinking. Informed writing about science is also practiced in the assessments. The course is aimed at non-science majors, and no prior knowledge of natural science is assumed. The course is made up of three broad sections: physical sciences, earth sciences, and life sciences. (1) The first section deals with what is known about the particles of matter that make up everything around us, including our own bodies. It also deals with the concepts of space and time, which form the fabric of our universe. (2) The second section revolves around the System Earth: and how, from a geological perspective, earth is a system in which everything is interconnected. We also deal with how humans affect this system. (3) The third section revolves around life: what it is, what it is made of, its fuel; as well as a number of connected questions around health and cardiovascular diseases, offspring, and the evolution of life on earth. This course is offered in semester 1 and in semester 2.

900151SCI: Ecology – From Soil to Society

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Earth & Environ., Biology
Prerequisites	None

Life can be studied at different levels of organization. The overarching levels ecology and ecosystem biology deal with relationships between individual organisms and the relationships between populations of individuals. In this course, we will first briefly focus on the key players in ecosystems: bacteria, plants, animals and fungi. We will further address their reciprocal interactions and how these contribute to the regulation of population size and the flow of energy and nutrients within ecosystems. In addition, we will address biodiversity: what factors determine biodiversity and how biodiversity affects ecosystem functioning. The interaction of ecosystem biology with humans will be covered in various ways. We will use invasive species as a tool to study ecological processes. These species often disrupt local ecosystems, providing natural experiments to study ecological processes. At the same time, they may impact strongly on the economy if they completely overtake the local ecosystem. Invasive species thus provides a strong linkage to ecological theory and society. Another link with society is the in the biological control of pests, which builds on predator-prey or parasite-host relationships. Finally, we will look how Global Climate Change may affect biodiversity and ecosystem functioning Ecological theory is often underpinned by or even formulated in terms of mathematical models. During the course we will pay attention to this approach and we will practice some simulations of biological systems. Ecology and biodiversity rely heavily on knowledge of the organisms involved. We will therefore pay due attention to learning to recognize some plants and animals (mostly insects). Topics: - Population ecology - Communities and Ecosystems - Biodiversity & Biogeography - Human Impacts

900152SCI: Introduction to Biology

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biology
Prerequisites	None

Biology is the Science of Life. Various themes may connect its diverse sub disciplines like inheritance, evolution, behaviour etc. A strongly unifying theme is the fact that all life is related by descent. This far reaching concept will serve as an umbrella for the following topics: 1. Theuniversalityoflife.Alllivingorganismssharesimilardesignprinciples. For instance, all organisms consists of cells, have DNA as the carrier if genetic information, use ATP as a currency of energy etc. 2. The diversity of life. Despite all commonalities, there is a huge variation in morphology, physiology, life cycles etc. 3. The feasibility of life.Despitethefactthatorganismsliveinawildly fluctuating external environment, they are able to maintain a rather constant internal environment. Many aspects of these topics are well understood in molecular details, and we will thoroughly cover this ground. Some core questions in biology are: • What are the commonalities that all life shares? • How did current diversity evolve in time? • How can a single cell turn into a billion celled organism? • How can life cope with the fluctuations of its environment? • If competition is all pervasive, how can cooperation exist? Although many of such questions are formulated in terms of organisms or a higher level of integration, all these questions have answers that extend down to the molecular level. So a satisfactory answer will always refer to that level too.

900152SCI: Developmental Biology

Discipline	SCI
Theme	Life, Evolution, Universe
Track	Biology
Prerequisites	900152SCI Introduction to Biology

Students will study the field of biology that seeks to explain evolutionary events through the mechanisms of developmental biology and genetics. Students will attempt to determine ancestral relationships between organisms and how developmental processes have evolved. Topics will include the early body plan, cell type determination, organogenesis, morphogenesis, stem cells, cloning and other issues in human development.

900156ACC/SCI/SSC: Big Data

Discipline	SSC, SCI, ACC
Theme	n/a
Track	Big Questions
Prerequisites	None

The defining characteristic of the 21st century might very well be the omnipresence of digital data. The continuous, voluminous and heterogeneous stream of data generated by sensors and people is rapidly transforming how we experience, how we analyse and how we interact with the people and things around us. Citizens, enterprises, governments and scientists are confronted with the potential blessings as well as challenges that “Big Data” provides for understanding the world around us. “Big Data” is a term that is difficult to define, hence the Big Question structure of the course provides a suitable way of approaching this topic that crosses disciplines. This course sets out to let students discover for themselves what “Big Data” entails and encourages them to reflect on that experience. Central to the course are therefore a series of real-life case studies related to key cultural, social and environmental issues in current day society. The case studies will lead the students to experience, first-hand, different techniques for data collection and storage, data visualisation and analytics, and hypothesis definition and communication. These steps are grounded in “data-driven knowledge discovery”, also referred to as “Abductive reasoning”, which starts with data describing a phenomena and continues with defining a hypothesis that explains the data. Is “Big Data” an exciting new way to discover new things about ourselves and the world around us, or does it hamper our privacy and lead us to follow invisible patterns that in the end proof to be terribly wrong? We frame the course as Applied data science, with a focus on tackling societal and scientific problems, from a geographic perspective. Students gain a theoretical and practical understanding of the impact of data in society. They take part in practical use cases and present their group work online.

900161SCI: The Human Body I – Anatomy and Physiology

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed.
Prerequisites	None

The aim of this course is to provide a foundation for more advanced study of anatomy and physiology by introducing the constituent tissue types of the human body and fundamental concepts and terminology. From this starting point, the first part of the course will focus on the organ systems that are involved in movement and in the integration of bodily functions. Consequently the anatomy and physiology of the musculo-skeletal system, the nervous system (including special senses) and the endocrine system will be reviewed. The role of the nervous and endocrine systems in integration will be discussed with reference to the principles of ergonomics and homeostasis. The second part focuses on the pulmonary, cardiovascular, immune and urinary systems. We shall discuss how pulmonary ventilation is achieved and regulated and how oxygen and other substances are moved around the body and maintained at a balanced level. We will discuss the delivery of oxygen and substrates to the tissues for energy production, the removal of wastes and the maintenance of a stable internal environment in changing situations (for example during exercise). This module looks at the vital support systems that provide for these needs; the cardiovascular, pulmonary and urinary systems, as well as the defence mechanisms that protect the body. Since function is based upon structure we shall also review the anatomy of the organs that comprise these systems and explore how their functions are regulated. Finally, we will examine how the normal functions of these systems are changed by both exercise and disease. Other relevant topics are: Concepts of risk in medical practice Labour forces in health care system An investigation of equality and inequality in the Dutch health care system. Students will need to be able to: define and use correctly a range of anatomical terms; describe the histological structure and relate it to the function of the fundamental human tissue types, with particular reference to the skin; describe the development, role, structure and function of osseous tissue and the skeletal system; describe the development, role, structure and function of skeletal muscle fibres and the organisation and function of the muscular system; describe the development, role, structure and function of the nervous system and explain neural transmission and the action of drugs on the nervous system; describe the development, role, structure and function of the endocrine system and explain neural transmission and the action of drugs on the nervous system; explain the principles of homeostasis and describe the roles of the neural and endocrine systems in its maintenance; describe the physiological systems involved in transport of oxygen around the body and the removal of waste products; describe the composition and function of blood and overview the structure and regulation of the cardio-vascular system including the heart, the vascular system; describe the immune response and the involvement of the lymphatic system; describe the structure of the respiratory system, the transport of gases and the regulation of blood gas concentrations; describe how the urinary system works; explain the regulation of fluids and electrolytes; demonstrate competence in data presentation, analysis and interpretation, numeracy, information retrieval and written communication.

900171SCI/SSC: Introduction to Public Health

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Health
Prerequisites	None

This is an introductory course intended to introduce undergraduate students in a variety of disciplines to the basic tenets of public health. The course will provide a history of public health, an introduction to the core disciplines: epidemiology, biostatistics, environmental health, social and behavioural health, health economics and health policy and management, and current events and issues in the field. Upon completion of this course, the student will: • Define public health and the impact it has had on history • Describe the evolution of public health, including its future development • Describe how public health is measured and compared across regions or populations • Describe how health interventions are created, implemented and evaluated • Describe the structure of the public health system in the various countries (continents) including how policy is implemented and how it impacts public health practice • List the basic study designs used in public health and provide examples of how they may be used, analysed and interpreted • Describe the impact of chronic and infectious diseases on the health of populations • Describe the variance in health status based on social and demographic factors and explain populations with special needs from a life cycle perspective • Explain how public health impacts other fields and how it may be integrated • Discuss the relationship between public health and the medical care system • Describe the role of public health in a global society

900181SCI/SSC: Introduction to Environmental Sciences

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Earth & Environ.
Prerequisites	None

This course serves as an introduction to and covers broad aspects of environmental science and environmental studies. The aim of this course is to provide students with the fundamental ideas and concepts in the field of environmental sciences and with the analytical tools needed for a considered reflection on the nature of environmental problems and its possible solutions. Environmental science, as a discipline, combines aspects of the physical and biological sciences with issues from the social and political sciences. In this course, we will explore the concept of sustainability and how it relates to us, the scientific principles and concepts governing ecosystems and their processes, human population and resource use, how to sustain the biodiversity of the earth, and how we use our energy resources. This course should prepare students to continue to develop their environmental knowledge through further coursework. Important features of the course include systems thinking and critical reflection.

900191SCI: Programming Your World

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Information
Prerequisites	None

This course introduces students to modern programming techniques and provides them with basic programming skills. Students will learn the basics of programming languages: syntax, semantics, program correctness and the interplay between programs and data structures, with illustrations in concrete (families of) programming styles: imperative, functional, object-oriented. The course explores aspects of modern programming through lectures and hands-on lab activities. Topics: Syntax Semantics Program correctness Interplay between programs Data structures Illustrations in concrete programming styles Imperative programming Functional programming Object-oriented programming

900191SSC/SCI/HUM: Theme course: Introduction to ICC

Discipline	SSC, SCI, HUM
Theme	ICC
Track	Theme
Prerequisites	None.

Humans sense, act, think, feel, communicate, learn and evolve. We see these capabilities increasingly also in machines. This course aims to develop a first understanding of how humans and machines make sense of the natural environment from all the physical signals pouring into them. Information from the world around us will be related to the structure of our brain and basic cognitive tasks such as language, sensory perception, intelligent interaction, and action. In parallel, the course will introduce how machines can encode information, store it, reason with it and retrieve it later to guide behaviour. The course is particularly relevant for students interested in crossing the divide between (physical, life, social) sciences to cooperatively i) step up progress in cognitive information processing in both man and machine, and ii) develop new applications and technologies serving society. Topics covered include, information structure, pattern recognition and machine learning, man-machine interaction, collective intelligence, mediated communication, expression and emotion, memory, brain structure, neuronal processing, visual consciousness, social cognition.

900222SSC/SCI: Risk Management and Natural Hazards

Discipline	SSC, SCI
Theme	ECS, Social Systems
Track	Earth & Environ., Economics
Prerequisites	900122SSC Environmental Economics OR 900181SCI/SSC Introduction to Environmental Science OR 900113SCI/SSC Theme Course: Energy, Climate and Sustainability

“Devastating earth quake hits Haiti.” “Hurricane Katrina causes the costliest disaster in the history of the United States.” “Japan fears a nuclear disaster after reactor breach.” Headlines that capture some of the major disasters that have struck our world in the past 5 years. Do you want to fight back? Are you prepared to take tough decisions about life and death under extreme time pressure? This course provides you with the skill set, knowledge and expertise to deal with these challenges. You will become a multidisciplinary team of risk fighters - devising plans, policies and practices to manage real-life disasters, at all stages of its life-cycle. At the core of your strategies is effective sharing of spatial information. Following introductory sessions that include team building, lectures on the natural and social processes involved in disaster management and practicals that familiarise you with data collection and spatial methodologies, we will work systematically through each stage of the disaster life-cycle: Risk Reduction, Relief and Recovery, and Short- and Long-term Reconstruction.

900223ACC/SCI: Computational Thinking

Discipline	SCI, ACC
Theme	n/a
Track	Maths
Prerequisites	TBA

Computational thinking is a digital age skill which is important for everyone, and not only computer scientists. We all need to understand how, when and where computers and other digital tools can help us solve problems. We also need to know how to communicate with others who can assist us with computer-supported solutions. It is a way of solving problems, designing systems and understanding human behavior by drawing on concepts fundamental to computer science. This includes: Formulating problems in such a way that computers and other tools can be used to help solve them Logically organizing and analyzing data Representing data through abstractions, such as models and simulations Automating solutions through algorithmic thinking(a series of ordered steps) Identifying, analyzing and implementing possible solutions with the goal of achieving the most efficient and effective combination of steps and resources Generalizing and transferring this problem-solving process to a wide variety of problems. Computational thinking is widely applicable across the Humanities, Social Sciences and Sciences. Some examples of applications are: Data Collection – studying population data in the social sciences, doing linguistic analysis in the humanities. Data Analysis – analyzing data from a scientific experiment, identifying patterns for different sentence types in linguistics. Abstraction – summarizing facts and deducing conclusions in the social sciences, using similes and metaphors in writing in the humanities. Algorithms and procedures – doing an experimental procedure in the sciences, writing instructions. Automation – using excel, using a spell checker. Simulation – simulating the movement of the solar system, playing (computer) games, doing a re-enactment from a story. This course will enhance critical thinking and analytical skills for students from all majors. It is offered in semester 2.

900225SCI: Vector Calculus

Discipline	SCI
Theme	ECS, Life, Evolution, Universe
Track	Maths
Prerequisites	900125ACC Calculus AND 900127ACC Linear Algebra

Tools for the description and analysis of multi-dimensional vector spaces are introduced, studied, and trained in exercises and assignments. This will be done in sessions that combine lecturing and problem solving. The material will be applied to the calculus of functions between multi-dimensional spaces, and results in the classical theorems by Green, Gauss and Stokes. Topics include: • Vectors and coordinate geometry in 3-space • Vector functions and curves • Functions of two and more variables, partial derivatives • Gradient and directional derivatives • Optimization • Implicit function theorem • Multiple integration and iterated integration • Polar and spherical coordinates • Line integrals and vector fields • Surfaces and surface integrals • Divergence and rotation • Theorems of Green, Gauss and Stokes • Applications (fluid dynamics, electromagnetism) Students will also practice exercises in-class to develop their skills.

900227SCI: Dynamical Systems

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Maths
Prerequisites	900125ACC Calculus (Linear Algebra Recommended)

Dynamical systems appear as models in applications whenever a nontrivial mechanism is at work. Dynamical systems are an ever-evolving component of mathematics. The different contexts include physics, chemistry, biology, economics and also the social sciences. In this course students will develop an understanding of the intriguing properties of dynamical systems. They will learn how to extract information from the model which is essential for the application of interest. Both discrete time and continuous time dynamical systems will be considered, leading to nonlinear (iterative) maps and (ordinary) differential equations. Famous examples from population dynamics in biology will be studied. Mathematical existence and uniqueness results reflect the deterministic nature of the models. Students will study linear dynamical systems, stationary states and their (in)stability, periodic behavior, chaos, global behavior of scalar maps and differential equations in the plane, as well as bifurcation theory.

900228SCI: Numerical Mathematics

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Maths
Prerequisites	900125ACC Calculus AND 900127ACC Linear Algebra (Vector Calculus Recommended)

Numerical mathematics is used frequently in all areas of science (e.g. fluid dynamics, meteorology and financial risk management). In many applications one encounters mathematical problems that cannot be solved through manipulations of formulas and, in such cases, numerical methods are used. These algorithms, implemented in computer programs, are at the core of scientific computing. In this course, students will learn the mathematical principles behind these numerical techniques and will apply them to non-trivial problems in applications outside of mathematics. The course focuses on the main numerical methods from modern day analysis and scientific computing. The theory is implemented in hands-on practical assignments. The list of subjects includes: error analysis, systems of linear equations, eigenvalue problems, interpolation, least square methods, fast Fourier transform, non-linear equations and ordinary (and partial) differential equations. Applications include Google page rank, data analysis and planetary orbits. A number of matlab assignments will also form an integral part of the course.

900229SCI: Probability and Statistics

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Maths
Prerequisites	900125ACC Calculus AND 900127ACC Linear Algebra, highly recommended

Many phenomena are subject to chance variation: economic time series, sampling of respondents in a survey (and subsequent lack of response), measurement error, survival after a medical treatment, physics of large systems, etc. Probability theory is the mathematical formalism to model such diverse phenomena. This course starts by introducing some key concepts or probability theory: - Random variables and vectors - Probability distributions and densities - Independence and conditional probability - Expectations - Law of large numbers and central limit theorem. Some models concern discrete systems and can be handled by elementary mathematics. However, emphasis will be on continuous phenomena, for which calculus of functions of one or more variables (as introduced in ACC 122) is necessary. Probability models are the basis for statistical analysis. Whereas descriptive statistics is concerned with averages and numerical tables, statistical inference tries to answer scientific questions regarding financial series, earth quakes, the health effects of certain foods, etc. This is done by modelling data as the outcome of a chance experiment. Statistics next aims at inferring the probability model for this experiment from the data. Methods are developed, understood and investigated from this perspective. Drawing up a reliable model for the underlying chance experiment is not always easy, but once available this allows making optimal decisions and quantifying the remaining uncertainty and possibility for generalization. Key concepts discussed in this course are: - Likelihood - Estimation, testing, p-value, confidence regions - Risk and power functions - Bayesian inference. The emphasis is on concepts, but well known concrete methods as the t-test, regression or anova arise as examples. The course is modern in its connection to recently developed methodology. Some examples of data-analysis, using standard software, may be included in the problem class that accompanies the lectures, depending on the background and interests of the students.

900233SCI: Quantum Physics

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Physics
Prerequisites	900127ACC Linear Algebra; 900133SCI Introduction to Physics is highly recommended

This course introduces and discusses the experimental basis, historical basis and the general formalism of quantum physics. The course also focuses on the wave function and its probabilistic interpretation leading to the fundamental Heisenberg uncertainty relations. The Schrödinger equation will be introduced and some important quantum systems will be studied, such as the particle in a box and the harmonic oscillator. In addition, the concept of quantum tunneling will be discussed. Furthermore, the formal framework of a Hilbert space will be introduced. The concepts of angular momentum, spin, fermions and bosons will be discussed. An important case study will be the hydrogen atom. Applications in chemistry will be discussed, such as the periodic table, the structure of molecules, and some of their properties. The conceptual problems that came with quantum theory will be given sufficient attention, in particular the measurement problem. We will also discuss the modern perspective on quantum theory through quantum information and its applications in cryptography. Black holes will be used to discuss the extent to which quantum theory can still today claim to be the final theory.

900234SCI: Statistical Mechanics (Physics of Large Systems)

Discipline	SCI
Theme	ECS, Life, Evolution, Universe
Track	Physics
Prerequisites	900231SCI The Physics of Heat

From the air we breathe to the food we eat, our daily life consists of interactions with environments, which contain 10^24 or more particles. The only feasible way of understanding such enormous systems is with methods of probability and statistics. This course introduces the relevant techniques, which are an essential part of the toolkit of a modern physicist, chemist, and -- increasingly -- biologist. Our first goal will be to derive and understand from a microscopic viewpoint the concepts learned in Physics of Heat, including temperature, entropy, and free energy. In doing so, we shall make use of a powerful and broadly applicable concept of an "ensemble", a collection of all possible microscopic states of the system. The course will close with some more advanced topics in statistical mechanics: renormalization, which relates the physics at different scales and critical exponents, which provide a robust quantitative description of phase transitions. The problem sets and research project will highlight the broad applicability of statistical mechanics, from the physics of living systems to black holes and string theory. The common motif, which explains why the content of this course is useful in such diverse disciplines, is the (almost) universal emergence of simplicity in large, complex systems.

900239SCI: Physics Lab

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Physics
Prerequisites	Any 200-level physics course

Laboratory experimentation in almost all science disciplines is key to model building, scientific progress and advances in various fields of technology. An AUC science student should be equipped with the necessary knowledge to set up an experiment, interpret the data and place the findings within the context of the related sciences discipline(s). In other words, students should explore and develop the characteristics of an experimental research-process by doing experiments. All Science Laboratory Courses are connected to related 100 or 200-level disciplinary courses in order to set the necessary foundation for the experimental approach. A typical AUC Science Laboratory Course consists of the following components: - Students should become familiar with the literature related to the discipline of the experiment, - Formulate a research question/hypothesis, - Design an experimental procedure (taking into consideration safety issues), - Execute the lab experiment, - Document the experiment (that lab report), - Evaluate the experimental data (including statistical analysis and computational processing), - Analyse the results (model building), placing the findings in context of literature, and - Report on the entire process.

900241SCI: Metabolic Biochemistry

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Chemistry, Biomed.
Prerequisites	900141SCI Introduction to Chemistry OR 900152SCI Introduction to Biology OR 900161SCI The Human Body 1

This course examines the generation of metabolic energy in higher organisms with an emphasis on its regulation at the molecular, cellular and organ level. Chemical concepts and mechanisms of enzymatic catalysis will be emphasized, as well as selected topics in carbohydrate, lipid and nitrogen metabolism. Complex lipids and biological membranes, along with hormonal signal transduction, will also be discussed.

900242SCI: Medicinal Chemistry

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Chemistry
Prerequisites	900141SCI Introduction to Chemistry OR 900252SCI Molecular Cell Biology

Medicinal Chemistry is an highly interdisciplinary discipline at the interface of chemistry and biology. In this course a general introduction will be given to the process of drug discovery, drug design and synthesis, drug development and drug safety assessment. Subsequently, potential drug targets, mechanisms of drug actions (including drug-receptor/enzyme interactions and dose-response relations), drug disposition (including pharmaco-/toxicokinetics) and drug toxicity will be discussed. Using various drug classes, relationships between chemical structures and biological activities will be derived and illustrated. Finally, various modern developments and tools will be illustrated by recent applications in the field of medicinal chemistry.

900243ACC/SCI/SSC: Gastronomy: the Arts and Sciences of Cooking

Discipline	SSC, SCI, ACC
Theme	n/a
Track	n/a
Prerequisites	At least one 100-level (non-cross-listed) science course. Only for second and third year students.

Gastronomy: The Arts & Sciences of Cooking epitomizes the liberal arts and sciences philosophy, because it focuses on the applications of sciences (physics, chemistry & biology) in one of the most basic life skills, that of cooking. The course puts cooking into a broader societal and cultural perspective by using insights and theories from the social sciences and humanities. Among the topics covered are physics of heat, (micro)biology of foods, the chemistry of flavours, neuro-gastronomy, food culture and history, and food in arts. This course will not only be theoretical and discursive, but will also contain cooking exercises and lab sessions. It is offered in semester 2.

900243SCI: Environmental Chemistry/Eco-Toxicology

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Earth & Environ., Chemistry
Prerequisites	900141SCI (Introduction to Chemistry) OR 900152SCI (Introduction to Biology) OR 900181SCI (Introduction to Environmental Sciences; only Science majors)

This interdisciplinary course examines the presence of chemical pollution in the environment and its effect on biological processes ranging from the molecular to the population level. The course consists of four main topics. 1. Environmental Chemistry addresses aspects as sources, characteristics, transport and fate of chemicals, including food web transfer and bioaccumulation. 2. Environmental Toxicology studies the kinetics, toxic effects and interactions of chemicals in the environment. 97 3. Monitoring of Pollutants discusses methods and strategies to determine exposure to well-known and emerging chemicals in the environment? 4. Risk Assessment addresses methods to derive safe exposure levels for humans and the environment, and to characterize their risk at environmental levels of exposure. Throughout the course, several classes of compounds will be discussed such as mutagens, pesticides, PCBs and dioxins, flame retardants, perfluorinated compounds and (other) endocrine disruptors.

900245SCI: Organic Chemistry

Discipline	SCI
Theme	Life, Evolution, Universe, Health and Well-being
Track	Chemistry, Biology, Biomed., Health
Prerequisites	Introduction to Chemistry

Basic principles to understand the structure and reactivity of organicmolecules. Substitution and elimination reactions and chemistry of the carbonylgroup, aromatic compounds, methods used to identify the structure of organicmolecules, principles of organic stereochemistry, organic reaction mechanisms,and methods used for the synthesis of organic compounds.

900248SCI: Analytical Chemistry Lab

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Earth & Environ., Chemistry
Prerequisites	900243SCI Environmental Chemistry/Eco-Toxicology

This course will provide students with hands-on experience in analytical chemistry. Techniques that will be applied include liquid and gas chromatography, mass spectrometry and spectroscopic techniques. Also bio-assays are introduced for analyzing (eco-)toxic compounds.

