

# GE2322: THE NOBEL PRIZE: A DISCOVERY APPROACH TO HUMAN GREATNESS

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## Effective Term

Semester A 2022/23

## Part I Course Overview

### Course Title

The Nobel Prize: A Discovery Approach to Human Greatness

### Subject Code

GE - Gateway Education

### Course Number

2322

### Academic Unit

Chemistry (CHEM)

### College/School

College of Science (SI)

### Course Duration

One Semester

### Credit Units

3

### Level

B1, B2, B3, B4 - Bachelor's Degree

### GE Area (Primary)

Area 3 - Science and Technology

### GE Area (Secondary)

Area 1 - Arts and Humanities

### Medium of Instruction

English

### Medium of Assessment

English

### Prerequisites

Nil

### Precursors

Nil

### Equivalent Courses

Nil

**Exclusive Courses**

Nil

**Part II Course Details****Abstract**

This course aims to inspire the students to discover the link between human achievements at the highest level and their personal lives. At one level, by citing the Nobel Prizes, the students will learn the multi-disciplinary nature of human endeavours. At another level, by using the current Nobel Prizes as examples, we aim to use the selection process of these awards to illustrate and critique how human endeavours are evaluated. Our objective is to stimulate the students to question the process of defining and judging human achievements. In this course, students will be guided to perform a number of activities, including (but not limited to) the organisation of guest lectures on selected Nobel Prizes, the election of the most significant Nobel Prizes in the history, voting for one question to ask a real Nobel winner, and the selection of one human achievement worthy of a Nobel Prize. Through these activities, students will learn the spirit of the Nobel Prize as an award for human achievements at the highest level.

**Course Intended Learning Outcomes (CILOs)**

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Describe the aims, history, and selection processes of the Nobel Prizes	5	x		
2	Identify the key stages of development of selected discoveries awarded with the Nobel Prizes by studying the biographical backgrounds of selected laureates	10	x		
3	Critically evaluate the achievements of the selected laureates, and their applications and influences	25		x	
4	Critically evaluate the selection process of the Nobel Prizes	30	x		
5	Reflect on the link of human achievements and applications that benefit human lives	30		x	x

**A1: Attitude**

Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

**A2: Ability**

Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

**A3: Accomplishments**

Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

**Teaching and Learning Activities (TLAs)**

TLAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Curation and discussion	Students will select from the teaching staff of local universities six professors and invite them to teach the aims, history and selection procedures of each of the six Nobel Prize categories.	1, 4
2	Curation and discussion	Students will examine various ways in which human academic achievements are evaluated and debate the effectiveness of each	3, 4
3	Research design	Students will conduct research on selected topics related to human achievements and their evaluations, based on the biographical and bibliometric data on Nobel laureates and nominees	1, 2, 3, 4, 5
4	Curation and discussion	Students will select a discovery, an invention, or a social movement that they think represents the highest level of human achievement. After discussion and debate, they will select the best one.	4, 5
5	Event organisation	Students will organise a final seminar, in which they will announce the outcomes of their TLAs, and justify their decision.	1, 2, 3, 4, 5

**Assessment Tasks / Activities (ATs)**

ATs	CILO No.	Weighting (%)	Remarks (e.g. Parameter for GenAI use)
1	Writing task 1 (TLA2): Student will write a blog on the latest Nobel Prizes, from the announcement to the ensuing mass coverage.	1, 2, 3	10

2	Writing task 2 (TLA3): Student will form groups to draft emails to local academics stating the purpose of this course and invite them to give guest lectures on selected Nobel Prizes awarded in the current year.	1, 2	10	
3	Writing task 3 (TLA4): Student in groups will design studies based on biographical and bibliometric data on Nobel laureates and nominees.	3, 4	10	
4	Oral presentation task 1 (TLA3-5): Students in groups will present (in groups) background information about the nominations collected from the polls.	3, 4, 5	10	
5	Oral presentation task 2 (TLA6): Students in groups will run a departmental seminar to announce the result of their decisions in TLA3-5.	1, 2, 3, 4, 5	10	
6	Classroom debate (TLA3-5)	1, 2, 3, 4, 5	10	
7	Reflective report on their experience in this course	1, 2, 3, 4, 5	10	

**Continuous Assessment (%)**

70

**Examination (%)**

30

**Examination Duration (Hours)**

2

**Additional Information for ATs**

Starting from Semester A, 2015-16, students must satisfy the following minimum passing requirement for courses offered by CHEM:

“A minimum of 40% in both coursework and examination components.”

