

1. General information

<i>Title</i>	The Systems View on Life
<i>Course code</i>	UC LAS1 07
<i>Type of Course</i>	Bachelor: Sciences, Social Sciences, & Humanities
<i>Faculty</i>	University College Groningen
<i>Schedule</i>	First year, semester 2a, see rooster.rug.nl
<i>Language</i>	English
<i>Coordinator</i>	Dr. Tjeerd Andringa
<i>Lecturer</i>	Dr. Tjeerd Andringa (t.c.andringa@rug.nl)
<i>Entry requirements</i>	N.A.
<i>Number of ECTS</i>	5
<i>Workload & contact hours</i>	Total 128 hours, 4 contact hours per week
<i>Summary Assessment</i>	Homework, clearly presented self-developed idea, professionalism, theory reflections
<i>Required Texts</i>	None
<i>Syllabus</i>	Link to this Syllabus
<i>Resources and homework</i>	Link to resource and homework document
<i>Shared drive</i>	Link to shared drive

This syllabus informs the students about what will be covered during the course. However, as the current situation is unpredictable and the online format is new, we kindly ask students to remain understanding and respectful. According to articles 4.1, 7.1 and 9.10 of the TER: In situations of force majeure, when it is not reasonably possible to provide teaching and examinations in the manner stated in OCASYS, alternative modes of instruction and assessment may temporarily be used. This is on condition that the prescribed learning outcomes are still achieved upon completion of the degree programme in the opinion of the Board of Examiners.

2. Specific Course Objectives and relation to Programme Learning Outcomes

One key aspect of Systems View of Life is to help you to reason like an academic. It deepens academic skills like steelmanning, giving and receiving feedback, academic listening, and respecting the (often hard earned) knowledge of experts. These skills help you to make more of your existing knowledge base and to detect where your knowledge and understanding are underdeveloped. Similarly, it helps you to detect expertise in others, make the most of their knowledge, and to discover where they might be weak (while being respectful). It also helps you to approach topics from a higher level of abstraction and from different perspectives. And it allows you to take a first step towards becoming an autonomous researcher by allowing you to develop a self-generated idea from fragile and unformed to (fairly) robust and defensible.

The learning outcomes that are assessed in this course are stated below.

Associated TER 2020-2021 learning outcomes as described in article 3.1.2	Learning objectives in this course	Teaching methods	Assessment methods
	Upon successful completion of the course unit, students have demonstrated to be able to ...		
1.4 ... is able to understand the origin and context of complex real-world situations 2.4 - ... is able to critically evaluate scientific knowledge and limitations	... identify (scientific) positions* and treat these respectfully	Homework assignments	Homework rubrics
3.1 - ... is able to apply existing knowledge with imagination and creativity 3.3- ... demonstrates ability to design their own learning path and learn in an active, deep and self-directed manner 6.2 - ... is able to integrate different disciplinary perspectives and knowledge	... develop an interesting profound idea from fragile to a well-supported position with a bit of coaching ... integrate different academic (and possibly non-academic) perspectives on the self-generated idea ... use key concepts from systems theory to synthesize insights across disciplines	Idea phase 1-3	Rubrics Idea
3.2 - ... reflects on personal performance	... reflect on the learning process and the course materials	Theory reflection	Rubrics theory reflection

*Note: ‘positions’ are, conform military parlance, well-defendable, grounded, and well-argued beliefs. Positions are grounded in data, facts, and research and *are aware of and defended against conflicting positions (or beliefs)*. Positions are associated with steel-manning. A steel-man argument is the opposite of creating a weak strawman argument of an opponent’s position and attacking that instead of the strongest and most respectful formulation possible: the steel-man.

3. Topic outline/schedule/literature

Topic outline

Systems theory is a powerful approach to transdisciplinarity. It is highly empowering when you know how to use it since it pertains to any form of human knowledge.

A system is any structure with stronger internal than external relations. A system self-organizes when its own activities contribute to its perpetuation and constrain its dynamics. A living system – a living agent or in short ‘an agent’ – is a special form of self-organization, in which the system itself is responsible for its own continued existence and flourishing.

Rocks, smartphones, and oil are all systems. States, economies, viruses, hurricanes, ideologies, bureaucracies, and the biosphere are self-organizing systems. Bacteria, fungi, plants, and animals are agents (sources of self-initiated activities).

Systems theory identifies the ‘open and closed system approach’ as two main modes of interacting with reality. The closed systems approach assumes the system’s in- and output are well-defined and typically, but not necessarily, under control of an “outside” agent that can use and or exploit the closed system. Closing a society is a prerequisite for exploiting its citizens. The closed systems approach fits (very) well with what McGilchrist describes (in “The master and his emissary”, 2012) as the left hemispheric attitude towards the world, which is characterized with intelligence (problem solving), power, and control. The way you approach a smart-phone and the way a (school)bureaucrat approaches you exemplifies the closed systems approach: as instrumental.