900252SCI: Molecular Cell Biology

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biology, Biomed.
Prerequisites	900152SCI Introduction to Biology OR 900161SCI The Human Body I

This course focuses on the functioning of cells in relation to each other and in relation to the extracellular environment as part of a multi-cellular organism. The course introduces and discusses the different parts of cells and how these different constituents function in relation to other cells in the direct vicinity, and to cells at a distance. The following topics will be discussed and presented: Cell-cell interactions Signal transduction Cell communication Cell-extra-cellular matrix interactions Cell migration Cell death Stem cells Different cell types in different tissues After this course the student should be able to understand the functioning of a cell on its own and in relation to its environment. The student should be able to describe the fundamental processes that take place inside the cell that are related to e.g. protein synthesis, gene expression, cell division, membrane metabolism, energy generation and cell movement.

900254SCI: Evolution and Origin of Human Diseases

Discipline	SCI
Theme	Life, Evolution, Universe, Health and Well-being
Track	Biology, Biomed., Health
Prerequisites	Introduction to Biology OR The Human Body I OR Ecology from Soil to Society: BRMS I OR Applied Statistics for Sciences is highly recommended

“Nothing in biology makes sense except in the light of evolution.” This quote from the evolutionary biologist Dobzhansky illustrates the central position of evolution in the biological sciences. This also applies to the medical sciences, which are fundamentally based in biology. Hence, an evolutionary approach to diseases is likely to teach us something valuable about the diseases –about their origin, their evolutionary consequences or about approaches to fight the disease. Obviously, a solid understanding of evolutionary biology is needed before we can start to investigate the evolutionary dimensions of diseases. This course will build the necessary basis. Topics will range from purely biological to human evolution to directly medically (HIV, Cystic Fibrosis). We will pay due attention to the quantitative aspects of evolution (simulations in Excel, statistical analysis). We will apply the biological knowledge to several case studies (Cancer, Malaria, genetic causation of diseases, mismatch diseases) to see how the evolutionary approach deepens and broadens our understanding of the example diseases.

900255SCI: Genes, Bioinformatics and Disease

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biology, Biomed.
Prerequisites	900152SCI Introduction to Biology

Students will study concepts and techniques related to traditional and modern genetics. The course provides students with a comprehensive overview of conjugation and recombination, gene regulation, forward and reverses genetics, gene linkage, mutagenesis screens, population genetics, genomics and functional genomics. The course also explores the applications of bioinformatics in modern life sciences.

900261SCI: The Human Body II

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed.
Prerequisites	900161SCI The Human Body I

The course Human Body II focuses on the structure and function of a multi- cellular system, the human body. Each human body is built up of ten thousand times more cells than the number of the entire human world population. These cells are organized in tissues that form the organs. This extremely complex system can only exist by rigorous organization and regulation which starts at the moment that an oocyte (egg cell) is fertilized by a sperm cell and continues until the body dies. Key elements of the organization and regulation involve the differentiation of cells. All cells in a human body contain the same genetic make- up (genome) but by differential use of the genome (transcription) cells are capable of exerting the correct function at the correct location (for example, stem cells differentiate into oocytes in the ovaries, into sperm cells in the testes and into cells that take up nutrients in the small intestines and in those places only). Differentiation of cells is the end point of a rigorous communication system of the body, including nerve cells, hormones, cell-cell communications, messenger molecules at long range (cytokines) and short range (nitric oxide and other gases) and many others. This miracle of biocomplexity of the human body is the topic of this course. Two organ systems are used as examples of differentiation and function related to structure: the sex organs and the gastro-intestinal tract. Focus is on the development of differentiation early during embryogenesis (from the fertilized oocyte onwards) and on the functioning of the organs in a mature body.

900262SCI: Hormones and Homeostasis

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed.
Prerequisites	900161SCI The Human Body I

Almost all diseases are failures of homeostasis. Students will study the principles of homeostasis and complex regulatory mechanisms (for instance: intestinal homeostasis, bone homeostasis, iron homeostasis, blood pressure regulation, homeostasis of body temperature). The main focus of the course is hormonal regulations in relation to homeostasis (for instance: energy, growth, reproduction, stress, blood glucose) in humans. Topics include types of hormones, the structure and function of hormone receptors, negative and positive feedback mechanisms, counter regulatory hormones, functional anatomy and histology of the endocrine system. The course centres on recent medical aspects (function/dysfunction) of the human endocrine and metabolic processes. Students will become familiar with endocrine diseases, diabetes and will understand (pharmacological) management of these diseases and the complications involved. During the course students will use recent scientific literature to prepare for individual or small group oral presentations.

900263SCI: Immunology

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed.
Prerequisites	900161SCI The Human Body 1 OR 900152SCI Introduction to Biology

Micro-organisms play an ambiguous role in our life. Whereas we tolerate billions of commensal bacteria in the gastrointestinal track, at the same time we have to build up highly sophisticated immune responses against a variety of life- threatening bugs (e.g. viruses, bacteria, fungi, parasites) that invade our body on the daily basis. On top of that, such bugs have evolved to evade our tailor-made immune system with an impressive number of tools. As a result, certain bugs may chronically infect our body and continuously form a potential danger, in particular in conditions of poor health. In addition, a calculated risk is that immune responses are associated with collateral damage that may even result in our death. Finally, the immune machinery may turn against us resulting in autoimmune and allergic diseases, of which the prevalence seems to increase in certain countries. Relevant questions in the field are 1) how our immune system manages to address the enormous variety of bugs, 2) how responses to harmless commensals, as well as autoimmunity and allergy are prevented and why the prevalence of these diseases increases, and 4) how immune-mediated diseases are characterized and how they can be treated. In this course we will analyse the battle against bugs by discussing the initiation of innate and adaptive immune responses. In this course we will learn about: 1. The receptors and cells that are used to recognize different classes or strains of microorganisms and the diversity of precise and less precise weapons immune cells have available. 2. The internal control mechanisms that diminish collateral damage and prevent autoimmunity and allergy, as well as the role of the environment herein. 3. The immune-mediated diseases and their treatment (chronic infection, autoimmunity, allergy).

900264SCI/SSC: Brain and Cognition

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed., Cognition
Prerequisites	900152SCI Introduction to Biology OR 900161SCI The Human Body 1

Brain and Cognition is a 200-level SCI course cross listed with SSC. The course counts as a 300-level SCI course for SSC students. In this course students will become familiar with basic key concepts in (cognitive) neuroscience. The goal of this course is to deepen understanding of the neurobiology of the mind and the aetiology of mental disorders. Students will be encouraged to critically analyse the impact of neurobiology and (psychiatric) brain disorders on society. To most of us, the mind constitutes as the very essence of our identity. However, where to draw the line between normal and abnormal, well and ill, an eccentric personality and a schizotypic one, an active, creative fast-thinking personality and ADHD? This course will explore the neurobiology of the mind. First, students will be provided with a concise overview of the structure and function of the human brain and will be introduced to the basics of neural communication (electrical signalling and synaptic transmission). Next, the focus will be on key concepts in cognitive neuroscience such as perception, memory, attention, emotion and consciousness. A selection of relevant topics will be covered in depth (partly by students' presentations); possibilities include: altered states of consciousness, neurobiology of attraction and partner selection, creativity and mental illness, the gendered brain, the moral brain, free will, empathy and mirror neurons, intelligence, neurobiology of belief, superstition and religion, brain-machine interfaces, cognitive enhancers, mind control (this list is by no means exhaustive). An important focus of this course is the aetiology of mental disorders, such as ADHD, depression, addiction, autism and schizophrenia, with special attention for the nature-nurture discussion. Students will be challenged to critically reflect on the boundaries between normality and abnormality and the implications for society.

900265SCI: Pharmacology

Discipline	SCI
Theme	Health and Well-being
Track	Chemistry, Biomed.
Prerequisites	Medicinal Chemistry OR Human Body I OR Metabolic Biochemistry OR Molecular Biology of the Cell

The functioning of the (diseased) human body can be affected by medicines, which act through a variety of molecular mechanisms. This course illustrates the physiological and pharmacological principles which are used for rational drug development and use. Identification of potential drug targets and the interaction of drugs with macromolecules as the main pharmacological principles are central in this course. Quantitative pharmacological, pharmacokinetic and statistical methods are used. At the end of the course students will be able to explain the effectiveness of existing drug therapies in a rational way in terms of the molecular targets, the cellular actions and the physiological consequences of pharmacological treatment. They will be able to apply pharmacological models when describing concentration-response, time-concentration, and time-response relationships of drugs.

900267SCI: Molecular Techniques and Immunology Lab

Discipline	SCI
Theme	Health and Well-being
Track	Biomed.
Prerequisites	900263SCI Immunology AND 900252SCI Molecular Cell Biology OR 900241SCI Metabolic Biochemistry

Lab course biomolecular and immunological techniques. Introduction to a number of techniques in molecular biology and biochemistry and associated bio-informatics tools. Techniques include: BLAST, cloning, PCR, gel electrophoresis, DNA digestion, ligation, transformation, sequencing, protein structure analysis, protein purification, mass spectrometry, immunoassays, working with antibodies. Note: Please be aware that for the course Biomed Lab you will be working with blood products. For the experiments it is important that this blood is as fresh as possible. These are blood products from blood donors in The Netherlands which of course have been screened in the past for infectious diseases, but at the moment of experiments this blood is untested. To rule out any risk it is important that you are inoculated for Hepatitis B. For maximum protection, the scheme for Hepatitis B vaccinations consists of a course of three injections: first one injection, than a month later a second injection, the third is 6 months after the first, followed by a blood test in the 7th month. Therefore, if you are not yet vaccinated, please do so as soon as possible. In almost all cases protection is there one month after the first injection, so if the blood test has not been done at the start of the course, this should not be a problem. If you do not have this vaccination, please contact your general practitioner, who will most likely be able to provide you with this inoculation or refer you to the appropriate authorities.

900269SCI: Cell Biology and Physiology Lab

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed.
Prerequisites	900161SCI The Human Body or 900252SCI Molecular Cell Biology

Laboratory experimentation in almost all science disciplines is key to model building, scientific progress and advances in various fields of technology. An AUC science student should be equipped with the necessary knowledge to set up an experiment, interpret the data and place the findings within the context of the related sciences discipline(s). In other words, students should explore and develop the characteristics of an experimental research-process by doing experiments. All Science Laboratory Courses are connected to related 100 or 200-level disciplinary courses in order to set the necessary foundation for the experimental approach. A typical AUC Science Laboratory Course consists of the following components: - Students should become familiar with the literature related to the discipline of the experiment, - Formulate a research question/hypothesis, - Design an experimental procedure (taking into consideration safety issues), - Execute the lab experiment, - Document the experiment (that lab report), - Evaluate the experimental data (including statistical analysis and computational processing), - Analyze the results (model building), placing the findings in context of literature, and - Report on the entire process.

900271SCI/SSC: Nutrition and Health

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Health
Prerequisites	900171SCI Introduction to Public Health

Nutrition is the essence of life and plays a central role in the health of individuals and populations. Therefore, nutrition by definition requires an interdisciplinary perspective drawing on fields as diverse as anthropology, biology, chemistry, epidemiology and economics. The course will emphasize an interdisciplinary perspective in understanding nutrition and related (public) health consequences. The nutrition-related biological mechanisms will be used as a basis to discuss how culture, society and economic factors relate to (public) health. Students will also be expected to discuss the impact of changing dietary patterns on public health, including both chronic disease and under-nutrition. The emphasis of the course will be on (guided) student led learning. In the last part of the course, every student will formulate a research question and write a review of a nutrition-related topic using both epidemiological as well as biological information.

900272SCI/SSC: International Public Health

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Health
Prerequisites	900171SCI Introduction to Public Health

This course explores the field of international health within the broader context of health and development. Basic issues related to major diseases and conditions in developing countries, including international health organisations and their influence on approaches to prevention, treatment and control, will be reviewed from a cross-cultural perspective. Topics covered during the course will be; culture, behaviour and health, reproductive health, infectious diseases, nutrition, chronic diseases, mental health, environmental health, health systems, health and economy, and globalization. Many of these health issues will be discussed using a human rights approach and/or the millennium goals. Part of the course will be devoted to creating a country profile regarding health status and evaluating existing health promotion or prevention programs.

900273HUM/SCI: Philosophical Logic

Discipline	SCI, HUM
Theme	n/a
Track	Philosophy
Prerequisites	900161ACC Logic, Information Flow and Argumentation, 100 level course

The aim of the 200-level philosophical logic course is to provide the students with a deeper understanding of what logic is about. The course is a continuation of the introductory course `Logic, Information flow and Argumentation'. As such, it maintains an interdisciplinary character and it draws connections with a variety of fields such as: philosophy of language, cognitive science, psychology of reasoning, mathematics, linguistics and natural language semantics, computer science, artificial intelligence, philosophy and history of logic. We will expand on the logics covered in the introductory course, namely, classical propositional and predicate logic, as well as dynamic epistemic logic. We will also motivate and introduce new systems, prominent in one or more of the fields mentioned above; for example, the students will be familiarised with intuitionistic logic, set theory, many-valued logics, tense logic, non-monotonic logic and game theory. In each case the students will learn to work within the respective logical systems and use their expressive powers, while asking critical questions about these systems and investigating their applications to various fields. We will explore the difference between the model theoretic and the proof theoretic approaches to logic, as well as study some interesting axiomatisations. In a few cases, a number of meta-logical results will be proven, such as the completeness theorem for classical propositional logic. Special attention will be devoted to philosophical questions surrounding the technical results. This course is offered in semester 1.

900273SCI/SSC: Epidemiology

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Health
Prerequisites	900171SCI Introduction to Public Health AND 900121ACC Basic Research Methods and Statistics 1

The objective of the course is to learn and apply epidemiological methods to determine exposure/disease relationships. Students will study risk factors affecting health conditions and will be a provided with a foundation in intervention strategies (preventive medicine). This discipline brings together the biological (medicine) and social sciences. Topics include measures and statistical terminology; observational studies; interventional studies; and public health surveillance. The course will also examine epidemiological study designs and measures of disease risk used in etiological epidemiology and health services research.

900281Sci/Hum: Environmental Archaeology

Discipline	SCI, HUM
Theme	ECS, Cities and Cultures
Track	History, Earth & Environ.
Prerequisites	Introduction to Geology OR Introduction to Environmental Sciences OR Early to Modern History

Environmental Archaeology covers the interaction between humans and their environment in the archaeological and historical past. This broad scope embraces research covering a range of environmental specialisms within archaeology, such as archaeobotany and geoarchaeology, as well as more synthetic and theoretical approaches to the past human environment. Moreover new concepts such as the Anthropocene debate, the Human Niche Construction Theory and domesticated landscapes will be incorporated in the course.

900282SCI: Hydrology and Watershed Management

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Earth & Environ.
Prerequisites	900121SCI Introduction to Geological Sciences OR 900181SCI Introduction to Environmental Sciences

Large lowland fluvial and coastal settings are especially susceptible to global environmental change, but include dense populations of increasing vulnerability. The adaption of appropriate management strategies within these settings requires an understanding of fundamental hydrologic and coastal processes, as well as an appreciation for the challenges in implementing management within a complex social and political framework. The purpose of this course is to examine the physical processes and management of fluvial and coastal environments, with a focus on large river basins and deltas. Topics to be examined over the semester include water resources and hydrology, erosional and sedimentary processes, river and coastal engineering, flooding and storm surges, policy and restoration, international basin management, and global environmental change. The course will include two field trips and laboratory assignments.

900283SCI: System Earth

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Earth & Environ.
Prerequisites	900121SCI Introduction to Geological Sciences OR 900181SCI Introduction to Environmental Sciences OR 900132SCI Introduction to Physics OR 900141SCI Introduction to Chemistry

The focus of this interdisciplinary course is on the Earth as a complex and dynamic system. We will study the characteristics of, and interactions between the major Earth compartments (solid earth, atmosphere, biosphere, and oceans), with a focus on their dynamical behavior. The various biogeochemical cycles (of carbon, nitrogen, sulfur, phosphorus and metals) within and between these spheres will also receive attention. These cycles involve both biological, physical, geological and chemical processes and transformations. Both the natural and the human perturbed cycles will receive attention. There will be ample opportunity for students to focus on their specific areas of interest. Note that some knowledge of basic chemical concepts (elements, molar masses, reaction equations) is assumed.

900289SCI: Field course in Environmental Earth Sciences

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Earth & Environ.
Prerequisites	900121SCI Introduction to Geological Sciences AND one of the following courses: 900283SCI System Earth OR 900282SCI Hydrology and Watershed Management

The lab course is largely field based (2 full weeks in the Ardennes), and includes mapping techniques, field observation, documentation and interpretation of results. Students will learn to make actual, relevant and accurate observations on the dynamic processes in the Earth, so that they will be able to do independent research in the field. We will focus on geological and geomorphological processes. 1. develop standard skills in geological observation techniques, including landforms, geomorphology mapping and processes, geological map, fossil assemblages, paleoenvironments, deformation structures and metamorphism, stratigraphic logging 2. documentation of observations 3. being able to think in geological dimensions of space and time 4. basic research methods in geosciences; i.e. testing hypothesis, research planning, writing of scientific report This lab course addresses the scientific method and observational skills valuable for Earth Science and will prepare for a capstone in the Earth and Environmental Sciences. A continuous period of 16 days will be spend in the field, lodging and working space will be available. Students should be physically fit. A typical day in the field will include 9 hours outdoor activity, 3 hours of data processing, reporting and discussion.

900294SCI: Advanced Programming

Discipline	SCI
Theme	ICC
Track	Information
Prerequisites	900191SCI Programming your World

The Advanced Programming course explains the idea that a program itself can be the subject of study and can serve as input and output of so-called meta-programs. This insight is crucial for the success and versatility of the computing domain itself and for all its application areas; it forms the foundation for compilers, software analysis tools, code generators, domain specific languages and model-driven engineering. Relevant questions are: • How to parse and analyse the source code of a program? • How to represent and compute with the facts that have been extracted from source code? • How to transform source code? • How to synthesize and visualize the results of analysis and transformation? Building on and extending the initial programming skills that have been acquired in the prerequisite course Programming your World, this course follows the Extract- Analyse-SYnthesize (EASY) paradigm for metaprogramming and presents methods for extracting facts from programs and other data (using regular expressions, parsing), for representing these facts (using lists, sets, tuples, and relations), for analysing them (by computing metrics, checking types, and interpretation), and for synthesizing results (using code generation and visualization). The underlying theories of the material presented in this course are formal languages and automata, relationalcalculus, and term rewriting. Concepts from these theories will be introduced when they are needed during the course.

900295SCI: Data Structure and Algorithms

Discipline	SCI
Theme	ICC
Track	Information
Prerequisites	900191SCI Programming Your World

The overall objective of this course is to equip the student with a set of tools, including analytical skills, that will enable him/her to create programmable and efficient solutions for real world problems. As programming involves the manipulation of data, it is important to be able to analyze, design, program (apply the design), and select the appropriate data structures required to solve specific problems. Using real world example, this course acquaints students with design principles and complexities of operations and algorithms when performed on various data structures. Topics included are: data structures such as stacks, queues, trees heaps and operations, algorithm performance, complexity issues, sorting algorithms, searching algorithms. At the end of the course students will be able to: • Define data structures studied. • Describe the category of problems each data structure can be used to solve. • Design a collection class for each of the data structures studied including lists, nodes, stacks, queues, trees, binary trees, heaps, hash tables, and graphs. • Create simple programs implementing each of the data structures studied including lists, nodes, stacks, queues, trees, binary trees, heaps, hash tables, and graphs. • Evaluate the different data structures in terms of time and their efficiency.

900296SCI: Machine Learning

Discipline	SCI
Theme	ICC
Track	Information
Prerequisites	900191SCI Programming your World (Basic Research Methods and Statistics I or Statistics for Sciences or Probability and Statistics are highly recommended)

Machine Learning develops and studies methods for using large amounts of observational data to discover general patterns. This course will introduce students to basic algorithms for supervised learning (classification and regression) and unsupervised learning (e.g. clustering). Topics include Linear Regression, Logistic Regression, Decision-Tree learning, Bayesian Learning, Neural Networks and Clustering. Students will develop an understanding of the fundamental concepts of machine learning using statistics and acquire skills in applying methods to real world learning problems. Students will implement algorithms in Python and learn to use a Machine Learning toolkit. The course consists of lectures, video lectures, working sessions and computer lab sessions. The textbook will be Tom Mitchell's book "Machine Learning" complemented by articles and notes. Assignments consist of written exercises, programming assignments using Python and a toolkit and a project.

900298SCI: Information Lab

Discipline	SCI
Theme	ICC
Track	Information
Prerequisites	900296SCI Machine Learning

The purpose of this intensive lab course is to provide students with a first experience in state-of-the-art machine learning methods for functional neuro-imaging. The course covers some basic aspects of MRI-based neuro-imaging data acquisition, experimental design, and data analysis. The core of the course is a project in which students apply and compare various machine learning methods in the context of neuro-image analysis. Students will be provided with existing neuro-imaging data (fMRI of subjects viewing different movie genres) and machine learning techniques (python), and are asked to determine in groups what brain regions contain information about the visual stimuli. The groups will compete against each other: the task being to predict on the basis of fMRI as accurately as possible what type of visual stimuli was seen. This requires groups to explore different machine learning techniques applied to different combinations of brain regions. At the end of this course: • Students are acquainted with basic mechanism of perceptual and emotional processing. • Students get an overview of tools and techniques to analyse brain activity data. • Students learn to use and compare machine learning technique in a specific real problem. • Students are able to design and conduct an experiment using appropriate research and analysis methods. • Students can evaluate and report about validity and limitations of scientific claims.

900301CIC: Capstone (12 ECTS)

Discipline	SSC, SCI, HUM
Theme	n/a
Track	n/a
Prerequisites	Third Year

N/a

900311SCI: Theme course ECS: a case study

Discipline	SSC, SCI
Theme	ECS
Track	Theme
Prerequisites	200-level courses related to this theme; exclusively for 300 level students

Since 70% of all CO2 emissions are related to energy conversion processes, energy policy and climate policy are intimately related. In the first part of the course we will organize several (guest) lectures that focus on the causes and nature of the changing climate system and the impacts of these changes on human welfare. Special attention will be on uncertainties and controversies in the climate debate. Students will train their critical thinking skills in assessing the validity of the many conflicting arguments that play a role in this heated debate. In the second part of this course we organize lectures about adaptation to, and mitigation of climate change. Examples of such mitigation options include energy efficient cars and renewable energy technologies. Furthermore, students will work in project teams and apply multicriteria analysis (MCA) to systematically analyze the pros and cons of these and other solutions. In a workshop, the ins and outs of MCA will be trained. The case studies may vary from year to year. Examples include adaptation in developing countries, modeling the energy transition, modeling greenhouse gas emissions from biofuel production and geo-engineering.

900312SCI: Theme course LEU: Astroparticle Physics

Discipline	SCI
Theme	Life, Evolution, Universe
Track	Theme
Prerequisites	900SCI233 Quantum Physics; exclusively for 300 level students

Astroparticle physics is a multidisciplinary field, which connects the study of the smallest scales (elementary particles) with the largest scales (the Universe). Important topics are the origin of cosmic rays, gravitational waves, the physics of the early Universe, and the nature of dark energy and dark matter. The latter forms an important theme of the present course. For that reason the course starts with the evolution of the Universe, from the Big Bang to the Universe today, and the role of dark matter and dark energy in that evolution. This includes descriptions of the large scale structures, the early Universe, nucleosynthesis, inflation, and the cosmic microwave background. After a short interlude on cosmic ray acceleration, we turn to the microscopic constituents and discuss quarks and leptons, and their interactions and symmetries. We conclude by considering particles such as neutrinos, charged particles etc. as probes of the physics that occurs in the Universe. The course does not only describe the theoretical aspects of astroparticle physics, but also provides ample discussion of experimental evidence.

900314SCI/SSC: Theme course HW: Lifestyle and Disease

Discipline	SSC, SCI
Theme	Health and Well-being
Track	Theme
Prerequisites	200-level courses related to this theme, preferably Epidemiology OR Nutrition and Health; exclusively for 300 level students

Diseases such as cancer, cardiovascular diseases, diabetes mellitus and obesity contribute largely to the global burden of disease. Important risk factors of these diseases are within the domain of lifestyle; scientific evidence shows a clear relation with dietary behaviours and physical activity. The strong association with lifestyle implicates that the majority of these diseases are preventable. A planned approach of disease prevention and health promotion is desirable to develop effective interventions and public health solutions. This approach entails a thorough process from analysing the public health problem, to identifying the lifestyle factors that cause the problem, to assessing the behavioural determinants of the relevant behaviours to selecting suitable intervention strategies and evaluation of the entire process.