**Assessment Rubrics (AR)****Assessment Task**

Writing task 1 (TLA2)

**Criterion**

ABILITY to CURATE and CRITICALLY ANALYSE information from the public domain.

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Not even reaching marginal levels

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**Assessment Task**

Writing task 2 (TLA3)

**Criterion**

ABILITY to CLEARLY and COURTEOUSLY COMMUNICATE ideas with strangers.

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Not even reaching marginal levels

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**Assessment Task**

Writing task 3 (TLA4)

**Criterion**

ABILITY to FORMULATE HYPOTHESIS and DESIGN EXPERIMENTS to test them.

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Not even reaching marginal levels

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**Assessment Task**

Oral presentation task 1 (TLA3-5)

**Criterion**

1 ABILITY to CURATE DATA and to FORMULATE OPINIONS based on the analysis of data.

2 ABILITY to CLEARLY COMMUNICATE IDEAS.

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Not even reaching marginal levels

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**Assessment Task**

Oral presentation task 2 (TLA6)

**Criterion**

ABILITY to CLEARLY COMMUNICATE IDEAS.

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Not even reaching marginal levels

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**Assessment Task**

Classroom debate (TLA3-5)

**Criterion**

ABILITY to ENGAGE ACTIVELY during lectures and tutorials.  
ABILITY to COLLABORATE with fellow students during the preparation of tutorials.

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Not even reaching marginal levels

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**Assessment Task**

Reflective report

**Criterion**

ABILITY to RECORD in DETAIL and with ACCURACY the guest lecture.  
ABILITY to COMMUNICATE ideas to a general audience.

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Not even reaching marginal levels

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**Assessment Task**

Final examination

**Criterion**

ABILITY to DESCRIBE the history and selection process of the Nobel Prizes, CRITICALLY ASSESS the different methods for assessing human achievements, and to DESCRIBE the academic knowledge/applications/social context related to selected Nobel Prizes awarded in the current year.

**Excellent (A+, A, A-)**

High

**Good (B+, B, B-)**

Significant

**Fair (C+, C, C-)**

Moderate

**Marginal (D)**

Basic

**Failure (F)**

Not even reaching marginal levels

## Part III Other Information

### Keyword Syllabus

Teaching method: Students as curators

This course adopts a special teaching method in which the students will be asked to take active roles in deciding whom to teach and what to learn. They will be guided through a series of well-structured activities that are designed to select, extract and assemble knowledge from the existing “knowledge-base”. In keeping with the humanistic nature of the Nobel Prizes, the knowledge-base our students will draw from is not made of words or books or websites, but of people themselves.

Throughout the course, the students will be asked to approach people, sometimes academics from this and other universities, sometimes their peers, and request them to contribute a bit of their ideas to the course. E.g., we need to find someone to give a talk about the Nobel Peace Prize in our class. In traditional courses, the course leader would either give the lecture himself, or would invite an academic in our university, or a distinguished member of our society who is particularly qualified to speak about this prize to give this lecture. It would be the most convenient way, but the students will have no mental connection to this guest lecturer. In this course, we will first ask the student: who is the most qualified person to give this talk? Under the course leader’s guidance, the students will be asked to go through the staff directory of CityU, and shortlist the people they think can give a good and informative talk about this Nobel Prize. The students will justify their selection and vote for the best ones after debates and discussions. Then they will invite the people they selected to give this guest lecture. Thus, the students will learn two things in this activity. On the day of the lecture, they will of course learn all about the Nobel Peace Prizes, about the meaning of peace, and about what a single human being could attain such an achievement. Because it is the students who invited this lecturer, they will pay extra attention to the lecture. In the lecture room, the students are no longer the guests, or the customers, but the hosts.