The open systems approach assumes that the system is essentially embedded and can only be understood and interacted with through participation. The open systems approach assumes that systems can become predictable because their innate dynamics, in response to complex influencing, can be observed and learned. This is how you learn the personality and behaviour of your friends (and yourself). Participating agents who deeply understand the dynamics of open systems (e.g., friendships, or gardens) can work with this innate dynamics and exert great influence with little effort (what Daoist philosophy refers to as Wu Wei). The open system approach fits really well with how McGilchrist conceptualizes the right hemispheric attitude towards the world, which is characterized by concepts like wisdom, understanding, and Wu Wei. Almost everything of positive emotional value – friendships, relations, passions, freedom – develops along the open systems approach. A suitable keyword is ‘relational’.

The development of the closed and (especially) the open systems approach in dealing with daily challenges is a hallmark of identity development and an indicator of positive mental health.

Reversely, unbalanced or no development stalls identity development and predicts mental health issues (especially in adolescence).

The closed system approach is focused, excluding, objective, it has a detached outsider-perspective, it is control- and power-oriented, and develops on the basis of shared and hence explicit knowledge. In general, it is aimed at problem-solving and complexity reduction and hence values intelligence, protocols, and compliance with system rules.

The open system approach in contrast is holistic, inclusive, subjective, it assumes participatory interaction, co-responsibility and co-creation, and develops implicit and tacit knowledge (real-world skills). In general, it is aimed at problem-prevention and self-actualization and hence it values and promotes wisdom, responsible autonomy, and unscripted contributions.

The course focuses on the complementary features of the two modes and applies these to a wide range of scientific and societal subjects: freedom vs dictatorship, friendship vs bureaucracy, climate and biosphere, agency and personal growth, geopolitics and money, men and women, ingroup-outgroup thinking, and identity development.

As you see, systems knowledge (systems thinking) is applicable in any domain and when you become proficient, it greatly helps to integrate and complement knowledge and insights across disciplines (transdisciplinary).

Trigger warning: the topics and course content may bring you out of your comfort zone. Do not choose this course if you consider yourself easily offended by conflicting, more nuanced and well reasoned positions!

Course structure

Friday-Tuesday:

Watch/listen/read homework material (~ 2 hours)

Create 300 word response

Deadline Tuesday Noon:

Online class Wednesday 13-15

Discussing homework

Discuss your ideas in smaller groups

Thursday-Friday:

watch lectures (<2 hours), prepare questions

Friday 13-15 Online class:

Discussing the lecture content

Weekly homework

The week starts with homework that becomes available just before or on the weekend. The homework sets the stage for the next week, but not necessarily in an obvious way. The homework is material from accomplished academics or in general educated minds who know how to develop a position (well-defended belief). It is centered on scientifically grounded, logically solid, and realistic content. But it may conflict with your current beliefs. The topics have been selected in the expectation you will find them empowering.

Idea development + discussions of the homework

The Tuesday sessions are to develop and challenge your developing idea. You have to prepare a new version of your idea every week. Tuesdays are also for discussing. The topics are associated with the homework and the week theme. They might also respond to important – and somewhat related – events in the news. Apart from doing the homework and working on your idea you do not have to prepare these sessions.

Theory and discussions

The lecture topics addressed in the videos, which become available on Wednesday and are discussed in small group and full group discussion on Friday, are examples of well-formed cross-domain connections and are intended as starting points for your own research.

Activity overview

Week	Idea development	Homework + idea development	Lecture discussion
1	2 February	3 February	5 February
		Course overview	Liberal Arts Teaching & Assessment. Realistic expectations
2	9 February	10 February	12 February
		“The Human predicament”	Trends that shape the future
3	16 February	17 February	19 February
		“How Big Oil conquered the world”	Systems that predict the Future
4	23 February	24 February	26 February
		Vaccines	Self-development discussion
5	3 March	3 March	5 March
	Idea phase 1 - Noon	The climate	How life shaped the biosphere
6	9 March	10 March	12 March
		Men and Women	Open-ended development of individuals
7	18 March	17 March	19 March
	Idea phase 2 - Midnight	Extremists and activists	Ontological security
8	23 March	24 March	26 March
		A progressive liberal arts college	Wrap-up
9	31 March	31 March	2 April
	Idea phase 3 - Midnight		Theory reflection assignment

Required texts

All materials, videos, text, podcasts will be provided (mostly as links to the source). All are referenced.

Recommended texts

The course is loosely based on the book: “The systems view on Life” by Capra and Luisi, Cambridge University Press (2014).