900315SCI: Theme Course LEU/HW: Mechanisms of Disease

Discipline	SCI
Theme	Health and Well-being
Track	Health
Prerequisites	900261SCI The Human Body II OR 900252SCI Molecular Cell Biology OR 900241SCI Metabolic Biochemistry OR 900262SCI Hormones and Homeostasis OR 900263SCI Immunology

The aim of this theme course is to provide an introduction to the relations and mechanisms between normal function (physiology) and disease (pathophysiology), illustrated by the following topics; 1. general paediatrics: growth and development 2. heart and blood vessels 3. Kidney 4. liver 5. reproductive system and endocrine glands 6. Hematology, infectious diseases and immunology 7. Respiratory system 8. The newborn 9. Pediatric Intensive Care 10. Translational genetics 11. Oncology 12. Evidence based medicine. Each module will deal with the problems of a specific organ system. On top of this, a course on epidemiology and Evidence Base Medicine is integrated. Most of the modules have the following format: 1. Patient presentation (30 minutes) 2. Introduction lecture: how does the organ/system work (physiology), what causes hampering of its function (determinants of disease) and to what does that lead (pathophysiology and impact of the disease). Groups presentations (80 minutes) 3. “State of the art” lecture (25 minutes). 4. Demonstration of clinical “tools” (30 minutes). During each module, the participating students will receive assignments for a planned patient contact and self-study program directed to a better understanding of disease mechanisms concerning the specific organ system. During the course, in addition to gaining knowledge on the relation between physiology and pathophysiology, the students, through contact with selected patients, will have an opportunity to understand the diagnostic, therapeutic, psychological and social consequences of disease, with reference to previous courses (The Human Body and Introduction to Health and Wellbeing).

900322SCI: Partial Differential Equations

Discipline	SCI
Theme	ECS, Life, Evolution, Universe
Track	Maths
Prerequisites	900127ACC Linear Algebra AND 900225SCI Vector Calculus

The majority of physical phenomena can be described by partial differential equations (Maxwell equation for electromagnetism, Schrödinger equation in quantum mechanics, Einstein equation in general relativity, diffusion equation in thermodynamics, wave equation in optics). Partial differential equations are also fundamental in the life sciences (reaction-diffusion equations) and economics (e.g. Black-Scholes equation). This module discusses these equations and methods for their solution. For example, for the heat and wave equation we discuss the method of separation of variables. This ties in with the remarkable result of Fourier that almost any periodic function can be represented as a sum of sines and cosines, called its Fourier series. An analogous representation for non-periodic functions is provided by the Fourier transform (and the closely related Laplace transform). We shall also discuss the the role of eigenvalue problems and some basic spectral theory, as well as fundamental solutions and associated Green's formulas. If time permits, we will cover some numerical methods. Topics include: • Second order ordinary differential equations, including non-constant coefficients • Power series solutions • Wave equation • Laplace transform • Complex functions (in particular contour integration, residues) • Fourier transform, Fourier series • Fourier analysis • Separation of variables • Heat equation • Laplace and Poisson equation • Green's function • Polar and spherical coordinates • Bessel functions • Schrödinger equation

900323ACC/SSC/SCI: Advanced Research Methods and Statistics

Discipline	SSC, SCI, ACC
Theme	n/a
Track	n/a
Prerequisites	900121ACC BRMS I or 900128ACC Statistics for Sciences; 900221ACC BRMS II is strongly recommended

This course will cover a series of statistical methods for more complex research designs than those covered in BRMS I and BRMS II or Statistics for Sciences. We will work extensively with real data and learn how to analyze and interpret data at an advanced level. The course covers the following topics: - review of multiple linear regression and ANOVA, - logistic regression, - MANOVA and MANCOVA, - Principle Components Analysis, - Discriminant Analysis, - Analysis of Repeated Measures, - Categorical Data Analysis, and, if time allows, - Time Series. These advanced methods will be an essential preparation for those who are planning to do a master's program in applied natural science or one of the quantitative social sciences such as Psychology, Economics, Sociology, Political Science, or Health Science. This course is offered in semester 2.

900323SCI: Introduction to Financial Mathematics

Discipline	SCI
Theme	ECS, Life, Evolution, Universe
Track	Maths
Prerequisites	900127ACC Linear Algebra AND 900225SCI Vector Calculus AND 900229SCI Probability and Statistics

• Financial institutions trade in risk, and it is therefore essential to measure and control such risks. Financial instruments such as options play an important role in risk management, and to handle them one needs to be able to price them. This course gives an introduction into financial mathematics. The emphasis is on analysis, although the first few weeks a more stochastic approach is sketched. • The following topics are treated: • introduction in the theory of options; • the binomial tree method; • introduction to Ito-calculus; • the Black-Scholes model; • the classical partial differential equations; • the Black-Scholes formula with applications; • American options and free boundary problems; • introduction to numerical methods for PDE's based on applications in financial mathematics.

900331SCI: Nanoscience

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Physics
Prerequisites	900233SCI Quantum Physics (is the minimum prerequisite). Chemistry; Electrons, Waves, and Relativity; and Statistical Mechanics are recommended.

This course will focus on the emerging field of nanoscience. While not all of nanoscience is radical or new, the collection of topics under a single umbrella is a recent and useful initiative. At small length scales, the discreteness of matter and energy causes nano-structured materials' properties to diverge from those of the bulk. Special properties of nano-structured materials are currently finding application in energy, electronics, advanced materials, and medicine. Split into three parts, the course will explore the physical laws relevant to nanoscale systems, the current methods for studying and creating nanomaterials, and a sample of research topics in nanoscience. First, the course introduces branches in physics and chemistry which are necessary for understanding nanoscale systems, including advanced topics in statistical mechanics and quantum mechanics (e.g. chemical kinetics, simple band theory, quantum transport, and perturbation theory). Second, the course will explore the varied techniques that enable the synthesis, analysis, and control of nanomaterials. The third part of the course will study developments in nanoscience, allowing students to pursue their own interests in the field.

900333SCI: Condensed Matter Physics

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Physics
Prerequisites	900233SCI Quantum Physics AND (900231SCI Physics of Heat, strongly recommended)

For this course we leave the traditional path which starts with a geometric description of ideal crystal structures and scattering of X-rays and neutrons in such structures. Instead, we immediately consider electron tunnelling from atom to atom in condensed matter, a process which is independent of the exact arrangement of atoms. The basic theoretical ingredients are introduced by treating the simplest system, that of two protons and two electrons, i.e. the H2- molecule. Already with this simple example we can understand qualitatively electron hopping, correlation effects and the occurrence of magnetism. Evidently, a two atomic molecule is quite different from a solid containing approximately 1023 atoms per cm3. In order to explore the profound influence of a large number of atoms we consider a very long chain of atoms and discover that translation invariance can lead to the formation of energy bands separated by forbidden energy gaps. This plays a vital role in the description of metals, semiconductors and insulators. The determination of electronic states in materials is only one ingredient of condensed matter physics. It is quite evident that in many-particle systems statistical physics is eminently needed. While electrons are described by Fermi-Dirac statistics, lattice vibrations (whose quanta are called phonons) obey Bose- Einstein statistics. In a certain sense, Physics of Condensed Matter is a marriage of Statistical Physics and Quantum Mechanics. It is a fascinating playground where various skills are required to understand the many facets of existing and future materials. It is also a playground full of surprises, some of the most spectacular being the discovery of high temperature superconductors (Nobel prize 1987) and of graphene (Nobel prize 2010). Both systems will be described in this course.

900334SCI: Mathematical Methods in Physics

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Maths, Physics
Prerequisites	900233SCI Quantum Physics; 900131SCI Electrons, Waves and Relativity is highly recommended

This course introduces the student to a number of central concepts and techniques in mathematical physics. We start introducing the necessary background on sets, functions, and the notions of homomorphism and isomorphism. We practice mathematical proofs for these notions. Tensors are then introduced, and tensor calculus is developed. Groups and representations are defined, and we study in detail two groups that are of central importance in physics: the rotation group SO(3) and the spin group SU(2), their geometrical interpretation, and their representations, which we then apply to quantum mechanics. In the second part of the course, after a review of Maxwell’s theory and its reformulation in terms of gauge potentials and tensors, we study in some detail the theory of special relativity, applied to classical electrodynamics. Finally we study various symmetries of classical electrodynamics: its covariance, gauge invariance, and conservation laws.

900344SCI: Computational Chemistry and Catalysis

Discipline	SCI
Theme	n/a
Track	n/a
Prerequisites	900245SCI Organic Chemistry AND 900233SCI Quantum Physics

Computational chemistry plays a central role in modern chemical research.Various molecular properties can be computed with chemical accuracy. In thisway, information can be obtained about quantities that are experimentallyinaccessible yet indispensible for molecular design and synthesis. One of themain objectives of this course is to learn current state-of-the-art quantumchemical methods and computer software. This course deals with ab initio theory(among others, Hartree-Fock and Møller-Plesset theory) and modern densityfunctional theory (DFT).These methods are applied in a computer lab in order to get acquainted withimportant modeling skills, such as, geometry optimization (molecular structure,stability, and thermo-chemistry), the exploration of potential energy surfaces(kinetics, reaction mechanism), and bonding and reactivity analyses(quantitative MO theory, Activation strain model).A second main objective is to develop skills for casting an (experimental)chemical problem into a computational approach leading to a practical solution.Furthermore, the course provides an introduction into crating physical modelsthat help interpreting experimental as well as computational data. An importantissue in this course is the unifying power of computational chemistry: the sametheoretical models serve as tools for solving very diverse problems from allbranches of chemistry, ranging from organic chemistry and catalysis viabiochemistry till pharmaceutical sciences.

900344SCI: Computational Chemistry and Catalysis

Discipline	SCI
Theme	n/a
Track	n/a
Prerequisites	900245SCI Organic Chemistry AND 900233SCI Quantum Physics

Computational chemistry plays a central role in modern chemical research.Various molecular properties can be computed with chemical accuracy. In thisway, information can be obtained about quantities that are experimentallyinaccessible yet indispensible for molecular design and synthesis. One of themain objectives of this course is to learn current state-of-the-art quantumchemical methods and computer software. This course deals with ab initio theory(among others, Hartree-Fock and Møller-Plesset theory) and modern densityfunctional theory (DFT).These methods are applied in a computer lab in order to get acquainted withimportant modeling skills, such as, geometry optimization (molecular structure,stability, and thermo-chemistry), the exploration of potential energy surfaces(kinetics, reaction mechanism), and bonding and reactivity analyses(quantitative MO theory, Activation strain model).A second main objective is to develop skills for casting an (experimental)chemical problem into a computational approach leading to a practical solution.Furthermore, the course provides an introduction into crating physical modelsthat help interpreting experimental as well as computational data. An importantissue in this course is the unifying power of computational chemistry: the sametheoretical models serve as tools for solving very diverse problems from allbranches of chemistry, ranging from organic chemistry and catalysis viabiochemistry till pharmaceutical sciences.

900351SCI: Epigenetic Regulations

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biology, Biomed.
Prerequisites	900252SCI Molecular Cell Biology

Advanced topics and recent developments in the field of epigenetic regulation with special emphasis on the role of epigenetics in various biological processes in human, animals, plants, fungi and bacteria. Further topics are: biochemistry and dynamics of DNA modification and chromatin modification (DM&CM;) and of the role these epigenetic mechanisms have on gene expression and inheritance of traits.

900361SCI: Infectious Diseases

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed.
Prerequisites	900263SCI Immunology

The field of microbiology studies micro-organisms: bacteria, viruses and parasites. Medical microbiology comprised of bacteriology, virology and parasitology studies microbial pathogens that cause infectious diseases in the (human) host. During this course, the classification, replication, transmission and detection of these pathogens will be studied, together with the presentation of on specific pathogens and their associated diseases that are currently threatening the human population. Vaccination is a powerful tool to prevent infection. Several vaccination strategies, their outcomes, as well as current challenges will be discussed. E.g. why is there still no anti-HIV vaccine whilst the combat against polio was so easy? The textbook will be an important backbone of this course, while the purpose of the lectures is mainly to illustrate current microbiologic research and threatening infectious diseases while stimulating discussions on relevant questions in the field.

900361SCI/HUM: Mathematical Logic

Discipline	SCI, HUM
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being, Cities and Cultures
Track	Maths, Philosophy
Prerequisites	Third-year Science majors. Third year SSC and HUM majors with good mathematical skills. NB HUM majors should also have followed the 200-level Philosophical Logic (Or: Advance Logic - old name) course. This is not strictly necessary for SCI and SSC majors.

In this course we study branches of logic -techniques and theorems- that aremost relevant to mathematics. There are two sides to the relation of logic tomathematics. On the one hand, logic is concerned with so-called foundationalquestions about mathematics. Such questions lead to the development of formalsystems that formalise parts of mathematics, e.g. axiomatisations ofarithmetic, analysis, geometry etc. A central theme here is the expressivepower of a logical system, and, in particular, whether the system is expressiveenough to contain the mathematical theory at hand, so that properties of thelogic immediately transfer to properties of the mathematical theory. On theother hand, logic is concerned with the proof of meta-mathematical results,such as consistency and decidability of particular formal systems, definabilityof certain notions of interest etc. These results include limitative theoremswhich establish the absolute limits of the deductive power of formal systems; agood example here is the famous Halting problem which roughly states that thereis no method by means of which it can be decided for arbitrary computerprograms whether they will eventually terminate on arbitrary input or runforever. Although such a limitative theorem belongs to theoretical computerscience, its implications inform any application of computation as we know it.The techniques and theorems that we will study come from the four main areas ofmathematical logic, which are: set theory, proof theory, model theory andrecursion theory. This course is offered in semester 2.

900361SCI/SSC/HUM: Moral Dilemmas in Medical Practice

Discipline	SSC, SCI, HUM
Theme	Health and Well-being
Track	Health, Philosophy
Prerequisites	Students are required to have completed at least two 200-level courses in their major.

Medical practice is characterised by moral dilemmas. What should a physician do when a patient asks for active termination of life because of unbearable suffering? What should professional caregivers do when an elderly patient refuses a diagnostic procedure which might help to determine the cause of physical problems? What should a nurse do when a psychiatric patient might become dangerous to himself or others? What should a genetic counsellor do when a person does not want her family to know that she has a hereditary condition which may be relevant for her relatives? In this course, these dilemmas will be studied from a theoretical perspective and investigated using methods for ethical case analysis. Topics include: - end of life decisions - responsibility in elderly care - coercion in psychiatry - genetics. The student will acquire knowledge of: - theories on medical ethics - moral dilemmas in health care - methods of case analysis - the practice of the ethical consultant The student is able to: - understand the significance of moral dilemmas in medical practice. - place these dilemmas in a theoretical perspective and analyse them methodically (discussions, paper). - interview a healthcare professional on ethical issues and analyse the transcript.

900362SCI: Cancer Biology and Treatment

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed.
Prerequisites	900252SCI Molecular Cell Biology AND 900263SCI Immunology

Cancer is a leading cause of death worldwide with an enormous impact on patients live and their surroundings. In this course we will start discussing the social and cultural meaning of cancer. We will look at population differences and the influence of genetics and several environmental factors on tumor development. Major oncology topics will be discussed during the lecture sessions, including; - important molecular mechanisms and gene pathways involved in cancer development and maintenance, - multi-step tumorigenesis, - oncogenes and tumor suppressor genes, - cell-cycle control, - DNA integrity, - apoptosis, - invasion and metastasis, - angiogenesis, - Cancer Stem Cells. Finally we will discuss already successfully used and possible future targets for therapy also concentrating on major ethical questions. Current research developments on the discussed topics will be integrated in the programme doing journal clubs and research debates. During the course students will work on a research project and get the chance to interact with young researchers currently working within the cancer research field.

900363SCI: Cardiovascular Diseases

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed.
Prerequisites	900252SCI Molecular Cell Biology

Cardiovascular diseases including heart failure and stroke are among the main causes of death in the Western world. Their incidences are still rising due to the aging of the population, obesity and, paradoxically, the successful treatment of acute myocardial infarction and cardiac arrhythmia. The aim of the course is to give the students a thorough understanding of the pathomechanisms involved in cardiovascular diseases and to provide insight in the current state of affairs and future prospects of prevention, diagnosis and treatment of cardiovascular diseases. Starting from basic cellular processes, various aspects of cardiac and vascular function at the organ level in health and disease will be covered. The impact of lifestyle, diet, sports and genetics are discussed. Major health issues related to obesity, diabetes, chronic inflammation, sepsis and shock will be discussed, as well as the impact and pharmacokinetics of several of the major drug classes, like beta blockers, diuretics, statins, warfarin and aspirin.

900364SCI: Neurosciences

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed.
Prerequisites	900161SCI The Human Body I AND one of the following courses: 900264SCI Brain and Cognition (highly recommended) OR 900252SCI Molecular Cell Biology OR 900261SCI Human Body II

The human nervous system governs all aspects of our cognition and behaviour. Look around yourself and marvel at the brains accomplishments. From language to music to machine, it all bears witness to the bewildering functional complexity of the nervous system. How does it work? In the Neurosciences course our aim is to provide students with a fundamental understanding of how the brain works. In addition, we focus on a second compelling reason to know more about the nervous system, which is the need to understand how malfunctions lead to neurologic and psychiatric disease. Emphasis will lie on studying the normal function of the brain, but modern scientific and clinical demands make it mandatory that we explore ways to translate fundamental experimental knowledge to clinical practice. Therefore, the clinical implications and opportunities for translational research will be discussed for selected subjects. The course has a strongly neurobiological character. We will study the organization and function of the nervous system by looking at the molecular and cellular components that constitute the nervous system and the way neural cells are organized in neural circuits which, in turn, make up neural systems that process similar kinds of information, i.e. the sensory, motor and associational systems. The associational system is particularly intriguing since it mediates the most complex functions. It will become clear how we can study the brain’s physiology and pathophysiology using structural, functional and behavioural analyses. Modern research in mental health requires the study of specific cognitive and affective domains across different diseases. To illustrate such an integrated approach we will apply experimental physiological findings to the pathophysiology of at least two disorders, viz. Parkinson’s disease and Addiction. We will use a textbook supplemented by original research papers. The textbook includes excellent brain atlas software which will be used to prepare for a neuroanatomical practical in which we will dissect the human brain. Students will be required to present (parts of) book chapters or additional reading and to initiate and moderate discussion of the above literature or other study assignments.

900366SCI: Clinical Neurosciences

Discipline	SCI
Theme	Health and Well-being
Track	Biomed.
Prerequisites	900264SCI/SSC Brain and Cognition AND 900265SCI Pharmacology OR 900241SCI Metabolic Biochemistry

This course will offer advanced training in principles of modern neuroscience and the application of those principles to a range of neurological disorders promoting understanding of the clinical presentation as well as ongoing clinical and fundamental research. Emphasis will lie on a translational research approach that allows fundamental (patho)physiological work to have direct impact on clinical practice. A number of important neurological disorders will be presented and discussed in depth. For every disorder, the neuropathological basis and current disease-related research will be extensively covered. Focus will be on the neurological and cognitive symptoms of each disorder, as well as on neuroradiology and diagnostics, and therapeutic intervention options. The course includes the following topics: Dementia, Movement disorders, Multiple sclerosis, Neuro-oncology, Childhood white matter disorders and Neuropsychiatric disorders. A general introduction will be provided on neuroimaging and its applications in neurological research. This will be complemented by a module on clinical neuroanatomy and radiology, and microscopical visualization of pathology in brain tissue (histopathology).

900371SCI/SSC: Addiction

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed., Health
Prerequisites	900264SCI Brain and Cognition OR 900242SCI Medicinal Chemistry

The goal of this course is to gain insight into the etiology and the neurobiology of addictive behavior. The course explores various topics in the study of drug addiction. The primary emphasis is on psychological and biological theories of drug addiction. Genetic and personality traits representing risk factors for the development of addiction will be identified. Other important topics are clinical diagnosis and treatment. Psychomotor stimulant (e.g. amphetamine, cocaine) and opiate (e.g. heroin, morphine) drugs, but also the more socially accepted drugs nicotine and alcohol, figure prominently in an examination of the pharmacological properties of addictive drugs. Much of the course relates the important mood-elevating effects of these drugs to their biological actions. However, non-drug related addictions, such as gambling and obsessive eating will also be discussed. We will also address the huge impact of addiction on our society and the effectiveness of drug policies.

900373SCI/SSC: Human Stress Research

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed., Health
Prerequisites	200 level course in Health, Biology or Biomedical track AND BRMS I OR Statistics for Sciences

‘Stress’ is one of the most intriguing phenomena that affects our life as it is today. At the same time, however, do we know what we are talking about? There is no other word in the Anglo-Saxon language that is so ill-defined, or has so many meanings as the word ‘stress’. Usually, when we talk about stress, we mean that life is weighing heavy upon us. Stress is imbalance. Scientifically, when we talk about stress, we talk about the (psychobiological) stress response and stressors (stimuli) that are able to elicit a stress response. In this way, stress is conceptualized as a positive force that enables us to learn from encounters and adapt to our environment, only being disruptive when for one reason or the other our coping skills fail and our stress response becomes inadequate: without stress there is no life; with too much stress life becomes miserable! The present course provides insight into today’s concepts of stress, the (psycho)biological mechanisms underlying the human stress response, the autonomous nervous system, the neuro-endocrine pathways and the immune system, and its impact on health and disease. The disease context is illustrated by discussing depression as a chronic stress syndrome, the post-traumatic stress disorder as a worn out disease and the conduct disorder as a cold-hearted condition. Prudent steps towards new treatment strategies will be highlighted.

900381SCI/SSC: Introduction to GIS

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being, Social Systems
Track	Earth & Environ., Economics
Prerequisites	Calculus OR Basic Research Methods and Statistics OR Statistics for Sciences.

This course provides an overview of the theory and practice of utilizing Geographic Information Sciences (GIS) as a method for analysis of environmental problems. The course applications are primarily directed to the natural sciences, but the techniques are also appropriate for the social sciences (such as urban planning). Lectures will emphasize general principles and theory in GIS, and the nature of geospatial data systems. Labs will be oriented towards concepts discussed in class by employing ArcGIS and related software packages to the display and analysis of geospatial data. Specific topics to include overview of geospatial technologies; geodetic datums, projections, and coordinate systems; vector and raster data structures; attribute and elational databases; spatial analysis (e.g., map algebra), and spatial modelling. Format: Hands-on sessions in the GIS studio (FNWI). Students are expected to complete a final project on an approved topic. The GIS studio has a capacity of 16 students. If the course is oversubscribed, third years students have priority.

900382SSC/SCI: Medical Anthropology

Discipline	SSC, SCI
Theme	Social Systems
Track	Health, Anthropology
Prerequisites	900181SSC Classical and Modern Anthropological Thought OR 900112SCI/SSC Health and Well-being Theme Course

Medical anthropology is an interdisciplinary field that recognizes the growing need to address socio- cultural factors affecting health and health care. The field of medical anthropology aids in providing insight into how people's ideas and conceptions around illness are formed and managed, as well as how cultural and social conditions influence experiences of illness. Furthermore, by taking culture into consideration, it allows a contextual focus on health, beliefs around treatments, restorations to health, healing and interventions. From a medical perspective, culture provides the doorway to understanding how people understand and react to illness and misfortunes. The research in medical anthropology draws from influences and interdisciplinary work in medicine, epidemiology, psychology, social work and other fields related to health and well- being. Ethnography is the foundation of inquiry. However, because of the interdisciplinary nature of the field, research often draws on broader resources of inquiry, including mixed method (qualitative and quantitative) research.This course is designed to introduce some of the major themes, theoretical approaches, and methodological concerns of medical anthropology today. Topics that will be discussed include the development and history of the central theories in medical anthropology, concepts, methodology and various themes in the field. These fields include (amongst others), pharmaceutical anthropology, idioms of distress, culture- psychology and psychiatry, disability, infectious diseases and sexuality, human rights and reproductive health- as well as different stages of the life cycle. Particular interest will be placed in the connection between medical anthropology and topics in global health such as refugees and psychological conditions, disasters and health with a special emphasis on social research and the involvement of people.

900384SCI: Atmospheric Sciences

Discipline	SCI
Theme	ECS
Track	Earth & Environ.
Prerequisites	900141SCI Introduction to Chemistry. Preferably also System Earth.

This is an applied science course in atmospheric chemistry and physics. We will work towards understanding sources of atmospheric trace gases and aerosol particles (also known as PM or particulate matter), their chemical and physical transformations, their atmospheric effects, and their removal processes. A basic understanding of physical chemistry (e.g. kinetics) and calculus is assumed. Topics of study may include: photochemical smog formation; stratospheric ozone depletion; particulate matter (PM) formation; aerosol population dynamics; heterogeneous chemistry; cloud physics; solar radiation management.