However, the second thing they will learn is less obvious, but not less important. In this exercise, the student will appreciate that knowledge is not a dead and static thing, but is harboured by living human beings. Our community contains a huge resource of people with different talents, knowledge and ideas. All we need to do is to find the right people and ask them the right question. This course aims to teach the students the ability to do this. In the course, the students will experience the core of knowledge creation, by curating the very course they are studying.

In summary, the teaching method used in this course, Students as Curators, enables the students to take an active role in their own learning. In traditional course, the teaching staff is assigned by the course leader, and it is not surprising that some students might treat their learning with indifference. In this course, the students organise their own course as educational event. The teaching and learning goals will likely be achieved with a much greater effectiveness.

### Activities

The course will divided into two major parts. The first part is a series of lectures, stand-alone seminars given by invited guest lecturers on the aim, history and selection process of each of the six Nobel Prize categories. The students will invite distinguished scholars from various colleges of our university to deliver these lectures.

The second part is devoted to discovery-based learning, in which the students achieve the various ILOs not through traditional lectures and tutorials, but through a series of activities. For example, instead of learning the names and the achievements of the latest Nobel winners, the students will be divided into six teams, each of them responsible for showing the live webcast of the announcement of one Nobel Prize at CityU. Each team will promote their show in the campus and



will write down their experience in a reflective report. Also, they will keep a blog on the Nobel Prize of their team, following up the news after the announcement. This exercise will fully expose the students to the inter-disciplinary nature of modern human endeavours.

Finally, the students will be asked to consider the nature of human achievements. What activities should be considered human achievements? Should we assess them by their ingenuity, their fundamental importance in human knowledge or simply by their beneficial impact on the humanity? We believe the best way of achieving this ILO is to let the students come up with an achievement they consider to be of the highest level. Through debate and voting, they will come up with their own award.

The most important event of the course will be a “press conference” in which the students will announce their choices to the department, in the same format of the real Nobel Prize announcement. Students will also conduct a Q&A session to defend their selection.

## Reading List

### Compulsory Readings

Title	
1	Nil

### Additional Readings

Title	
1	<a href="http://www.nobelprize.org/">http://www.nobelprize.org/</a>
2	The complexity of greatness : beyond talent or practice Kaufman, Scott Barry 1979- New York : Oxford University Press, 2013 Available at Run Run Shaw Library Circulation Collection (BF431 .C596 2013 )
3	Ye, S., Xing, R., Liu, J., & Xing, F. (2013). Bibliometric analysis of Nobelists’ awards and landmark papers in physiology or medicine during 1983–2012. <i>Annals of medicine</i> , 45(8), 532-538.

## Annex (for GE courses only)

**A. Please specify the Gateway Education Programme Intended Learning Outcomes (PILOs) that the course is aligned to and relate them to the CILOs stated in Part II, Section 2 of this form:**

Please indicate which CILO(s) is/are related to this PILO, if any (can be more than one CILOs in each PILO)

**PILO 1: Demonstrate the capacity for self-directed learning**

1, 2, 3, 4, 5

**PILO 2: Explain the basic methodologies and techniques of inquiry of the arts and humanities, social sciences, business, and science and technology**

2, 5

**PILO 3: Demonstrate critical thinking skills**

4, 5

**PILO 5: Produce structured, well-organised and fluent text**

1

**PILO 6: Demonstrate effective oral communication skills**

1, 2, 3, 4, 5

**PILO 7: Demonstrate an ability to work effectively in a team**

1, 2, 3, 4, 5

**PILO 9: Value ethical and socially responsible actions**

5

**B. Please select an assessment task for collecting evidence of student achievement for quality assurance purposes. Please retain at least one sample of student achievement across a period of three years.**

**Selected Assessment Task**

Students will select local academics from fields relevant to the six Nobel Prize categories, and invite them to introduce their favourite laureates in the history of the Nobel Prize. Students will also select a discovery, an invention, or a social movement that they think represents the highest level of human achievement. After discussion and debate, they will select the best one.