4. Assessment and Grading

Assessment overview

100 points can be achieved in four assessment components. Scoring 55/100 is a pass (see TER article 10.1.4). Not participating in the homework, the idea development and presentation or the theory reflection leads, after a warning, to exclusion from the assessment and a fail. Homework and idea development will be assessed as a learning process, not on the individual components. Hence all your marks will be given at the end of the block. However, via the extensive feedback you know where you stand in fulfilling the course requirements.

Assessment form	Points	Criteria	Mark
Weekly homework (300 word mini essay, longer is allowed, but must be interesting and polished)	35	Detect well-supported and well-argued positions Respectful approach Awareness of own knowledge state Entertaining thoughts Engagement with the material	
Idea phase 1 Idea phase 2 Idea phase 3 (Presented infographic, video, or podcast, stored in Notion)	35	Exploring content Discovering purpose Integrating knowledge Additional research Connecting integrating knowledge Defending positions Precision of keywords Development Consistency Novelty/creativity Goal clarity Clarity formulation Clarity structure	
Theory reflection (1500 word text)	15	Integration of material Connections (Self-)reflection	
Professional conduct, pre-and postform, and personal reflection (Active participation)	15	Good student-conduct Personal reflection Being in time Keeping deadlines Contributing actively Camera on during class	

Bonus system

You may propose to give some other student a bonus by sending a short email to the teacher in which you provide a justification for your request. You cannot propose bonuses for close friends or

people you work with structurally. In these cases the friendship and the close working relation is bonus enough. You can however propose bonuses for others who help you, guide you, inspire you, or otherwise contribute to your work on an incidental basis. This bonus comes on top of the professional conduct grade and can maximally double its value (10 points).

5. Grading rubrics

Represented idea

The ideas develop from explorative and fragile to well-formulated, well-defendable, and well-presented. This process involves 2 feedback moments (after phase 1 and 2) with the teacher and 6 or more weekly sessions with fellow-students. Step by step you discover how to formulate it so that it is both very clear, internally consistent, well-defendable, and ultimately well-presented.

Access to last year's final ideas will be provided at some point in the course as illustration.

	High (8-10)	Mid (6-8)	Low (<6)
Development (Phase 3)	Every cycle leads to marked improvements in which feedback is taken into account.	Not every cycle leads to marked improvements and/or not all feedback is taken into account.	The idea develops hardly an/or feedback is mostly ignored
Topic (Phase 1 - 3)	Topic has profound aspects and is illustrative of important societal developments	Topic has interesting aspects and/or is illustrative of societal developments	Topic has few interesting aspects and/or is hardly illustrative of societal developments
Consistency (Phase 2 & 3)	The idea is well-defined and fully internally consistent. Very few or any loose ends	The idea is not yet fully defined and/or not fully internally consistent	The idea is ill-defined and/or internally inconsistent
Defendability (Phase 3)	The idea is grounded in existing knowledge and aware of existing criticism	The idea is in part grounded in existing knowledge and/or not fully aware of criticism	The idea is in hardly grounded in existing knowledge and/or unaware of criticism
Novelty/creativity (Phase 1-3)	The idea is clearly self-developed and unique and/or is approached or shaped in a unique way	The idea is mainly self-developed and/or unique and/or is approached or shaped in an interesting way	The idea is neither original nor unique and is approached without originality.
Key terms (Phase 3)	Key terms are appropriate, complete, clear, and well-defined.	Key terms are mostly appropriate, complete, clear, and well-defined.	Key terms are missing, irrelevant, unclear and/o/ill-defined.

Goal clarity (Phase 2 & 3)	The content all contributes towards making the point	Most of the content contributes (more or less) effectively towards making the point clear	The relationship between goal and content is unclear. No clear point is made.
Clarity formulation (Phase 1-3)	Formulations are all clear and to the point.	Formulations are mostly clear and/or to the point.	Many formulations are unclear or do not clearly contribute.
Clarity structure (Phase 1-3)	The structure is immediately clear and content follows structure impeccably	The structure is clear and content follows structure	The structure is unclear and/or content violates structure

Homework

All homework receives extensive weekly feedback. This feedback helps you to become more proficient in the homework and especially the detection and respectful approach of positions. Growth of this ability is the main criterion during assessment.