900385SCI: Advanced Geosciences

Discipline	SCI
Theme	ECS, Life, Evolution, Universe
Track	Earth & Environ.
Prerequisites	Intro Geological Sciences AND System Earth OR Field Course Environmental and Earth Sciences

This course focusses on rates and magnitudes of geologicalprocesses. Including the cutting edge of plate tectonics, dynamics ofsedimentary basins, and paleoenvironments. We will explore processes in thesolid Earth, and their geological record stored in the sedimentary archive. Itwill include a short excursion as well as a number of practical assignments.

900386SCI: Climate Sciences: Past and Present

Discipline	SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Earth & Environ.
Prerequisites	900121SCI Introduction to Geological Sciences and at least one 200 level course Earth/Environment track.

Paleoclimatology is an integrative discipline within the geosciences that aims to link past climate change with rates and patterns of environmental change. This course provides an overview of the multiple approaches utilized in climate reconstruction over the Quaternary (last ~2.5 million years). The focus is on the analysis of key environmental proxies, including some combination of Quaternary paleoclimatology, paleoecology, stratigraphy and pedology, radiometric dating, and paleohydrology. The class is to include laboratory, field, and computer modelling exercises as appropriate for the topic.

900389SSC/SCI: Urban Environment Lab

Discipline	SSC, SCI
Theme	ECS, Social Systems
Track	Earth & Environ., Economics
Prerequisites	900221ACC Basic Research Methods and Statistics II OR 900222SSC/SCI Risk Management OR 900226SSC The Sustainable City OR 900181SCI/SSC Introduction to Environmental Sciences OR 900381SCI/SSC Introduction to GIS

This course focuses on the science and social science of urban environment planning. An evidence-based approach to the problem of climate change and spatial planning will be the focus of this year's lab. More specifically, we will explore the urban heat island effect in Amsterdam. Students will personally try to measure this effect, statistically link obtained local temperature measurements to environmental characteristics and assess potential future changes in urban temperatures in Amsterdam based on socio-economic and climate scenarios. Following this assessment solution strategies will be proposed to limit local temperature increases. Finally an attempt is made to evaluate the effectiveness of these strategies.

900391SSC/HUM/SCI: Theme course: Games and Learning

Discipline	SSC, SCI, HUM
Theme	ICC
Track	Theme
Prerequisites	Any 100-level theme course (Limited to third year students.)

This course is about the scientific study of games and learning. Different perspectives on the nature of learning, from behaviorist tot situated, will be studied. The function of games and play in learning will be discussed from an evolutionary perspective, a neurocognitive perspective as well as other perspectives, such as motivation theory, and social learning theory. The different topics will be organized in seminars which will be student-led. The topics listed here are therefore not fixed. These may change according to students' preferences. Next to studying relevant scientific literature and assignments based on this literature the course will address the design of games for learning. How can games contribute to solving big societal issues in health (behavior) and safety (public space). The students will work on a case provided by an external party or devised by the students themselves in small multidisciplinary groups, and write an individual essay addressing a theoretical topic related to the case they are working on. If possible the individual essay can be related to the capstone topic, in terms of theme, approach, technique or methodology. Students are explicitly invited to consider the potential relation between the essay assignment and their capstone work.

900393SCI: Modelling Real World Problems

Discipline	SCI
Theme	ICC
Track	Information
Prerequisites	900121ACC Basic Research Methods and Statistics OR 900125ACC Calculus; exclusively for 300 level SCI/SSC students; 900191SCI Programming your World is highly recommended

This course will focus on modelling real world phenomena ranging from biological to social networks. After an overview of modelling and simulation as the third paradigm of science, we introduce Network Science and apply it to model social and biological phenomena. Examples of this are friend and contact networks on the Web, or how to infectious diseases such as influenza move through society. Topics: - 3rd paradigm of science, modelling and simulation - Networks (technological, social, information, biological) - Mathematics and Networks - Fundamental network algorithms - Modelling networks (preferential attachment, vertex copying) - Modelling with networks (percolation, epidemics, social relations)

900393SSC/SCI: Brain and Mind (for SSC students)

Discipline	SSC, SCI
Theme	ICC, Health and Well-being
Track	Health, Cognition
Prerequisites	900292SSC Cognitive Psychology

Brain and Mind is a 300-level SSC course cross listed with SCI. The course counts as a 200-level SSC course for SCI students. The goal of this course is to deepen understanding of the neurobiology of the mind and the aetiology of mental disorders. Students will be encouraged to critically analyse the impact of neurobiology and (psychiatric) brain disorders on society. To most of us, the mind constitutes as the very essence of our identity. However, where to draw the line between normal and abnormal, well and ill, an eccentric personality and a schizotypic one, an active, creative fast-thinking personality and ADHD? This course will explore the neurobiology of the mind. First, students will be provided with a concise overview of the structure and function of the human brain and will be introduced to the basics of neural communication (electrical signalling and synaptic transmission). Next, the focus will be on key concepts in cognitive neuroscience such as perception, memory, attention, emotion and consciousness. A selection of relevant topics will be covered in depth (partly by students' presentations); possibilities include: altered states of consciousness, neurobiology of attraction and partner selection, creativity and mental illness, the gendered brain, the moral brain, free will, empathy and mirror neurons, cultural context of mental illness, intelligence, neurobiology of belief, superstition and religion, neuro-economics & neuro-marketing, brain-machine interfaces, cognitive enhancers, mind control (this list is by no means exhaustive). An important focus of this course is the aetiology of mental disorders, such as ADHD, depression, addiction, autism and schizophrenia, with special attention for the nature-nurture discussion. Students will be challenged to critically reflect on the boundaries between normality and abnormality and the implications for society.

900394SCI: Text Mining and Collective Intelligence

Discipline	SCI
Theme	ICC
Track	Information
Prerequisites	900296SCI Machine Learning

This course provides an introduction to text mining and basic natural language processing, along with the principles underlying Web 2.0, collective intelligence and Python. Students will learn to solve basic text mining problems using collective intelligence resources. The increasing amount of textual information available online contains a wealth of knowledge about topics, people, products and behaviour. Due to its numerous applications (scientific, commercial, non- profit, etc), uncovering this knowledge is an important task. To achieve the goal of automatically uncovering knowledge in text, we need to have algorithms to identify structure in text: who does what, with whom, when and where? This is the aim of text mining. The course will offer an introduction to text mining and put the core ideas to work using Web 2.0 data. The course will identify the need for machine learning techniques that allow us to make inferences and predictions about user experiences, marketing and human behaviour from the information that is generated and collected daily.

900397SCI: Discrete Mathematics and Algebra

Discipline	SCI
Theme	ICC
Track	Information, Maths
Prerequisites	900127ACC Linear Algebra

This course revolves around the quantitative description of discrete quantities and objects. This branch of mathematics complements the area of Calculus and Analysis, where the notion of continuity (and the infinitesimally small) is central. One may compare this to the digital-versus-analogue dichotomy, and it is no surprise that discrete mathematics is frequently used in computer science. The course will start with a number of techniques to count the sizes of discrete objects, such as sets and permutations. Another important concept is that of graphs, which are used to describe a variety of networks, such as transport networks (rail roads), the world wide web, biological networks and social networks. The course describes basic graph theory as well as some algorithms for problems on graphs like finding shortest paths and maximum matchings. The course will also address modular arithmetic and the theory of prime numbers. These concepts form the basis of cryptographic systems such as RSA, which is used everywhere to secure financial transactions (for example online shopping). Topics include: Counting, Graph theory, Graph algorithms, Modular arithmetic, RSA cryptography. Planned course book: Discrete Mathematics, Elementary and Beyond. by L. Lovasz, J. Pelikan, K. Vesztergombi, Undergraduate Texts in Mathematics, Springer, 2003.

900007SSCY: Master Class in Development

Discipline	SSC
Theme	Social Systems
Track	n/a
Prerequisites	Selection for Master course; knowledge of international relations, trade, development, and human rights is desirable

This course will provide an introduction into international development policy making for the period after 2015. Towards the end of the 1990s an international consensus had been reached about the so-called Millennium Development Goals (MDGs) to be met in 2015. Presently an international debate is taking place with the aim to reach consensus about a policy for the period thereafter. The course will start with a survey of international development policy making during the last decades of the previous century: the context, the objectives, targets and instruments, and the results. We will than look at the situation around the turn of the millennia, focus on the MDGs and explore to which extent they have been met. On the basis of this assessment we will discuss alternative policies, both globally, as well as for some selected countries and sectors. We will do so, amongst others, by critically analysing policy alternatives which presently are being proposed by various stakeholders.

900112SCI/SSC: Theme course: Introduction to HW

Discipline	SSC, SCI
Theme	Health and Well-being
Track	Theme
Prerequisites	None

Health and Well-being, both on an individual and societal level, is an important matter for our global society and human mankind in general. The introductory course focuses on a number of issues that are relevant to ongoing research in the disciplines of Biomedical Sciences and Health Sciences. The course provides the student with a powerful introduction to the major disciplines that shape today’s thinking on health related issues. The emphasis lies on Medical Sciences that mould the Health and Well- being arena. The theme course offers a preview of biomedically oriented courses such as Metabolic Biochemistry, Medicinal Chemistry, The Human Body II, Hormones and Homeostasis, Immunology, Epidemiology, Nutrition and Health, Infectious Diseases, Cardiovascular Diseases, and Mechanisms of Disease. The student is able to understand on an introductory and elementary level the following medical sciences • general physiological concepts of regulation • biochemistry and cell biology • energy metabolism • pharmacology • pathology • immunology • genetics • epidemiology • hematology • the alimentary system • the internal environment, including topics of the cardiovascular system, the respiratory system, the renal system, and the endocrine system • diet and nutrition Furthermore, the student demonstrates competence in (oral) data presentation, analysis and interpretation, numeric, (medical) information retrieval and written communication

900112SSC: Theme course: Introduction to Social Systems (1)

Discipline	SSC
Theme	Social Systems
Track	Theme
Prerequisites	None.

In this introductory theme course students will explore two fundamental questions of the social systems theme: 1) How are modern societies organized? 2) And why? We will respond to these questions from the perspectives of law, political science, and economics. Students will be introduced to each respective discipline, emphasizing the specific ways in which it both frames these questions and responds. In addition to a basic introduction to the methodology and theory of each discipline, examples of current challenges and problems in society will be discussed, illustrating both the similarities and differences between the approaches. At the end of the course student will be able to understand some of the problems of contemporary social regulation and what the disciplines of law, economics and political science contribute to understanding of these problems. Students will be able to analyze these problems critically and to formulate possible solutions using concepts drawn from law, economics and political science. As much as possible, international trade will be used as a running example.

900113SCI/SSC: Theme course: Introduction to ECS

Discipline	SSC, SCI
Theme	ECS
Track	Theme
Prerequisites	High school Calculus. We recommend following Calculus or Calculus for Economics simultaneously.

This course elaborates the concept of sustainability. The carbon cycle and the Earth's energy balance are explained to understand our (changing) climate, and what measures are needed to limit global warming to a level that is considered acceptable. As 82% of the Dutch greenhouse gas emissions (218 Mt CO2 equivalents) are caused by fossil fuel use, we focus on energy in this course. We discuss our energy demand, the difference between work, energy and power, frequently used energy units, and explain basic thermodynamics to understand why energy conversions are inherently inefficient. We treat the following energy sources in detail: fossil fuels, nuclear energy, biomass, solar and wind energy. Following MacKay we go for numbers, not (only) adjectives. Hence, physical concepts and equations are introduced to describe energy conversions and to calculate their potential for a significant contribution to our energy demand. We discuss reserves, environmental impacts, strategic concerns, costs and benefits. In addition we take a close look at transport and heating (18 and 13% of the total greenhouse gas emissions in the Netherlands, respectively). During this course, students will also do laboratory experiments (on Stirling engines and wind turbines) and a computer simulation.

900113SSC: Theme course: Introduction to Social Systems (2)

Discipline	SSC
Theme	Social Systems
Track	Theme
Prerequisites	None.

In this course, we will discuss sociological and anthropological views on social systems. As we are social beings, our experience of the world and our behaviour are to a very large extent determined by our interactions with others. The social systems we create seem to acquire a force of their own, unleashing dynamics to which the individual has to yield. On the other hand, social systems cannot be separated from individual human beings, who have agency to influence and change those dynamics. We will discuss the dynamics of social systems by zooming in on four major issues of contemporary social systems: capitalism and inequality, the nation-state today, migration and climate change. We will place these issues in historical perspective, discuss their present-day dynamics and connect them to the students' personal experiences.

900122SSC: Environmental Economics

Discipline	SSC
Theme	Social Systems
Track	Economics
Prerequisites	None.

The course offers a treatment of modern economic theories and methods to study the relationship between natural resources, environmental quality, the economy, and environmental policy. Students will develop a thorough understanding of relevant aspects of the economy and the environment, their inter-linkages, and their relevance to current environmental problems including e.g. water shortage, climatic change, and biodiversity protection. The lectures will focus on linking theory to practical examples in order to set the stage for the application of methods, such as simple modelling and valuation techniques. The course includes the following topics: Sustainability, ethics and economics: Limits to growth, sustainable development, homo economicus, intertemporal distribution, ecologists vs. economists; Welfare economics and the environment: Efficiency and optimality, market allocations, social welfare, market failure, government failure, public goods, externalities; Pollution control, targets and instruments: Stock and flow pollution, optimal pollution level, abatement costs, command & control, taxes & subsidies; Cost-benefit analysis and valuation: The value of a tree, the value of a drop of water, revealed preferences, stated preferences, meta-analysis, project appraisal, dual discounting; The economics of (non)-renewable resources: Forests, fish, oil, and gas. Selected topics in environmental economics: Payments for ecosystem services, climate change economics, the green paradox, optimal river water allocation, green GDP, technology adoption.

900131SSC: Economic Thought in a Historical Perspective

Discipline	SSC
Theme	Social Systems
Track	Economics
Prerequisites	None.

This course presents an introduction to economic thought seen from a historical perspective. The rationale for taking this perspective is that economic theories did not develop in a vacuum. Indeed, economics was once named the science of political economy, to indicate the close connection between political interests and economic inquiry. The key to this course is the insight that economists of the past and present responded to the social and economic circumstances of their times. Moreover their answers were not unequivocal; similar problems called forth different solutions giving rise to competing paradigms and schools of thought. Studying the development of economics in its historical context is the best way to learn appreciate the richness of economics as a scientific tradition. To this purpose, we shall discuss economic thinking from the days of the Greeks in classical Antiquity to modern times. This course aims to demonstrate how methods and tools emerged in their proper historical context and how they relate to economic policy. This requires an elementary introduction to some of the tools of economics, which will be done in a non-technical manner. Applied economic questions relate to major issues in society, such as the issue whether economic science has a solid case in supporting either a free market society or active government involvement in economic problems. We also introduce the work of major thinkers in economics such as Adam Smith, Karl Marx, John Maynard Keynes and Milton Friedman, minds not always in agreement about the proper way to conduct economic research and policy, to say the least. The philosophy of this course is that tackling similar questions from different angles furthers understanding of what economics is all about.

900142SSC: Law, Society and Justice

Discipline	SSC
Theme	Social Systems
Track	Law
Prerequisites	None

This course introduces law as a human artifact that is used to establish order in society. This use of law - also called ‘legal ordering’ - will be addressed in three perspectives. In the first part of the course the essence of legal ordering will be studied by tracing its historical development. How did communities first start to use legal rules and concepts? Why is this often associated with the term ‘formalisation’? What is the purpose of the ongoing attempt to codify and systemise legal rules in the form of written constitutions, statutes, treaties and regulations? Following Max Weber’s sociology, it will be argued that the concept ‘rationalisation’ is crucial to understand all this. Law itself will be introduced in the second part of the course. A body of basic legal knowledge will be presented, answering questions such as: What is the basic structure of a modern legal system? What types of law do exist? How are lawyers supposed to find law? What is the basic structure of international law, and what are the specific features of the legal system of the European Union? Furthermore, students will be trained in a number of basic legal skills: consulting the sources of law, reading a judicial decision, interpreting legal rules and arguing to defend a legal claim. The third part of the course is devoted to critical reflection on present day legal ordering.

900151SCC: Classical and Modern Political Thought

Discipline	SSC
Theme	Social Systems
Track	Political Science
Prerequisites	None.

The course introduces students to key texts in the history of political thought. It is divided into two main sections: classical and modern political thought. As part of the classical tradition we read Plato, Aristotle, Aquinas and Luther. Each philosopher starts out with the question about human nature and the good life for human beings. According to the classical tradition, the end of politics is not just to maintain order in society but also to cultivate habits that contribute to human flourishing. Good politics promotes and crucially depends on citizens and statesmen of good character. Machiavelli radically breaks with the classical paradigm and redefines good character. In order to survive a statesman has to finesse the evil ways of politics. As part of the early modern tradition we also read Hobbes, who argues for state sovereignty, and Locke and Madison who argue for institutions to keep both citizens and the state in check. We then enter the nineteenth century to discuss the strengths and weaknesses of democracy, reading Tocqueville and Mill. The course concludes with developments in the late modern period, with Nietzsche arguing for a deconstruction of bourgeois morality and the liberal order, and the contemporary theorist Charles Taylor who argues for higher modes of authenticity in light of current political challenges.

900155ACC/SCC: Big Questions in Future Society

Discipline	SSC, ACC
Theme	n/a
Track	Sociology
Prerequisites	None.

We live in a rapidly changing society as is evidenced when we consider the digital revolution, global urbanization, and the shift in the balance of (economic and political) power between East and West. In this course we will consider the main developments and challenges facing our (global) society at the moment and what this may mean for future society. We will start with changes and developments which are apparent in present-day society and consider the political, sociological and economic consequences for these in the future. This course enables students to study these Big Questions from many different perspectives which link up to the various disciplines in the Social Sciences. This course is offered in semester 1 and in semester 2.

900156ACC/SCI/SSC: Big Data

Discipline	SSC, SCI, ACC
Theme	n/a
Track	Big Questions
Prerequisites	None

The defining characteristic of the 21st century might very well be the omnipresence of digital data. The continuous, voluminous and heterogeneous stream of data generated by sensors and people is rapidly transforming how we experience, how we analyse and how we interact with the people and things around us. Citizens, enterprises, governments and scientists are confronted with the potential blessings as well as challenges that “Big Data” provides for understanding the world around us. “Big Data” is a term that is difficult to define, hence the Big Question structure of the course provides a suitable way of approaching this topic that crosses disciplines. This course sets out to let students discover for themselves what “Big Data” entails and encourages them to reflect on that experience. Central to the course are therefore a series of real-life case studies related to key cultural, social and environmental issues in current day society. The case studies will lead the students to experience, first-hand, different techniques for data collection and storage, data visualisation and analytics, and hypothesis definition and communication. These steps are grounded in “data-driven knowledge discovery”, also referred to as “Abductive reasoning”, which starts with data describing a phenomena and continues with defining a hypothesis that explains the data. Is “Big Data” an exciting new way to discover new things about ourselves and the world around us, or does it hamper our privacy and lead us to follow invisible patterns that in the end proof to be terribly wrong? We frame the course as Applied data science, with a focus on tackling societal and scientific problems, from a geographic perspective. Students gain a theoretical and practical understanding of the impact of data in society. They take part in practical use cases and present their group work online.

900161SSC: International Relations Theory and Practice

Discipline	SSC
Theme	Social Systems
Track	International Relations
Prerequisites	None.

The purpose of this course is to introduce students to the main concepts and theories in the field of international relations. Students will get familiar with a wide range of concepts such as anarchy, conflict, cooperation, trade and globalization, while also exploring different issue-areas. The course material is divided into five parts: historical perspective, IR theory, international cooperation, international security and international political economy.

900171SCI/SSC: Introduction to Public Health

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Health
Prerequisites	None

This is an introductory course intended to introduce undergraduate students in a variety of disciplines to the basic tenets of public health. The course will provide a history of public health, an introduction to the core disciplines: epidemiology, biostatistics, environmental health, social and behavioural health, health economics and health policy and management, and current events and issues in the field. Upon completion of this course, the student will: • Define public health and the impact it has had on history • Describe the evolution of public health, including its future development • Describe how public health is measured and compared across regions or populations • Describe how health interventions are created, implemented and evaluated • Describe the structure of the public health system in the various countries (continents) including how policy is implemented and how it impacts public health practice • List the basic study designs used in public health and provide examples of how they may be used, analysed and interpreted • Describe the impact of chronic and infectious diseases on the health of populations • Describe the variance in health status based on social and demographic factors and explain populations with special needs from a life cycle perspective • Explain how public health impacts other fields and how it may be integrated • Discuss the relationship between public health and the medical care system • Describe the role of public health in a global society

900171SSC: Classical and Modern Sociological Thought

Discipline	SSC
Theme	Social Systems
Track	Sociology
Prerequisites	None.

In this course we investigate the implications of the processes of globalisation and individualisation for existing social institutions and relations (the welfare state, the nation state, the family, the school, the church, political party, the trade union) and what changes will occur or what new institutions or relationships will replace the old ones. We begin with an overview of the field of sociology in terms of the processes of globalisation and individualisation, with special reference to the concepts of inequality, solidarity, identity and rationality. Then we present contemporary theorists, whose theories and research shed new light on these processes. We first discuss Bourdieu, the author of the book Distinction, on the changing aspects of inequality, the importance of cultural capital and social capital, and then Robert Putnam, the author of the book Bowling Alone, on solidarity, concerning the fear that we are witnessing the decline of community. We also discuss Anthony Giddens, the author of the book Modernity and Self-identity, on the problems of constructing a sense of self in a world characterised by globalisation and individualisation. Finally, we discuss George Ritzer, the author of The McDonaldization of Society, on the new course that rationalising process has taken in contemporary society. After that we turn to study the classical theories that were the sources of inspiration for these contemporary sociologists. Bourdieu's theory is seen as a critique of the model of Karl Marx, but also as a continuation of some elements in Marx's class-theory. Putnam is inspired by the questions that Emile Durkheim discussed around 1900, the questions concerning the structural cohesion in modern society and the apparently decreasing importance of central values that bind people together. Giddens has raised questions that were treated for the first time in the work of Georg Simmel: how do we develop a coherent sense of self in an atomising urban and secular social milieu. And Ritzer is a self-confessed admirer of Weber's theory of the rationalising processes in contemporary society. He thinks that the principles that Weber discerned can still be observed today, but they manifest themselves in other places (not only in the government bureaucracy, but also in the supermarket) and that they sometimes have taken new and unexpected forms. The final part of the course will return to the central themes and discuss some empirical research that has been done on the questions of globalisation and individualisation, but this time enriched by our excursions in the fields of classical and modern sociological theory.

900181SCI/SSC: Introduction to Environmental Sciences

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Earth & Environ.
Prerequisites	None

This course serves as an introduction to and covers broad aspects of environmental science and environmental studies. The aim of this course is to provide students with the fundamental ideas and concepts in the field of environmental sciences and with the analytical tools needed for a considered reflection on the nature of environmental problems and its possible solutions. Environmental science, as a discipline, combines aspects of the physical and biological sciences with issues from the social and political sciences. In this course, we will explore the concept of sustainability and how it relates to us, the scientific principles and concepts governing ecosystems and their processes, human population and resource use, how to sustain the biodiversity of the earth, and how we use our energy resources. This course should prepare students to continue to develop their environmental knowledge through further coursework. Important features of the course include systems thinking and critical reflection.

900181SSC: Classical and Modern Anthropological Thought

Discipline	SSC
Theme	Social Systems
Track	Anthropology
Prerequisites	None.

This course is an introduction to the discipline of classical and modern anthropology, the study of human diversity. The course will provide a brief overview of the four sub-disciplines of anthropology, namely (1) social and cultural anthropology, (2) archaeological anthropology, (3) biological/physical anthropology, and (4) linguistic anthropology, before diving into the (memberwise)largest sub-discipline of social and cultural anthropology. Social and cultural anthropology, which studies the socio-cultural variation of human societies and groups (e.g., when it comes to constructions of marriage, family and kinship, gender, and ethnicity), will thus be the central focus of the course. In this course, we will explore how anthropologists define the concept of “culture” and the student will be familiarized with key concepts (e.g., hegemony, ethnicity, rites of passage) that anthropologists use. We will cover essential debates and theories (e.g., cultural relativism and functionalism, respectively) that have shaped anthropology and those that still do play a role in anthropology today (e.g., the crisis of representation). We will read (excerpts of) classical anthropological texts that lay the foundation for contemporary anthropology (e.g., Malinowski) and we will read more recent work that illustrates which questions anthropologists ask about modern-day issues and how they try to gain in-depth knowledge. In this regard, we will also pay attention to applied anthropology (e.g., urban anthropology) and how anthropology can be of use for education, business, and governments.