Component	Excellent >8	Good 7-8	Average 6-7	Weak <6
Development in dealing with out of comfort zone information: detection positions and respectful treatment	Detects positions Is respectful or became respectful	Mostly detects positions Mostly respectful, or becomes more respectful	Regularly detects positions Regularly disrespectful with little improvement	Fails to detect positions often disrespectful and no growth
Clarity of argumentation and awareness of own knowledge state: own informedness or ignorance	Always aware of own knowledge state	Mostly aware of own knowledge state Produces rarely weak arguments	Regularly aware of own knowledge state Regularly produces weak arguments	Hardly aware of own knowledge state (and ignorance) Often produces weak arguments
Engagement with the material: connection to new and unfamiliar viewpoints and potential impact	Always entertains new and unfamiliar viewpoints Plays with impact	Often entertains new and unfamiliar viewpoints Sometimes avoids engagement	Sometimes protects self from entertaining new and unfamiliar viewpoints Whole narrative refutation	Regularly protects self from new and unfamiliar viewpoints Narratives or viewpoints ignored

Theory reflection assignment

The course – homework, discussions, theory sessions, provides examples of and opportunities for reflection that indicate what are appropriate topics and what is the appropriate level of reflection.

Component	High (8-10)	Mid (6 -8)	Low (<6)
High-level synthesis	Able to integrate and formulate an overall abstract/theoretical synthesis of this course.	Able to integrate and formulate aspects of an overall abstract/theoretical synthesis of this course.	Unable to formulate a high level synthesis. Superficial
Clarity	Very clear and well-structured	Clear and structured	Unclear or unstructured
Self-reflection	Reflects honestly, self-critically, and in depth	Reflects mostly honestly, self-critically, and is not superficial	Barely shows self-reflection or is superficial.
Nuance & Precision	Is able to make all points with nuance and great precision	Makes points clearly and/or lacks some nuance.	Makes points unclearly or with a lack of nuance
Style	Engaging	Effective	Boring

6. Resit and repair

As described in the Teaching and Examination Regulations (TER), there will be an opportunity to sit the examinations for the course units listed in Articles 4.1 and 7.1 for all course units offered by UCG at least twice in each academic year but students are restricted to resit a maximum of 2 courses in each year of study.

The periods in which examinations can be sat are listed in the course syllabus.

Notwithstanding the provisions of Article 10.4.1, there will be only one opportunity in a certain year to take the examination for a course unit not taught in that year.

Resits provided by UCG can be taken at the therefore designated period (beginning of July) .

A resit will comprise an assessment of all learning outcomes of the course unit.

The last result of the examination is the final result.

Students may resit an examination for a course unit that is no longer offered at least twice during the first year after it has been removed from the curriculum.

If a student signs up for a resit and does not show up for the resit, the student will get a ‘fail’ for the resit. If the student has already received a passing grade for the course before missing the resit exam for which they registered, the final grade for the course will be changed into a fail.

7. Attendance policy

As described in the Teaching and Examination Regulations (TER), it is intended that the learning objectives will be achieved by student participation in all of the activities that comprise the course unit. Therefore, class attendance is regarded as an obligation, and all students are expected to attend regularly and punctually all course activities as part of the course units in which they are enrolled. Failure to do so may jeopardize a student's academic standing.

Notification of absence from a course must always be given prior to class and supported by reasons.

In the event of absence, the lecturer may stipulate sanctions and/or replacement assignments.

In any case, absence of more than 20%, without extraordinary circumstances, will result in the student jeopardising passing the course.

Determination of extraordinary circumstances (see also Art 1.2.ff) is to be made by the study advisor.

In this course 80%+ attendance is expected. If you miss a session, inform the teacher via email and ask your fellow students how to make up (do not bother the teacher). For the final assessment your portfolio consisting of homework, (presented) idea, and theory reflection needs to be available.

8. Availability of the lecturer(s)

Email address: t.c.andringa@rug.nl

Office: Home.

Office hours: to be negotiated.

9. Student workload

Activity	Required number of hours
Classes	9 * 4 = 36
Homework	8 * 4 = 32
Personal reflection	2
Theory Summary	4
Friday session preparation	8 * 6 = 48
Ideas hand-ins	3 * 4 = 12
Diverse	6
Number of ECTS = 5 / Total number of required hours = 140 (1 ECTS = 28 hours)	140

Appendix A: Policy on fraud and plagiarism

As described in the Teaching and Examination Regulations (TER), cheating is an act or omission by a student designed to partly or wholly hinder the forming of a correct

assessment of their own or someone else's knowledge, understanding and skills. Cheating also includes plagiarism, which means copying one's own or someone else's work without correct reference to the source.

If a student cheats, the Board of Examiners may exclude that student from participation in one or more examinations or final assessments for a maximum of one year.

In the event of serious cheating, the Board of Examiners can request the Board of the University to permanently terminate a student's registration in the degree programme.

The Board of Examiners sets out its course of action in the event of cheating in its Rules and Regulations.

For more information on the UCG policy on fraud and plagiarism, please consult the Teaching and Examination Regulations (TER) and the Rules and Regulations (R&R).