900191SSC/SCI/HUM: Theme course: Introduction to ICC

Discipline	SSC, SCI, HUM
Theme	ICC
Track	Theme
Prerequisites	None.

Humans sense, act, think, feel, communicate, learn and evolve. We see these capabilities increasingly also in machines. This course aims to develop a first understanding of how humans and machines make sense of the natural environment from all the physical signals pouring into them. Information from the world around us will be related to the structure of our brain and basic cognitive tasks such as language, sensory perception, intelligent interaction, and action. In parallel, the course will introduce how machines can encode information, store it, reason with it and retrieve it later to guide behaviour. The course is particularly relevant for students interested in crossing the divide between (physical, life, social) sciences to cooperatively i) step up progress in cognitive information processing in both man and machine, and ii) develop new applications and technologies serving society. Topics covered include, information structure, pattern recognition and machine learning, man-machine interaction, collective intelligence, mediated communication, expression and emotion, memory, brain structure, neuronal processing, visual consciousness, social cognition.

900192SSC: Psychology

Discipline	SSC
Theme	ICC
Track	Cognition
Prerequisites	None.

In this introductory course students will become acquainted with the methods and theories that are key to the study of psychology, along with their development. The course begins with an introduction to the scientific methods and technologies that ground psychology as a discipline, such as observation, reaction time experiments and brain imaging. Students will also receive an introduction to the psychology of language and, consciousness, emotion and social behaviours. Topics 1: Psychology and Scientific Thinking: A Framework for Everyday Life 2: Research Methods: Safeguards against Error 3: Biological Psychology: Bridging the Levels of Analysis 4: Sensation and Perception: How We Sense and Conceptualize the World 5: Consciousness: Expanding the Boundaries of Psychological Inquiry 6: Learning: How Nurture Changes Us 7: Memory: Constructing and Reconstructing Our Pasts 8: Language, Thinking, and Reasoning: Getting Inside Our Talking Heads 9: Intelligence and IQ Testing: Controversy and Consensus 10: Human Development: How and Why We Change 11: Emotion and Motivation: What Moves Us 13: Social Psychology: How Others Affect Us 14: Personality: Who We Are

900193SSC: Linguistics

Discipline	SSC
Theme	ICC
Track	Cognition
Prerequisites	None.

Linguistics is concerned with the study of language. Of particular importance will be the social sciences perspective on language. On the one hand, language will be approached as a cognitive system. We will explore how the natural sciences bear on the analysis of language ability and the extent of its basis in human biology. On the other hand, language will be approached as a tool used by individuals in society for communicative and cultural purposes. At the end of the course, students will know how to place language within human cognition and will understand how linguists are working towards a satisfying characterization of its properties.

900222SSC/SCI: Risk Management and Natural Hazards

Discipline	SSC, SCI
Theme	ECS, Social Systems
Track	Earth & Environ., Economics
Prerequisites	900122SSC Environmental Economics OR 900181SCI/SSC Introduction to Environmental Science OR 900113SCI/SSC Theme Course: Energy, Climate and Sustainability

“Devastating earth quake hits Haiti.” “Hurricane Katrina causes the costliest disaster in the history of the United States.” “Japan fears a nuclear disaster after reactor breach.” Headlines that capture some of the major disasters that have struck our world in the past 5 years. Do you want to fight back? Are you prepared to take tough decisions about life and death under extreme time pressure? This course provides you with the skill set, knowledge and expertise to deal with these challenges. You will become a multidisciplinary team of risk fighters - devising plans, policies and practices to manage real-life disasters, at all stages of its life-cycle. At the core of your strategies is effective sharing of spatial information. Following introductory sessions that include team building, lectures on the natural and social processes involved in disaster management and practicals that familiarise you with data collection and spatial methodologies, we will work systematically through each stage of the disaster life-cycle: Risk Reduction, Relief and Recovery, and Short- and Long-term Reconstruction.

900225SSC: Environmental Law and Policy

Discipline	SSC
Theme	Social Systems
Track	Law, Envir. Econ. (and policy)
Prerequisites	None.

There are few issues that affect our daily lives and our future and that of the planet as profoundly and as visibly as trans-boundary environmental degradation. This course will explore the emergence and evolution of law, policy and governance approaches designed to address contemporary environmental challenges in a multi-level context, from local to global. We will examine how the special nature and framing of environmental 'problems' affects the way state and non-state actors, respectively and collaboratively, respond to the environmental challenges posed by our modern, globalized, Anthropocentric world. Drawing on various fields of studies including law, policy, politics, international relations, environmental studies, economics, sociology, philosophy, and ethics, this course will provide students with knowledge and critical understanding of how society responds to environmental threats. The course consists of five thematic parts:: Part 1) (De)constructing environmental problems: will start from the premise that environmental problems are not simply 'given', but rather socially constructed and framed on the basis of locally dominant worldviews, social values, economic interests, and philosophical and political rationales. Major topics include social construction and framing, world views and value paradigms, eco-philosophy and sociology, history of environmentalism, green political thought, North/South perspectives, consumerism (and other societal cause of environmental problems), etc.; Part 2) The Nature of the Environment as a 'Policy Problem': will examine environmental problems are not merely biophysical in nature, but also have important political, economic, geographic, cultural and ethical dimensions, involving a myriad of values and interests that may conflict. Major topics include nature of environment as a public good; market failures; externalities; moral hazards; collective action; tragedy of the commons. Explores the need for public policies for environment, rather than market regulation or voluntary choices by individuals? Debates various approaches including sustainable development and ecological modernization; Part 3) Policymaking for the Environment – history, present and future: introduces the basics of (environmental) law and policymaking, by looking at the multitude of actors, interests and institutions involved in environmental politics at the national and sub-national levels. Major topics include the steps in the policymaking process from initial agenda-setting to legislative action; the variety of instruments and administrative tools available for policy intervention, even under conditions of risk and uncertainty; issues of power, influence, and access, stakeholder consultation, public participation, etc.; Part 4) European Union Environmental law and Policy: will examine how these theoretical frameworks and concepts take practical shape in the unique supranational polity of the European Union. Following a brief primer/refresher on the EU's institutional make-up and policymaking process, we will trace the unlikely historical genesis and evolution of EU-level environmental policy from a mere by-product of economic integration to one of the most prolific areas of EU law. Using detailed case-studies in substantive environmental issues areas, key weak-points will be identified in the implementation and enforcement of EU environmental policy by and in the Member States; Part 5) Global Environmental law and Policy: will shift the focus upwards to the global level and the international law and policy arena. Here we observe both the more traditional machinery of international treaty negotiations and world trade arbitration between sovereign states, as well as the emergence of a new type of global environmental governance, defined as the ways in which sovereign states and non-state actors (including intergovernmental organizations, civil-society NGOs, industry and business groups, scientists, etc.) coordinate their discrete and collective efforts to address transnational environmental issues in a globalized world. Major topics include Introduction to international relations/actors and sources of public international (environmental) law; international environmental principles, globalization and international trade, emergence of global environmental governance regimes, etc.

900226SSC: The Sustainable City

Discipline	SSC
Theme	ECS, Social Systems
Track	Earth & Environ., Economics
Prerequisites	900122SSC Environmental Economics

Cities are engines of national and global growth. Urban areas generate around 80% of global Gross Domestic Product (GDP). They are also associated with around 70% of global energy consumption and energy- related greenhouse gas emissions. Already, urban areas account for half the world's population. Over the next two decades they will house nearly all of the world's net population growth: 1.4 million people are being added to urban areas each week. By 2050, over 70% of the total world population is expected to live in cities, implying that in a few decades from now the world urban population will be larger than the entire global population today. This urban transition is being driven by cities in the developing world, where 90% of urban growth is projected to take place. These trends give rise to a series of interesting and relevant questions, which we will address troughout the course: First, we need to understand the economics and geography of cities. Why do people and firms want to concentrate in highly dense, expensive and vulnerable parts of the world? What explains the location of cities? Second, we need to understand the extent to which urbanization is a sustainable form of organization of economic activities. How does urbanization influence global environmental change, and how does global environmental change in turn influences urbanization processes? Third, we need to understand the kinds of urban policy frameworks required to make cities productive, resilient, cleaner, quieter and safer.

900232SSC: International Political Economy (IPE)

Discipline	SSC
Theme	Social Systems
Track	Economics, International Relations
Prerequisites	900161SSC International Relations: Theory and Practice OR 900131SSC Economic Thought in a Historical Perspective

This course introduces students to the basic concepts and ideas of the field of International Political Economy. The course emphasizes the theoretical foundations of global political economy by discussing the most critical theoretical perspectives: realism, liberalism and historical structuralism. In addition, students will get acquainted with important issues of the contemporary global economy, such as the origins of the modern trade and financial systems, patterns of distribution of wealth, problems of poverty and development, patterns of global production and the causes of recent financial and economic crises.

900233SSC: International Trade, Growth and Development

Discipline	SSC
Theme	Social Systems
Track	Economics
Prerequisites	900237SSC Fundamentals of Macro-Economics OR 900236SSC Fundamentals of Micro-Economics

This course introduces students to the important contemporary debate on how globalization affects economic growth, development and inequality. Students will obtain a detailed knowledge of the main concepts and theories on international trade and economic growth. This includes the trade-offs between pushing for deeper globalization at the cost of sovereignty (global governance), harmonizing rules across countries at the cost of ill-fitting rules for all (straitjacket) restricting globalization at the cost of giving up the gains from trade. Students will be able to apply this knowledge to real life cases in which the gains of free trade and free migration may or may not outweigh the risks and, hence, may or may not justify protectionism and closing borders. The course also looks critically at present-day controversies associated with international trade, including labour standards (e.g. child labour), government procurement, intellectual property rights and Investor State Dispute Settlement. In the second part of the course important issues in economic development are analysed, starting with the measurement of and global trends in poverty and inequality and the crucial role of structural transformation for development. The links between inequality and growth are also analysed, both in theory and practice. The role of aid in development is extensively discussed, both at the macro level as well as in terms of new models of aid delivery and new (experimental) evidence. Also discussed are the role of the integration of smallholder farming, credit, corruption, migration and gender in development.

900234SSC: Econometrics

Discipline	SSC
Theme	Social Systems
Track	Economics
Prerequisites	900237SSC Fundamentals of Macro-Economics AND 900236SSC Fundamentals of Micro-Economics

This course introduces modern econometric techniques, enabling students to conduct empirical analyses on their own. Econometric theory essential to analyze cross-sectional, time series and panel data sets will be examined. A major focus will be on the application of econometric techniques to real-world examples from different fields of economics. More specifically, topics that may be discussed include explaining individual wages, house prices or expenditures on alcohol and tobacco, estimating the returns to schooling, the wage elasticity of labor demand or the willingness to pay for public goods or testing the Capital Asset Pricing Model, the long-run Purchasing Power Parity or the Permanent Income Hypothesis. The course will be beneficial to students planning to take 300-level economics courses and/or to students writing an empirical Capstone thesis.

900236SSC: Fundamentals of Micro-Economics

Discipline	SSC
Theme	n/a
Track	Economics
Prerequisites	900124ACC/SCI Calculus for Economics OR 900125ACC Calculus

This course introduces microeconomic concepts and analysis, supply and demand analysis, theories of the firm and individual behavior, competition and monopoly, and welfare economics. Students will be introduced to the use of microeconomic applications to address problems in current economic policy throughout the semester.

900237SSC: Fundamentals of Macro-Economics

Discipline	SSC
Theme	n/a
Track	Economics
Prerequisites	900124ACC/SCI Calculus for Economics OR 900125ACC Calculus

This course provides an overview of the following macroeconomic issues: the determination of output, employment, unemployment, interest rates, and inflation. Monetary and fiscal policies are discussed, as are public debt and international economic issues. This course also introduces basic models of macroeconomics and illustrates principles with the experience of the United States and other economies. Macroeconomic aspects covered include models of economic growth and models of business cycles. The role of policy will be discussed throughout.

900242ACC/SSC: Global Leadership

Discipline	SSC, ACC
Theme	n/a
Track	n/a
Prerequisites	100-level course The Global Identity Experience

This course follows up on the 100 level Global Identity Experience course and focuses on an interdisciplinary study of the important elements of global leadership. Among such elements are many other attributes, contextual and cultural awareness, clear understanding of diversity, global knowledge transfer, power distance indices, vision making, planning, organizational know-how, (savvy), strategies capabilities development and use of emotional intelligence. The course is divided into six parts: Part I: presents the contextualization of leadership and the distinctions between domestic, community,and global leaders. Part II: identifies the competencies of domestic to global leaders. Part III: introduces qualitative research, ethnographic interviews, shadowing, focus group to engage leaders. Part IV: identifies the significance of women leaders and explains the cultural domains of Geert Hofstede. Part V: Uncovering global challenge: inquisitiveness, perspective, character and savvy. Part VI: identifies some of the current leadership theories and focuses on personal development. It is offered in semester 2.

900242SSC: Human Rights Law and Politics

Discipline	SSC
Theme	Social Systems
Track	Law, Political Science
Prerequisites	900142SSC Law, Society and Justice OR 900151SCC Classical and Modern Political Thought

This is an interdisciplinary course that explores human rights from a variety of perspectives, including law, history, politics, philosophy, and sociology. During the first part of this course, students will be presented with an overview of the historical trajectory of human rights as an idea, as a political force, as a growing compilation of national and international legal documents, and as a set of institutions in which a multiplicity of actors engage with some of the most pressing issues of our time. The course will continue with an examination of international and regional human rights architecture (including the UN, Council of Europe, Organization of American States, and African Union). Subsequently, students will be acquainted with the various types of human rights. In particular, the course will examine the apparent paradox that human rights addresses human beings in their 'bare individuality', as well as in their 'belonging to a group'. In the third part of the course, we will see how human rights connect with other areas, such as the prosecution of war criminals, the protection of refugees, and the fight against poverty. Finally, the course will conclude by looking at some of the cutting edge developments in the field of human rights, such as globalization, privatization, and citizenship.

900243ACC/SCI/SSC: Gastronomy: the Arts and Sciences of Cooking

Discipline	SSC, SCI, ACC
Theme	n/a
Track	n/a
Prerequisites	At least one 100-level (non-cross-listed) science course. Only for second and third year students.

Gastronomy: The Arts & Sciences of Cooking epitomizes the liberal arts and sciences philosophy, because it focuses on the applications of sciences (physics, chemistry & biology) in one of the most basic life skills, that of cooking. The course puts cooking into a broader societal and cultural perspective by using insights and theories from the social sciences and humanities. Among the topics covered are physics of heat, (micro)biology of foods, the chemistry of flavours, neuro-gastronomy, food culture and history, and food in arts. This course will not only be theoretical and discursive, but will also contain cooking exercises and lab sessions. It is offered in semester 2.

900244SSC: International Law

Discipline	SSC
Theme	Social Systems
Track	Law
Prerequisites	900142SSC Law, Society and Justice

This course provides an introduction to public international law. Students are introduced to the basic structures of international law; to some of its central topics; and by means of several ‘close ups’ they are asked to engage with topical issues of international law. The fundamental idea underlying this course, is that international law has, over the last few decades, been witness to radical changes to the relevant actors and the kinds of developments covered by international law. This means that a singular focus on the state – the primary actor in international law – no longer ‘does the job’ if the aim is to understand the international legal system. Therefore, the course emphasizes not just the role of the state, but also the rise of other actors and developments, and what these new participants and influences do to existing legal rules.

900245SSC: Constitutional and Administrative Law

Discipline	SSC
Theme	n/a
Track	Law
Prerequisites	900142SSC Law, Society and Justice

This course will introduce students to the basic principles of constitutional law and administrative law. We will study both theory and practice of constitutional and administrative law from a comparative perspective, with a focus to the jurisdictions of the Netherlands, Germany, France, the United Kingdom (UK), and the United States (US), as well as the emerging inter- and supranational constitutional dimensions of the European Union (EU) and the European Convention of Human Rights (ECHR), and their growing influence on the legal systems of the nation states (and vice versa). The fields of constitutional law and administrative law are closely related, at times even overlapping; yet also decisively distinct. In its essence, constitutional law is concerned with the organization of the of the state and its institutions, and the inter-relationship between the government and individual citizens and/or civil society. Within constitutional law, we can differentiate the two branches of institutional law and human rights protection. Administrative law concerns the governance of public bodies and the designation and control of power of administrative agencies, so as to protect citizens from governmental abuses of power or discretion. The process of judicial review, at both national and inter/supra-national levels, is crucial to both constitutional and administrative law, and will constitute a central theme throughout the course, including in students' comparative case study projects. Constitutions are much more than positive law. They are shaped by, and in turn shape, the societies which they govern, and give expression to a wealth of fundamental principles, traditions, custom, history, values, beliefs, ideologies, culture and even national identity. They are, therefore, much more than just the 'supreme law of the land' or the institutional blueprint for state government; constitutions are 'living instruments', that evolve along with the societies they govern (and that govern them), even if the written documents may remain rigid and unchanged over decades or even centuries. As a result of these diverging historical and cultural contexts, the arguably narrow focus adopted by this course on constitutionalism in Western liberal democracies of countries situated in the global North does, in fact, provide a very diverse and rich comparative sample of constitutional and administrative law systems. In this course, we will seek to study both the formal, positive law aspects of constitutional and administrative law, as well as the underlying principles and concepts that shape and help to explain them, and that guide their application in practice.

900247SSC: Principles of Private Law

Discipline	SSC
Theme	n/a
Track	Law
Prerequisites	900142SSC Law, Society and Justice

This course introduces students to the field of private law. It familiarizes them with foundational and central concepts and notions, with the historical and theoretical background, and with the overall legal and ideological context in which private law operates. Three main areas of private law receive elaborate attention: contract law, the law of torts, and property law. In addition, the course will look at a number of other topics, such as corporate law and family law, and explore a number of new approaches to private law, such as law and economics, and human rights as well as communist approaches to private law. Looking across various legal traditions, the focus of this course goes beyond that of a single country, or jurisdiction. Rather, it connects to a very old tradition whereby law developed before the modern state-legislature, through custom and jurisprudence. As such, the course traverses various civil and common-law traditions, and offers a dispersive overview that aims to allow students to understand the general features of this field of law. In addition to giving students a basic command of private law concepts and doctrines, the course will throughout connect to the cultural and ideological dimensions of private law.

900251SSC: Comparative Democracy

Discipline	SSC
Theme	Social Systems
Track	Political Science
Prerequisites	900151SCC Classical and Modern Political Thought

What is the state of democracy today? Is there anywhere a genuine democracy or has this term become devoid of meaning? Should we aspire that all societies be democratic? What do critics of democracy say, and are there alternatives to the dominant model of a liberal democracy? This course provides a comparative theoretical and empirical framework to enable students to answer these questions. The course consists of four main clusters: - Fundamentals of democracy: key concepts and debates concerning the public sphere, civil society, equality, rights, legitimacy, participation and inclusion. - Variants of democracy: comparing procedural, deliberative, republican and presidential models of democracy as well as electoral systems. - The dark side of democracy: democracy and dictatorship, ethnic conflict, genocide, colonialism, and apartheid. - Democratization and democracy promotion: models of transitions to democracy through revolution, conflict resolution and military intervention. The discussion of theories and concepts covered in this course will incorporate historical and contemporary case studies including Italy, Germany, the Soviet Union, South Africa, Rwanda, the United States, UK, China, Latin America, and the Middle East.

900252SSC: The Politics of Modernity

Discipline	SSC
Theme	Social Systems
Track	Political Science
Prerequisites	900151SCC Classical and Modern Political Thought

We live in a modern—or even post-modern—world. Yet the exact nature, beginnings, drawbacks, and benefits of modernity continue to be contested. All sides accept, however, that modernity is characterized by (1) the rise of technology, built on a mathematical or quantitative, materialist understanding of (natural) science and (2) secularization and individualism, that is to say: equal rights to protect individual freedom and individual moral autonomy, producing a contractual understanding of political legitimacy. Modernity is hence generally contrasted with (1) teleological or supernatural explanations in (natural) science and (2) teleological, theological, or hierarchical understandings of man and society. Discussion in class will revolve around two sets of intertwined questions. First: What is modernity? Is there a specific politics of modernity? If so, how does it differ from the pre-modern? And: What is the relation between modern politics, modern philosophy, and science? Are the politics of modernity the product of modern philosophy and modern science, or is their interaction more complicated? Behind these two sets of questions we find a third one: Is there a natural order? If so, does the natural order extend beyond science to morality and politics? To what extent can we know this order?

900253SSC: The Middle East Today

Discipline	SSC
Theme	Social Systems
Track	Political Science
Prerequisites	None

The goal of the course is to help students acquire basic knowledge of society and politics in the Middle East region and develop analytical perspectives through which they can interpret and understand current affairs as well as long-term developments. The course theoretical framework draws on anthropology, sociology and critical theory of the Middle East. The course will encourage students to develop a “bottom up” approach to the study of the region. Course readings offer a range of scholarship by Middle Easteners and seeks to expose students to nuanced native perspectives that pose an alternative to dominant theories on the regions’ geopolitics, political economy and international relations. The West and the rest: Orientalism vs. clash of civilization: dominant narratives, established paradigms and their critique. The Arab World: Nationalism, colonialism, postcolonialism, The Muslim World: political Islam, post-islamism, Islam and Liberalism. The Palestinian Question: The Israeli-Palestinian conflict and the Arab world. The Women Question: Women’s rights, modern family law in the ME, Arab feminism: The Arab Street: Democracy, dictatorship and civil society. The Western Muslim. Diaspora, multiculturalism, citizenship

900258HUM/SSC: Journalism

Discipline	SSC, HUM
Theme	ICC
Track	Media
Prerequisites	900153HUM Media and Communication. For second and third year students

While twenty-first century journalism demands diverse, ever-evolving skills, many of these skills remain founded on the principles of a long-standing media institution: the newspaper. With the newspaper as its organizing principle, this class will introduce students to basic concepts of journalism and skills of observation, critical thinking, and clear, precise writing required in all forms of journalism. Students will learn to gather information and present it accurately, objectively, and effectively; evaluate and criticize their own work; and develop sound news judgment to identify the elements of good journalism and recognize story angles to pursue. Using the classroom as a newsroom, students will practice their skills through readings, in-class activities and discussions, and, exercising the reportorial skepticism, independent thinking, and research methods that inform quality journalism, reporting and writing on a range of local and regional topics--such as politics, business, science, education, arts, and sports--in a range of journalistic styles, including short news reports and reviews, long-form features, and multimedia productions such as podcasts. Students will have the opportunity to collaborate with AUC's independent student newspaper, The Herring. The class will also explore the role of the so-called Fourth Estate in a functioning democracy, the way that role is shifting due to technological, economic, and cultural developments, and the ethical challenges these developments present. The semester culminates with an intensively reported enterprise project that demonstrates how journalism can serve as a paradigm for exploring the issues of the day. (This course is offered in the Spring semester.)

900262SSC: European Integration

Discipline	SSC
Theme	Social Systems
Track	Political Science, International Relations
Prerequisites	900161SSC International Relations: Theory and Practice OR 900151SCC Classical and Modern Political Thought OR 900111SSC Theme Course: Introduction to Social Policy

This course explores the origins, development and contemporary practices of and debates on European integration. In the first half of the course, we explore the history of the European Union and study the role and functioning of different European institutions, including the European Council, the European Commission, the European Parliament and the European Court of Justice. Different legislative processes are assessed and key actors in European politics are identified, such as citizens, interest groups, and political parties. The complex process of EU policy making is discussed from agenda-setting to decision making and implementation.In the second half of the course, we zoom in on selected historical and contemporary issues and debates. This part focuses in particular on economic and social integration. How was a monetary union developed and what are its consequences for the legitimacy of the European Union? Is there a European Social Model? How does the EU affect national welfare states? We also have a look at immigration and intra- EU migration and their implications for European politics. To conclude, students decide on further issues to be discussed.

900263SSC: Human Rights and Human Security

Discipline	SSC
Theme	Social Systems
Track	International Relations
Prerequisites	900161SSC International Relations Theory and Practice OR 900112SSC Theme course: Introduction to Social Systems (1)

This course examines the contribution of international human rights regimes to the protection and promotion of human security within the international community. The course is divided into three main sections: i) war; ii) youth perspectives; iii) poverty. We begin with a discussion of one of the central motivating forces in the development of international human rights standards: war. Of particular interest will be the challenge that terrorism and torture have posed to our understanding of human rights, especially civil and political rights, as well as concepts such as sovereignty and liberal democracy. The second section of the course examines human rights and human security issues from a youth perspective. Human security broadens and deepens the concept of threat, influenced by ideas such as human rights. So this section of the course will look at aspects of human security, such as economic security, personal security, community security, and political security, but from the perspective of young people. The final area of focus is poverty and global inequality. Recognized as one of the most serious threats to an individual's security, poverty and its effects are central issues on the international community's agenda. We will discuss current responses by international, transnational, national, and individual actors, allowing us to integrate themes from the two earlier sections.

900263SSC/HUM: Ethics

Discipline	SSC, HUM
Theme	n/a
Track	Philosophy
Prerequisites	Students are recommended to have completed at least two courses in their major.

What is the right thing to do? Do I really have a moral responsibility to others? Are there good reasons to act morally? Does morality have any foundation? This course in ethics will not only explore these questions in a systematic manner, but also engage with some of the most pressing problems in society today. Students will have the opportunity to develop familiarity with important ethical theories such as deontology, utilitarianism, virtue ethics and ethical relativism. They will be introduced to central philosophers such as Aristotle, Kant and Nietzsche and more modern writers such as Foot, Singer, Nussbaum, and Sandel. Topics may include but are not limited to: • Euthanasia, human experimentation and other issues in medical ethics. • Terrorism, violence, equality and the limits of justice. • Animal rights, sustainability, and eco-radicalism. • Diversity and discrimination. This course will provide students with an excellent introduction to the ethical dimension of many of the themes that they are studying at AUC. This course is offered in semester 2.

900264HUM/SSC: World Religions

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	Culture, Philosophy
Prerequisites	Students should have completed their first year.

This course introduces students to the spectrum of world's religions (drawing from shamanism and shintoism, confucianism and islam, to hinduism and buddhism, egyptian and islam, judaism and christianity, african and aztec), their historical transformations, some of their main issues and their interactions with politics. Certain issues will be combined with certain religions, thus shifting the focus each class. In order to cover the variety of religions, the different issues and the historical transformations worldwide, attention will be paid to - theories on the origins of religion - shamanism and mysticism - ancestor worship - polytheism - monotheism - monism - religion & the Axial Age - religion & the Modern Age - religion & the state - religion & conflict - religious fundamentalism - religion & nationalism - religion & concepts of harmony - religion & globalization - religion & concepts of time. - religion & identity

900264SCI/SSC: Brain and Cognition

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed., Cognition
Prerequisites	900152SCI Introduction to Biology OR 900161SCI The Human Body 1

Brain and Cognition is a 200-level SCI course cross listed with SSC. The course counts as a 300-level SCI course for SSC students. In this course students will become familiar with basic key concepts in (cognitive) neuroscience. The goal of this course is to deepen understanding of the neurobiology of the mind and the aetiology of mental disorders. Students will be encouraged to critically analyse the impact of neurobiology and (psychiatric) brain disorders on society. To most of us, the mind constitutes as the very essence of our identity. However, where to draw the line between normal and abnormal, well and ill, an eccentric personality and a schizotypic one, an active, creative fast-thinking personality and ADHD? This course will explore the neurobiology of the mind. First, students will be provided with a concise overview of the structure and function of the human brain and will be introduced to the basics of neural communication (electrical signalling and synaptic transmission). Next, the focus will be on key concepts in cognitive neuroscience such as perception, memory, attention, emotion and consciousness. A selection of relevant topics will be covered in depth (partly by students' presentations); possibilities include: altered states of consciousness, neurobiology of attraction and partner selection, creativity and mental illness, the gendered brain, the moral brain, free will, empathy and mirror neurons, intelligence, neurobiology of belief, superstition and religion, brain-machine interfaces, cognitive enhancers, mind control (this list is by no means exhaustive). An important focus of this course is the aetiology of mental disorders, such as ADHD, depression, addiction, autism and schizophrenia, with special attention for the nature-nurture discussion. Students will be challenged to critically reflect on the boundaries between normality and abnormality and the implications for society.

900269HUM/SSC: Democracy in Modern History

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	History, Political Science
Prerequisites	completed 1st year Recommended: Early to Modern History OR Political Thought

Democracy slowly has become more and more popular from around 1800. Since then this mode of government and the word ‘democracy’ itself has by leaps and bounds found acceptance in Europe as well as in other parts of the world. For many democracy has become the standard or the rule, while other modes of government are seen as deviations or exceptions. But within the world of democracies there are many differences and still there exist alternatives for democracy. How and why did the democratic evolution occurred in Europe and in other parts of the world? What have been and still are the biggest challenges for democracy? What different models of democracy have been experimented with? These questions will be used as a starting point to critically analyse the meaning and development of democracy in the time of the American Revolution and French Revolution, the nineteenth-century struggle between monarchy and democracy, the interwar years when dictatorships rose and after the Second World War and the end of the Cold War when democracy became dominant.

900269SSC: Peace Lab

Discipline	SSC
Theme	Social Systems
Track	International Relations
Prerequisites	900263SSC Human Rights and Human Security

This course provides field training and experience in hands-on qualitative research, as well as experience with methodologies in the peace-building, peace-making and peace-keeping fields. It is a unique opportunity for students to compare and contrast theory and practice. The course is divided into three main sections.Section One: one week, including lectures, readings and trip preparation. Students will learn about the historical and political background of the Balkans, and specifically, Kosovo. This includes theories regarding post-conflict areas in general. Section Two: 10-day field trip to Kosovo. Students will visit various UN organizations and NGOs, discussing postwar peace building, local cultures of human rights, formation of a nation state, youth participation, and other issues. This can be viewed as an invaluable experience for students to see, hear, and understand for themselves a post-conflict society and the many threads of peace building from a human rights perspective—in the field. Section Three: one week, including follow-up and final assignments. This course is limited to 20 students.

900271HUM/SSC: Gender and Sexuality

Discipline	SSC, HUM
Theme	Cities and Cultures
Track	Anthropology, Sociology, Culture
Prerequisites	a 100 level course on the Culture, Anthropology, or Sociology track

The study of gender and sexuality has constituted a crucial strand of cultural studies from the inception of the discipline through to the present day. This course on gender and sexuality studies traces trajectories of the field as they have emerged over time – from feminist theory to queer theory to trans studies and beyond. The course is interdisciplinary in nature, integrating a combination of both theoretical readings/primary texts, and the analysis of relevant objects within their soci-political context. Special emphasis is placed on the discussion of the social construction of sex and gender; the politics of identity and inequality; and the intersection of gender and sexuality with other markers of difference including race, religion, nationality, andclass.

900271SCI/SSC: Nutrition and Health

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Health
Prerequisites	900171SCI Introduction to Public Health

Nutrition is the essence of life and plays a central role in the health of individuals and populations. Therefore, nutrition by definition requires an interdisciplinary perspective drawing on fields as diverse as anthropology, biology, chemistry, epidemiology and economics. The course will emphasize an interdisciplinary perspective in understanding nutrition and related (public) health consequences. The nutrition-related biological mechanisms will be used as a basis to discuss how culture, society and economic factors relate to (public) health. Students will also be expected to discuss the impact of changing dietary patterns on public health, including both chronic disease and under-nutrition. The emphasis of the course will be on (guided) student led learning. In the last part of the course, every student will formulate a research question and write a review of a nutrition-related topic using both epidemiological as well as biological information.

900272HUM/SSC: Culture Lab

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	Culture, Anthropology
Prerequisites	The Global Identity Experience Introduction to Cultural Analysis OR Anthropological Thought

This course takes the annual European City of Culture festival, and one of its host cities (in June 2016, Paphos) as its object of study, and deploys grounded multi- and interdisciplinary methodologies, to enable students to explore and analyse its impacts, implications and imaginaries. In line with cultural analysis approaches whereby 'No concept is meaningful … unless it helps us to understand the object better on its own terms'(Bal, in Bowman 2003), it deploys grounded multi- and interdisciplinary methodologies including fieldwork approaches from cultural anthropology, critical discourse analysis and related fields such as visual analysis, and participatory approaches to theories of art and culture.' It therefore providesproject-basedandself-directedlearningaboutcultureandculturalfestivals, Europeanide ntity-buildingandtheroleofculturalinterventionsinaddressingissuesforcitiesandcitizenswithinEur opeancontexts. Studentsengagewithculturaltheoriesandpractices, study illustrative case studies, and exploreandpracticeusingculturalanthropologymethodologies. They learnaboutand intervene in bothrealandvirtualculturalmanifestationsrelatingto the city, the festival, its audiences and the cultures in which they participate and co-create. T

900272SCI/SSC: International Public Health

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Health
Prerequisites	900171SCI Introduction to Public Health

This course explores the field of international health within the broader context of health and development. Basic issues related to major diseases and conditions in developing countries, including international health organisations and their influence on approaches to prevention, treatment and control, will be reviewed from a cross-cultural perspective. Topics covered during the course will be; culture, behaviour and health, reproductive health, infectious diseases, nutrition, chronic diseases, mental health, environmental health, health systems, health and economy, and globalization. Many of these health issues will be discussed using a human rights approach and/or the millennium goals. Part of the course will be devoted to creating a country profile regarding health status and evaluating existing health promotion or prevention programs.

900273SCI/SSC: Epidemiology

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Health
Prerequisites	900171SCI Introduction to Public Health AND 900121ACC Basic Research Methods and Statistics 1

The objective of the course is to learn and apply epidemiological methods to determine exposure/disease relationships. Students will study risk factors affecting health conditions and will be a provided with a foundation in intervention strategies (preventive medicine). This discipline brings together the biological (medicine) and social sciences. Topics include measures and statistical terminology; observational studies; interventional studies; and public health surveillance. The course will also examine epidemiological study designs and measures of disease risk used in etiological epidemiology and health services research.

900273SSC: Inequality and Poverty

Discipline	SSC
Theme	Social Systems
Track	Sociology
Prerequisites	Any 100 level Social Sciences course in the Social Systems theme

The focus of the course is primarily on inequality and poverty in Western developed countries with examples drawn from the United States, European, Asian, and Latin American countries. While equality before the law regardless of gender, race, or other personal characteristics has been firmly established in most western countries by now, inequality in terms of wealth and income has actually increased over the past decades. The types of questions that will be addressed in this ocurse are: Where do these persistent inequalities come from? Do people of different origins and backgrounds really face equal opportunities? Is there still poverty in western countries? What does poverty mean for people?

900274SSC/HUM: Sociology and the Other

Discipline	SSC, HUM
Theme	Social Systems
Track	Culture, Sociology
Prerequisites	900171SSC Classical and Modern Sociological Thought

One of the classic subjects of sociology is the relationship between norm and exception or deviation. Entire fields of knowledge from medicine to psychiatry to criminology emerged from practices of identifying, studying and categorizing normative exceptions – the ill, the mentally disabled, the socially pathological to mention few examples. In this course practices of differentiation, and the desire to expel or contain otherness through scientific and governmental techniques are explored. Paying a tribute to philosophical writings on the concept of the Other, the course focuses on the disciplinary and discursive constructions of sexual, moral, social, medical, mental and political difference. Readings in relatively new social science fields such as queer studies and disability studies are also covered to introduce new perspectives on this classic theme.

900275SSC/HUM: Nations, Nationalism and Modernity

Discipline	SSC, HUM
Theme	Social Systems
Track	History, Sociology
Prerequisites	900171SCC Classical and Modern Sociological Thought

The course examines the nature of national identity and nationalism. We will first survey some of the most influential statements on the rise of nation-states and the making of nations in the modern world. Our focus will be on the conceptual debate between “constructivists” and “perennialists.” We will then proceed to explore in more detail the interrelations between nationalism and citizenship, ethnicity and nationhood, as well as between class, religion, gender, sexuality and national identity in a historical and comparative perspective. Specific case studies will allow us to reexamine the drama of the Holocaust, the imperial legacies in post-colonial nation building, and the paradoxes of inclusion and exclusion in contemporary America and Europe. Finally, we will critically examine the prediction that humanity is about to enter the era of “the end of nationalism” and explore the sources of the continuing attraction of the idea of “nationhood.”

900276SSC: Contemporary Sociological Thought

Discipline	SSC
Theme	Social Systems
Track	Sociology
Prerequisites	900171SCC Classical and Modern Sociological Thought

The American sociologist C. Wright Mills once described the distinctively sociological perspective on the world as “the sociological imagination.” What kind of perspective is this? What are its implications for academic research, public debate, policy-making and our personal lives? This course addresses these questions by exploring some of the key developments and debates in contemporary sociological theory. While surveying the major contributions by Pierre Bourdieu, Michel Foucault, Jürgen Habermas, Immanuel Wallerstein, Zygmunt Bauman and other important theorists, we will discuss both the continuing relevance of classical sociological tradition and more recent path-breaking insights into the nature of social inequality and power relations in society. We will examine these phenomena by focusing on such significant and often controversial fields of inquiry as development and globalization, education and socialization, crime and surveillance, religion and the public sphere, as well as the politics of race, gender, and sexuality. Key conceptual dilemmas of sociological knowledge will be considered in the context of “the 1968 revolution,” “the neoliberal (counter-)revolution,” and the post-9/11 world.

900281SSC/HUM: Community and Society in a Globalised World

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	Culture, Anthropology
Prerequisites	900181SSC Classical and Modern Anthropological Thought

It is nowadays commonplace to argue that 'globalization' affects people's social lives. This argument is founded on the observation that social contact increasingly stretches beyond traditional community boundaries, dissolving old configurations while at the same time creating new ones. But how does this work in practice, and how do individual persons respond to the challenges that globalization presents them with? Key to the course is to equip students with approaches, (theoretical) ideas and skills to untangle the complexities of this. The course focuses on globalization from below, i.e. on local actors and their social practices. Hence the course is critical of 'grand' views stressing the universality and predictability of globalizing forces. To unpack the complexities of people’s social lives under globalization, the course explores particular linkages between the 'local' and the 'global'. In this exploration, a distinction is made between social, economic and cultural aspects of globalization. To make this more concrete, the course focuses on three broad themes: i) migration and transnational life, ii) global circulation of goods, iii) cultural globalization. During lectures, key ideas and thinkers in these themes are introduced, followed by empirical case studies wherein these are applied on particular actors, products and ideas. Central throughout is what this all means for common people, and how they respond to this in different ways.

900283SSCH: Ethnographic Research for 21st Century

Discipline	SSC
Theme	Social Systems
Track	Anthropology, Sociology
Prerequisites	None, but enthusiasm and commitment to conducting qualitative and particularly ethnographic research.

This course adds methodological substance to the anthropology track and prepares students for fieldwork in their 3rd year. It explores ways in which anthropologists have adapted and innovated ethnographic approaches, methods and questions to the challenges of the modern world at the dawn of the third millennium. Focused on specific instances of ethnographic fieldwork, the course addresses such topics as the dialectics of self and other, the multi-sited nature of fieldwork, changing conceptions of ethics, and the challenges of modernity, globalization, and transnationalism in their many guises for anthropological field research. Students willbe exposed to interpretive theory, and several intellectual traditions that constitute this field of research including participatory action research, sense making, symbolic interactionism, ethnography of speaking, and autoethnography. Exemplars of qualitative research that illustrate these particular theoretical traditions as well as key issues such as ethics, ethnography online, and qualitative quality will be examined. As both the philosophies and methods of interpretive research, will be covered, a significant amount of reading and research is involved in this course.

900291SSC: Developmental Psychology

Discipline	SSC
Theme	ICC
Track	Cognition
Prerequisites	900192SSC Psychology AND 900121ACC BRMS I

This course will provide students with an overview of current developments in Developmental Psychology. The student will have acquired a solid introductory knowledge base of the current state of Developmental Psychology as a science. Also, the student will understand and be able to critique the main developmental psychological theories. Also, the student will have acquired a basic understanding of the Ecological models of Human Development Topics include: • The Study of Development • Nature/Nurture & Evolution • Prenatal • Infancy • Early Childhood • Middle Childhood • Adolescence

900292SSC: Cognitive Psychology

Discipline	SSC
Theme	ICC
Track	Cognition
Prerequisites	900192SSC Psychology

This course is about the scientific study of cognition – the mental processes that are involved in perception, attention, memory, language, problem solving, reasoning, and decision making. Apart from outlining what we currently know about these topics and how they have led to particular theories about what is going on in our mind, emphasis will also be placed on how we have obtained this understanding. As part of this, the course provides opportunity to get hands-on experience with some classic and contemporary cognitive psychology experiments. Another important aspect of the course is to demonstrate and discuss the relationship between cognitive theory and everyday experience. Main topics that will be discussed are: perception (e.g., representations, signal detection, subliminal perception, object/face recognition, bottom-up and top-down processing); attention (e.g., vigilance, attention capture, early and late selection, how emotion affects attention); short term and working memory (e.g., limited capacity, interference, serial position effects, central executive, dual task performance); learning and remembering (e.g., depth of processing, implicit learning, transfer appropriate processing, false memories); knowing (e.g., categorisation, semantic networks, knowledge representation, priming); language (e.g., semantic integration, context effects); problem solving (e.g., information processing approach, expertise, creativity, effects of training); reasoning and decision making (deductive reasoning, heuristics, risk assessment, stereotypes, medical diagnosis, neuroeconomics).

900293SSC: Cognition Lab

Discipline	SSC
Theme	ICC
Track	Cognition
Prerequisites	900192SCC Psychology AND 900221ACC BRMS II

This lab takes a ‘brain and development’ approach to cognition’, and will focus on the interdisciplinary field of Educational Neuroscience. Educational neuroscience is an emerging field of research that explores the interactions between cognitive neuroscience and education. Researchers in educational neuroscience investigate the learning brain. They examine the normal development, but also focus on development at risk due to biological, psychological and/or social factors. Key research topics include the (neural underpinnings of the) development of reading and numerical skills, social cognition and self-control, but also their associated difficulties as expressed in learning disorders and behavorial disorders. It is however of vital importance to relate the findings of these studies to the context of an individual’s learning: the social and cultural context (e.g., parents, teachers, friends, the neighborhood). The main challenge in the field of educational neuroscience is to build bridges between cognitive neuroscience and education, in order to foster the study of mind, brain and education to further our understanding of the learning brain. This knowledge is vital for the development of interventions that promote learning. The lecturers in this course will bridge disciplinary boundaries. Topics discussed will include self-control, social cognition, reading and mathematics, and talent development. The course offers training in integrative thinking and critical evaluation of the value of integrating different approaches to each topic.

900295SSC: Perception and Attention

Discipline	SSC
Theme	ICC
Track	Cognition
Prerequisites	900292SSC Cognitive Psychology

This course introduces you to the problems of perception and attention. Why is perception a problem? Seemingly without effort, our brain constructs a rich world of visual, auditory, and other sensory impressions for us. But how are these mental impressions created? How do they relate to the physical world out there? In what ways can we study this subjective experience? And what happens when perception goes wrong? Furthermore, from this rich world entering our senses, we only appear to be conscious of a small part at any one time. What do we attend to and what do we ignore? How does the brain make this election? Can we do multiple things at the same time? Is attention the same as awareness or not? This course teaches you to the scientific way of looking at perception and attention. We start with visual perception, from how the eye works to how brain damage changes perception. We treat questions such as, how does the brain recognize objects? How do we see color, or motion? Can we see without consciousness? And are illusions trying to tell us that something is wrong in our brain? Another part deals with auditory perception. How do you know whether sounds come from above or below, because they enter through the same ears, right? How do you know who is talking, and what they are saying? Are there any auditory illusions? And does what we see affect what we hear? You will learn about the scientific methods and theories that have tried to answer these questions, as well as the relationship to everyday experience. The second part focuses on attention. Attention appears to be driven in two ways: By salient stimuli (like ambulances), and internally, by “ourselves”. What does “ourselves” mean here? Our free will, our previous experiences, our memories? What happens when attention goes wrong, like in spatial hemineglect? This part teaches you about the major theories of attention, as well as the behavioural and neuroscientific methods to investigate it.

900296SSC: Knowledge of Learners and Learning

Discipline	SSC
Theme	ICC
Track	Cognition
Prerequisites	None

This course aims to help students to gain a theoretical understanding of learners – young adolescents in particular – their development and of individual and cultural differences as they occur in a dynamic and globalized world. Questions that are addressed are: “How do people learn and how can this learning be optimized?”, “How do young people develop during early adolescence and what are the consequences for their functioning at school?”, and “How can young learners be motivated?”. Various theories from the social sciences are used, e.g. cognitive psychology, developmental psychology, motivation, theories on learning and learning problems. It provides an introduction to learning sciences in connection to neuro science. Students work on assignments in which they combine theory with data collected during their first visits to schools, small experiments in psychology labs, etc. These assignments are reported in papers or presentations and form the basis for the assessment of the course in combination with written exams.

900297SSC: Knowledge of Teaching

Discipline	SSC
Theme	ICC
Track	Cognition
Prerequisites	900296SSC Knowledge of Learners and Learning

This course aims to prepare student-teachers for actual teaching at their internships school in the following semester. The first topic that is covered is classroom management and building a positive social climate in the classroom. Social psychological theories are used to help students understand the dynamics in classroom interaction (teacher-students; student-student). Students explore and train various classroom management techniques. The second topic pertains to designing, planning and delivering teaching and learning tasks and to assessing learning outcomes. Theories on instruction and assessment are used to help students understand the basics of educational design at course and curriculum level. Students carry out exercises in designing teaching and learning situations (including the use of ICT in education), tasks and assessments. Special attention is paid to student-centered approaches to teaching and learning in and to ensuring equitable and inclusive learning environments that encourage each learner to meet high standards and rigorous learning goals, i.e. taking diversity into account. Assessment takes the form of a number of assignments in which theory is combined with practical assignments, including observation tasks. These assignments are reported in papers or presentations and form the basis for the assessment of the course in combination with written exams.

900301CIC: Capstone (12 ECTS)

Discipline	SSC, SCI, HUM
Theme	n/a
Track	n/a
Prerequisites	Third Year

N/a

900311SCI: Theme course ECS: a case study

Discipline	SSC, SCI
Theme	ECS
Track	Theme
Prerequisites	200-level courses related to this theme; exclusively for 300 level students

Since 70% of all CO2 emissions are related to energy conversion processes, energy policy and climate policy are intimately related. In the first part of the course we will organize several (guest) lectures that focus on the causes and nature of the changing climate system and the impacts of these changes on human welfare. Special attention will be on uncertainties and controversies in the climate debate. Students will train their critical thinking skills in assessing the validity of the many conflicting arguments that play a role in this heated debate. In the second part of this course we organize lectures about adaptation to, and mitigation of climate change. Examples of such mitigation options include energy efficient cars and renewable energy technologies. Furthermore, students will work in project teams and apply multicriteria analysis (MCA) to systematically analyze the pros and cons of these and other solutions. In a workshop, the ins and outs of MCA will be trained. The case studies may vary from year to year. Examples include adaptation in developing countries, modeling the energy transition, modeling greenhouse gas emissions from biofuel production and geo-engineering.

900311SSC: Theme course Globalisation: Global Economics

Discipline	SSC
Theme	Social Systems
Track	Theme
Prerequisites	Any 100-level theme course (Fundamentals of Micro and Macro-Economics is highly recommended for this course as it will assume prior knowledge of economic tools and methods. Limited to third year students)

In this course, globalisation as both an empirical phenomenon and explanatory theory will be discussed with special attention to the economic aspect. Students are expected to gain an in-depth understanding of the different effects of globalization at both the national and international level, drawing on research and theories from the seven disciplines of the Social Systems theme: anthropology, environmental economics and policy, economics, law, international relations, political science, and sociology. Topics covered may include: economic institutions, financial regulation, emerging markets.

900312SSC: Theme course Globalisation: Global Politics

Discipline	SSC
Theme	Social Systems
Track	Theme
Prerequisites	Any 100-level theme course (limited to third year students).

In this advanced course students address questions revolving around the theme of global politic, citizens and non-citizens power, and new paradigms for activism and democratic struggles in the 21st century. The course this year will offer the students a unique opportunity to engage in first hand activism and design the third term of the semester on their own. Students will design “open class” sessions with international activists. They will conduct group projects in collaboration with various organisations following the lines of the course themes and set up their own projects in the campus or at any location they choose in the city. This activity will take place alongside intense and in depth sessions of in-class close-reading and discussion dedicated to Hannah Arednt’s the Human Condition (1958). Students will reflect on the relevance of Arendt’s philosophy of action to today’s world. Based on their experience with “Network Democracy” and the close-reading sessions students write a final paper related to the theme of the course.

900313SSC: Theme course Globalisation: Global Culture

Discipline	SSC
Theme	Social Systems
Track	Theme
Prerequisites	Any 100-level theme course

It has become a truism that today's world is rapidly 'globalizing', i.e. that the webs of interdependencies between actors are quickly expanding across the globe and that they are becoming increasingly complex. This seems particularly true for economic/material aspects of globalization: think of multi-national companies and their central role in structuring worldwide trade, or how global retail networks have dramatically changed consumption practices (supermarkets/malls), or how international migration flows support transnational entrepreneurship. Key questions that anthropologists studying these phenomena address are: how do actors working under conditions of (economic) globalization make sense of their situation, how do they act on these cultural understandings, and how do they organize their everyday lives in a rapidly changing world (livelihoods)? This theme course equips students with essential conceptual and methodological tools to investigate such important questions in-depth. Particular attention will be given to common, non-elite actors, and how economic globalization structures their sociocultural practices; the course thus focuses on how globalization is structured 'from below'. Hence the course is critical of 'grand' narratives stressing the universality and predictability of globalizing forces, instead showing how diversity and heterogeneity are key to economic globalization. In more detail, the course will focus on three important approaches in the anthropological study of economic globalization. Firstly, it will be considered how rationalization of production and trade have promoted the rise and spread of a global capitalism, and debates whether this has led to cultural homogenization. A high point of global capitalism are 'hyperspaces' such as shopping malls and supermarkets. It is thought that these plays a major role in the rise of middle-class identities, hence figuring in how people think about themselves and other people. Secondly, it will be regarded how global capitalism creates new inequalities between actors: in global value chains, wealth in the global South is appropriated and concentrated in the hands of a global elite in Global cities. These new global inequalities have profound consequences on local interpretations of labour relations (notably pertaining to gender and kinship ties), which is explored by looking at new global exports from the South. Thirdly, whereas the aforementioned approaches emphasize how cultural change results from/are shaped by external structural conditions of economic globalization, a major question remains to what extent cultural change is internal to the webs of interdependencies in which actors operate. In other words, to what extent does agency drive processes of cultural heterogenization (sometimes called 'creolization') which anthropologists noted in many parts of the world? This point is highlighted by looking at transnational migrants. After completion of the course, students: • will have gained an insight in the diversity and variety of cultural forms under economic globalization; • will be familiar with key anthropological concepts and debates in (economic) globalization; • can meaningfully discuss structure-based and actor-based models of globalization; • can apply these ideas in a field research project; • will have gained practical experience with research methods to study globalization (anthropological fieldwork).

900314SCI/SSC: Theme course HW: Lifestyle and Disease

Discipline	SSC, SCI
Theme	Health and Well-being
Track	Theme
Prerequisites	200-level courses related to this theme, preferably Epidemiology OR Nutrition and Health; exclusively for 300 level students

Diseases such as cancer, cardiovascular diseases, diabetes mellitus and obesity contribute largely to the global burden of disease. Important risk factors of these diseases are within the domain of lifestyle; scientific evidence shows a clear relation with dietary behaviours and physical activity. The strong association with lifestyle implicates that the majority of these diseases are preventable. A planned approach of disease prevention and health promotion is desirable to develop effective interventions and public health solutions. This approach entails a thorough process from analysing the public health problem, to identifying the lifestyle factors that cause the problem, to assessing the behavioural determinants of the relevant behaviours to selecting suitable intervention strategies and evaluation of the entire process.

900322HUM/SSC: Literature of Social Exclusion

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	Literature, Sociology
Prerequisites	900161HUM Introduction to Literary and Cultural Theory AND one 200-level course from the Literature track OR 900274SSC Sociology of the Other

This seminar explores literary engagements with the topic of social exclusion. In doing so, it draws on sociological and anthropological theories of globalization, transculturality, cosmopolitanism, social conflict and group membership. At the same time, close examination of literary texts uncovers that theoretical concepts sometimes fail to account for the intricacies of individual experience. The literary texts explored in this seminar portray diverse experiences of exclusion, stigmatization and discrimination but in some cases also of emancipation and agency. The seminar engages with diverse areas of human experience such as diaspora and exile, war and political conflict, hierarchies of caste, class, race and gender, anti- and postcolonialism, new poverty and HIV/Aids. Literary texts, however, are not read as mere illustrations of ‘real life’ but also as aesthetic specimens in their own right. In addition to this, the seminar explores the aestheticization of social exclusion (for example in the stylized ‘ghetto culture’ prevalent in hip hop music) and its strategic uses in what Graham Huggan has called the “marketing of the margins”.

900322SSC: Global Environmental Governance

Discipline	SSC
Theme	Social Systems
Track	Law, International Relations, Envir. Econ. (and policy)
Prerequisites	Any 200-level Social Sciences course in the Social Systems theme.

This course critically examines the past, present and future of global environmental governance, evaluates the effectiveness of specific case study regimes, assesses needs and options for reform and future innovations. The course explores dimensions of key contemporary global environmental problems and how these are addressed in law and policy approaches at various levels ranging from the global scale down to the regional (European), national and even local contexts. The first part of the course will provide an introduction to the burgeoning field of “global environmental governance”, its history, key actors and tools. It will address questions such as: What makes certain environmental issues global? How is environment affected by globalization and trade? Do global problems require global solutions? What distinguishes collective action problems at national or regional level from the global level? How do we make global environmental policy, and how do we make it work? How are the actors and the machinery of global environmental ‘governance’ changing, and does this replace or compliment traditional international environmental law and policy? Other major themes include the emergence of global environmental law and policy responses (regimes); key concepts, principles, practices and theories; actors and intergovernmental organizations (esp. UN/UNEP); multilateral environmental treaties: negotiation, compliance, enforcement and effectiveness; emerging role of non-state agents/private actors (e.g. international organizations; certification bodies, business, NGOs, consumers, etc.); voluntary standards and market-based instruments for GEG; global trade and eco-protectionism, North/South dimension, treaty congestion and regime fragmentation, etc. However, the main focus of this course will be on detailed case studies of key global environmental governance regimes, such as: climate change, geo-engineering, biodiversity, fisheries, forestry, air pollution, ozone layer depletion, sustainable development, biosafety and biotechnology/GMOs, food safety, toxic wastes and chemicals, nuclear energy, water pollution and water scarcity, human rights and environment, environmental citizenship and participation, global trade and environment, etc. The course will involve active and dynamic participation by students in researching and presenting case studies, and in weekly in-depth and comparative discussions of various specific global environmental governance regimes. Through both individual and team work, students will acquire and share valuable comparative perspectives by synthesizing and comparing their individual research of (sub)national, EU, and global level public policy actions and private governance initiatives. By analyzing the collective outcomes of all these in-depth multilevel environmental comparative case studies, we will draw conclusions about cross-cutting issues, common trends, lessons, failures and weaknesses, successes and strengths, and will consider future directions for global environmental governance.

900323ACC/SSC/SCI: Advanced Research Methods and Statistics

Discipline	SSC, SCI, ACC
Theme	n/a
Track	n/a
Prerequisites	900121ACC BRMS I or 900128ACC Statistics for Sciences; 900221ACC BRMS II is strongly recommended

This course will cover a series of statistical methods for more complex research designs than those covered in BRMS I and BRMS II or Statistics for Sciences. We will work extensively with real data and learn how to analyze and interpret data at an advanced level. The course covers the following topics: - review of multiple linear regression and ANOVA, - logistic regression, - MANOVA and MANCOVA, - Principle Components Analysis, - Discriminant Analysis, - Analysis of Repeated Measures, - Categorical Data Analysis, and, if time allows, - Time Series. These advanced methods will be an essential preparation for those who are planning to do a master's program in applied natural science or one of the quantitative social sciences such as Psychology, Economics, Sociology, Political Science, or Health Science. This course is offered in semester 2.

900323HUM/SSC: Political Shakespeare

Discipline	SSC, HUM
Theme	Cities and Cultures
Track	Literature
Prerequisites	900161HUM Introduction to Literary & Cultural Theory, OR 900154ACC/HUM Big Books, OR 900163HUM Research Methods in History, OR 9000151SCC Classical and Modern Political Thought.

Shakespeare lived in times of turbulent cultural and political change. In this historical context, it is not surprising that Shakespeare's plays are saturated with political themes. In his 'history plays,' Roman plays, and tragedies we encounter a range of monarchs, statesmen, and citizens, who are depicted in situations that challenge their most deeply held beliefs and which often throw their identity as social and political actors into crisis. Taken together these plays constitute a profound inquiry into such issues as the divine right of kings, republican virtue and citizenship, the relationship between church and state, and the nature of the political life. What is more, the early-modern theatre in which Shakespeare was such a leading figure was itself deeply politicized as a social institution. The role of the theatre in early-modern urban culture, and in relation to the Elizabethan and Jacobean courts, makes for a vibrant cultural context in which each play is saturated with political meaning and resonance. In this course, we will study the political dimensions of Shakespeare's work by bringing it into dialogue with insights from political theory, intellectual history, and comparative literature. We will address questions such as: How did Shakespeare think about kingship and statesmanship between ca. 1580 and 1620? By what kind of thinking about (civic) virtue and citizenship was his work informed? How did he respond to new historical, political, and intellectual developments in the course of his long career as a playwright? How do his plays problematise or intervene in the many political debates of the period – an important era of transition in which nothing seemed certain and everything was held up for debate? And, last but not least, are the dilemma's that confront Shakespeare's characters still relevant for readers today and, if so, how? Plays to be read in this course may include: Shakespeare's Coriolanus, The Merchant of Venice, Romeo and Juliet, Richard II, Henry IV (Part 1), Henry V, Richard III, and The Tempest. Furthermore, students are expected to read the following texts in political theory and intellectual history: Machiavelli, The Prince (1513); Thomas More, Utopia (1516); Erasmus, Education of a Christian Prince (1516); James VI/I, The Trew Law of Free Monarchies (1598); Arthur Lovejoy, The Great Chain of Being (1936); Ernst Kantorowicz, The King's Two Bodies (1957).

900331SSC: Advanced Micro-Economics

Discipline	SSC
Theme	Social Systems
Track	Economics
Prerequisites	900237SSC Fundamentals of Macro-Economics AND 900236SSC Fundamentals of Micro-Economics AND 900125ACC Calculus OR 900124ACC/SCI Calculus for Economics

This course will develop students' understanding of the theory and methods of microeconomics. Theoretical topics covered include decision-making by firms in monopolistic and oligopolistic markets and the implications for public policy including competition law. In particular, we will discuss how a monopoly may price discriminate, what quality it will supply, and its role in upstreamdownstream settings. With respect to oligopolies, we will cover different types of rivalry, (tacit) collusion, entry and exit, product differentiation, moral hazard, and adverse selection. In addition, you will be introduced to the theory of auctions. Methods discussed include game theory, experimental economics, and econometrics. By the end of the course, the student will: • be able to apply micro-economic tools to analyze decision-making by firms in monopolistic and oligopolistic markets; • be able to evaluate public economic policy including competition law aimed at correcting markets failures in imperfectly competitive markets; • have acquired basic knowledge about methods commonly used in micro-economic research including game theory, experimental economics, and econometrics.

900331SSC: Advanced Macro-Economics

Discipline	SSC
Theme	Social Systems
Track	Economics
Prerequisites	900237SSC Fundamentals of Macro-Economics AND 900236SSC Fundamentals of Micro-Economics AND 900125 ACC Calculus OR 900124ACC/SCI Calculus for Economics

This course is concerned with the main research questions of macroeconomics: What are the sources of economic growth? What policies promote growth? What causes business cycles? What are the effects of monetary and fiscal policy? Can these policies be used to fight recessions? If so, how should they be designed? Many of these questions were already examined in "Fundamentals of Micro-and Macroeconomics". Here we will study these questions at a more advanced level, with a stronger focus on the methods that state-of-the-art macroeconomic research uses to provide answers to these questions. Students will have acquired a solid understanding of the methods and theories of modern macroeconomics, their strengths and limitations in relationship to other disciplines, and how they translate into policy advice offered by macroeconomics. Students will be in a position to critically evaluate what macroeconomics in its current state can (and cannot yet) contribute to solving some of the big economic problems facing society.

900332SSC: The Promotion and Regulation of the Economy

Discipline	SSC
Theme	Social Systems
Track	Economics
Prerequisites	900237SSC Fundamentals of Macro-Economics AND 900236SSC Fundamentals of Micro-Economics

This course studies public policy aimed at industries where the competitive forces fail to deliver efficient outcomes. In particular, the course focuses on sources of market failure such as economies of scale, barriers to entry, collusion, abuse of dominant position and weak property rights. After introducing the basic notion of market failure the course takes the student to a tour on public policies to alleviate its effects on consumer welfare. The course first covers key antitrust issues such as horizontal and vertical mergers, collusion and exclusionary practices such as predation, exclusive dealing, loyalty discounts, rebates, tying and bundling etc. Then, the course moves into the discussion of the process of deregulation, liberalization and re-regulation of traditionally monopolized industries such as electricity, natural gas and telecommunications. Issues such as access pricing to infrastructures and the role of uncertainty and forward contracts are studied. The course ends with the important topic of R&D;, weak property rights and the role of patents and firm cooperation.

900334SSC: Market Failure, Institutions and Economic policy

Discipline	SSC
Theme	Social Systems
Track	Economics
Prerequisites	900237SSC Fundamentals of Macro-Economics AND 900236SSC Fundamentals of Micro-Economics

The course discusses the general micro-economic theory of market failures, essentially asymmetric information and limitations to the ability to commit to promises, and of the institutions to cope with these market failures, for example contract law, property rights, reputations, credit rating agencies, the state monopoly of violence, democracy, and the constitution. Institutions emerge as an attempt to minimize transaction cost, or equivalently, to internalize externalities. The course offers a detailed analysis of the basic forms of transaction cost: asymmetric information (bargaining, moral hazard, adverse selection) and commitment problems (commitment in time, commitment to community = free riding). We analyze when the market creates the necessary institutions itself (private law) and when political coordination is required (public law). A wide number of practical institutions are discussed, for example social security, cities, financial markets, principal agent problems in bureaucracies. The aim is to show that all these market failures and institutions to cope with them can be explained by a small number of mechanisms that show up time and again in different contexts. The course stresses the links of economics to sociology, law, history and political science, and to a lesser extent, to biology and psychology.

900342HUM/SSC: Photograph as Socio-Political Document

Discipline	SSC, HUM
Theme	Cities and Cultures
Track	Art History, Culture, Anthropology
Prerequisites	For HUM, 900261HUM Introduction to Visual Methodologies. For SSC, 900161HUM Introduction to Literary and Cultural Theory or any 200-level Humanities course. For SCI, 900161HUM Introduction to Literary and Cultural Theory or any 200-level Humanities course.

The photograph as proof of what has been (according to Roland Barthes) is inextricably tied to claims of truth. What some viewers might see as merely an art object has had the power to change labor laws (photographs of children in factories), label people and objects (anthropology and natural science), prompt the establishment of national parks (photographs from expeditions in the American west), garnered support for environmental activists (images of Earth taken from space), and provoked debates on abortion (image of fetus on the cover of Life magazine) to name a few examples. This course will examine the history of photographs as they have functioned in the scientist's laboratory, the courtroom, and mass media. We will question the assumed veracity of the photograph and discuss how the photograph has been used as a device in argumentation. Methods will include visual analysis, which will help train students from various disciplines in the interpretation of images. We will look at texts from various fields in the sciences and social sciences and discuss photographs by examining the social, historical, and political contexts in which they were created, addressing how images influence the formation of knowledge.

900342SSC: International Economic Law

Discipline	SSC
Theme	Social Systems
Track	Law
Prerequisites	900241SSC Comparative Law OR 900245SSC Constitutional and Administrative Law

This course is designed to provide students with the fundamentals of international law and international relations concerning global economic affairs. The course is mainly structured around the Bretton Woods system (i.e. the IMF, the WTO and the World Bank), thus emphasizing the current legal framework within which these international organizations function. While IEL discipline comprises many fields, this course will provide an essential understanding of international monetary law, international trade law, investment law and global financial regulation. There will also be discussed the impact of the global economic crisis of 2007 on these particular institutions and, thus, potential reforms. Students successfully completing the course will have a comprehensive view of the functions and role of the most important international economic organizations and should be able to understand relevant principles and rules, and solve legal problems in the field of international economic relations.

900343SSC: European Union Law

Discipline	SSC
Theme	Social Systems
Track	Law
Prerequisites	Any 200 level Social Sciences course in the Social Systems Theme

A small number of European states decided to open their borders to each other and form a common market in 1957. The resulting organization has now grown to 27 states and is the world's largest economy and trading block. The EU is no longer only about creating a single market, but also actively legislates and takes other action to do with the environment, criminal law, security, foreign affairs, social policy, education and culture, and many other fields. To achieve its goals it has its own parliament, court, and bureaucracy. The core of the EU's effectiveness lies in its law. As a result of a series of judgments over the years it has become accepted that this must be enforced by national courts, and must take precedence over national law. National parliaments and legislators are no longer supreme on their territory. This makes the EU unique. It is not quite a state, but it is more than a mere international organization. It has autonomy and power over its Member States, who submit to its authority, but they in turn influence it via representation in its bodies and institutions. There is in substance a pooling of national sovereignty to create a new type of supranational body. This creates many problems and raises many questions. There are simple legal questions about how it all works, but also questions about the democratic legitimacy of the EU, and its capacity to respond to the desires and values of its population. There are also questions about its role in the wider world, and the degree to which it should replace individual European states in international affairs. This course will look at, among other issues, the following topics: 1. The origins and goals of the EU 2. The institutional structure of the EU 3. The 'democratic deficit' 4. The nature of EU law – direct effect and supremacy 5. Human rights and the EU 6. European citizenship 7. The internal market – free movement of persons, goods, services and capital 8. The competences of the EU and their control: subsidiarity and proportionality 9. The enforcement of EU law - judicial procedure, preliminary references, state liability 10. EU social policy and labour market policy 11. The EU and international affairs.

900345SSC: Economics of Contract & Tort Law

Discipline	SSC
Theme	n/a
Track	Law
Prerequisites	Any 200-level course in the Economics or Law track.

This course examines contract and tort law from a law & economics perspective. After a brief introduction to the methodology of law and economics, this course utilizes the standard tools of economic analysis for the study of law and legal institutions, with special focus on economics of contracts and economics of tort law. The course is of particular interest to students focusing on the law track and/or the economics track. During the course students will examine landmark cases in US contract law. US contract law has provided the background for the development of the economic analysis of the law of contracts and hence understanding these cases is a fundamental step in order to understand the development, implications and impact of economic analysis. In addition, the law of the state of NY is particularly important for international contracts as it is often the law of choice for international parties. As an aside, this course offers an overview of US contract law and its most important cases. The course incorporates the economic analysis of non- contractual liability (torts).

900346SSC: Criminal Justice Systems

Discipline	SSC
Theme	n/a
Track	Law
Prerequisites	900142SSC Law, Society and Justice

The course introduces students to criminal justice from a legal and a sociological perspective. The course comprises both a solid introduction to the legal underpinnings of criminal justice systems, and a more empirical introduction to their actual functioning and how different societies deal with criminal behavior. The course is relevant to students focusing on the law track, the sociology track and the IR track. In the first part of the course we will discuss the various criminal justice systems (common law and civil law/ national and international) and what their general aims are as well as basic concepts and will focus more particularly on the Dutch criminal justice system as an example. We will then look into criminological issues and discuss comparative issues and try to understand why countries have different criminal justice systems. In the second part of the course we will focus on substantive criminal law. We will look into the jurisdiction principles as well as the general principles of criminal law such as the principle of legality and the ne bis in idem principle. We will briefly look into the concept of individual criminal responsibility (mens rea and actus reus) but only in order to understand the basic concept as we will study this concept in-depth in the fourth part. We will also study the way the criminal justice system is set up as well as its various organs. In the third part we will focus on criminal procedural law. What investigative powers do state functionaries have and how and to what extent is the application of these powers restricted by human rights law? We will discuss the concept of the right to a fair trial and the particular difficulties that arise from international criminal cooperation. In the fourth and last part we will focus on individual criminal responsibility and will study the concepts of mens rea and actus reus as well as the various defenses from a comparative perspective and will look how international criminal courts and tribunals deal with this concept.

900349SSC: Moot Court Lab

Discipline	SSC
Theme	Social Systems
Track	Law
Prerequisites	900241SSC Comparative Law OR 900245SSC Constitutional and Administrative Law. International Law is strongly recommended

This course lets student take an intensive approach to preparing for developing and delivering an international legal argument before the International Court of Justice. Students will receive training and work on drafting a Memorial for their respective sides in a legal dispute, setting out a convincing argument on the basis of international legal sources. Participating students will also undergo intensive video-training to practice pleading before a panel of judges. At the end of the course, students will plead their case before a panel of judges that will consist of experts on international law from practice as well as academia.

900351SSC: Comparative Public Policy

Discipline	SSC
Theme	Social Systems
Track	Political Science
Prerequisites	Any 200-level Social Systems course in the Social Systems theme.

Public policy can be described as the sum total of efforts by or on behalf of a government to remedy social ills in a society. Over the last centuries, governments have come to develop wide-ranging and firmly institutionalized arrangements of public policy such as social security, health care, and education. By way of shorthand, these latter three are often referred to as the welfare state. In order to understand varieties of public policies and their vicissitudes, one has to understand the social ills they attempt to cure. Or rather, one has to understand the particular definitions of social ills in the society at hand. What is a public or social problem? How does it become recognized, socially constructed or defined? Which actors are involved in the process? What are the principle arenas? How do social policies emerge from the process of recognition and definition? Can we understand why different societies in different eras develop different types of policy? The course takes a comparative approach in two dimensions. First, it studies social problems and policies in a historical of diachronic perspective. How did they emerge? How have they been transformed? In what direction do they seem to be heading? Second, it uses the method of comparative case study. The course samples various problems and policies within Dutch society. Is it indeed the case – as some say – that Dutch society has developed a particular style of problem solving, variously called pragmatism in politics, government by negotiation, or regulated tolerance? At the same time, we set up a baseline or yardstick for comparison with other societies. Students will select one particular social problem plus policy from the Dutch sample and compare this with a contemporary society or country of their own choice. In a research paper, they will report their findings. The course will be concluded with a conference “Comparative case studies in public policy”, where students will present the fruits of their research.

900352SSC: European and International Institutions

Discipline	SSC
Theme	Social Systems
Track	Political Science
Prerequisites	A 200 level course in the Social Systems theme. 900262SSC European Integration is highly recommended.

This survey course will provide students with a comprehensive understanding of the formal structure, political impact, and future challenges of the major European and international institutions, with a particular focus on theUN and the EU. The first part of the course looks at international organisations from a variety of theoretical perspectives that try to explain global governance, focusing on why states create IOs and operate through them, how IO's function, and what are the key issues besetting them. The second part of the course looks at the UN (in particular concerning its evolution, its key organs and constituent institutions, as well as challenges for the future, including reform), and also at major multilateral organisations in key fields such as trade and development, financial regulation, collective security, and humanitarian action. The third part of the course focuses on the politics of the European Union. It discusses what kind of international actor is the US, discusses briefly some of the key theoretical debates in explaining EU politics, examines the key institutions of European governance, and discusses some key policy areas in which EU governance has expanded significantly, before interrogating the future of the Union, in face of its current crisis. The final part of the course looks at the future. Combining insights from the previous sections, we ask: how do we expect the major European and international multilateral institutions to develop? Does globalization mean that we live in a post-national, post- democratic order? What will happen to global governance efforts?

900353HUM/SSC: Media Psychology

Discipline	SSC, HUM
Theme	ICC
Track	Media, Cognition
Prerequisites	900192SSC Psychology AND 900153HUM Media and Communication

Media Psychology is an autonomous field of study within the science of psychology, but also a domain of intersection between two large knowledge fields, the one of psychology and the other of media studies. What does this intersection mean today, how is it pertinent, and what new directions are opening with the development of new and social media? This course aims at familiarizing students with the basic areas of interest for media psychology, enabling them to reflect upon the evolvement of media-psychological debates though the field's history, and to critically engage with the contemporary psychological aspects and implications of media use. Among the topics that will be covered are: political communication, reality TV and mediated surveillance, branding and advertising, media representations of psychopathologies, individual responses to violence, and issues of cognition and perception in videogames and new media.

900354SSC: Framing in Politics and Economics

Discipline	SSC
Theme	Social Systems
Track	Political Science
Prerequisites	Classical and Modern Political Thought OR Economic Thought in a Historical Perspective. BRMS II is strongly recommended.

Did the media contribute to reduced consumer confidence during the euro crisis? Does coverage of immigrants increase anti-immigration sentiment? Media coverage of politics and economics doen not simply mirror reality, but is the result of choices of and institutional constraints on journalists and their sources. These choices have a strong impact on the way consumers, politicians, and companies perceive the world and how they act: The way that an issue or development is framed in politics or economics (co-)determines consumer behaviour, policy choices, and investor decisions. In this course students will learn how to use automatic text analysis tools and statistical analysis techniques to analyse the determinants and effects of public discourse. Specifically, we will look at the discourse on immigration and on the economic crisis, and investigate the effect of real world developments on the public discourse, and the subsequent effect of this discourse on public opinion and policy. After this course, students will be acquainted with the recent literature on political communication, framing, and specicially the framing of immigration and economics. Moreover, students will have experience with state-of- the-art analysis tools for both text analysis and statistical time series analysis in R.

900361SCI/SSC/HUM: Moral Dilemmas in Medical Practice

Discipline	SSC, SCI, HUM
Theme	Health and Well-being
Track	Health, Philosophy
Prerequisites	Students are required to have completed at least two 200-level courses in their major.

Medical practice is characterised by moral dilemmas. What should a physician do when a patient asks for active termination of life because of unbearable suffering? What should professional caregivers do when an elderly patient refuses a diagnostic procedure which might help to determine the cause of physical problems? What should a nurse do when a psychiatric patient might become dangerous to himself or others? What should a genetic counsellor do when a person does not want her family to know that she has a hereditary condition which may be relevant for her relatives? In this course, these dilemmas will be studied from a theoretical perspective and investigated using methods for ethical case analysis. Topics include: - end of life decisions - responsibility in elderly care - coercion in psychiatry - genetics. The student will acquire knowledge of: - theories on medical ethics - moral dilemmas in health care - methods of case analysis - the practice of the ethical consultant The student is able to: - understand the significance of moral dilemmas in medical practice. - place these dilemmas in a theoretical perspective and analyse them methodically (discussions, paper). - interview a healthcare professional on ethical issues and analyse the transcript.

900361SSC: International Crimes

Discipline	SSC
Theme	Social Systems
Track	International Relations
Prerequisites	Any 200-level Social Sciences course in the Social Systems theme.

This is an advanced course focusing on international crime, combining aspects of criminology, international relations and international law. The first part of the course is dedicated to transnational crime, exploring illicit trade networks (high taxation commodities but also human trafficking). The organisation of transnational criminal networks will be discusses as well as the market conditions that enable illicit trade. Attention will be paid to white-collar international crimes and corporate neglect, looking at the role of Shell in the Niger Delta and the Trafigura case of toxic waste disposal in he Gulf of Guinea. Implications of the organisational aspects of different forms of transnational crime for crime control and punishment are a final element of the first part of the course. The second part of the course looks at international crime, as defined by the Rome Statute, covering the crime of aggression, war crimes, crimes against humanity and genocide. Attention will be paid to the historical background of these crimes, the contexts in which they are committed and the mechanisms for international justice that have been designed to control them, most notably international courts and tribunals.

900362SSC: The Changing World of International Relations

Discipline	SSC
Theme	Cities and Cultures
Track	International Relations
Prerequisites	900161SSC International Relations Theory and Practice.

The purpose of this course is to learn how to explore changes in international politics empirically. Students will explore concepts that can explain analysis of changes in international relations, how the international relations scholars think about ‘change’ and how to study it empirically. Subsequently, students will study areas of change in contemporary international politics. This course places heavy emphasis on empirical analysis and work with data. An excursion to Brussels is included.

900363HUM/SSC: Religion, Secularism and Violence

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	Culture, Anthropology
Prerequisites	For third-year HUM or SSC majors.

While 20th century extreme violence (e.g. Word wars I and II, proxy wars during the Cold War, the Cambodian genocide under the Khmer Rouge) was often justified by atheistic or non-religious political, ideological motives (e.g. Nazism, Stalinism, etc.), the beginning of the 21th century brought violence to the world stage explicitly justified on religious grounds. This religious violence was contested by those who dismissed the use of religion as illegal, and used by others to plea for a peaceful world without religion. This course is taught at a moment at which in major European countries (the Netherlands, France and Germany) election campaigns are fought in which the fear for religious violence is a major factor. This resurgence of religious violence has also triggered new extensive interdisciplinary research on the link between religion and violence in the past and the present. The course will explore this new emerging field of academic enquiry. We will start with an analysis of how violence is part of five world religions (Christianity, Islam, Judaism, Hinduism, and Buddhism) in founding stories, in sacred texts, in rituals, in practices, and in symbols, and how they have dealt during their history with the violence aspects of their religious traditions. In the second part, the entanglement of religion and politics will be illustrated by recent cases in their social, political and cultural contexts (ISIS, Charlie Hebdo), and motives (apocalypse, Armageddon, sacrifice and martyrdom, etc.). In the third part other themes will be explored, such as conflicts about sacred spaces, evil and purification, and blasphemy, next to aspects such as religious violence against women and the use of religion in colonial violence. In the last part we will give attention to new theories that shed new light on the relation between religion and violence from evolutionary, philosophical and theological perspectives.

900364HUM/SSC: Cultural Memory Studies

Discipline	SSC, HUM
Theme	Cities and Cultures, Social Systems
Track	Culture, History, Sociology
Prerequisites	For HUM, 900161HUM Introduction to Literary and Cultural Theory AND at least 1 200-level course in the Literature or Culture tracks. For SCI, any two 200-level courses from the Sociology or Anthropology track. For SSC, any two 200-level courses from the Sociology or Anthropology tracks.

This course offers an introduction to the international – and highly interdisciplinary – field of cultural memory studies. Through strategically chosen case studies, a number of fundamental questions will be explored about cultural memory in all its forms: - What is the role of (collective) memories in society and culture? What forms of remembrance and commemoration can be seen to be at work in them? How do cultural memories contribute to the creation of social consensus, to the demarcation of conflicting identities and interests, and to the questioning of painful episodes from the past? - What are the media through which cultural memories are circulated and maintained? What is the role of literature, film, and the visual arts in transmitting cultural memories? How do new media and new communication technologies impact on the material transmission of memories, both geographically (across countries and cultures) and historically (across generations or even centuries)? - What explains the contemporary “memory boom”? Why are readers, museumgoers, and film and theatre audiences so obsessed with the past? And what is the role of the culture industry and the so-called “heritage business” in promoting, selecting, and defining cultural memories? Cases studies may include: Holocaust narratives; narratives of trauma and testimony; urban memory sites; “world heritage” sites; art and history museums; commemorative spaces and practices. Key theorists and critics whose work will be considered in the course include: Aleida Assmann, Maurice Halbwachs, Andreas Huyssen, Pierre Nora, Ann Rigney, Michael Rothberg, and Jay Winter.

900369SSC: Diplomacy Lab

Discipline	SSC
Theme	Social Systems
Track	International Relations
Prerequisites	Any 200 level course in International Relations

Conflict resolution is often divided between peacemaking, peacekeeping, and peacebuilding. The category of peacemaking includes processes aiming to stop outright violence, thus allowing peacekeeping and peacebuilding to occur. This class explores the theory and practice of peacemaking, and the process at its core, negotiation. We will explore both traditional “hard bargaining” negotiation and the process of “principled negotiation,” and the difficulties associated with each. These theories will be illuminated by examples from case studies from around the world, and from both micro and macro levels. These case studies will also allow us to investigate how culture and conflict dynamics affect negotiation, and how groups can splinter and divide during negotiation, complicating the process. In an ever more complicated world, peacemaking has become an ever more complicated process, this class introduces students to the basic principles and prepares them to better understand how conflicts come to an end.

900371SCI/SSC: Addiction

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed., Health
Prerequisites	900264SCI Brain and Cognition OR 900242SCI Medicinal Chemistry

The goal of this course is to gain insight into the etiology and the neurobiology of addictive behavior. The course explores various topics in the study of drug addiction. The primary emphasis is on psychological and biological theories of drug addiction. Genetic and personality traits representing risk factors for the development of addiction will be identified. Other important topics are clinical diagnosis and treatment. Psychomotor stimulant (e.g. amphetamine, cocaine) and opiate (e.g. heroin, morphine) drugs, but also the more socially accepted drugs nicotine and alcohol, figure prominently in an examination of the pharmacological properties of addictive drugs. Much of the course relates the important mood-elevating effects of these drugs to their biological actions. However, non-drug related addictions, such as gambling and obsessive eating will also be discussed. We will also address the huge impact of addiction on our society and the effectiveness of drug policies.

900371SSC: Violence and Conflict

Discipline	SSC
Theme	Social Systems
Track	International Relations, Sociology
Prerequisites	Any 200-level course in either the International Relations or Sociology track.

This course will provide an introduction into the field of conflict studies, investigating the escalation of non-violent conflict into mass-violence and exploring international responses to violent conflict. We will first look at the dynamics of inter-group conflict, focusing specifically on conflict between ethnic groups, including genocide. We will then move to the analysis of militarized conflicts, focusing mainly on intra-state (civil) wars. What motivates groups to pick up arms against a government? How do rebel groups organise and arm themselves? Why do some rebel groups manage to overthrow a government, while others collapse? How can we explain diverging patterns of violence in civil wars? Drawing on this analysis, international responses to violent conflict will be investigated, including humanitarian relief and peacekeeping. A recurring theme throughout the course will be the connections between processes of stateformation and violence, both in Western and non-Western settings.

900372SSC: Migration, Integration and Diversity

Discipline	SSC
Theme	Social Systems
Track	Sociology
Prerequisites	Any 200-level Social Sciences course in the Social Systems theme.

This course will expose students to the intersection of integration, diversity and migration taking place in different parts of the world. Diverse theories such as assimilation, transnationalism, and multiculturalism will be analyzed and country case comparisons where each of these prevail be highlighted. The course has a theoretical sociological component and a small practical research component. Students will be required to use the theories they have learned to analyse the stories they collect from immigrants or diverse ethnic groups which they seek out on their own. Students will focus on migration studies, identifying social and cultural interpretations. The lectures and student presentations will focus on theories on migration as well as analyses of specific migration cases, e.g. transnational migration, illegal migration and assimilation issues. Students will learn how to conduct interviews to highlight a focus of their own interest and to identify a person, a group, or several members of a distinct generation to interview. They will need to identify aspects of diversity, processes of integration, and migration in their lives and connect these two issues of nation-state control and citizenship and democracy.

900373HUM/SSC: Legal and Social Philosophy

Discipline	SSC, HUM
Theme	n/a
Track	Law, Philosophy
Prerequisites	900142SSC Law, Society and Justice OR Classical and Modern Political Thought (900181SSC)

This course invites students to explore the use of law in society (legal ordering) philosophically. Whereas the first part focuses on mainstream legal and social philosophy, the second will be devoted to a number of more adventurous thinkers, primarily in the sphere of the Critical Legal Studies movement. A significant part of the course is devoted to the paper writing process, with a strong focus on individual guidance and feedback. As such this course also aims to prepare students for the capstone writing process. In fact, students may opt to use their papers as basis for writing a capstone in the sphere of legal and social philosophy. This course is offered in semester 1.

900373SCI/SSC: Human Stress Research

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being
Track	Biomed., Health
Prerequisites	200 level course in Health, Biology or Biomedical track AND BRMS I OR Statistics for Sciences

‘Stress’ is one of the most intriguing phenomena that affects our life as it is today. At the same time, however, do we know what we are talking about? There is no other word in the Anglo-Saxon language that is so ill-defined, or has so many meanings as the word ‘stress’. Usually, when we talk about stress, we mean that life is weighing heavy upon us. Stress is imbalance. Scientifically, when we talk about stress, we talk about the (psychobiological) stress response and stressors (stimuli) that are able to elicit a stress response. In this way, stress is conceptualized as a positive force that enables us to learn from encounters and adapt to our environment, only being disruptive when for one reason or the other our coping skills fail and our stress response becomes inadequate: without stress there is no life; with too much stress life becomes miserable! The present course provides insight into today’s concepts of stress, the (psycho)biological mechanisms underlying the human stress response, the autonomous nervous system, the neuro-endocrine pathways and the immune system, and its impact on health and disease. The disease context is illustrated by discussing depression as a chronic stress syndrome, the post-traumatic stress disorder as a worn out disease and the conduct disorder as a cold-hearted condition. Prudent steps towards new treatment strategies will be highlighted.

900373SSC: The Development of Social Policy

Discipline	SSC
Theme	Social Systems
Track	Sociology
Prerequisites	Any 200-level Social Sciences course in the Social Systems theme.

The course will explore key influences, political, social, and historical on the development of both social policy in practice and Social Policy as an academic discipline. The development of Welfare States and social policy developments in a range of countries will be included, including the Netherlands. Of particular interest will be: the influence of ideologies in shaping the development of social policy approaches; perspectives on the development of Welfare State regimes; perspectives on the social policy making process; perspectives on the development of the current welfare mix in societies (public, private, voluntary, informal mixes); perspectives on the development of debates and approaches to universality and selectivity in service provision; the development of social policy in the wider contexts of the EU and Globalisation; the development of anti-poverty and social inclusion policies and programmes; the development of social policies for social groups and in response to equality based social movements, old and new risks (e.g. age, disability, gender, race, sexuality, faith); and critical perspectives on the development of social policy.

900374SSC/HUM: Race Class Gender Intersectionality

Discipline	SSC, HUM
Theme	Social Systems
Track	Culture, Anthropology, Sociology
Prerequisites	Any 200 level course in the Anthropology and Sociology tracks.

The way in which ‘race’ was constructed during Transatlantic Slavery also affected 19th century Irish factory laborers in the United States, who were considered to be non-white in the American public imagination. The interaction between the Egyptian women’s movement of the late 19th century with European and American suffragettes as well as with male decolonial activists is an example of the forgotten Global History that helped shape current attitudes on decolonialism and gender. This course traces the history and intersections of gender, race, class from a Global History perspective. The interplay between ‘East’ and ‘West’ is under plenty of scrutiny in both political discourse and media. In popular imagination, especially in Western societies, there seems to be an increasingly common idea of ‘East’ and ‘West’ being monolithic entities that differ fundamentally from each other. The aim of this course is to link up critically with the paradigm of ‘East’ and ‘West’ or, according to some, ‘East’ vs. ‘West’ . For the ancient Greek historian Herodotus, ‘Europe’ was the domain of ‘uncivilized barbarians’. This begs the question when ‘Europe’ was constructed as a cultural entity and heir of ancient Greek civilization. Understanding present day global currents requires an in-depth knowledge of historical exchanges that have shaped them. Why were gender, race and class constructed throughout the interplay between ‘East’ and ‘West’? How does the Global History between ‘East’ and ‘West’ shape our current attitudes on gender, race and class?

900381SCI/SSC: Introduction to GIS

Discipline	SSC, SCI
Theme	ICC, ECS, Life, Evolution, Universe, Health and Well-being, Social Systems
Track	Earth & Environ., Economics
Prerequisites	Calculus OR Basic Research Methods and Statistics OR Statistics for Sciences.

This course provides an overview of the theory and practice of utilizing Geographic Information Sciences (GIS) as a method for analysis of environmental problems. The course applications are primarily directed to the natural sciences, but the techniques are also appropriate for the social sciences (such as urban planning). Lectures will emphasize general principles and theory in GIS, and the nature of geospatial data systems. Labs will be oriented towards concepts discussed in class by employing ArcGIS and related software packages to the display and analysis of geospatial data. Specific topics to include overview of geospatial technologies; geodetic datums, projections, and coordinate systems; vector and raster data structures; attribute and elational databases; spatial analysis (e.g., map algebra), and spatial modelling. Format: Hands-on sessions in the GIS studio (FNWI). Students are expected to complete a final project on an approved topic. The GIS studio has a capacity of 16 students. If the course is oversubscribed, third years students have priority.

900381SSC/HUM: Urban Anthropology Lab

Discipline	SSC
Theme	Cities and Cultures, Social Systems
Track	Culture, Anthropology
Prerequisites	900281SSC/HUM Community and Society in a Globalised World

The majority of today's world population lives permanently, or part of their lives, in cities. Cities continue to grow in number and in size: urbanization has reached unprecedented levels. Many scholars view cities as central building blocks of 'post-industrial' society; others link cities to discussions on 'modernity'. Yet again others view the growth of cities as emblematic of the expanding gap between North and South, East and West. But what does on-going urbanization mean for the lives of ordinary persons living in cities, and of those aspiring to do so? What are the problems and dilemma's characteristic of social life in the city? This course addresses these questions by presenting a critical review of anthropological and sociological thinking and literature on cities, urban life and urbanization. The course focuses on experiential and organizational aspects of social life in the city, but it also explores how this is embedded in broader societal frames, including the countryside (urban-rural linkages), transnational migration networks, and globalising trade. By taking a comparative perspective (including examples from Western and so-called 'developing' countries), the course surveys the social and cultural diversity in perspectives and practices of city dwellers/urban actors, and discusses different research approaches and traditions to study these meaningfully. During the course, students gain insight into and develop an understanding of: - Diversity and variety of city life in a comparative perspective, - Today's social problems and issues associated with cities, - The embedding of cities in broader socio-economic and cultural frames, - Research methods to study city life (fieldwork).

900382SSC/SCI: Medical Anthropology

Discipline	SSC, SCI
Theme	Social Systems
Track	Health, Anthropology
Prerequisites	900181SSC Classical and Modern Anthropological Thought OR 900112SCI/SSC Health and Well-being Theme Course

Medical anthropology is an interdisciplinary field that recognizes the growing need to address socio- cultural factors affecting health and health care. The field of medical anthropology aids in providing insight into how people's ideas and conceptions around illness are formed and managed, as well as how cultural and social conditions influence experiences of illness. Furthermore, by taking culture into consideration, it allows a contextual focus on health, beliefs around treatments, restorations to health, healing and interventions. From a medical perspective, culture provides the doorway to understanding how people understand and react to illness and misfortunes. The research in medical anthropology draws from influences and interdisciplinary work in medicine, epidemiology, psychology, social work and other fields related to health and well- being. Ethnography is the foundation of inquiry. However, because of the interdisciplinary nature of the field, research often draws on broader resources of inquiry, including mixed method (qualitative and quantitative) research.This course is designed to introduce some of the major themes, theoretical approaches, and methodological concerns of medical anthropology today. Topics that will be discussed include the development and history of the central theories in medical anthropology, concepts, methodology and various themes in the field. These fields include (amongst others), pharmaceutical anthropology, idioms of distress, culture- psychology and psychiatry, disability, infectious diseases and sexuality, human rights and reproductive health- as well as different stages of the life cycle. Particular interest will be placed in the connection between medical anthropology and topics in global health such as refugees and psychological conditions, disasters and health with a special emphasis on social research and the involvement of people.

900383SSC/HUM: Digital Anthropology

Discipline	SSC, HUM
Theme	ICC, Social Systems
Track	Culture, Anthropology
Prerequisites	900181SSC Classical and Modern Anthropological Thought.

This course introduces students to the burgeoning field of digital anthropology. It familiarizes them with how anthropologists (and other scholars in the social sciences and humanities) study the relationship between people and digital technology. It focuses especially on Web 2.0 technologies, questioning what “the internet” is and how should westudy it? The course aims to equip students to independently study social phenomena in contemporary, digitally-mediated life. To this end, the theoretical module of the course introduces students to the work of scholars from Media Anthropology, Communication Science, and Science and Technology Studies. How do these fields theorize the society-technology relationship? Through readings and discussion, the key concepts of mediation, mediatization, media affordances, media environments, and polymedia are explored to provide students analytical tools for thinking about digital media. The methodological module covers important debates and innovations specific to doing social research on digital media. What are the new possibilities and implications regarding data collection and analysis? What do the principles of ethnographic investigation have to offer the study of Web applications? Following the theory and methods modules, the course dedicates thematic modules to a number of focus areas of digital anthropological research. These include international migration and diaspora web connections, social movements and digital communications, gender and racial inclusion/exclusion on the web, and the digital youth culture around the world. In the third module of the course, the course focuses on how particular digital tools and applications, such as mobile phone technologies, digital games, selfies, and online memes, shape our everyday lives and socialities around the world. Throughout the course, questions are raised around configurations and relations of power. In a societal context where digital technologies are increasingly a part of everyday life, do digital media have power over people, or are people actively in charge of digital media? And what role do institutions and collective movements play in this relationship? The course builds on students’ prior knowledge of anthropological understandings of culture. Students’ prior knowledge about ethnographic methods will also be applied to the area of digital media.

900389SSC/SCI: Urban Environment Lab

Discipline	SSC, SCI
Theme	ECS, Social Systems
Track	Earth & Environ., Economics
Prerequisites	900221ACC Basic Research Methods and Statistics II OR 900222SSC/SCI Risk Management OR 900226SSC The Sustainable City OR 900181SCI/SSC Introduction to Environmental Sciences OR 900381SCI/SSC Introduction to GIS

This course focuses on the science and social science of urban environment planning. An evidence-based approach to the problem of climate change and spatial planning will be the focus of this year's lab. More specifically, we will explore the urban heat island effect in Amsterdam. Students will personally try to measure this effect, statistically link obtained local temperature measurements to environmental characteristics and assess potential future changes in urban temperatures in Amsterdam based on socio-economic and climate scenarios. Following this assessment solution strategies will be proposed to limit local temperature increases. Finally an attempt is made to evaluate the effectiveness of these strategies.

900391SSC/HUM/SCI: Theme course: Games and Learning

Discipline	SSC, SCI, HUM
Theme	ICC
Track	Theme
Prerequisites	Any 100-level theme course (Limited to third year students.)

This course is about the scientific study of games and learning. Different perspectives on the nature of learning, from behaviorist tot situated, will be studied. The function of games and play in learning will be discussed from an evolutionary perspective, a neurocognitive perspective as well as other perspectives, such as motivation theory, and social learning theory. The different topics will be organized in seminars which will be student-led. The topics listed here are therefore not fixed. These may change according to students‘ preferences. Next to studying relevant scientific literature and assignments based on this literature the course will address the design of games for learning. How can games contribute to solving big societal issues in health (behavior) and safety (public space). The students will work on a case provided by an external party or devised by the students themselves in small multidisciplinary groups, and write an individual essay addressing a theoretical topic related to the case they are working on. If possible the individual essay can be related to the capstone topic, in terms of theme, approach, technique or methodology. Students are explicitly invited to consider the potential relation between the essay assignment and their capstone work.

900393SSC/SCI: Brain and Mind (for SSC students)

Discipline	SSC, SCI
Theme	ICC, Health and Well-being
Track	Health, Cognition
Prerequisites	900292SSC Cognitive Psychology

Brain and Mind is a 300-level SSC course cross listed with SCI. The course counts as a 200-level SSC course for SCI students. The goal of this course is to deepen understanding of the neurobiology of the mind and the aetiology of mental disorders. Students will be encouraged to critically analyse the impact of neurobiology and (psychiatric) brain disorders on society. To most of us, the mind constitutes as the very essence of our identity. However, where to draw the line between normal and abnormal, well and ill, an eccentric personality and a schizotypic one, an active, creative fast-thinking personality and ADHD? This course will explore the neurobiology of the mind. First, students will be provided with a concise overview of the structure and function of the human brain and will be introduced to the basics of neural communication (electrical signalling and synaptic transmission). Next, the focus will be on key concepts in cognitive neuroscience such as perception, memory, attention, emotion and consciousness. A selection of relevant topics will be covered in depth (partly by students' presentations); possibilities include: altered states of consciousness, neurobiology of attraction and partner selection, creativity and mental illness, the gendered brain, the moral brain, free will, empathy and mirror neurons, cultural context of mental illness, intelligence, neurobiology of belief, superstition and religion, neuro-economics & neuro-marketing, brain-machine interfaces, cognitive enhancers, mind control (this list is by no means exhaustive). An important focus of this course is the aetiology of mental disorders, such as ADHD, depression, addiction, autism and schizophrenia, with special attention for the nature-nurture discussion. Students will be challenged to critically reflect on the boundaries between normality and abnormality and the implications for society.

900395SSC: The Empathic Brain

Discipline	SSC
Theme	Social Systems
Track	Cognition
Prerequisites	900192SSC Psychology. Brain and mind is strongly recommended

While we watch a movie, we often share the experiences of the actors we observe. Or when we want to learn a new dance, we find strong benefit from repeated observation of the teacher. Why? Specific brain areas are involved when we perform certain actions or feel certain emotions are also recruited when we simply observe someone else performing similar actions or feeling similar emotions. These areas called 'shared circuits' transform what we see into what we would have done or felt in the same situation. With such brain areas, understanding other people is not an effort of explicit thought but becomes an intuitive sharing of their emotions, sensations and actions. Through the investigation of shared circuits, the Social Brain Lab of the Netherlands Institute of Neuroscience attempts to understand the neural basis of empathy and social interaction. This course will give students different perspectives on empathy and bring students in touch with empathy research at the Social Brain Lab. The focus will be on following four topics: 1) Theoretical framework in the study of empathy, 2) interaction and prediction and 3) Animal and human models of empathy.